

ENVIRONMENTAL LAW AND POLICY IN NAMIBIA

TOWARDS MAKING AFRICA
THE TREE OF LIFE

Third Fully Revised Edition

Edited by

OLIVER C. RUPPEL
&
KATHARINA RUPPEL-SCHLICHTING

Environmental Law and Policy in Namibia

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THE TREE OF LIFE**

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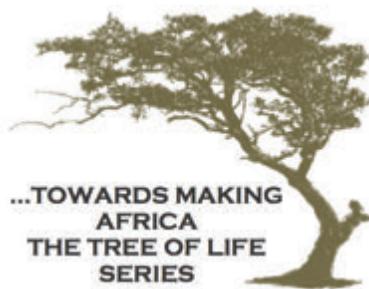


TABLE OF CONTENTS

FOREWORD	xv
PREFACE	xvii
ACKNOWLEDGEMENTS	xix
THE EDITORS	xxi
THE CONTRIBUTORS	xxiii
ABBREVIATIONS	xxviii
CHAPTER 1 – NAMIBIA AND ITS LEGAL SETUP	1
<i>by Oliver C. Ruppel and Katharina Ruppel-Schlichting</i>	
1 Namibia in a Nutshell: Facts and Figures	1
2 The Legal Setup in Namibia	3
3 The Laws	4
4 The Court System	5
4.1 The Supreme Court	5
4.2 The High Court	6
4.3 The Lower Courts	6
4.4 The Magistrates' Courts	7
4.5 The Community Courts	7
5 The Ombudsman	8
CHAPTER 2 – INTRODUCING ENVIRONMENTAL LAW	9
<i>by Katharina Ruppel-Schlichting</i>	
1 Terminology	9
2 Foundations of Environmental Protection	11
3 Functions of Environmental Law	13
4 Historical Development of Environmental Law	14
CHAPTER 3 – NAMIBIA AND ITS ENVIRONMENT	22
<i>by Katharina Ruppel-Schlichting</i>	
1 Introduction	22
2 Major Environmental Concerns in Namibia	24
2.1 Land Degradation and Soil Erosion	24
2.2 Deforestation	25
2.3 Water Management	25
2.4 Climate Change	26
2.5 Waste and Pollution	27
CHAPTER 4 – ENVIRONMENTAL LAW IN NAMIBIA: AN OVERVIEW	29
<i>by Oliver C. Ruppel</i>	
1 Introduction	29
2 The Namibian Constitution	29
3 Development Framework	31
3.1 Namibia's Green Plan	31
3.2 Vision 2030 and the National Development Plans	32
4 Policy Framework	34
4.1 Policies on Environment, Wildlife and Biotechnology	35

4.2 Policies on Land and Agriculture	36
4.3 Policies on Water	38
4.4 Policy on Forests	39
4.5 Policies on Tourism	40
4.6 Climate Change Policy	40
5 Statutory Law	41
5.1 The Environmental Management Act No. 7 of 2007	42
5.2 The Nature Conservation Ordinance No. 4 of 1975	43
5.3 Legislation on Water	44
5.4 Legislation on Fisheries and Marine Resources	45
5.5 Legislation on Land and Agricultural Production	46
5.6 Legislation on Forestry	47
5.7 Legislation on Energy and Mining	47
5.8 Selected Environmental Legislation in Preparation	48
6 Roman-Dutch and Common Law	49
7 Customary Law	50
8 Criminal Aspects of Environmental Law	51
9 Selected Strategies and Action Plans	52
9.1 National Biodiversity Strategy and Action Plan	52
9.2 Namibia's Climate Change Strategy and Action Plan	52
9.3 Aquaculture Strategic Plan	53
9.4 Strategic Action Plan for the Implementation of Renewable Energy Policies	53
9.5 Forestry Strategic Plan	54
10 Funding Mechanisms	54

CHAPTER 5 – INTRODUCTION TO INTERNATIONAL ENVIRONMENTAL LAW 55

by Oliver C. Ruppel

1 The Application of International Law in Namibia	55
2 Sources of International Environmental Law	56
2.1 International Conventions: Multilateral Environmental Agreements (MEAs)	57
2.1.1 How MEAs are Made	57
2.1.2 The General Scope of MEAs	58
2.1.3 Typical Structure of MEAs	59
2.1.4 Compliance and Enforcement of MEAs	59
2.2 International Customary Law	61
2.3 General Concepts and Principles of International Environmental Law	61
2.4 Judicial Decisions and Teachings	64
3 Multilateral Environmental Agreements Relevant to Namibia	65

CHAPTER 6 – ENVIRONMENTAL LAW IN THE AFRICAN UNION (AU) 71

by Oliver C. Ruppel

1 Introduction	71
2 Structure of the AU	71
3 Environmental Issues within the AU's General Legal Framework	73
4 Specific Environmental Conventions	74

4.1	The African Convention on Conservation of Nature and Natural Resources, 1968	74
4.2	The Revised (Algiers) Convention on the Conservation of Nature and Natural Resources, 2003	75
4.3	The Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa	77
4.4	The Maritime Transport Charters	77
4.5	The African Nuclear Free Zone Treaty (Treaty of Pelindaba)	77
4.6	The Phyto-Sanitary Convention for Africa	78
4.7	The African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa	78
5	The African Union's Judicial System and the Consideration of Environmental Rights	79
6	Selected Institutions and Initiatives Particularly Relevant for Environmental Protection	81
6.1	The African Ministerial Conference on the Environment (AMCEN)	81
6.2	Relevant Departments within the AU Commission	82
6.3	The Peace and Security Council (PSC)	83
6.4	The New Partnership for Africa's Development (NEPAD)	83
CHAPTER 7 – ENVIRONMENTAL LAW IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC) AND CROSS-CUTTING REGIMES		85
<i>by Oliver C. Ruppel</i>		
1	The Consideration of Environmental Concerns within the SADC Legal Framework	85
1.1	Heterogeneity of SADC States	86
1.2	Institutional Structure of SADC	87
1.3	Environmentally Relevant Legal Framework	88
1.3.1	The SADC Treaty	88
1.3.2	The SADC Protocols	89
1.3.3	Other SADC Legal and Institutional Instruments Relevant for the Environment	98
1.4	SADC Law Enforcement and Relevant Case Law	101
1.4.1	The SADC Tribunal	101
1.4.2	Mike Campbell: An Environmentalist	103
1.4.3	Swissbourg and the Lesotho Highlands Water Project (LHWP)	105
1.5	Some Challenges Ahead	106
2	The Consideration of Environmental Concerns in Cross-cutting Regimes	107
2.1	The Southern African Customs Union (SACU) and SACU Related Trade Agreements	107
2.2	The EAC-COMESA-SADC Tripartite Initiative	108
2.3	The BRICS Partnership	109

CHAPTER 8 – ENVIRONMENTAL MANAGEMENT	113
I. GENERAL PRINCIPLES OF ENVIRONMENTAL MANAGEMENT IN NAMIBIA	113
<i>by Katharina Ruppel-Schlichting</i>	
1 Introduction	113
2 The Environmental Management Act No. 7 of 2007	115
2.1 Environmental Management Principles in the EMA	115
2.2 Ministerial Competencies	116
2.3 Institutions / Officials under the EMA	117
2.4 Environmental Plans under the EMA	117
2.5 Environmental Clearance Certificates and Environmental Assessments under the EMA	118
2.6 Enforcement and Appeals under the EMA	121
3 Concluding Remarks	121
II. PRACTICAL IMPLICATIONS OF ENVIRONMENTAL MANAGEMENT IN NAMIBIA: THE CASE STUDY OF OHORONGO	123
<i>by Peter Koep and Meyer van den Berg</i>	
1 Background	123
2 Ohorongo's Mining Activities	123
3 The Environmental Impact Assessment	124
3.1 Water	125
3.2 Vegetation	125
3.3 Animals	125
3.4 Dust	126
3.5 Noise	126
3.6 Air Pollution	126
4 Rehabilitation	126
CHAPTER 9 – POLLUTION CONTROL AND WASTE MANAGEMENT	131
<i>by Katharina Ruppel-Schlichting</i>	
1 Introduction	131
2 Legal and Policy Framework	132
2.1 International Law	132
2.2 Pollution under the Constitution	133
2.3 Common Law Aspects of Pollution	134
2.4 Framework Legislation: The Environmental Management Act No. 7 of 2007 (EMA)	134
2.5 Sectoral Legislation	136
2.5.1 The Pollution Control and Waste Management Bill	136
2.5.2 The Public and Environmental Health Bill	136
2.5.3 The Soil Conservation Act No. 76 of 1969	137
2.5.4 The Hazardous Substances Ordinance 14 of 1974	137
2.5.5 The Atmospheric Pollution Prevention Ordinance 11 of 1976	137
2.5.6 The Atomic Energy and Radiation Protection Act No. 5 of 2005	137
2.5.7 The Minerals Prospecting and Mining Act No. 33 of 1992	138
2.5.8 Water Related Legislation	138
3 Waste Management in the City of Windhoek	140
4 Concluding Remarks	143

CHAPTER 10 – LEGAL PROTECTION OF BIODIVERSITY IN NAMIBIA	145
<i>by Manfred O. Hinz and Oliver C. Ruppel</i>	
1 Introduction	145
2 Biodiversity in Perspective	145
3 International Environmental Law Pertinent to Biodiversity Protection	148
4 Biodiversity Protection under National Environmental Law	152
CHAPTER 11 – WATER AND FISHERIES	159
I. WATER AND FISHERIES RELATED STATUTORY LAW AND POLICY IN NAMIBIA	159
<i>by Shirley Bethune and Oliver C. Ruppel</i>	
1 The Policy Framework	159
1.1 The Water Supply and Sanitation Policy	159
1.2 The National Water Policy White Paper	160
1.3 Namibia's Draft Wetland Policy	161
1.4 Namibia's Marine Resources Policy	162
1.5 Namibia's Aquaculture Policy	163
2 The Statutory Framework	164
2.1 The Water Act No. 54 of 1956	164
2.2 The Water Resources Management Act No. 24 of 2004	165
2.3 The Water Resources Management Act No. 11 of 2013	167
2.4 The Namibia Water Corporation Act No. 12 of 1997	170
2.5 The Marine Resources Act No. 27 of 2000	170
2.6 The Aquaculture Act No. 18 of 2002	171
2.7 The Inland Fisheries Resources Act No. 1 of 2003	172
2.8 The Prevention and Combating of Pollution at Sea by Oil Act No. 6 of 1981	172
II. GOVERNANCE OF RURAL WATER SUPPLY IN NAMIBIA	173
<i>by Thomas Falk</i>	
CHAPTER 12 – LAND AND AGRICULTURE	177
I. LAND AND AGRICULTURAL LAWS AND POLICIES RELEVANT FOR ENVIRONMENTAL PROTECTION IN NAMIBIA	177
<i>by Oliver C. Ruppel, Shirley Bethune and Anielle von Finckenstein</i>	
1 Introduction	177
2 Soil Protection in the International Legal Framework	178
3 Land Tenure in Namibia	180
4 Sustainable Farming in Namibia	181
5 Land and Agricultural Policies	184
5.1 Land-use Planning: Towards Sustainable Development	184
5.2 The National Land Policy	184
5.3 The National Resettlement Policy	185
5.4 The National Land Tenure Policy	185
5.5 The National Agricultural Policy	185
5.6 The Green Scheme Policy	185
5.7 The National Drought Policy and Strategy	186
5.8 The Regional Planning and Development Policy	186

6	Land and Agriculture Related Legislation	186
6.1	The Environmental Management Act No. 7 of 2007	186
6.2	The Communal Land Reform Act No. 5 of 2002	187
6.3	The Soil Conservation Act No. 76 of 1969	187
6.4	The Agricultural (Commercial) Land Reform Act No. 6 of 1995	188
6.5	In the Pipeline: The Land Act	189
6.6	The Agricultural Pests Act No. 3 of 1973	189
II.	LAND USE PLANNING AND THE ENVIRONMENT	191
	<i>by Felicity F. !Owoses-/Goagoses</i>	
1	Introduction	191
2	The Concept of Land Use Planning	191
3	Environmental Aspects of Land Use Planning	193
4	Planning Levels	194
5	Land Use Plans	194
6	The Land Use Planning Process	194
7	Approaches to Land Use Planning	195
8	Current Land Use Policy and Legislative Framework	196
8.1	Land Use Planning Approach	196
8.2	Legislative and Policy Framework on Land Use Planning	196
8.2.1	The Town Planning Ordinance	199
8.2.2	The Townships and Division of Land Ordinance	200
8.2.3	The Subdivision of Agricultural Land Act	200
8.2.4	The Flexible Land Tenure Act	200
8.2.5	The Agricultural (Commercial) Land Reform Act	201
8.2.6	The Environmental Management Act	201
9	Land Use Planning Institutions and Administration	201
9.1	The National Planning Commission	202
9.2	The Ministry of Land Reform	202
9.3	Ministry of Urban and Rural Development	203
9.4	Other Authorities, Organisations and Persons	203
10	Land Use Planning in Local Government	203
10.1	Town Planning Schemes	204
10.2	Structure Plans	205
10.3	Township Establishment	205
11	Regional Planning	206
11.1	Regional Development Plans	206
11.2	Town Planning Function of Regional Councils	207
11.3	Regional Structure Plans	207
12	Land Use Planning in the Coastal Zone	208
12.1	Introduction	208
12.2	Policy, Legal and Institutional Frameworks	208
12.3	Status of Coastal Zone Management	208
12.4	The National Policy on Coastal Management	209
12.4.1	Defining the Coastal Zone	209
12.4.2	NPCM Land Use Planning Objectives and Implementation Strategies	210

CHAPTER 13 – MINING AND ENERGY	211
I. MINING AND ENERGY IN NAMIBIA	211
<i>by Meyer van den Berg and Peter Koep</i>	
1 The Environmental Management Act	211
2 Mining Laws and Policy	215
2.1 The Minerals (Prospecting and Mining) Act	215
2.1.1 Application for Claims and Licences	215
2.1.2 Granting of Mining Claims and Mining Licences	216
2.1.3 Exercising Rights in Terms of Claims and Licences	216
2.1.4 Mine Closure and Rehabilitation	217
2.2 The Minerals Policy	218
2.3 The SADC Protocol on Mining	219
3 Energy Laws and Policy	219
3.1 The Petroleum (Exploitation and Production) Act No. 2 of 1991	219
3.1.1 Application for Licences	219
3.1.2 Granting of Licences	220
3.1.3 Exercising Rights in Terms of Licences	220
3.1.4 Rehabilitation and Closure	222
3.1.5 The Petroleum Agreement	223
3.2 The Atomic Energy and Radiation Protection Act No. 5 of 2005	224
3.3 The Petroleum Product and Energy Act	226
3.4 The Draft Gas Bill	226
3.5 The Electricity Act No. 4 of 2007	227
3.6 Draft White Paper on the Energy Policy of Namibia	228
3.7 Namibia's Uranium and Nuclear Energy Policy	229
3.8 The SADC Protocol on Energy	229
3.9 Renewable Energy	229
II. NAMIBIA TOWARDS A CONDUCIVE REGULATORY FRAMEWORK IN RENEWABLE ENERGY LAW AND REGULATION	233
<i>by Natalie A. Renkhoff</i>	
1 The Energy Sector	234
1.1 Current and Future Projected Demand	234
1.2 Current and Prospective Power Generation Projects	235
1.2.1 Short-term Projects	236
1.2.2 Medium- and Long-term Projects	237
2 Regulatory Framework	238
2.1 Ministry of Mines and Energy	239
2.2 Electricity Control Board	239
2.3 Other Market Actors	241
2.4 Namibia Energy Institute	242
3 Legal Framework	242
3.1 White Paper on Energy Policy of Namibia	243
3.2 Rural Electrification Programme	245
3.3 REDMP – Rural Electricity Distribution Master Plan	247
3.4 OGEMP – Off-Grid Energisation Master Plan	247
3.5 NEEP – Namibia Energy Efficiency Programme in Buildings	249

3.6 REEECAP – Renewable Energy and Energy Efficiency Capacity Building Programme	250
3.7 NIRP - National Integrated Resource Plan	251
3.8 CSP TT NAM and Other RE Projects	252
4 Benefits of and Barriers to Renewable Energy	252
5 Procurement Mechanisms	254
5.1 Feed-in Tariffs	256
5.2 Tendering	257
5.3 Power Purchase Agreements	258
5.4 Quota Systems and Green Certificates	259
5.5 Net Metering	260
6 RE Projects in Namibia	262
6.1 Tsumkwe and Gam Energy Projects	263
6.2 Biomass Power Plants from Encroacher Bush	264
7 Concluding Remarks	265
III. INTERNATIONAL LAW ASPECTS OF RENEWABLE ENERGIES	267
<i>by Oliver C. Ruppel and Katharina Ruppel-Schlichting</i>	
1 Introduction	267
2 Sustainable Energy and Climate Change	268
3 Regulatory Framework on the International Level	271
4 Regulatory Framework in the Southern African Development Community (SADC)	273
4.1 The SADC Protocol on Energy	275
4.2 The Regional Indicative Strategic Development Plan (RISDP)	276
4.3 The Regional Energy Access Strategy and Action Plan (REASAP)	277
4.4 The Energy Sector Plan of the SADC Regional Infrastructure Development Master Plan (RIDMP)	277
5 Regulatory Options to Support Renewable Energies on the National Level	277
6 Concluding Remarks	280
CHAPTER 14 – CLIMATE CHANGE	281
I. SETTING THE SCENE: HUMAN VULNERABILITY AND FINDINGS OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE	281
<i>by Oliver C. Ruppel</i>	
1 Introduction	281
2 Aspects of Human Vulnerability in Africa	282
3 Findings of the IPCC	284
3.1 Main Findings for Africa	286
3.2 Impacts of Climate Change	287
3.3 Future Risks	288
4 Opportunities for Effective Action to Reduce the Risks Associated to Climate Change	289
5 Concluding Remarks	290

II. INTERNATIONAL CLIMATE CHANGE POLICY: WHERE DO WE STAND?

by Nadia von Bassewitz

291

1	Introduction	291
2	Key Legal Framework Documents	291
2.1	The United Nations Framework Convention on Climate Change, 1992	291
2.2	The Kyoto Protocol, 1997	293
2.2.1	Mitigation	294
2.2.2	Adaptation	295
3	Developments up until Copenhagen 2009	295
3.1	Taking Stock of the Kyoto Protocol	295
3.2	COP12, Montreal, Canada, 2005	296
3.3	COP13, Nusa Dua, Bali, Indonesia, 2007	297
3.3.1	Outcome	297
3.3.2	Assessment	298
3.4	COP15, Copenhagen, Denmark, 2009	298
3.4.1	Outcome	298
3.4.2	Assessment	299
4	Developments Beyond Copenhagen 2009 until Lima 2014	300
4.1	Taking Stock of the Copenhagen Accord	300
4.2	COP16, Cancun, Mexico, 2010	302
4.2.1	Outcome	302
4.2.2	Assessment	303
4.3	COP17, Durban, South Africa, 2011	303
4.3.1	Outcome	303
4.3.2	Assessment	304
4.4	COP18, Doha, Qatar, 2012	305
4.4.1	Outcome	305
4.4.2	Assessment	306
4.5	COP19, Warsaw, Poland, 2013	308
4.5.1	Outcome	308
4.5.2	Assessment	308
4.6	COP20, Lima, Peru, 2014	309
4.6.1	Outcome	309
4.6.2	Assessment	310
5	Ahead of COP 21, Paris, France, 2015	310
6	Global Warming and Individual Countries	317
6.1	The European Union	318
6.1.1	Mitigation Policy	318
6.1.2	Funding for Developing Countries	321
6.2	The United States of America	322
6.2.1	Mitigation Policy	322
6.2.2	Funding for Developing Countries	325
6.3	BASIC Group: China	325
6.3.1	Mitigation Targets?	325
6.3.2	Policy Instruments	327
7	Concluding Remarks	328

III. AFRICA IN THE INTERNATIONAL CLIMATE NEGOTIATIONS	331
<i>by Nicole Bogott and Lesley-Anne van Wyk</i>	
1 Introduction	331
2 Background	332
3 Parallels and Asymmetries: Africa in the Global Climate Change Arena	333
4 Consolidating the ‘African Voice’	335
5 Conclusion	337
IV. REVIEW OF THE CLIMATE CHANGE SITUATION IN NAMIBIA: PROJECTED TRENDS, VULNERABILITY AND EFFECTS	339
<i>by Isaac Mapaure</i>	
1 Introduction	339
2 Namibia’s Contribution to Greenhouse Gas Emissions	340
3 Climate Trends and Predictions	343
4 Potential Impacts of Climate Change	345
4.1 Projections	345
4.2 Agriculture	347
4.3 Biodiversity, Ecosystems and Tourism	349
4.4 Coastal Zone	351
4.5 Energy	352
4.6 Human Health and Well-Being	353
4.7 Fisheries and Marine Resources	354
4.8 Water Resources	355
5 Mitigation and Adaptation to Climate Change in Namibia: Actions Taken	356
6 Concluding Remarks	358
V. LEGAL AND REGULATORY ASPECTS OF CLIMATE CHANGE IN NAMIBIA AND SADC	359
<i>by Oliver C. Ruppel</i>	
1 Introduction	359
2 Climate Change Legislation	359
3 Namibia’s Climate Change Policy	360
4 Namibia and the United Nations Convention on Climate Change (UNFCCC)	364
5 Climate Change Governance in the Southern African Development Community (SADC)	365
CHAPTER 15 – DISASTER RISK MANAGEMENT LAW AND POLICY	371
<i>by Mary Picard and Ewan Powrie</i>	
1 Introduction	371
2 International Frameworks	372
2.1 International Response to Disasters	372
2.2 Disaster Risk Reduction	373
2.2.1 Hyogo Framework for Action	373
2.2.2 Sendai Framework for Disaster Risk Reduction 2015-2030	374
2.3 State DRM Obligations under Human Rights Law	375
3 Disaster Risk Management Law and Policy in the African Union	377
3.1 Africa Regional Strategy for Disaster Risk Reduction	377
3.2 Human Rights and Internal Displacement	378
4 Disaster Risk Management Law and Policy in the SADC Region	379

5	Disaster Risk Management Law and Policy in Namibia	380
	5.1 Disaster Risk Management Act No. 10 of 2012	380
	5.2 Disaster Risk Management Regulations 2013	382
	5.3 Relevant Policy Framework for DRM in Namibia	384
	5.3.1 National Disaster Risk Management Policy 2009	384
	5.3.2 National Disaster Risk Management Plan 2011	384
	5.3.3 National Development Plan and Vision 2030	385
	5.4 Disaster Risk Reduction in Key Sectoral Laws in Namibia	385
	5.4.1 Building Codes	386
	5.4.2 Environmental Resource Management	386
	5.4.3 Forestry	386
	5.4.4 Water	387

CHAPTER 16 – TRADE, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

389

by Oliver C. Ruppel

1	Introducing the International Trade, Environment and Development Debate	389
	1.1 The Trade Perspective	389
	1.2 The Environmental Perspective	389
	1.3 The Development Perspective	389
	1.4 Sustainable Development: The Answer to the Dilemma?	390
2	The Role of Trade for Sustainable Development and the Reduction of Poverty in Africa	392
3	Regional Integration and Natural Resources in Southern Africa	396
4	The WTO and the Environment	399
	4.1 The Primary Objectives of the WTO	400
	4.2 The 2001 Doha Declaration and the Environment	401
	4.3 The Committee on Trade and Environment	402
	4.4 WTO Agreements and their Environmentally Relevant Provisions	403
	4.4.1 The General Agreement on Tariffs and Trade (GATT)	403
	4.4.2 The General Agreement on Trade in Services (GATS)	404
	4.4.3 The Agreement on Technical Barriers to Trade (TBT)	404
	4.4.4 The Agreement on Sanitary and Phyto-sanitary Measures (SPS)	404
	4.4.5 The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)	405
	4.4.6 The Agreement on Subsidies and Countervailing Measures (SCM)	405
	4.4.7 The Agreement on Agriculture	406
	4.4.8 The Environmental Goods Agreement	406
	4.5 The WTO's Dispute Settlement Body	406
	4.6 Some Environmental Case References	407
	4.6.1 United States – Canadian Tuna (1982)	408
	4.6.2 Canada – Salmon and Herring (1988)	408
	4.6.3 United States – Tuna (Mexico) (1991, not adopted)	408
	4.6.4 United States – Gasoline (1996)	409
	4.6.5 Chile – Swordfish (WTO/ITLOS, 2000)	409
	4.6.6 United States – Shrimp: Initial Phase (1998)	410
	4.6.7 United States – Shrimp: Implementation Phase (2001)	411
	4.6.8 Brazil – Measures Affecting Imports of Re-treaded Tyres (2007)	412

4.6.9	China – Measures Related to the Exportation of Various Raw Materials	414
4.6.10	China – Measures Related to the Exportation of Rare Earths, Tungsten and Molybdenum	415
4.7	The WTO and the North-South Divide	416
4.8	Climate Change and WTO Law	418
5	Multilateral Environmental Agreements (MEAs) and the Multilateral Trading System	421
6	The Trade and Investment Environment in Namibia	423
6.1	Trade Policy Review Namibia 2015	423
6.1.1	Trade Performance Overview	424
6.1.2	Trade-related Legislation (also relevant to the Environment)	425
6.1.3	Environmentally Relevant Import Practices	426
6.1.4	Environmentally Relevant Export Practices	429
6.1.5	Agriculture	429
6.1.6	Fisheries	432
6.1.7	Forestry	433
6.1.8	Mining and Energy	433
6.1.9	Manufacturing	434
6.1.10	Services	435
6.1.11	Transport	435
6.1.12	Tourism	435
6.2	Foreign Investment	435
7	Concluding Remarks	437
CHAPTER 17 – CUSTOMARY LAW AND THE ENVIRONMENT		441
by <i>Manfred O. Hinz</i>		
1	Introduction	441
2	Post-Independence Conservation Policy in Namibia: Gateway for Customary Environmental Law	442
3	Customary Law and Customary Environmental Law within the General Legal System	444
4	Conservancies and Customary Law	446
5	BIOTA and TFO Research on Customary Law and the Environment	448
6	Traditional Conservationism	452
7	The Protection of Traditional Knowledge	455
8	Concluding Remarks	463
CHAPTER 18 – WESTERN INTELLECTUAL PROPERTY RIGHTS REGIMES AND TRADITIONAL KNOWLEDGE PROTECTION SYSTEMS IN AFRICA		467
by <i>Eliamani Laltaika</i>		
1	Introduction	467
2	Defining Traditional Knowledge and Associated Genetic Resources	467
3	Biopiracy	469
4	Western Intellectual Property Regime versus Community Rights	470
5	The Convention on Biological Diversity: A New Era for GR Governance?	471
6	Intellectual Property in Plant Genetic Resources for Food and Agriculture and TK	473
6.1	The International Undertaking on Plant Genetic Resources	474

6.2 The TRIPS Agreement and UPOV	474
6.3 Historical Backdrop	475
6.4 The Pinch of IPR to Farmers	476
7 African Approach	476
7.1 The OAU Model Legislation on the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources	477
7.2 The Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore	477
8 The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefit Arising from their Utilisation: Too Little, Too Late?	478
8.1 Overview of the Protocol	479
8.2 Does the Protocol Make a Difference?	479
8.3 Too Little, Too Late?	479
9 The Need for a Paradigm Shift	479
10 Concluding Remarks	480
CHAPTER 19 – HUMAN RIGHTS AND THE ENVIRONMENT	481
<i>by Oliver C. Ruppel</i>	
1 Introduction	481
2 Human Rights Categories	482
3 Constitutionality of Environmental Human Rights?	483
3.1 The Preamble	484
3.2 Fundamental Rights and Freedoms	485
3.3 Article 6: The Right to Life	486
3.4 Article 8: Respect for Human Dignity	487
3.5 Article 10: Equality and Freedom from Discrimination	489
3.6 Article 15: Children’s Rights	490
3.7 Articles 18 and 5: Administrative Justice	490
3.8 Article 19: The Right to Culture	491
3.9 Article 25: Enforcement of Fundamental Rights and Freedoms	492
3.10 Article 95(1): The Environmental Principle of State Policy	493
3.11 Article 100: Sovereign Ownership of Natural Resources	494
3.12 Article 144: International Law	495
4 Concluding Remarks	497
CHAPTER 20 – ENVIRONMENTAL JUSTICE, COMPLIANCE AND ENFORCEMENT	499
<i>by Oliver C. Ruppel</i>	
1 Introduction	499
2 Environmental Justice and Advocacy	499
3 Administrative Procedures for Compliance and Enforcement	501
4 The Role of Namibian Courts in Environmental Matters	501
5 Criminal Law	503
6 Conflict Resolution	504
6.1 Environmental Litigation	504
6.2 Alternative Dispute Resolution (ADR) in the Area of Environmental Conflict	505

6.2.1	General Features of ADR	505
6.2.2	ADR in Namibian Statutory Law	507
7	Concluding Remarks	507
CHAPTER 21 – THE OMBUDSMAN AND THE ENVIRONMENT		509
<i>by Katharina Ruppel-Schlichting</i>		
1	Legal Foundations	509
2	Basic Characteristics of the Ombudsman in Namibia	510
3	The Environmental Mandate of the Ombudsman	514
4	Investigation, Enforcement and Reporting Procedures	517
BIBLIOGRAPHY AND FURTHER REFERENCES		521

FOREWORD

It is a great pleasure to see that what has become a standard work in the field of environmental law and policy in Namibia is going into the next round with the third fully revised and expanded edition of *Environmental Law and Policy in Namibia – Towards Making Africa the Tree of Life*. The first and second editions of this publication attracted much attention among both lawyers and non-lawyers in Namibia, Africa and beyond, and with good reason. This is a sustainable effort indeed and I commend the depth of the work and its positive impact.

A sustainable environment is essential to protect people from the short, medium and long term ravages of nature; man-made threats in nature; and the deterioration of the natural environment. Namibia faces a range of difficult environmental challenges including among others land degradation; water scarcity and pollution; deforestation; biodiversity loss; and climate change. Addressing these challenges requires, above all, unequivocal determination on the part of policy-makers. The law, as a subsequent step to policy and decision-making processes on the one hand and as a basis for enforcement and implementation on the other, is an important discipline in terms of environmental protection and is an essential tool to address environmental problems threatening our country, region and planet. Given the multi-disciplinary nature of environmental issues and the involvement of different Government institutions, policy makers and stakeholders, the afore-mentioned environmental challenges are covered by a variety of statutes and policies.

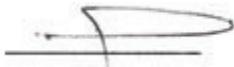


This book offers a multi-faceted insight into environmental law and policy in Namibia. It does this most successfully by taking stock of the existing legal framework and Namibia's commitment to environment-related issues at the local, national, regional, continental and international level. The mother of Namibian laws, our Constitution, is one of the few constitutions in the world to explicitly incorporate the protection of the environment. It is well reflected in this publication that we have achieved significant milestones in terms of environmental law and policy such as the ratification and implementation of several multilateral environmental agreements; the enactment of landmark pieces of national legislation such as the Environmental Management Act; as well as a broad environmental policy framework. Of course, the process is on-going and we must not rest on our laurels.

It is highly commendable that the editors of this book have again eloquently managed to give an in-depth updated overview of sectoral and cross-sectoral legislation and policies relating to environmental concerns. The publication puts environmental law issues into the broader context of current and future societal needs and economic developments. The focus of the publication is on Namibia. It is, however, notable that the book also puts a strong emphasis on the multi-faceted African legal structure and its particularities, including the environmental legal frameworks of the African Union and the Southern African Development Community.

This publication will be a valuable source of information and guidance for lawyers, judges, students, policymakers and all those members of the public interested in environmental law and policy.

I wish to cordially thank Prof. Dr. Oliver C. Ruppel and Dr. Katharina Ruppel-Schlichting and all who have contributed to the third edition of the book and assisted in making it a reality. It has grown to be a landmark and an important work for Namibia, which will inevitably contribute to further green growth, sustainable development and environmentally sound management in the interest of our people. Let all of us make environmental protection our responsibility!



Pohamba Shifeta
Minister of Environment and Tourism, MP
Windhoek, November 2015

PREFACE

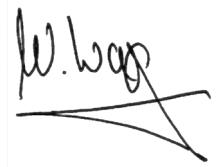
This third edition of the publication *Environmental Law and Policy in Namibia – Towards Making Africa the Tree of Life* comes at a timely moment both nationally and internationally as the country tackles diverse and numerous environmental and developmental challenges while the world has agreed to a new set of ambitious global goals for sustainable development. The first and second editions of this book were published in 2011 and 2013, respectively, and both were a great success. We therefore have sustained our commitment to this work and funded this third revised and expanded edition.

The Namibian Government has taken the lead to recognize the impact of the population with its economic activities on the country's natural environment and has also taken the initiative to adopt and domesticate ethical and humane legislation and policies to inclusively undertake, manage and monitor environmental management.

Namibia has made progress to foster cross-sectoral and dynamic solutions to address the far-reaching effects of climate change, desertification and the depletion of biological resources. As such, this book stands as a comprehensive and telling compilation of the Namibian Government's commitment to tackle environmental challenges as not only users but also stewards of its endowments of natural resources.

The Hanns Seidel Foundation has for some decades now supported the protection of the natural environment as a part of its worldwide activities. This book further intersects with many aspects of the Foundation's mandates to support political, economic and social development, especially in the Global South where economic development and environmental sustainability are often competing objectives.

Against this backdrop, the work of the editors and contributors is highly commended for demonstrating the interlinkages of the different sectors engaged in environmental management as well as the dynamic sphere of policy development and implementation guiding such efforts.

A handwritten signature in black ink, appearing to read "W. Krug", is written over a horizontal line. A second, shorter horizontal line is drawn below the first.

Dr. Wolf Krug
Regional Representative
Hanns Seidel Foundation Southern Africa

ACKNOWLEDGEMENTS

Over the course of writing a book, one accumulates more debts than can be acknowledged in a few lines. A multi-authored publication such as this is an enormous team effort. Therefore our special thanks go to all the distinguished contributors – both in Namibia and beyond. Considering recent developments and thematic priorities in the field of law and policy, this third edition of *Environmental Law and Policy in Namibia* includes – besides substantial updates and revisions – some new Chapters and Sections such as on environmental management and disaster risk management. On the other hand, in order not to go beyond the constraints with regard to the length of this publication, some reductions of text were necessary and we are satisfied to know that these remain preserved and available to the interested reader in the previous editions.

We are very grateful to those who contributed financially to this publication, namely the Hanns Seidel Foundation (HSS) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). “In the service of democracy, peace and development” – this is the motto of the Germany-based Hanns Seidel Foundation; this publication reflects this maxim and the aims of the foundation and its noble mission. Our particular gratitude goes to Nicole Bogott, the Head of Country Office of the HSS in Namibia, and to Lesley-Anne van Wyk, Project Coordinator of the Environmental Awareness and Climate Change Project of the Hanns Seidel Foundation Namibia for her active involvement in making the third edition of this book a reality.

This publication is also a tribute to German-Namibian development cooperation. It is in line with what the German Minister for Economic Cooperation and Development Mr. Dirk Niebel stated during his 2010 official visit to Namibia, “Germany has ever since Namibian Independence considered the bilateral relations to be a special partnership for historical and cultural reasons, and Germany has been providing development assistance to Namibia worth over 600 million Euros (over N\$6 billion) over the last two decades.”

Germany has also supported Namibia in the field of environmental matters through bilateral cooperation. As early as 1991, Germany and Namibia concluded a cultural agreement, which *inter alia* incorporated cooperation in the areas of research and higher education. Environmental law and policy have also been on this agenda. Technical cooperation has been afforded by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) and we thank Dr. Konrad Uebelhoer from GIZ for his continued support.

Last but not least, we would like to thank the numerous readers who provided us with valuable feedback on the first two editions of this book – for their positive response, but also for suggestions for improvements.

December 2015

The Editors

THE EDITORS

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Ruppel is an International Arbitrator (FA Arb) with the Association of Arbitrators of Southern Africa and the Swiss Chamber for Commercial Mediation (SCCM). He is a Member of various legal associations such as the Society of International Economic Law (SIEL), the International Conservations Union (IUCN) World Commission (WCEL), the South African Branch of the Association for International Law (SABILA) and the European Environmental Law Forum (EELF). He is a Member of the Board of the German African Law Association (*Gesellschaft für Afrikanisches Recht*); a Council Member of the Centre for International Studies at the European Law Faculty, Ljubljana, Slovenia; and a Member of the International Consortium for Geopolitical Studies of the Sahel, USA. He serves as Coordinator and Member of the Technical Committee of the United Nations Intergovernmental Panel on Climate Change (IPCC) Scholarship Programme; a Member of the Advisory Board of *UNAM Law Review*; a Member of the Editorial Board of the *Journal of African Foreign Affairs* (JoAFA); a Member of the Editorial Board of the *NIELS Journal of Environmental Law* at the Nigerian Institute of Advanced Legal Studies; a Member of the Editorial Board of the *Legal Perspectives on Global Challenges Series* in The Hague, Netherlands; a Member of the Editorial Board of the Publication Series *Law and Constitution in Africa*, NOMOS Publishers, Germany; and a Member of the Editorial Board of the *International Yearbook of Soil Law and Policy*, Springer Publishers, Germany. He graduated in law after studies at the Universities of Lausanne, Switzerland and Munich, Germany and holds a Master of Laws degree (LLM) from the University of Stellenbosch, a Doctor of Laws degree (LLD) from Comenius University, a Master of Mediation degree (MM) from the University of Hagen, Germany and a postgraduate Diploma in International Human Rights Law from Åbo Akademi University, Finland.

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Anielle von Finckenstein has just obtained her Bachelor of Laws degree (LLB) from the University of Stellenbosch and will commence her articles of clerkship at Koep & Partners in Namibia in 2016. During her time at Stellenbosch she developed a keen interest in socio-economic rights and academic writing. After having served on the 2014 editorial committee of *Respona Meridiana*, a law journal exclusively publishing undergraduate students, she became the editor of the 2015 edition.

ABBREVIATIONS

ABS	Access and benefit sharing
ACPC	African Climate Policy Centre
AfDB	African Development Bank
AF	Adaptation Fund
AGF	Advisory Group on Climate Change Financing
ALAN	Association of Local Authorities in Namibia
AMCEN	African Ministerial Conference on the Environment
APPO	Air Pollution Prevention Ordinance
ARC	Association of Regional Councils
ARIPO	African Regional Intellectual Property Organisation
ASSELLAU	Association of Environmental Law Lecturers in African Universities
ATF	Agricultural Trade Forum
AU	African Union
AUC	African Union Commission
AWG-LCA	Ad hoc Working Group on Long-term Cooperative Action
BAP	Bali Action Plan
BASIC	Brazil, South Africa, India and China
BIOTA	Biodiversity Monitoring Transect Analysis in Africa (Project)
BRICS	Brazil, the Russian Federation, India, China and South Africa
CAF	Cancun Adaptation Framework
CAHOSCC	Conference of African Heads of State and Government on Climate Change
CBD	Convention on Biological Diversity
CBDR	Common but differentiated responsibility
CBNRM	Community Based Natural Resources Management
CCDA	Climate Change and Development in Africa
CDM	Clean Development Mechanism
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMESA	Common Market for Eastern and Southern Africa
CONTRALESZA	Congress of Traditional Leaders of South Africa
COP	Conference of the Parties
CSAG	Climate Systems Analysis Group
CSC	Climate Services Centre
CTE	Committee on Trade and Environment
CTESS	Committee on Trade and Environment Special Session
CTF	Clean Technology Fund

DANIDA	Danish International Development Agency
DEA	Directorate of Environmental Affairs
DGVM	Dynamic global vegetation model
DPRE	Development Plan for Renewable Energy
DRFN	Desert Research Foundation of Namibia
DSB	Dispute Settlement Body
EAC	East African Community
ECB	Electricity Control Board
ECCP	European Climate Change Programme
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EPA	Economic Partnership Agreement or Environmental Protection Agency
ETS	EU Emissions Trading System
EU	European Union
FAO	United Nations Food and Agriculture Organisation
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
FYP	Five-year Plan
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GCCA	Global Climate Change Alliance
GCCI	Global Climate Change Impacts
GCOS	Global Climate Observation System
GDP	Gross Domestic Product
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GEF	Global Environmental Facility
GFDRR	Global Facility for Disaster Reduction and Recovery
GG	Government Gazette
GHG	Greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GMO	Genetically modified organism
GN	Government Notice
GR	Genetic resources
GRN	Government of the Republic of Namibia
IAEA	International Atomic Energy Agency
ICCPR	International Covenant on Civil and Political Rights
ICDP	Integrated Conservation and Development Projects
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICJ	International Court of Justice
IDP	Internally Displaced Person
IEA	International Energy Agency

ILO	International Labour Organisation
INC	Intergovernmental Negotiating Committee
IPBF	Indigenous People's Business Forum
IPCC	Intergovernmental Panel on Climate Change
IPP	Independent Power Producer
IPR	Intellectual property rights
IRENA	International Renewable Energy Agency
ISDR	International Strategy for Disaster Reduction
IUCN	World Conservation Union (formerly International Union for the Conservation of Nature and Natural Resources)
IUCNAEL	IUCN Academy of Environmental Law
JI	Joint implementation
KAS	Konrad Adenauer Stiftung
KFW	Kreditanstalt für Wiederaufbau
LAI	Leaf area index
LCA	Long-term Cooperative Action
LDC	Least developed country
LDCF	Least Developed Countries Fund
LRDT	Legal Research and Development Trust
MCA	Millennium Challenge Account
MDG	Millennium Development Goal
MEA	Multilateral Environmental Agreement
MEF	Major Economy Forum
MET	Ministry of Environment and Tourism
MOP	Meeting of the Parties
MPA	Model Petroleum Agreement
MRA	Marine Resources Act
MRV	Measurement, Reporting and Verification
NAMA	Non-agricultural market access
NAPA	National adaptation plan
NAMFISA	Namibia Financial Institutions Supervisory Authority
NAMREP	Namibia Renewal Energy Programme
NEAA	Netherlands Environmental Assessment Agency
NCCC	Namibian Climate Change Committee
NCCI	Namibia Chamber of Commerce and Industry
NDC	Namibia Development Corporation
NDP	National Development Plan
NEEP	Namibia Energy Efficiency Programme in Buildings
NEPAD	New Partnership for Africa's Development
NGGIP	National Greenhouse Gas Inventories Programme
NGO	Non-governmental organisation
NIRP	National Integrated Resource Plan

NMA	Namibian Manufacturers Association
NPP	Net primary productivity
OAU	Organisation for African Unity
ODS	Ozone-depleting substances
OECD	Organisation for Economic Co-operation and Development
OGEMP	Off-Grid Energisation Master Plan
PGRFA	Plant Genetic Resources for Food and Agriculture
PIC	Prior Informed Consent
PPA	Power Purchase Agreements
PRC	People's Republic of China
PSC	Peace and Security Council
R&D	Research and Development
RE	Renewable Energy
RED	Regional Electricity Distributor
REDMP	Rural Electricity Distribution Master Plan
REEECAP	Renewable Energy and Energy Efficiency Capacity Building Programme
REEEI	Renewable Energy and Energy Efficiency Institute
REFAD	Renewable Energy for African Development
REN21	Renewable Energy Policy Network for the 21 st Century
REPM	Renewable Energy Procurement Mechanism
RET	Renewable Energy Technology
RGGI	Regional Greenhouse Gas Initiative
RISDP	Regional Indicative Strategic Development Plan
REDD	Reducing Emissions from Deforestation and Forest Degradation
RTPC	Regional Trade and Policy Course
SACU	Southern African Customs Union
SADC	Southern African Development Community
SADCC	Southern African Development Coordination Conference
SAP	Synthesis and Assessment Product
SARCOF	Southern Africa Regional Climate Outlook Forum
SCCF	Special Climate Change Fund
SCM	Subsidies and countervailing measures
SID	Small-island developing state
SPS	Sanitary and Phytosanitary Measures
SREP	Scaling-Up Renewable Energy Fund
SRREN	Special Report on Renewable Energy Sources and Climate Change Mitigation
SWAPO	South West Africa People's Organisation
TBT	Technical Barriers to Trade
TCE	Traditional Cultural Expression
TFI	Task Force on National Greenhouse Gas Inventories

TK	Traditional Knowledge
TRIPS	Agreement on Trade-related Aspects of Intellectual Property Rights
UDHR	Universal Declaration of Human Rights
UN	United Nations
UNAM	University of Namibia
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIN	United Nations Institute for Namibia
UN-REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
UNTAG	United Nations Transition Assistance Group
UPOV	International Union for the Protection of New Varieties of Plants
USAID	United States Agency for International Development
USD	US Dollar
WCI	Western Climate Initiative
WG	Working Group
WIPO	World Intellectual Property Organisation
WMO	World Meteorological Organisation
WTO	World Trade Organisation
WWF	World Wildlife Fund
ZERI	Zero Emission Research Initiative

CHAPTER 1

NAMIBIA AND ITS LEGAL SETUP

Oliver C. Ruppel and Katharina Ruppel-Schlichting

1 Namibia in a Nutshell: Facts and Figures

The inhospitable Namib Desert constituted a barrier to European colonisation until the late 18th century when traders and missionaries first explored the area. In 1878, the United Kingdom annexed Walvis Bay on behalf of the Cape Colony, while the rest of south-western Africa would soon thereafter fall under German administration, henceforth to be known as German South West Africa. Resulting from the Herero and Nama wars of anti-colonial resistance of 1904-08, Germany consolidated its hold over the colony, and prime-grazing land passed to white control. German overlordship ended during World War I in the wake of South Africa's military occupation of the German colony. On 17 December 1920, South Africa took over the administration of South West Africa in terms of Article 22 of the 1919 Peace Treaty of Versailles (which incorporated the Covenant of the League of Nations) and a mandate agreement by the League Council. South Africa was mandated with the power of administration and legislation over the territory. Article 22 stated as follows:

To those colonies and territories which as a consequence of the late war have ceased to be under the sovereignty of the States which formerly governed them and which are inhabited by peoples not yet able to stand by themselves under the strenuous conditions of the modern world, there should be applied the principle that the well-being and development of such peoples form a sacred trust of civilisation and that securities for the performance of this trust should be embodied in this Covenant. The best method of giving practical effect to this principle is that the tutelage of such peoples should be entrusted to advanced nations who by reason of their resources, their experience or their geographical position can best undertake this responsibility, and who are willing to accept it, and that this tutelage should be exercised by them as Mandatories on behalf of the League. The character of the mandate must differ according to the stage of the development of the people, the geographical situation of the territory, its economic conditions, and other similar circumstances. (...) There are territories, such as South-West Africa (...), which, owing to the sparseness of their population (...) or their remoteness from the centres of civilisation, or their geographical contiguity to the territory of the Mandatory, and other circumstances, can be best administered under the laws of the Mandatory as integral portions of its territory, subject to the safeguards above mentioned in the interests of the indigenous population.¹

In 1946, the League of Nations was superseded by the newly formed United Nations. When the United Nations requested South Africa to place the territory under a trusteeship agreement it refused. In 1966 the South African mandate was officially revoked by the UN General Assembly.² Also in 1966 the South West African People's Organisation (SWAPO), under the leadership of Sam Nujoma, started to put pressure on the South African Government, and took up an armed struggle to liberate Namibia. Political and social unrest within Namibia increased markedly during the 1970s and was often met with repression at the hands of the colonial

¹ Available at <http://net.lib.byu.edu/~rdh7/wwi/versa/versal.html>; accessed 20 November 2015.

² For further details see Zaire (2014:37ff.).

administration. In 1978, the UN Security Council passed Resolution 435 and authorised the creation of a Transition Assistance Group to monitor the country's transition to independence.³ In April 1989, the UN began to supervise this transition process, part of which entailed supervising elections for a Constituent Assembly which was also charged with drafting a constitution for the country. After more than a century of domination by other countries and a long struggle on both diplomatic and military levels, Namibian independence was achieved and officially declared on 21 March 1990, which is a national holiday today. Walvis Bay, which is Namibia's deep-water sea port, remained under South African control until 1994. Namibia has been a member of the Commonwealth of Nations since 1990.

Namibia borders on Angola in the north, Zambia and Zimbabwe in the north-east, Botswana in the east, South Africa in the south and the Atlantic Ocean to the west. The capital of Namibia is Windhoek, with a population estimated to be 368,000.⁴ The latest available census dated 2011 enumerated a population of 2,104,900.⁵ The population density lies at 2.5 inhabitants per km², which makes it the second least densely populated country in the world; about 42% of the population live in urban areas.⁶ The surface area of Namibia is 824,268 km², making the country the 31st largest in the world. Namibia is demarcated into 13 regions:

- In the North: Caprivi, Kavango, Kunene, Omusati, Ohangwena, Oshana and Oshikoto;
- In the central part of the country: Omaheke, Otjozondjupa, Erongo and Khomas;
- In the South: Hardap and Karas.

Namibia's population consists of approximately 50% Ovambo, 9% Kavango, 7% Damara, 7% Herero, 6% White (including about 20,000 of German descent), 5% Nama, 4% Caprivians, 3% San, 2% Rehoboth Baster and less than 1% Tswana.⁷ 87.5% of the population is black, 6% white and 6.5% mixed. English is the only official language today (until 1990 also Afrikaans and German). 80% of the population is classified as Christian (with 60% Protestants and 20% Catholic). At least 10% of the population hold indigenous beliefs.⁸

According to figures from the 2014 UN Human Development Report⁹, Namibia is ranked 127th out of 187 in the Human Development Index. Life expectancy at birth (2013) is 64.5 years; and adult literacy (2012) is 76.5%; Adolescent birth rate (births per 1,000 women aged 15-19) is 74.4; the poverty headcount ratio at national poverty lines is at 28.7% of the population; according to the National Labour Force Survey 2014¹⁰, the unemployment rate in Namibia is 28.1%; the HIV/AIDS pandemic and household food insecurity are among the main problems

³ Amoo / Skeffers (2008:17ff.).

⁴ CIA, the World Fact book on Namibia; available at <https://www.cia.gov/library/publications/the-world-factbook/geos/wa.html>; accessed on 18 August 2015.

⁵ Cf. GRN (2012e:2).

⁶ GRN (2012e:42 and 5).

⁷ CIA, the World Fact book on Namibia; available at <https://www.cia.gov/library/publications/the-world-factbook/geos/wa.html>; accessed on 18 August 2015.

⁸ Figures taken from Factbook Namibia <http://www.kas.de/namibia/en/publications/20353/>; accessed 18 August 2015.

⁹ Available from <http://hdr.undp.org/en/data>; accessed 26 August 2015.

¹⁰ NSA (2014:68). Note that this figure is based on the broad unemployment definition which drops the requirement that the person actively looked for work. In contrast, the strict unemployment definition as used for example by the ILO unemployed population consists of all persons (15 years and above) who are either actively seeking for work or are available for work during the reference period.

facing Namibia. Tuberculosis and malaria prevalence in Namibia are amongst the highest in the world. Almost half the population depends on subsistence farming. Although Namibia has large reserves of minerals (diamonds, uranium, zinc, copper, and gold) and despite the comparably high income per capita in the region, the wealth distribution is extremely unbalanced in Namibia. The income share held by the highest 20% is 66.2%, while the income share held by the lowest 20% is 3.4%.¹¹ Economically, Namibia remains overly dependent on South Africa, its most important partner in the Southern African Development Community (SADC). Namibia is classified as having an upper middle income level with a GDP (current US\$) of \$13.43 billion (2014).¹² The local currency, the Namibia Dollar (NAD) is linked to the South African Rand. Both currencies are accepted in Namibia.

Estimates for 2014 by the World Bank relating to Namibia's economy reveal the following figures:¹³

GDP (current US\$) (billions)	13.43	2014
GDP growth (annual %)	4	2014
Inflation, GDP deflator (annual %)	12	2014
Agriculture, value added (% of GDP)	6	2014
Industry, value added (% of GDP)	35	2014
Services, etc., value added (% of GDP)	59	2014
Exports of goods and services (% of GDP)	40	2014
Imports of goods and services (% of GDP)	63	2014
Gross capital formation (% of GDP)	28	2014

2 The Legal Setup in Namibia

The following section provides an overview of Namibia's legal setup, necessary for a discussion of the more complex legal issues in the environmental domain.

The Constitution of the Republic of Namibia, which was drafted and adopted in 1990, is the fundamental and supreme law of the land.¹⁴ It is hailed by some as being amongst the most liberal and democratic in the world. It enjoys hierarchical primacy amongst the sources of Namibian law by virtue of its Article 1(6). It is thematically organised into 21 Chapters which contain 148 Articles. Together, they organise the state and outline the rights and freedoms of people in Namibia.¹⁵

By virtue of Proclamation 21 of 1919, Roman Dutch law as developed by South African courts was made the common law of the territory and was binding on the courts in Namibia until independence in 1990. This position is affirmed by Article 66(1) of the Constitution, which provides that both the customary law and common law of Namibia in force at the date of independence shall remain valid to the extent to which this is not in conflict with the Constitution or any other statutory law.

¹¹ See World Bank figures on World Development Indicators: Distribution of income or consumption available at <http://wdi.worldbank.org/table/2.9#>; accessed 26 August 2015.

¹² As per figures from the World Bank available at <http://data.worldbank.org/country/namibia>; accessed 26 August 2015.

¹³ Estimates for 2014 by the World Bank retrieved from <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>; accessed 18 August 2015.

¹⁴ Cf. Amoo (2008a, b, c). See also Hinz *et al.* (2002) and Bösl *et al.* (2010).

¹⁵ Ambunda / Mugadza (2009:5ff.).

One of the key requirements of the rule of law is that the courts and the state's prosecution agencies are independent and free of political interference.¹⁶ Although this doctrine – the separation of powers – is well entrenched in the Namibian Constitution and recognised by the courts, the true measure of the independence of the judiciary and the state prosecution services lies in the way these institutions relate to the Executive and other organs of state in practice.

Article 12 of the Constitution contains the provisions for a fair trial. The principle of the rule of law runs throughout the constitutional regime.¹⁷ In Namibia, the separation of legislative and executive powers from those of the independent judiciary is constitutionally guaranteed.¹⁸ Various mechanisms are put in place to ensure that each branch of Government remains independent of the other through a system of checks and balances.¹⁹ The Constitution explicitly states that Namibia is established as “a democratic and unitary state founded on the principles of democracy, the rule of law and justice for all.”²⁰

3 The Laws

Namibian law reflects the country’s history and is the product of different sources: Firstly, Roman law; secondly, the fusion of Roman law and Roman Dutch customary law – hence the term Roman Dutch law – which came in the wake of Dutch colonisation at the Cape of Good Hope; thirdly, from the early 19th century onwards English law asserted itself, leaving deep traces in Roman Dutch law, after British hegemony in southern Africa had been established; and fourthly, indigenous customary law from time immemorial.²¹ With few exceptions German legal influence has disappeared completely.

The Namibian legal system is an object of fascination for comparative lawyers, legal ethnologists and sociologists.²² The concept of legal pluralism – a situation in which more than one type of law or legal tradition operates simultaneously – is commonplace in Namibia.²³ Some sources of law are authoritative while others merely have a persuasive authority. The courts are bound by authoritative sources whereas those of persuasive authority may serve to convince a court to apply or interpret a legal rule in a particular manner. The sources of law in which they are usually consulted are statute law or legislation; judgements of the courts; international law (Article 144 of the Constitution); common and customary law (Article 66 of the Constitution) and to some extent legal writing.

The doctrine of *stare decisis* applies in Namibia, making the judgements of the superior courts one of the most important sources of the law. Literally *stare decisis* means “the decision stands”. Obviously, when a court arrives at a decision, the parties to the dispute adjudicated will be bound by that decision. But what is the effect of such particular decision on similar disputes arising in future? Is a court, when it has to settle another dispute of a similar or even the same nature bound by previous court decisions, or is it free to formulate its own principles and ignore a previous decision? Strict adherence to the doctrine of *stare decisis* would mean that courts are obliged to follow earlier decisions regardless of whether an earlier decision still makes sense. Therefore and for greater fairness and legal certainty, Namibian courts are bound

¹⁶ Cf. Horn / Bösl (2008a, b).

¹⁷ Hinz (2003:273).

¹⁸ Ruppel (2008d).

¹⁹ Diescho (1994:70ff.).

²⁰ Article 1(1), Namibian Constitution.

²¹ Hinz (2002a).

²² Ruppel (2009j).

²³ Griffiths (1986:1-55).

by their own decisions unless and until they are overruled by a superior court. It is, however, conceivable that circumstances arise that would render it possible for a court to override its own legal opinion.²⁴

4 The Court System

The Namibian court system retains Roman Dutch elements, inherited from South Africa along with elements of the African traditional (community) court system. The formal court system comprises the Supreme Court, the High Court, the Magistrates' Courts and the Community Courts. The Supreme Court serves as the highest court of appeal and also exercises constitutional review of legislation. Prior to the attainment of nationhood in 1990 and the promulgation of the Constitution of the Republic of Namibia, which created an independent judiciary, the courts of Namibia were an extension of the judiciary system of South Africa.²⁵

4.1 The Supreme Court

The Supreme Court is primarily a court of appeal, and its appellate jurisdiction covers appeals emanating from the High Court, including appeals which involve interpretation, implementation and upholding of the Constitution and the fundamental rights and freedoms guaranteed there under.²⁶ The Supreme Court is not bound by any judgement, ruling or order of any court that exercised jurisdiction in Namibia before or after independence. The Constitution further vests in Parliament the power to make legislation providing for the appellate jurisdiction of the Supreme Court. The Supreme Court is vested with unlimited appellate jurisdiction over appeals against any judgement or order of the High Court; and any party to any such proceedings before the High Court, if dissatisfied with any such judgement or order, has a right of appeal to the Supreme Court.²⁷

In the exercise of its appellate jurisdiction, the Supreme Court has the power to receive further evidence, either orally or by deposition before a person appointed by the court, or to remit the case for further hearing to the court of first instance or to the court whose judgement is the subject of the appeal, with such instructions relating to the taking of further evidence or any other matter as the Supreme Court may deem necessary. The Supreme Court is also empowered to confirm, amend or set aside the judgement or order that is the subject of the appeal, and to give any judgement or make any other order which the circumstances may require.²⁸ The Supreme Court has original jurisdiction over matters referred to it for decision by the Attorney-General under the Constitution, and with such other matters as may be authorised by Act of Parliament. Thus, the Supreme Court has original jurisdiction over constitutional matters, but this original jurisdiction is not exclusive to the Supreme Court because the High Court is also vested with original jurisdiction over constitutional matters. Unlike, for example, in the case of the judicial structure in South Africa, where there is a Constitutional Court, the Namibian Constitution does not create a separate Constitutional Court *per se*, but the Supreme Court can constitute itself as a Constitutional Court.²⁹ The Supreme Court may exercise this jurisdiction *ex mero motu* (of the court's own accord) should it come to the notice of the court or any judge of that court, that an irregularity has occurred in

²⁴ Havenga *et al.* (2002:8ff.).

²⁵ Amoo (2008a, b, c).

²⁶ Amoo (2008b:72ff.).

²⁷ Cf. Supreme Court Act No. 15 of 1990.

²⁸ Ibid.

²⁹ Amoo (2008a:3ff.).

any proceedings, notwithstanding that such proceedings are not subject to an appeal or other proceedings before the Supreme Court. The seat of the court is in Windhoek. A decision of the Supreme Court is binding on all other courts of Namibia and all persons in Namibia unless it is reversed by the Supreme Court itself, or is contradicted by an Act of Parliament, lawfully enacted in conformity with the principles of legislative sovereignty.³⁰

4.2 The High Court

The High Court is a superior court of record and its jurisdiction is provided by both the Constitution and the High Court Act³¹. The Constitution vests the High Court with both original and appellate jurisdiction, and all proceedings in the High Court are to be carried in an open court.³² The court may, however, exclude the press and/or the public from all or any part of the trial for reasons of morals and the public order or national security.³³ It is situated permanently in Windhoek, and since 2009 also at Oshakati. Other than this, the court goes on circuit to venues, including Gobabis, Grootfontein and Swakopmund.³⁴ The High Court derives its appellate jurisdiction to hear and adjudicate upon appeals from lower courts primarily from the Constitution.³⁵ During the appeal process, the court may receive further evidence, either orally or by deposition before a person appointed by the court, or remit the case to the court of first instance or the court whose judgement is the subject of the appeal, for further hearing, with such instructions relating to the taking of further evidence or any other matter as the High Court may deem it necessary. The court also has the power to confirm, amend, or set aside the judgement or order which is the subject of the appeal, and to give any judgement or make any order which the circumstances may require.³⁶

4.3 The Lower Courts

The lower courts are responsible for administering justice. In terms of Article 78 of the Constitution, the lower courts form part of the judiciary, one of the three branches of the state. Lower courts are established in terms of Section 2(1) of the Magistrates' Courts Act.³⁷ The bulk of the judiciary's work also takes place in the lower courts. There are 32 permanent courts and more than 30 periodical courts in Namibia.³⁸ Lower courts are divided into a Regional Division and five administrative districts, namely Windhoek, Oshakati, Otjiwarongo, Keetmanshoop and Rundu. Each district has a seat for a regional court that presides on all criminal matters except high treason, but has no jurisdiction in civil matters.³⁹

³⁰ Ibid.

³¹ No. 16 of 1990.

³² Section 13 of the High Court Act.

³³ Article 12(1)(a), Namibian Constitution; Amoo (2008b:76).

³⁴ Section 4 of the High Court Act provides that the seat of the High Court is to be in Windhoek, but if the Judge-President deems it necessary or expedient in the interest of the administration of justice, he or she may authorise the holding of its sitting elsewhere in Namibia.

³⁵ Article 80(2), Namibian Constitution.

³⁶ Section 19 of the High Court Act.

³⁷ No. 32 of 1944.

³⁸ The Ministry of Justice Annual Report 2006-2007:15.

³⁹ Amoo (2008b:83).

4.4 The Magistrates' Courts

Magistrates' Courts in Namibia may be classified into regional, district and sub-district, division⁴⁰ and periodical courts⁴¹. Magistrates' Courts are courts of record⁴² and their proceedings in both criminal cases and the trial of all defended civil actions are conducted in an open court.⁴³ The jurisdiction of the Magistrates' Courts in respect of causes of action is regulated by Section 29 of the Magistrates' Court Act, as amended.⁴⁴ The Magistrates' Courts have jurisdiction over liquid claims not exceeding N\$100,000 and illiquid claims not exceeding N\$25,000.⁴⁵ Magistrates' Courts are presided over by judicial officers, and advocates or attorneys of any division of the Supreme Court may appear in any proceeding in any court. All Magistrates' Courts have equal civil and criminal jurisdiction, except the regional Magistrates' Courts, which have only criminal jurisdiction.⁴⁶ The territorial jurisdiction of a Magistrate's Court is the district, sub-district or area for which it is established; a court established for a district has no jurisdiction in a sub-district. Magistrates' Courts also have the jurisdiction to hear and determine any appeal against any order or decision of a Community Court.

4.5 The Community Courts

The Community Courts shall cater for all forms of proceedings exercised under customary law. Community courts are a formal creation of the Community Courts Act,⁴⁷ which also provides detailed procedures and requirements for the establishment and recognition of Community Courts in particular traditional communities.⁴⁸ The Act was drafted to give legislative recognition to and formalise the jurisdiction of the traditional (African) courts that render essential judicial services to members of traditional communities who subject themselves to their jurisdiction and the application of customary law. This formal recognition also brings the proceedings of the erstwhile traditional courts within the mainstream of the judiciary in Namibia, and subjects their proceedings to formal evaluation and review by the superior courts.⁴⁹ The Community Courts Act has, however, not yet been implemented. The Ministry of Justice has pointed out that the delay in the promulgation of the Act may be associated with a lack of funds for implementing the necessary infrastructure, as well as the lack of trained staff in the area of customary law.⁵⁰

⁴⁰ Section 2(f) and (2)(a)-(iv) of the Magistrates' Courts Act of 1944.

⁴¹ Section 26 of the Magistrates' Courts Act of 1944; periodical courts are meant to serve the remote areas of the country, and as the name suggests, they are only held at intervals, when the volume of work in the area requires a court sitting.

⁴² A court of record can be understood as "a court whose acts and judicial proceedings are written on parchment or in a book for a perpetual memorial which serves as the authentic and official evidence of the proceedings of the court". Cf. Amoo (2008b:83).

⁴³ Section 5 of the Magistrates' Courts Act of 1944.

⁴⁴ Magistrates' Courts Amendment Act No. 9 of 1997.

⁴⁵ A liquid amount is fixed and certain and can – compared to an illiquid amount – be easily determined. *Maritime and General Insurance Co Ltd v Colenbrander* 1978 (2) SA 262 (D) at 264F.

⁴⁶ Amoo (2008b:84ff).

⁴⁷ No. 10 of 2003.

⁴⁸ For more details see Hinz (2008a).

⁴⁹ Amoo (2008b:90).

⁵⁰ Hinz (2008a).

5 The Ombudsman

In order to protect and maintain the respect of the state for the rights of the individual citizen, to promote the rule of law, and to promote and advance democracy and good governance, the Office of the Ombudsman has been established. The relevant legal provisions with regard to the Ombudsman are to be found in Chapter 10 of the Namibian Constitution as well as in the Ombudsman Act⁵¹. The mandate of the Ombudsman relates to three widely-defined categories:⁵² human rights, administrative practices, and the environment. Complaints, which are related to the mandate of the Ombudsman, may be submitted by any person, free of charge and without specific formal requirements. To ensure that citizens have an avenue, open to report complaints free of red tape, and free of political interference, the Ombudsman is politically independent, impartial, fair, and acting confidential in terms of the investigation process.⁵³ Negotiation and compromise between the parties concerned are the main objective when handling complaints.⁵⁴

⁵¹ No. 7 of 1990.

⁵² For more details on the mandates of the Ombudsman see Ruppel / Ruppel-Schlichting (2010) and Chapter 21 in this book.

⁵³ Tjitendero (1996:10). As to the characteristics of a classical Ombudsman in general see Gottehrer / Hostina (1998).

⁵⁴ Article 91(e) of the Constitution and Section 5(1) of the Act.

CHAPTER 2

INTRODUCING ENVIRONMENTAL LAW

Katharina Ruppel-Schlichting

1 Terminology

At the outset, it is important to explain the term environmental law, as there is more than one valid definition. This is obvious in the light of the fact that environmental law is a highly complex subject. The Oxford Advanced Learner's Dictionary broadly defines environment as "the conditions, circumstances, etc affecting a person's life"¹. This definition can serve as a good starting point for our analysis and definition of the term environment. Academics from various disciplines, including humanists, natural scientists and economists have made various attempts to shed light on this issue, and thus definitions vary. The etymological origin of the term environment is to be found in an ancient French word, *environner*, which means to encircle. This implicates the existence of a centre in which someone or something is situated observing the circumstances, objects, or conditions by which he, she or it is surrounded. Based on this etymological origin, it is reasonable – though not necessarily correct – for the term environment to often be used synonymously with other terms such as nature, ecology or habitat.

A commonly-used definition is that environment is

the complex of physical, chemical, and biotic factors (like climate, soil and living things) that act upon an organism or an ecological community and ultimately determine its form and survival

and "the aggregate of social and cultural conditions that influence the life of an individual or community."²

Academics and decision-making bodies have dealt with the notion 'environment' in the process of drafting documents, academic papers, statutes or other legal texts, as well as judicial decisions. Most approaches describe the term very widely, whilst others are more specific, as shown by the examples below.

The Declaration of the United Nations Conference on the Human Environment, which was discussed and decided at the United Nations Conference on the Human Environment in Stockholm in 1972, is considered to be one of the basic legal foundations of international environmental protection. Part I proclaims that "the protection of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world". While the declaration lacks a definition of the term itself, it is more precise in specifying what natural resources are:

The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management as appropriate.

¹ Oxford Advanced Learner's Dictionary 5th edition 1995.

² Merriam-Webster's Collegiate Dictionary 11th edition 2004.

On the national level, the Namibian Environmental Management Act³ in Section 1 defines environment as

the complex of natural and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, including –

- (a) the natural environment that is the land, water and air, all organic and inorganic material and all living organisms; and
- (b) the human environment that is the landscape and natural, cultural, historical, aesthetic, economic and social heritage and values.

The South African National Environmental Management Act⁴ defines environment as

The surroundings within which humans exist and that are made up of:

- (i) the land, water and atmosphere of the earth;
- (ii) micro-organisms, plant and animal life;
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

In their rather broad dimensions, all the above approaches make it clear that it is difficult to establish more precisely the possible limits of the term environment. The encompassing nature of the term has also been emphasised by the International Court of Justice in its advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons*:

The environment is not an abstraction, but represents the living space, the quality of life, and the very health of human beings, including generations unborn.⁵

By way of summary: the term environment denotes the entire range of living and non-living factors that influence life on earth, and their interactions. Everything living, humans, animals, plants and micro-organisms are thus part of our environment, as well as non-living resources such as air, water, land, in addition to historical, cultural, social and aesthetic components; this includes the built environment.

This difficulty in definition is reflected in the scope of the term environmental law. In a very broad sense, environmental law can generally be described as the body of rules which contain elements to control the human impact on the environment. However, given that all human activities, as well as all natural events have a direct or indirect impact on the environment, environmental protection virtually forms part and should be integrated into all areas of law and policy. Thus, environmental law cannot be seen as a distinct domain of law but rather as an assortment of legal norms, contained in a number of conventional fields of law or an

ensemble of norms, statutes, treaties and administrative regulations to ensure or to facilitate the rational management of natural resources and human intervention in the management of such resources for sustainable development.⁶

In more detail, environmental law can thus be defined as the group of norms, rules, procedures and institutional arrangements found in civil and common law, statutes and implementing regulations, case law, treaties and soft law instruments, which deal with or relate to protection,

³ No. 7 of 2007.

⁴ No. 107 of 1998.

⁵ Advisory Opinion, ICJ Rep. 1996, 241f, para. 29.

⁶ Okidi (1988:130).

management and utilisation of the environment and natural resources for sustainable development and/or intergenerational equity.⁷

Whatever the scope of environmental law, it cannot be disputed that an interdisciplinary and holistic approach is needed in order to adequately address environmental threats and concerns from a legal perspective. Disciplines that are relevant for the area of environmental law include the natural, physical and social sciences, history, ethics, and economics.

2 Foundations of Environmental Protection

Although environmental law is considered to be a relatively new area of law, one must go far back in the world's history when tracing the foundations of environmental protection. As stated above, environmental law is of interdisciplinary nature, and as such, it is anchored in various fields and disciplines: religion, philosophy, ethics, science, economics, national and international law. All world religions contain rules and principles regarding the conservation of the environment.⁸ In the Judeo-Christian religious tradition, one basic conceptual foundation of environmental protection in terms of human guardianship for the earth and its resources can be found in the Old Testament:

God blessed them, and God said to them, ‘Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth.’⁹

Christian environmental commitment has been stressed by former Pope Benedict XVI and his predecessor, Pope John Paul II.¹⁰

The family needs a home, a fit environment in which to develop its proper relationships. For the human family, this home is the earth, the environment that God the Creator has given us to inhabit with creativity and responsibility. We need to care for the environment: it has been entrusted to men and women to be protected and cultivated with responsible freedom, with the good of all as a constant guiding criterion. Human beings, obviously, are of supreme worth vis-à-vis creation as a whole. Respecting the environment does not mean considering material or animal nature more important than man. Rather, it means not selfishly considering nature to be at the complete disposal of our own interests, for future generations also have the right to reap its benefits and to exhibit towards nature the same responsible freedom that we claim for ourselves.¹¹

⁷ See also Sands / Peel (2012:13) for a detailed discussion.

⁸ For a detailed description see Kiss / Shelton (2004:9ff.).

⁹ Gen.1:28.

¹⁰ “Faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past. The public in general as well as political leaders are concerned about this problem, and experts from a wide range of disciplines are studying its causes. Moreover, a new ecological awareness is beginning to emerge which, rather than being downplayed, ought to be encouraged to develop into concrete programmes and initiatives.” Message of His Holiness Pope John Paul II for the celebration of the World Day of Peace 1 January 1990 see http://www.vatican.va/holy_father/john_paul_ii/messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace_en.html; accessed 4 November 2010.

¹¹ Message of His Holiness Pope Benedict XVI for the celebration of the World Day of Peace 1 January 2008 see http://www.vatican.va/holy_father/benedict_xvi/messages/peace/documents/hf_ben-xvi_mes_20071208_xli-world-day-peace_en.html; accessed 4 November 2010.

In June 2015, Pope Francis, with his second encyclical called *Laudato si*¹² released an environmental compass, focusing among others on climate change as a common concern and lamenting pollution, waste and the throwaway culture, a lack of clean water, loss of biodiversity, and an overall decline in human life and a breakdown of society.

Principles of environmental protection can also be found in the Islamic tradition:

The right to utilise and harness natural resources, which God has granted man, necessarily involves an obligation on man's part to conserve them both quantitatively and qualitatively. God has created all the sources of life for man and all resources of nature that he requires, so that he may realise objectives such as contemplation and worship, inhabitation and construction, sustainable utilisation, and enjoyment and appreciation of beauty. It follows that man has no right to cause the degradation of the environment and distort its intrinsic suitability for human life and settlement. Nor has he the right to exploit or use natural resources unwisely in such a way as to spoil the food bases and other sources of subsistence for living beings, or expose them to destruction and defilement.¹³

The religious belief systems of indigenous peoples contain concepts of environmental protection to a wide extent as well, as natural resources are basic to their existence. Thus, the relationship with the land is a foundation for their beliefs, customs, tradition and culture.¹⁴

Semi-detached from religious concepts and traditions are the concepts of equity and justice, which are of rather philosophical or ethical nature. Three kinds of relationships can be listed in this context: Inter-generational equity, dealing with the relationships among existing persons; intra-generational equity, governing the relationships between present and future generations; and inter-species equity, covering the relationships between humans and other species. These concepts have been laid down in many environmental legal texts¹⁵ and form basic principles for environmental jurisprudence on international¹⁶ and national¹⁷ level.

Science, especially biology, chemistry and physics, has been and remains one of the most important foundations in the history and the development of environmental law, as it uses science to predict and regulate the consequences of human behaviour on natural phenomena. On the other hand, environmental law must be developed in a manner that is flexible enough to respond to scientific uncertainty, possible irreversibility and the dynamics of a constantly evolving environment.¹⁸

Last, but not least, environmental law also rests on the world's economic system and its challenge to environmental protection¹⁹ as economic growth – at least in its early stages –more

¹² See Encyclical Letter Laudato Si' of The Holy Father Francis on Care for our Common Home available at http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html; accessed 19 August 2015.

¹³ Bagader *et al.* (1994): Section one: A general introduction to Islam's attitude toward the universe, natural resources, and the relation between man and nature.

¹⁴ Hinz / Ruppel (2008b:6).

¹⁵ See for example Principle 1 of the Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration); Preamble to the Convention on Biological Diversity; Section 3(2) of the Environmental Management Act No. 7 of 2007.

¹⁶ E.g. *Maritime Delimitation in the Area between Greenland and Jan Mayden Denmark v Norway ICJ* 14 June 1993 separate opinion by Weeramantry available at <http://www.icj-cij.org/docket/index.php?p1=3&k=e0&case=78&code=gjm&p3=4>; accessed 4 November 2010.

¹⁷ E.g. *Oposa and others v Factoran and another* G.R.NO: 101083 Supreme Court of the Philippines. Summary available at <http://www.unescap.org/drpad/vc/document/compendium/ph1.htm>; accessed 4 November 2010. See also Gatmaytan (2003).

¹⁸ Kiss / Shelton (2004:14).

¹⁹ Ibid:15.

often than not brings about environmental degradation.²⁰ Measures for environmental protection are expensive and therefore increase the costs of goods and services; this in turn has an impact on the free trade in goods and services, and might influence the issue of competitive advantage. This, the economic North-South divide²¹, and the fact that natural resources are exhaustible, tie the need for environmental protection and economic development together. This can be addressed through environmental law mechanisms.

3 Functions of Environmental Law

During the past decades, environmental concerns have been high on the legal agenda, with good reason. Mankind is part of nature and life depends on the uninterrupted functioning of natural systems as this ensures the supply of energy and nutrients. Humans are directly dependent on the ecosystems and natural resources. The dependence of people on ecosystems is often more apparent in rural communities where lives are directly affected by the availability of resources such as water, food, medicinal plants and fire wood. Further, ecosystems provide cultural, aesthetic, spiritual and intellectual stimulation. Every form of life is unique and merits respect, regardless of its worth to man. Humans can, however, alter nature and exhaust natural resources by action or its consequences and must therefore fully recognise the urgency of maintaining the stability and quality of nature and of conserving natural resources. Thus, environmental concerns have become subject to multiple law-making processes.

But why is law needed to conserve our environment? Given that environmental degradation is largely caused by human intervention, the public authority responsible for preventing such negative effects will act by developing legal rules in order to have at hand binding norms. The obligatory character of environmental law and enforcement mechanisms are designed to prevent acts detrimental to the environment. Not only does environmental law establish rules and regulations, it also provides for other forms of intervention such as management tools, incentives and disincentives. However, binding rules are not the only element in environmental law; other, non-binding principles such as declarations or plans might just as well be appropriate to enhance environmental protection. Thus, environmental law is an essential remedy to pollution and to the depletion of the world's natural resources. International law is needed because most environmental challenges cross boundaries in their scope.²²

From a legal perspective, environmental protection can be achieved by international treaties and declarations, through national constitutions, and environmental policies determining the objectives and strategies which should be used in order to ensure the respect of environmental values, and further, through statutory legal instruments to reach the objectives fixed by the environmental policy. The main function of environmental law is thus to safeguard and protect non-renewable resources for future generations. Further to this, renewable resources have to be managed in such a way that continuous supply is ensured and resource depletion is avoided, e.g. deforestation, which can also trigger climate change and desertification. Habitats upon which various species of animal life depend for survival have to be protected in order to retain the food chain. Also the essential character of natural treasures has to be preserved for future generations.²³

²⁰ Hypothesis advanced by Simon Kuznet in his Environmental Kuznet's Curve. Kuznet (1955 and 1956). For a critical discussion see Yandle *et al.* (2002).

²¹ Beyerlin (2006).

²² Kiss / Shelton (2004:3).

²³ Sands (2003:252ff.); Kidd (2008:13ff.).

4 Historical Development of Environmental Law

Although much has been written, especially with regard to the historical development of international environmental law, the following paragraphs will complementarily provide a short overview on how international environmental law has developed.²⁴ Writing, however, from a Namibian perspective, the African context and specific developments in sub-Saharan Africa, and Namibia in particular, will also be addressed.

International environmental law has only come into its own during the second half of the 20th century, although some international environmental legislative measures had already been taken earlier. The 1902 Paris Convention to Protect Birds Useful to Agriculture granted protection to certain birds by prohibiting their killing or destruction of their nests, eggs or breeding places, except for scientific research or repopulation purposes. The 1933 London Convention Relative to the Preservation of Fauna and Flora in their Natural State applied to Africa – then largely colonised. It did not, however, cover the metropolitan areas of the colonial powers.²⁵ The Convention provided for the creation of national parks, included measures regulating the export of hunting trophies, banned certain methods of hunting and provided for measures to be taken to protect animals and plants perceived to be useful to man or of special scientific interest. On the North American continent, the 1940 Washington Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere provided for the establishment of national parks and reserves, the protection of wild plants and animals, and for cooperation between governments in the field of research.²⁶ Following these precursors of present-day environmental law concepts, the founding of the United Nations and its specialised agencies in 1945 marks a milestone in the development of international environmental law.

In the 1950s, states increasingly entered into water-related agreements. Such boundary water agreements, including provisions on the problem of water pollution and efforts to combat marine pollution, were addressed by the 1954 London Convention for the Prevention of the Pollution of the Sea by Oil.²⁷ In 1956, the first United Nations Conference on the Law of the Sea (UNCLOS I) was held at Geneva, Switzerland. Four treaties were concluded as a result in 1958: the Convention on the Territorial Sea and Contiguous Zone,²⁸ the Convention on the Continental Shelf,²⁹ the Convention on the High Seas,³⁰ and the Convention on Fishing and Conservation of Living Resources of the High Seas.³¹ The four Conventions on the Law of the Sea aimed at achieving international cooperation to solve the problems related to the conservation of the living resources of the high seas. Among others, it prohibited ocean pollution by oil, pipelines and by radioactive waste; further, damage to the marine environment caused by drilling operations on the continental shelf was also addressed. The 1959 Antarctic

²⁴ For an extensive overview of the history of international environmental law see, for example, Kiss / Shelton (2004:25ff.), Sands / Peel (2012:16ff.) and Sands (2003:25ff.).

²⁵ This convention was replaced by the 1968 African Convention on the Conservation of Nature and Natural Resources.

²⁶ Legal instruments predating the establishment of the United Nations are the 1909 Agreement Respecting Boundary Waters between the United States and Canada or the 1921 Geneva Convention Concerning the Use of White Lead in Painting. Cf. Sands (2003:25ff.) and Kiss / Shelton (2004:25f.).

²⁷ Amended in 1962 and 1969 and replaced in 1972 by the International Convention for the Prevention of the Pollution of the Sea by Oil.

²⁸ Entry into force: 10 September 1964.

²⁹ Entry into force: 10 June 1964.

³⁰ Entry into force: 30 September 1962.

³¹ Entry into force: 20 March 1966.

Treaty outlawed all nuclear activity on the sixth continent and envisaged the adoption of measures to protect animals and plants.

The present ecological era is considered to have started at the end of the 1960s, when it became apparent that the world's resources were not limitless and something needed to be done to prohibit industrial and developing nations from destroying the world's water, air, biological and mineral resources. Public opinion increasingly demanded action to protect the quantity and quality of the environment.³² New technologies, especially the development and deployment of nuclear technology led to further environmental legislation such as the 1963 Moscow Treaty Banning Nuclear Weapons in the Atmosphere, Outer Space and Underwater. It was adopted to obtain an agreement on general and complete disarmament under strict international control and in accordance with the objectives of the United Nations.

It is noteworthy, that even before the United Nations officially took up the protection of the environment with its Stockholm conference in 1972, it was at regional level, where environmental law history was written as early as 1968. On the European level, the Council of Europe adopted the first environmental texts.³³ But more remarkably, the heads of states and governments of the Organisation of African Unity in 1968 signed a comprehensive document on environmental protection, namely the African Convention on the Conservation of Nature and Natural Resources. This was remarkable in that such a document was signed despite the common view in the region that environmental degradation was primarily a problem of industrial pollution in the northern hemisphere.

Within the United Nations, which strongly shaped the evolution of international environmental law, several conferences and the results thereof are of particular relevance. In 1972, the General Assembly convened a Conference on the Human Environment in Stockholm. This environmental conference was the first of its kind and it was attended by about 6,000 participants, delegations from 113 states, representatives of every major intergovernmental organisation, 700 observers sent by 400 NGOs and 1500 journalists.³⁴ The two-week conference resulted in several documents, which remain basic foundations of today's international environmental law: The Declaration on the Human Environment³⁵ included 26 principles that greatly shaped future international environmental law. In its basic statements, the 1972 Stockholm Declaration on Human Environment recognises that the natural elements and man-made things are essential to human well-being and to the full enjoyment of human rights including the right to life. The protection of the environment is viewed as a major issue for economic development. It furthermore recognises that the natural growth of the world's population continuously poses problems for preserving the environment and that human ability to improve the environment is complemented by social progress and the evolution of production, science and technology. The Action Plan for Human Environment, also a result of the 1972 Stockholm conference, is made up of 109 resolutions for action with three major themes: a global environmental assessment programme;³⁶ environmental management

³² Kiss / Shelton (2004:27).

³³ The Declaration on Air Pollution Control; the European Water Charter; and the European Agreement on the Restricting of the Use of Certain Detergents in Washing and Cleaning Products. See Kiss / Shelton (2004:27).

³⁴ See <http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=1519&l=en>; accessed 4 November 2010. Also see Kiss / Shelton (2004:28).

³⁵ Available at <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503>; accessed 5 November 2010.

³⁶ Establishing "Earthwatch" a mechanism for evaluation and review, research and monitoring and information exchange.

activities;³⁷ and supporting measures focused on information and public education, and on the education of environmental specialists. One further important outcome of the 1972 Stockholm Conference was the recommendation for a central organisation charged with environmental matters, today's United Nations Environment Programme (UNEP).

Subsequent to the Stockholm Conference, a multitude of environmental conventions were adopted.³⁸ The 1971 Ramsar Convention on Conservation of Wetlands of International Importance was adopted to stem the progressive encroachment on and subsequent loss of wetlands, while recognising the fundamental ecological functions of wetlands, including their economic, cultural, scientific and recreational value. The 1972 UNESCO Convention on the Protection of the World Cultural and Natural Heritage, adopted in Paris, established a system to protect cultural and natural heritage of outstanding universal value. In 1972 the UN Conference on the Law of the Sea produced the Convention on the Law of the Sea (UNCLOS) adopted in 1982 after ten years of work. UNCLOS encompasses, *inter alia*, the issue of marine environmental protection. In 1973 the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) was adopted in Washington to protect certain endangered species from over-exploitation by means of a system of import-export permits. The 1979 Bonn Convention on the Conservation of Migratory Species of Wild Animals protects those species that migrate across national boundaries. The 1982 United Nations World Charter for Nature was not endorsed as a binding legal instrument, but it continues to have a strong influence on environmental law. This charter proclaims that mankind itself is part of nature, that civilisation is rooted in nature and that every form of life is unique and therefore merits respect, regardless of its worth to man. In its principles it sets forth that nature shall be respected; population levels of all wild forms, wild and domesticated shall be at least sufficient for their survival; special protection shall be afforded to the unique areas of the globe (land and sea); and that ecosystems, organisms and other natural resources shall be managed to achieve and maintain their optimum sustainable productivity and continuity.

Emerging new environmental challenges, such as long-range air pollution and the depletion of the ozone layer resulted in the adoption of the 1985 Vienna Convention for the Protection of the Ozone Layer and the 1987 Montreal Protocol, creating an international system to reduce emissions of ozone-depleting substances. The Chernobyl Disaster of 1986³⁹ led to the Vienna Convention on Early Notification of a Nuclear Accident and the Vienna Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency of the same year.

In 1987, Our Common Future, also known as the Brundtland Report, was drafted by a special UN Commission.⁴⁰ This report stated that individual states, and the international community at large, had come to recognise sustainable development as the single most important paradigm to

³⁷ Containing provisions concerning pollution (dumping of toxic and dangerous substances; elaboration of norms limiting noise; control of contaminations in food); protection of the marine environment; and protection of wildlife and natural spaces.

³⁸ For a collection of international environmental treaties see UNEP (2005c).

³⁹ On April 26, 1986, the fourth reactor of the Chernobyl Nuclear Power Plant exploded. After the explosion, graphite fires broke out due to the high temperatures of the reactor. All permanent residents of Chernobyl and the zone of alienation were evacuated because radiation levels in the area had become unsafe. The nuclear meltdown produced a radioactive cloud that floated over neighbouring nations. Two hundred and thirty-seven people suffered from acute radiation sickness, of which thirty-one died within the first three months. An international assessment of the health effects of the Chernobyl accident is contained in a series of reports by the United Nations Scientific Committee of the Effects of Atomic Radiation (UNSCEAR). The radioactive contamination of aquatic systems as well as the degradation of flora and fauna became major issues in the immediate aftermath of the accident.

⁴⁰ World Commission on Environment and Development (1987).

maintain and improve the quality of human life. The newly-coined term, sustainable development, meant that natural resources, renewable or non-renewable, and the environment must be used in such a manner that may equitably yield the greatest benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations. Sustainable development includes the maintenance and improvement of the capacity of the environment to produce renewable resources and the natural capacity for regeneration of such resources. This concept was taken up by the United Nations Conference on Environment and Development held in Rio in 1992. It was the next big conference after Stockholm 1972, and hosted 10,000 participants, 172 states, 1,400 NGOs and 9,000 journalists.⁴¹ Two legally binding instruments resulted from the Rio Conference, namely the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the 1992 Convention on Biological Diversity (CBD). The UNFCCC was drafted prior to the Rio Conference, adopted in New York, and then opened for signature at the Rio Conference. It regulates levels of greenhouse gas concentration in the atmosphere, so as to avoid climate change on a level that would impede sustainable economic development or compromise initiatives in food production, while the CBD aims at conserving biological diversity, promoting the sustainable use of its components, and encouraging equitable sharing of the benefits arising out of the utilisation of genetic resources.

Other texts resulting from the Rio Conference were the Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests; the Declaration on Environment and Development (Rio Declaration) as well as Agenda 21. The Rio Declaration, a soft law mechanism, reaffirms the Stockholm Declaration and provides 27 principles guiding environment and development, the core concepts being sustainable development and integrating development and environmental protection. Concepts contained in the Rio Declaration include inter-generational equity; prevention; environmental impact assessment; the polluter pays and precautionary principles; public rights such as participation and access to justice; and the special status of indigenous peoples.

Agenda 21, which is a Programme of Action and, like the Rio Declaration, a soft law and thus a non-binding document, was drafted to serve as a guide for the implementation of the treaties agreed to at the summit and the principles of sustainable development. Agenda 21 also established the United Nations Commission on Sustainable Development (CSD) and the Global Environment Facility (GEF). Agenda 21 remains of particular importance for international environmental law and consists of 40 Chapters with 115 specific topics. Agenda 21 is sub-divided in four main parts: conservation and resource management (e.g. atmosphere, forest, water, waste, chemical substances); socio-economic dimensions (e.g. habitats, health, demography, consumption and production patterns); strengthening the role of NGOs and other social groups; and measures of implementation (funding, institutions). Sector-specific Chapters on the atmosphere (9); biodiversity and biotechnology (15); oceans (17); freshwater resources (18); toxic chemicals (19); and waste (20ff) form part of Agenda 21.

After the Rio Conference, virtually every multilateral agreement included environmental protection, be it of particularly environmental, economic, or human rights or humanitarian law nature.⁴² An emerging issue in international environmental law after the Rio Conference was a new weapons system which called for the 1993 Paris Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction.

⁴¹ Kiss / Shelton (2004:33).

⁴² Kiss / Shelton (2004:33).

New technologies such as biotechnology and the handling of living modified organisms (LMOs) in the laboratory resulted in the adoption of the 2000 Cartagena Protocol on Biosafety to the CBD, drafted to ensure an adequate level of protection in the field of safe transfer, handling and use of LMOs that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health, and specifically focusing on trans-boundary movements.

Ten years after the Rio Conference, the next big UN Conference of environmental relevance was the Johannesburg World Summit on Sustainable Development held in 2002. Although this summit was considered to be less successful in environmental terms by environmentalists and environmental lawyers, it emphasised the interrelation between combating poverty and improving the environment. The Declaration on Sustainable Development, which emerged from the summit, focuses on development and poverty eradication and recognises three components of sustainable development: economic development, social development, and environmental protection. The Johannesburg Summit was followed by a further World Summit of the United Nations General Assembly in 2005, which reaffirmed the commitment to achieve the goal of sustainable development through implementation of Agenda 21 and the Johannesburg Plan of Implementation. The 2005 World Summit Outcome, adopted by the UN General Assembly, specifically envisages promoting a recycling economy to tackle climate change, to promote clean energy, to fight hunger, and to provide access to clean drinking water and basic sanitation.

Undoubtedly, the UN has played a vital role in the development of environmental law. However, it must also be emphasised, that environmental law has gradually developed on the regional, sub-regional and of course on the national levels as well. Seen from a Namibian perspective, international environmental law within the African Union and the Southern African Development Community (SADC) is of particular importance. As early as 1968, the Organisation of African Unity (OAU), which later became the African Union (AU), signed a comprehensive document on environmental protection, namely the African Convention on the Conservation of Nature and Natural Resources to enhance environmental protection; foster the conservation and sustainable use of natural resources; and to harmonise and coordinate policies in these fields. The 1968 Convention was revised in 2003 to improve institutional structures to facilitate effective implementation and mechanisms to encourage compliance and enforcement, but the revised convention is yet to come into force.⁴³ One further piece of AU legislation of environmental relevance is the African Nuclear Free Zone Treaty, which was adopted in 1995 and entered into force on 15 July 2009 to establish an African nuclear-weapon-free zone, thereby, *inter alia*, keeping Africa free of environmental pollution from radioactive waste.

Within the SADC legal framework, environmental concerns are of increasing importance and have a substantial place in the legal setting of the regional institution. The SADC was established in Windhoek in 1992 as the successor to the Southern African Development Coordination Conference (SADCC), which was founded in 1980. Sustainable utilisation of natural resources and effective protection of the environment have been laid down as basic objectives of SADC in its founding legal document, the SADC Treaty and member states agreed to cooperate in the area of natural resources and environment.⁴⁴ Several SADC Protocols have been signed and entered into in the past two decades, which aim to ensure

⁴³ As of August 2015, 42 states have signed the Convention, while only twelve member states have deposited their instrument of ratification. The revised Convention will come into force, 30 days after 15 countries have deposited their ratification instruments. Namibia has signed the Convention but not yet deposited a document of ratification.

⁴⁴ Article 5g SADC Treaty.

implementation of the SADC Treaty. Many of these protocols contain provisions for environmental protection, either directly or indirectly. Environmentally-relevant documents are: the Protocols on Energy⁴⁵, Fisheries⁴⁶, Forestry⁴⁷, Health⁴⁸, Mining⁴⁹, Tourism⁵⁰, Trade⁵¹, Transport, Communications and Meteorology⁵², Wildlife Conservation and Law Enforcement⁵³, Shared Watercourse Systems⁵⁴, and the Revised Protocol on Shared Watercourses⁵⁵.

The evolution of international (and national) environmental law was not restricted to the drafting of legal treaties, agreements or similar documents. Jurisprudence also played and continues to play a significant role in the process of developing environmental law standards and contributed to the protection of the environment. One early landmark decision in this regard was a case involving the United States and Canada in 1941, namely the Trail Smelter Arbitration (with involvement of the Governments of Canada and the United States).⁵⁶ The arbitration affirmed that no state has the right to use its territory or permit it to be used to cause serious damage by emissions to the territory of another state or to the property of persons found there.

Jurisprudence of the International Court of Justice (ICJ) also contributed to environmental protection. The Corfu Channel case⁵⁷ (UK v Albania), decided by the ICJ in 1949, did not specifically deal with environmental matters but addressed general principles of state responsibility also applicable to environmental matters. In 1996, the ICJ issued two advisory opinions relating to the use of nuclear weapons, one requested by the General Assembly of the United Nations,⁵⁸ the other by the World Health Organisation⁵⁹. The latter dealt directly with environmental concerns as the question in the request was formulated as follows:

In view of the health and environmental effects, would the use of nuclear weapons by a State in war or other armed conflict be a breach of its obligations under international law including the WHO Constitution?

The court in its advisory opinion denied the request by the WHO because the legality of the use of nuclear weapons “does not relate to a question which arises within the scope of activities of that organisation”. The court held that although negative effects on human health

⁴⁵ Signed in 1996, in force since 17 April 1998.

⁴⁶ Signed in 2001, in force since 8 August 2003.

⁴⁷ Signed in 2002, in force since 17 July 2009.

⁴⁸ Signed in 1999, in force since 14 August 2004.

⁴⁹ Signed in 1997, in force since 10 February 2000.

⁵⁰ Signed in 1998, in force since 26 November 2002.

⁵¹ Signed in 1996, in force since 25 January 2000.

⁵² Signed in 1996, in force since 6 July 1998.

⁵³ Signed in 1999, in force since 30 November 2003.

⁵⁴ Signed in 1998, in force since 28 September 1998.

⁵⁵ Signed in 2000, in force since 22 September 2003.

⁵⁶ Trail Smelter Arbitration (1938/1941) 3 RIAA 1905 Arbitral Tribunal: US and Canada.

⁵⁷ ICJ Corfu Channel (*United Kingdom of Great Britain and Northern Ireland v Albania*) judgment available at <http://www.icj-cij.org/>; accessed 5 November 2010.

⁵⁸ ICJ Legality of the Threat or Use of Nuclear Weapons; Request for Advisory Opinion by the General Assembly of the United Nation, 8 July 1996. Available at <http://www.icj-cij.org/docket/index.php?p1=3&p2=4&k=e1&case=95&code=unan&p3=4>; accessed 5 November 2010.

⁵⁹ ICJ Legality of the Use by a State of Nuclear Weapons in Armed Conflict; Request for Advisory Opinion by the World Health Organisation, 8 July 1996. Available at <http://www.icj-cij.org/docket/index.php?p1=3&p2=4&k=e1&p3=4&case=93>; accessed 5 November 2010.

and the environment may result from the use of nuclear weapons, the WHO needs to undertake measures irrespective of the legality of their use. The request by the United Nations General Assembly was, however, accepted and with regard to environmental concerns the court recognised that

the environment is under daily threat and that the use of nuclear weapons could constitute a catastrophe for the environment. The Court also recognises that the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment.⁶⁰

And further the court stated that

while the existing international law relating to the protection and safeguarding of the environment does not specifically prohibit the use of nuclear weapons, it indicates important environmental factors that are properly to be taken into account in the context of the implementation of the principles and rules of the law applicable in armed conflict.⁶¹

One further case of particular importance decided by the ICJ was the case concerning the Gabčíkovo-Nagymaros Project.⁶² This case raised a multitude of environmentally related legal issues, such as the concept of sustainable development, the principle of continuing environmental impact assessment and the handling of *erga omnes* obligations in *inter partes* judicial procedure.

But not only the jurisdiction of the ICJ contributed to the development of environmental law and to the protection of the environment. Other international and national judicial bodies had to deal with environmental concerns as well. The Dispute Settlement Body of the WTO, for example, was frequently confronted to resolve issues regarding environmental protection.⁶³

Environmental protection was also a burning issue in the Ogoni case, a case which was heard in national courts of Nigeria⁶⁴ and the United States,⁶⁵ as well as by the African Commission

⁶⁰ ICJ Legality of the Threat or Use of Nuclear Weapons; Request for Advisory Opinion by the General Assembly of the United Nation, 8 July 1996 at page 21 para 29; available at <http://www.icj-cij.org/docket/index.php?p1=3&p2=4&k=1&case=95&code=unan&p3=4>; accessed 5 November 2010. For a discussion of the ICJ's advisory opinion and of the question whether or not the use of nuclear weapons during international armed conflict would violate existing norms of public international law relating to the protection and safeguarding the environment see Koppe (2008).

⁶¹ ICJ Legality of the Threat or Use of Nuclear Weapons; Request for Advisory Opinion by the General Assembly of the United Nation, 8 July 1996 at page 21 para 33; available at <http://www.icj-cij.org/docket/index.php?p1=3&p2=4&k=1&case=95&code=unan&p3=4>; accessed 5 November 2010.

⁶² *ICJ Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, 25 September 1997. Judgement available at <http://www.icj-cij.org/docket/index.php?p1=3&p2=3&k=8d&case=92&code=hs&p3=4>; accessed 5 November 2010.

⁶³ See for example the following cases: Panel Report, United States – Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/R and Corr.1, adopted 6 November 1998, modified by Appellate Body Report, WT/DS58/AB/R, DSR 1998:VII, 2821; Panel Report, European Communities – Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/R and Add.1, adopted 5 April 2001, modified by Appellate Body Report, WT/DS135/AB/R, DSR 2001:VIII, 3305; Panel Report, Brazil – Measures Affecting Imports of Retreaded Tyres, WT/DS332/R, adopted 17 December 2007, as modified by Appellate Body Report, WT/DS332/AB/R.

⁶⁴ Judgment delivered by the Nigerian High Court on 14 November 2005.

on Human and Peoples' Rights⁶⁶ and which was also subject to a United Nations Special Rapporteur's Report on Nigeria,⁶⁷ which accused Nigeria and Shell of abusing human rights and failing to protect the environment in oil-producing regions, and called for an investigation of Shell. Subject to judicial review in this case was the fact that, since Shell began drilling for oil in Ogoniland in the Niger Delta in 1958, the people of Ogoniland have had pipelines built across their farmlands and in front of their homes, have suffered constant oil leaks from these very pipelines, and have been forced to live with the constant flaring of gas fires. This environmental assault has drenched land with oil, killed masses of fish and other aquatic life, and introduced devastating acid rain to the land of the Ogoni, a people dependent upon farming and fishing. The poisoning of the land and water has had devastating economic and health consequences.

Summarising, it can be stated that the history of modern environmental law originated in the second half of the past century and is strongly influenced and developed by international and national political action and legislative measures, as well as by international and national jurisprudence.

⁶⁵ *Kiobel v Royal Dutch Petroleum*; United States Court of Appeals for The Second Circuit, Docket Nos. 06-4800-cv, 06-4876-cv. <http://www.ca2.uscourts.gov/decisions>; accessed 5 November 2010. For a comment on this decision see Ikari (2010).

⁶⁶ Communication 155/96. The Social and Economic Rights Action Center and the Center for Economic and Social Rights / Nigeria. Available at http://www.achpr.org/english/_info/decision_article_24.html; accessed 5 November 2010.

⁶⁷ Released 15 April 1998. The report condemned Shell for using a "well-armed security force which is intermittently employed against protesters." The report was unusual both because of its frankness and its focus on Shell, instead of only on member countries.

CHAPTER 3

NAMIBIA AND ITS ENVIRONMENT

Katharina Ruppel-Schlichting

1 Introduction

Namibia's surface area is 824,268 km² with three major categories of land tenure: the so-called commercial farmland with freehold tenure (approximately 44% of the country situated predominantly in the south and centre of Namibia), communal areas which are situated mainly in contiguous blocks in the northern Namibia (approximately 41% of the country), and the state land including conservation areas (approximately 15% of the country).

Namibia has common borders with Angola, Zambia, Zimbabwe, Botswana and South Africa and a coastline of 1,572 km at the Atlantic Ocean to its west. The Ocean with its cold, nutrient rich Benguela Current has a significant influence on Namibia's climate, vegetation and marine life. Main geographical areas in Namibia include two of the largest and most important great deserts, namely the Kalahari Desert in the east, which is dominated by stabilised dunes on the Namib Desert in the west, which comprises a wide range of landscape types. The Central Plateau with its Great Escarpment lying in the inland of the Namib plains and rising up above them is the third great landscape unit in Namibia.¹

Namibia is one of the driest countries in sub-Saharan Africa with a mean annual rainfall of approximately 270mm with wide regional and seasonal variation. This is reflected in the country's rivers. Most of the rivers that rise in Namibia such as the Kuiseb are dry for most of the year, they are ephemeral and seasonal. The perennial rivers in Namibia are located on the northern and southern borders and gain their flow in Zambia and Angola and in South Africa respectively. Only three perennial rivers reach the sea, namely the Orange, the Zambezi and the Kunene rivers, while the Okavango and the Kwanda flow into the the Okavango Delta and the Linyanti Swamps in the North of Botswana. Major parts of Namibia is thus predominantly dependent upon ephemeral rivers and groundwater.² According to figures from the World Bank and based on the definition on arable land by the Food and Agriculture Organization (FAO)³ only 1% of Namibia's land surface was arable in 2012.

Against the backdrop of variation in climate and aridity in the country, it is explainable that the vegetation cover in Namibia is generally low. The main groups of soils in the country are unconsolidated sand (arenosols) and shallow and weakly developed soils on bedrock (lithosols, xerosols, regosols and yermosols).⁴ Owing to very low contents of clay in the soil, the water holding capacity is generally very low. Nonetheless, Namibia has a broad variety of vegetation types including deserts, savannahs (dwarf shrub savannah, various acacia-based tree and shrub savannah associations and the mopane savannah) and dry woodlands. Moreover, Namibia has an abundant dense and diverse mammalian fauna.

¹ See Goudie / Viles (2015:3ff.); See also Mendelsohn *et al.* (2009).

² See Goudie / Viles (2015:12ff.) and Sweet / Burke (2006).

³ According to which arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow (land abandoned as a result of shifting cultivation is excluded)

⁴ Sweet / Burke (2006).

The *United Nations Statistics Division* in its 2013 *Environment Statistics Country Snapshot Namibia*⁵ provides data about the environment for comparative purposes. The country snapshot of Namibia, *inter alia*, reflects the following data:⁶

Land and Agriculture

Total area (km ²)	824,268	2011
Agricultural land (km ²)	388,090	2011
Arable land (% of agric. land)	6.0	2011
Permanent crops (% of agric. land)	0.0	2011
Permanent pasture and meadows (% of agric. land)	98.0	2011
Change in agricultural land area since 1990 (%)	0.0	2011
Forest area (km ²)	72,158	2011
Change in forest since 1990 (%)	-18	2011

Population

Population (1000)	2,283	2010
Population growth rate from previous year (%)	2.0	2010

Air and climate

Emissions of:	Year
CO2 (million tonnes)	4.0
CO2 per capita (tonnes)	2.0
GHG (million tonnes CO2 eq.)	9.0
GHG per capita (tonnes CO2 eq.)	5.0
Ozone depleting CFCs (ODP tonnes)	0.0

Biodiversity

Year
Proportion of terrestrial marine areas protected (%)
Number of threatened species
Fish catch (tonnes)
Change in fish catch from previous year (%)

Energy⁷

Energy consumption (1000t oil eq.)	1,458	2009
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⁵ Available at

http://unstats.un.org/unsd/environment/envpdf/Country_Snapshots_Aug%202013/Namibia.pdf; accessed 18 August 2015.

⁶ Source with further references:

http://unstats.un.org/unsd/environment/envpdf/Country_Snapshots_Aug%202013/Namibia.pdf; accessed 18 August 2015. Data on Economy from World Bank at <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>; accessed 18 August 2015.

⁷ For more details and figures see Chapter 13 II on Renewable Energy Law.

Energy consumption per capita (kg oil eq.)	650	2009
Energy intensity (kg oil eq.) per \$1,000 (PPP) GDP	135	2009
Renewable electricity production (%)	82	2009
Water and Sanitation		
Long-term average renewable freshwater resources (mill m ³ /year)	45,460	N / A
Urban population with access to improved drinking water source (%)	99	2010
Rural population with access to improved drinking water source (%)	90	2010
Urban population with access to improved sanitation (%)	57	2010
Rural population with access to improved sanitation (%)	17	2010

2 Major Environmental Concerns in Namibia

To quite some extent, Namibia faces environmental problems that are similar to those experienced in many parts of Africa; some of the most challenging issues will be pointed out broadly in the subsequent paragraphs in order to give an overview of the importance of taking legal and non-legal measures for environmental conservation.

2.1 Land Degradation and Soil Erosion

Land degradation in Namibia, like elsewhere in the world occurs in different forms and the effects and causes of land degradation are manifold.⁸ It is, *inter alia*, caused by climatic variations, especially the high variability of rainfall patterns, and human activities. According to the Namibia Household Income and Expenditure Survey 2009/2010,⁹ 23% of Namibian households depend on subsistence farming as the main source of income. This figure has decreased from 38% in 1993/1994 and 29% in 2003/2004. However, many Namibians depend – directly or indirectly – more on farming than on any other economic activity.¹⁰ Despite the fact that the whole agriculture and forestry sector, which includes processing, only made up 5.1% of GDP in 2009¹¹ most of the land in Namibia is used for agricultural purposes.¹²

Overstocking and overgrazing are considered to be the main causes for land degradation in Namibia. Especially in rural areas, poverty forces people into unsustainable environmental management practices such as overstocking and overgrazing in order to ensure food supply. More often than not, the densities of livestock exceed the carrying capacity of the land, which places strain on the environment. Further negative effects on land are caused by the

⁸ Klintenberg / Seely (2004).

⁹ NSA (2012:56).

¹⁰ Iyambo, N, then Minister of Agriculture, Water and Forestry in his foreword to Mendelsohn (2006).

¹¹ HSF (2012:15).

¹² Mendelsohn (2006:10).

unsustainable harvesting of forest resources, wild plants and game, and the clearing of land for farming or housing purposes.¹³

Land degradation not only has negative economic consequences in that it reduces the country's resources, it also poses a serious threat to food security and rural livelihoods, which particularly affects the most vulnerable groups in Namibia's poor and densely populated areas. The most alarming effects of land degradation are deforestation, decreased availability of palatable grass species, soil erosion, bush encroachment and soil salinisation.¹⁴

2.2 Deforestation

In 2005, almost 7.7 million ha of Namibia was covered by forests.¹⁵ This corresponds to 9.3% of the total land surface area. Almost 2% of the forest area has disappeared since 1990, however. In 2010, official data reported on FAO questionnaires from Namibia reveal that the forest area had decreased to under 7.3 million ha.¹⁶ Major threats to forests in Namibia include the expansion of land for agriculture; the cutting of wood for fuel and for domestic use; clearing for infrastructure development; uncontrolled wild fires; selective logging through timber concessions and unlicensed curio carving; and habitat destruction by elephants.¹⁷

Forest resources are of essential importance as woodlands stabilise fragile soils. Moreover, forest areas are the home of rich biological diversity. But forests also play a vital role from a socio-economic perspective and especially in the rural areas of Namibia, many are directly or indirectly dependent on the availability of forest resources for browsing, building material for homesteads, fuel wood for cooking, light and heating, and medicines amongst others.

However, the increase of the population unfortunately goes hand in hand with an increase in an unsustainable use of timber for fuel, housing, fencing, fire, and poses a severe strain on the environment as deforestation not only leads to the loss of resources used for human activities, it also results in desertification and severe degradation of land.¹⁸

2.3 Water Management

Water is a critical factor and water supply remains a serious problem throughout Namibia, as the country is considered to be one of the most arid countries in southern Africa. 22% of Namibia can be classified as desert, with a mean annual rainfall of less than 100 mm. 33% is classified as arid, with a mean annual rainfall of between 100 and 300 mm. 37% is classified as semi-arid, with a mean annual rainfall of between 301 and 500 mm, and 8% as sub-tropical, with a mean annual rainfall of between 501 and 700 mm.¹⁹ These low rainfall rates, exacerbated by evaporation rates often higher than the precipitation, a high degree of rainfall variation, and variable rainfall distribution patterns are responsible for the fragility of Namibian water resources.

Water is needed in terms of basic sustenance and for agriculture. Sustainable water management is, therefore, a major challenge. Major threats to water availability are population pressure, as well as industrial development and growth. The latter two are causing surface and

¹³ MET (2006:1ff.).

¹⁴ Klintenberg / Seely (2004:7).

¹⁵ See <http://www.fao.org/forestry/country/32185/en/nam/>; accessed 25 August 2015.

¹⁶ See <http://faostat3.fao.org/download/R/RL/E>; accessed 25 August 2015.

¹⁷ Cf. FAO (2005).

¹⁸ MET (2006:13).

¹⁹ GRN (1997a:1); for Namibia's main climatic characteristics (rainfall, temperatures, fog, wind, etc.) see also Goudie / Viles (2015:37ff.).

ground water pollution, resulting in a decrease in water availability and quality, harmful to human and animal health. Environmental law can substantially contribute towards reducing these negative effects, e.g. by limiting the use of pesticides, or by preventing the discharge of waste water or other substances harmful to aquatic systems. Sound water management can for example be enforced by a permit system for the abstraction of water in order to avoid the over-abstraction of water.

Environmental law, an integrated water resource management that promotes the co-ordinated development and management of water, land and related natural resources, as well as increasing public awareness with regard to water problems is needed, in order to tackle the challenge of equitable access to enough water of acceptable quality.

2.4 Climate Change

As mentioned earlier, Namibia is considered to be one of the driest countries in southern Africa. The cold Benguela current along the west coast and Namibia's location traversing the subtropical high-pressure belt greatly influences the main features of the climate. The climate of Namibia is characterised by high variability. This in part, contributes to making Namibia vulnerable to the impact of climate change.

In Namibia's initial communication to the United Nations Framework Convention on Climate Change (UNFCCC) in 2002,²⁰ it is stated that trends in climate change predict that temperature will increase, specifically in central inland areas, rainfall will be variable and the rainy season is predicted to be shorter. Furthermore, an increase of potential evaporation at a rate about 5% per degree of warming and a sea level rise of up to 30cm was predicted. Namibia's second national communication to the UNFCCC dated 2011 reveals that

The projected temperature increases will result in evaporation and evapotranspiration increases in the range of 5-15%, further reducing water resource availability and dam yields. It is predicted that, even without the additional stresses of climate change on the water resources, demand will have surpassed the installed abstraction capacity by 2015.²¹

Climate change in Namibia has an impact on access to water and sanitation, health, agriculture, fisheries and marine ecosystems, forestry, energy, and human settlements.²² A growing body of evidence has demonstrated that poor and other disenfranchised groups are the greatest victims of environmental degradation. In Namibia, the majority of the population live in rural areas, where poverty is a sad reality and remains one of the greatest challenges in the southern African region. The combined impact of climate change is expected to reduce livelihood opportunities even further, to reduce biodiversity and food security; the prevalence of drought and flooding will increase. Predicted impacts associated with temperature increases include a further rise in sea levels, changes in precipitation patterns, and the resultant threat to food security and sustainable development in general, with more people being caught up in the poverty trap. Limited adaptive management puts Namibia's population and its natural resources at risk. Thus, integrating adaption and mitigation strategies into the legal framework is essential. Additionally, access to information, public participation and the development of an educational approach is called for. Finally, interdisciplinary research into the effects of climate change needs to be consolidated.

²⁰ GRN (2002d).

²¹ GRN (2011a:6).

²² Karuaihe *et al.* (2007:34ff.).

2.5 Waste and Pollution

Namibia in general and Windhoek in particular, are considered to be clean, if compared to many other parts and capital cities in Africa. Yet, growth in development and in population brings about an increase in pollution and waste. More people produce more waste, and economic development inevitably has negative effects on our environment: ground water and air pollution, more generally the toxic contamination of soils, etc. Therefore, waste management and pollution control are essential in terms of environmental protection.

Since 1990, the industrial production has significantly increased in Namibia with an attendant real potential to pollute the environment: the food industry, meat processing and mining all are potential sources of pollution.²³ Carbon dioxide emissions are on the increase due to increasing motorisation, and the amount of household waste is rising too. Household waste accounts for a significant amount of waste produced in all the urban and rural areas of Namibia.²⁴

²³ MET (2006:70).

²⁴ MET (2006:87).

CHAPTER 4

ENVIRONMENTAL LAW IN NAMIBIA: AN OVERVIEW

Oliver C. Ruppel

1 Introduction

The objective of this chapter is to give a broad overview of the general foundations and sources of national environmental law.¹ It should be noted, that the subsequent Chapters will then provide a more in-depth legal analysis of specific topics.

The root causes for environmental degradation as experienced worldwide also apply to Namibia. Environmental degradation is closely related to human actions, economies and policies. The direct causes for environmental degradation include overexploitation, over-consumption, pollution and a wide range of activities that have a direct impact on the environment. The major threats to the Namibian environment include unsustainable harvesting of wild plants and wildlife, soil erosion and water pollution, climate change but also alien invasive organisms that threaten the survival of indigenous species.

The aim of environmental protection can be achieved by different means. Traditional legal methods include the establishment of protected areas, the regulation of harvesting and trade in certain species, the management of habitats and ecosystems, and the prohibition of alien and invasive species. Pollution control and the management of hazardous substances are other effective ways to contribute to the preservation of the environment.

The success of Namibia's efforts to sustainably use, control, manage and safeguard its natural resources depends to quite some extent on the different legal instruments that are available and on an interdisciplinary approach to develop a target-oriented environmental legislative framework as knowledge from other disciplines – biology, chemistry, medical science, ecology, sociology and economy is a *conditio sine qua non* for the creation of environmental institutions and sound legislation.

2 The Namibian Constitution

The Namibian Constitution² or the Mother of All Laws, as Namibians have come to call this legal instrument is indivisibly linked to the founding of the Namibian state. The adoption of the Constitution on 9 February 1990 came about after a three-decade-long struggle for Independence³ and many more decades of colonial and military rule.⁴ On 21 March 1990,

¹ For the sources of Namibian law in general see Amoo (2008a:53ff.).

² It should be noted that according to Article 148 of the Namibian Constitution, “[T]his Constitution shall be called the Namibian Constitution.” Differing citations such as *the Namibian Constitution Act, 1990*, *the Constitution of Namibia Act I of 1990* or *the Constitution of the Republic of Namibia, 1990 (Act No. 1 of 1990)* are strictly speaking incorrect, although these citations do occur in court processes, judgments, academic syllabi and academic publications.

³ On the struggle for liberation see Katjavivi (1988).

⁴ For a detailed analysis of the background and origin of the Namibian Constitution see Diescho (1994:8ff.) and Erasmus (2002).

Namibia became politically independent, with a basic legal framework drafted by the Constituent Assembly of Namibia. The liberation process was supported by the international community particularly the United Nations Security Council Resolution 435 of 1978, setting out the governing code for the decolonisation process. Resolution 435 could be implemented due to a tripartite agreement between South Africa, Cuba and Angola under the supervision of the UN.⁵ In 1982, the United Nations General Assembly requested the United Nations Institute for Namibia, which was established in 1976 by the United Nations Council for Namibia, to prepare, in cooperation with the South West Africa People's Organisation (SWAPO), the Office of the United Nations Commissioner for Namibia and the United Nations Development Programme, a comprehensive document on all aspects of socio-economic reconstruction and development planning for an independent Namibia.⁶ The first democratic and internationally recognised elections took place in November 1989 and a Constituent Assembly consisting of individuals from various political parties drafted the fundamental legal framework for the Republic of Namibia. The Constitution, which came into force on Independence Day 21 March 1990, was thus a result of joint efforts of and debates between the political parties represented in the Constituent Assembly, South Africa, the United Nations and the South West Africa People's Organisation (SWAPO).⁷

The Namibian Constitution has been hailed as one of the most democratic and liberal constitutions in the world.⁸ It shows a strong commitment to the rule of law, democratic Government and respect for fundamental human rights and freedoms such as the protection of life, liberty, human dignity, equality, education, freedom from slavery, forced labour, and discrimination to name only a few rights enshrined in the Constitution. Furthermore, the Constitution contains mechanisms with regard to checks and balances between the three branches of Government – the executive, legislative branches, and the judiciary. Principles of state policy, which guide the Government's legislative processes are provided in Chapter 11 of the Constitution. That the protection of the environment is not only a concern, but a constitutional issue in Namibia will be outlined in the following paragraphs.

According to Article 1(6) of the Constitution, the latter is the law above all laws. Therefore, all legislation ought to be consistent with the provisions of the Constitution. The Constitution lays the foundation for all policies and legislation in Namibia and contains three key environmental clauses relevant to sustainable use of natural resources.

Article 100 of the Constitution vests all natural resources in the state, unless otherwise legally owned. Thus, unless legal ownership of natural resources in a specific locality is proven, such natural resources are owned by the state; the provision implies thus that natural resources can be legally owned as private property. Article 95(I) stipulates that the state shall actively promote and maintain the welfare of the people by adopting policies which include “the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all Namibians...”. Through this particular Article, Namibia is obliged to protect its environment and to promote a sustainable use of its natural resources. Furthermore, Article 91(c) stipulates that one of the functions of the Ombudsman is

⁵ Diescho (1994:17f).

⁶ UNIN (1986).

⁷ Diescho (1994:8f.).

⁸ Schmidt-Jortzig (1991:71ff.); Schmidt-Jortzig (1994:309ff.); Van Wyk (1991:341ff.).

the duty to investigate complaints concerning the over utilisation of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia.

Further to these environmental key provisions, Article 144 must again be pointed out as the constitutional link to international environmental law applicable in Namibia.⁹

3 Development Framework

3.1 Namibia's Green Plan

Namibia's Green Plan aims at securing – for present and future generations – a safe and healthy environment and a prosperous economy. It was compiled by the Ministry of Wildlife, Conservation and Tourism in consultation with various governmental and non-governmental organisations and first presented at the Rio Conference in 1992.¹⁰ With the Green Plan, Namibia created a national common vision around its environmental issues, priorities and future actions. The Green Plan outlines needed policy and legislation, and strategies and recommendations for key areas such as the sustainable management of wildlife, tourism and fisheries as well as environmental education for sustainable development and links environment to socio-economic development. Thus, the Green Plan has laid the basis for a number of processes to conserve and manage resources for development.¹¹ Some substantive outputs of Namibia's Green Plan have been the EMA, which provides the legal foundation for environmental protection in the country through Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments (SEAs); Integrated Regional Land Use Plans; Community-based Natural Resource Management (CBNRM) including Namibia's world-renowned communal conservancies, community forests and community-based management of water resources and fisheries; a thriving nature-based tourism sector supported by a progressive policy framework on tourism, and tourism and wildlife concessions on state land; water demand management initiatives including water recycling, desalination and the establishment of basin management committees and transboundary basin commissions; a variety of renewable energy and energy efficiency initiatives; cleaner production and waste management; and natural resource accounting. One further outcome of Namibia's Green Plan was the establishment of the Environmental Investment Fund (EIF) of Namibia.

The Green Plan recognises that “the health of individuals, society and the economy are inextricably linked to the health of the environment. A healthy environment provides the opportunity of realising the full developmental potential of a region and country.”¹² Accordingly, the objective is to manage its natural resources for present use without jeopardising the future accessibility of these resources. Namibia's Green Plan is divided into Chapters as follows:

- Life's three essentials – clean air, water and land;
- Sustaining our renewable resources;
- Our special spaces and species;
- Namibia's unique stewardship: The Namib Desert;

⁹ Article 144 reads as follows: “Unless otherwise provided by this Constitution or Act of Parliament, the general rules of public international law and international agreements binding upon Namibia under this Constitution shall form part of the law of Namibia.”

¹⁰ Brown (1992).

¹¹ GRN (2012:27).

¹² Brown (1992:1).

- The importance of wetlands management in arid regions;
- The threat of desertification;
- Global environmental security; and
- Environmentally-responsible decision-making.

Namibia's Green Plan cautions that environmental policies must be based on the precautionary principle and that all major construction projects, especially in the water sector, should always be preceded by an Environmental Impact Assessment (EIA) in order to prevent or minimise the potential negative effects on the environment. Further to this, the plan makes provision for the protection of the country's genetic resources; also its rich biodiversity must be maintained.

Namibia's Green Plan has identified a multitude of actions needed to achieve sustainable development. These actions include helping to ensure that Namibia has clean air, water and land; supporting the sustainable use of natural resources; protecting Namibia's special spaces and species; highlighting the importance of wetlands in arid regions; promoting global environmental security; and encouraging environmentally responsible decision-making at all levels of society. The plan furthermore acknowledges that environmental as well as social requirements such as poverty reduction, education, public participation and a high level of primary health care must be addressed in order to achieve the interrelated objectives of wise environmental management and sustainable development.¹³

Namibia's Green Plan at a very early stage of Namibian nationhood set out an ambitious national programme for achieving environmental protection in the country. The topics set out in the plan are still, or even more of concern in the country. Thus, Namibia's Green Plan remains a relevant basic document with regard to sustainable development and environmental protection in Namibia.

3.2 Vision 2030 and the National Development Plans

Namibia's Vision 2030 was launched in June 2004 by the Founding President, Dr Sam Nujoma.¹⁴ The vision's rationale is to provide long-term policy scenarios on the future course of development in the country at different points in time up until the target year of 2030. Vision 2030 regards the sequential five-year National Development Plans (NDPs) as the main vehicles for achieving its long-term objectives. Chapter 5 of Vision 2030 states the following:

The integrity of vital ecological processes, natural habitats and wild species throughout Namibia is maintained whilst significantly supporting national socio-economic development through sustainable low-impact, consumptive and non-consumptive uses, as well as providing diversity for rural and urban livelihoods.¹⁵

Thus, one of the long-term aims of Vision 2030 is the availability of clean water, and productive and healthy natural wetlands with rich biodiversity.¹⁶

The successive NDPs will contain the goals and intermediate targets (milestones) that will eventually lead to the realisation of Vision 2030. NDP2,¹⁷ which spanned the period 2001/2–

¹³ Brown (1992:172ff.).

¹⁴ GRN (2004a).

¹⁵ Ibid:167.

¹⁶ For more detailed information on wetlands in Namibia, cf. Ruppel / Bethune (2007:14).

¹⁷ GRN (2002a).

2005/6, sought sustainable and equitable improvement in the quality of life of all of the country's inhabitants. The national development objectives were to¹⁸

- reduce poverty,
- create employment,
- promote economic empowerment,
- stimulate and sustain economic growth,
- reduce inequalities in income distribution and regional development,
- promote gender equality and equity,
- enhance environmental and ecological sustainability, and to
- combat the further spread of HIV/AIDS.

NDP3 spans the five-year period 2007/8 to 2011/2.¹⁹ The draft guidelines for the formulation of NDP3 were prepared in the latter part of 2006, and approved by Cabinet in December of that year.²⁰ The predominant theme of NDP3 was the accelerated economic growth through intensified rural development,²¹ while the productive utilisation of natural resources and environmental conservation are key result areas. Principal environmental concerns included water, land, marine, natural resources, biodiversity and ecosystems, drought, and climate change. It was stated that waste management and pollution will grow significantly with increasing industrialisation. NDP3 recognised that with the country's scarce and fragile natural resource base, the risk of overexploitation is considerable, and that sustained growth is highly dependent on the sound management of these resources. The guidelines for preparing NDP3 stipulated that the renewable resource capital needs to be maintained in quantity and quality. This is to be achieved by reinvesting benefits into natural resources by way of diversifying the economy away from resource-intensive primary sector activities, and by increasing productivity per unit of natural resource input. Two NDP3 goals to ensure the protection of environmental concerns have been identified, namely the optimal and sustainable utilisation of renewable and non-renewable resources on the one hand, and environmental sustainability on the other.

Namibia's Fourth National Development Plan²² was released in July 2012 and spans the period from 2012/2012 to 2016/2017. NDP4 differs essentially from its predecessors. NDP4 is more focused, in that fewer goals and target values have been adopted. However, from an environmental perspective, NDP4 has sustained some losses. While the optimal and sustainable utilisation of renewable and non-renewable resources, and environmental sustainability had been set forth as goals within NDP3, the three overarching goals of NDP 4 are high and sustained economic growth, increased income equality, and employment creation. Four sectors, which will enjoy priority status are logistics, tourism, manufacturing, and agriculture.

¹⁸ Ruppel / Bethune (2007:14).

¹⁹ GRN (2007a).

²⁰ Ibid.

²¹ Ibid.

²² GRN (2012). NDP 4 and an executive summary are available at <http://www.npc.gov.na/npc/ndp4info.html>; accessed 14 September 2015.

Environment and climate change are, however, recognised under the category of values and principles²³, which Namibia cherishes as a nation:

Our environment is clean, and we will continue to keep it so. We expect all elements of society, and businesses in particular, to support a precautionary approach to environmental challenges and alterations of the natural world contributing to climate change, undertake initiatives to promote greater environmental responsibility, and encourage the development and diffusion of environment-friendly technologies.

Furthermore, NDP4 recognises that

environmental management is both an enabler and driver of economic development. The issue of environmental management is firmly anchored in Namibian laws and policies whose roots are in the Namibian Constitution and has earned the country an excellent reputation internationally for prudent environmental management based on innovative and progressive legislative framework.

In order to achieve one of the desired outcomes of NDP4, namely to become the most competitive economy in the SADC region according to the standards set by the World Economic Forum by the year 2017, the environmental strategy during NDP4 and beyond includes:

- the implementation and enforcement of the EMA of 2007, particularly the use of strategic environmental assessments to guide development decision-making, the development of an integrated (including spatial) planning,
- the implementation of the CBNRM programme;
- improving and implementation policy and legislative frameworks,
- increase public access to environmental information;
- strengthen inter-ministerial, non-governmental, donor coordination and harmonisation,
- adopt Public-Private-Community-Partnerships, and
- develop new initiatives such as a Natural Resources and Environmental Governance Programme.

The strategy identified to address Namibia's vulnerability to climate change is to make use of strategic environmental assessments to guide development decision-making.

4 Policy Framework

A policy is a deliberate plan of action to guide decisions and achieve rational outcomes. Policies differ from rules or law. While law can compel or prohibit behaviours (e.g. a law requiring permits for specific actions) policy merely guides actions to achieve a desired outcome.

Environmental policy determines the objectives guiding, and the strategies to be used in order to strengthen the respect for environmental values, taking into account the existing social, cultural and economic situation. The foundation for the Namibian environmental policy framework is Article 95(l) of the Constitution. It stipulates that the state shall actively promote

²³

The other values and principles which are contained in NDP4 are: National sovereignty and human dignity; upholding the Constitution and good governance; partnership; capacity enhancement; comparative advantage; people-centred economic development; gender equality and the empowerment of women; sustainable development; and peace and security.

and maintain the welfare of the people by adopting policies which include the “maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefits of all Namibians...”.

Although many policies have at least an indirect impact on the environment, only those considered to be most relevant are listed in the table below. A brief introduction to some of the policies listed forms part of the subsequent paragraphs.

Environmental Policies in Namibia	
Environment and Wildlife	
Namibia’s Environmental Assessment Policy	Land
Policy for Prospecting and Mining in Protected Areas and National Monuments	Land-use Planning: Towards Sustainable Development The National Land Use Planning Policy The National Land Policy The National Resettlement Policy The National Land Tenure Policy
National Policy on Human Wildlife Conflict Management	
Water and Fisheries	Climate Change
Water Supply and Sanitation Policy	Namibia’s Climate Change Policy
The National Water Policy	
Namibia’s Draft Wetland Policy	
Namibia’s Aquaculture Policy – towards responsible development of aquaculture	Forestry
	Namibia Forestry Strategic Plan Development Forestry Policy
Agriculture	Tourism
The National Agricultural Policy	The Tourism White Paper The Draft National Tourism Policy The Community-Based Tourism Policy Revised Draft Tourism Policy
The National Drought Policy and Strategy	
The Regional Planning and Development Policy	Biotechnology
The National Seed Policy	Enabling the Safe Use of Biotechnology Policy

4.1 Policies on Environment, Wildlife and Biotechnology

The **Environmental Assessment Policy**²⁴ approved by Cabinet in 1994, obliges Namibia to place a high priority on maintaining ecosystems and related ecological processes, and to uphold maximum biological diversity. The Policy recognises that environmental assessments are a key tool towards implementing integrated environmental management. The policy has also gained legislative support by the EMA.

The 1999 **Policy for Prospecting and Mining in Protected Areas and National Monuments** aims was drafted to sensitise about the importance of conservation and tourism. The Policy envisages environmentally responsible mining and recognises the right of the State to issue prospecting and mining licences in protected areas. The Ministry of Mines and Energy is urged MME not to encourage the exploitation of low-value minerals and dimension stone in parks. The Policy emphasised the need for inter-sectoral collaboration where prospecting and mining is allowed in parks.

²⁴

GRN (1995b).

Recognising that with increased wildlife populations and expanded ranges into communal and freehold farming areas results in conflicts between people and wild animals, elephants and predators in particular, which cause livestock and crop losses and damage to water installations and sometimes also in the loss of human lives, the Ministry of Environment and Tourism adopted the **National Policy on Human Wildlife Conflict Management** in 2009 by the to provide a framework for addressing human-wildlife conflict efficiently to protect biodiversity and to promote human development. To this end, the Policy has identified five major objectives, namely to develop a future human-wildlife conflict management legislative framework; a standardised monitoring system for human-wildlife conflict management; innovative ways to reduce the level of human-wildlife conflict; to establish best practice mitigation measures for human-wildlife conflict management; and to provide clarity on the question of compensation in respect of damages caused by wildlife.

The **National Policy on Enabling the Safe Use of Biotechnology**²⁵ was prepared by the Namibian Biotechnology Alliance and the Ministry of Higher Education, Vocational Training, Science and Technology in October 1999.²⁶ Pertinent to this review are two of the major objectives of this policy. The first is to guide the judicious use of modern biotechnology in Namibia for sustainable development in ways that do not in any way jeopardise human and environmental health, including Namibia's biodiversity and genetic resources. A second objective is to ensure the effective control of trans-boundary movements of genetically modified organisms or products thereof resulting from modern biotechnology, *inter alia* through the exchange of information. The policy recognises that, in addition to a competent lead authority, cooperation from several other ministries is essential to ensure regulation. Several institutions will be involved in conducting risk assessments, advising on permit issues, and ensuring effective control and law enforcement.²⁷

4.2 Policies on Land and Agriculture

The **Land Use Planning Policy Document**²⁸ drafted by the Ministry of Environment and Tourism in 1994 defines five physiographic land forms, namely communal state land, privately owned commercial farmland, proclaimed state land, urban areas, and wetland systems, including their catchments. The policy emphasises the sustainability of natural resources, biodiversity and essential ecological processes.

In 1998, the Ministry of Lands and Resettlement issued the **National Land Policy**,²⁹ which is based on constitutional principles and on the national commitment to redress the social and economic injustices inherited from Namibia's colonial past. The policy calls for the establishment and proclamation of urban areas, and strives to promote decentralisation and community involvement. The policy proposes financial and tax incentives for the protection and rehabilitation of natural environments, e.g. planting of indigenous trees and using alternative energy to reduce rates of deforestation and pollution. In accordance with Article 95(1) of the Constitution, it promotes environmentally sustainable land use, stating that failure to demonstrate environmental sustainability may be grounds for the denying or termination of a title. One of the aims of this policy is to establish a Land Use and Environmental Board to promote environmental protection and contribute towards coordinated planning and

²⁵ GRN (1999a).

²⁶ For environmental law and policy education in Namibia, see Ruppel (2008c).

²⁷ GRN (1999a).

²⁸ GRN (1994b).

²⁹ GRN (1998b).

management at national and regional levels. This Board is obliged to ensure that environmental protection is promoted in order to guarantee environmental, social and economic sustainability. The **National Land Use Planning Policy**³⁰ was drafted by the Ministry of Lands and Resettlement in 2002. It provides a framework for the implementation of regionally integrated land use plans.

The 1997 **National Resettlement Policy**³¹ regulates that resettlement must be institutionally, socially, economically and environmentally sustainable, to enable the beneficiaries to become self-supporting.³²

The 2003 **National Land Tenure Policy**³³ covers all land tenure systems in urban, communal, commercial (freehold) and resettlement areas, and is intended to guide all land tenure rights in Namibia. The policy promotes the sustainable utilisation of land and other resources. By regulating different land tenure rights, it provides secure tenure for informal urban settlers, farm workers and occupiers (those who have been employed less than ten years on a single farm and do not have secure tenure elsewhere). Furthermore, it provides guidelines on compensation for occupiers of expropriated land. In line with the 1995 National Agricultural Policy,³⁴ the National Land Tenure Policy recognises the environmental limitations of the country. Some 22% of Namibia's land surface area is desert, receiving less than 100 mm of rainfall a year. Another 33% of the land is classified as arid, with an annual rainfall of between 100 to 300 mm. Some 37% of the land is semi-arid, meaning it receives between 300 and 500 mm rainfall a year, leaving only 8% classified as semi-humid and sub-tropical, i.e. with 500–700 mm annual rainfall.³⁵

The aims of the 1995 **National Agricultural Policy** are largely economic, focusing on increasing agricultural productivity. One of the policy's objectives is to promote national and household food security,³⁶ while recognising the limitations imposed by the country's climate and soils. The policy seeks to promote sustainable utilisation of the land and other natural resources within the context of a vulnerable ecosystem. Potential problems such as deforestation, soil erosion, bush encroachment and overgrazing are also addressed.

The **Regional Planning and Development Policy** was drafted by the National Planning Commission in 1997.³⁷ The policy acknowledges the trend of the increasing degradation of pastures, rangelands and woodland, with special attention to soil, water and forest management as development tools. The policy promotes strategies such as soil conservation and controlled grazing cycles, which are important to agriculture.

Namibia's Drought Policy and Strategy was drafted in 1997 and is concerned with developing an efficient, even-handed and sustainable approach to drought management. In line with Namibia's National Agricultural Policy, the Drought Policy recognises that aridity and highly variable rainfall are normal phenomena. Farmers must also take into account the risks associated with variable input and output prices, exchange and interest rates, in addition to weather conditions. The policy aims to shift responsibility for managing drought risk from Government to the farmer, with financial assistance and food security interventions only being

³⁰ GRN (2002b).

³¹ GRN (2001c).

³² Woeller (2005:141).

³³ GRN (2002c).

³⁴ GRN (1995c).

³⁵ See World Bank (2007:100ff.).

³⁶ Jones (2000a:11).

³⁷ GRN (1997c).

considered in the event of an extreme or disaster drought. The objectives of the policy are inter alia to ensure that household food security is not compromised by drought; to encourage and support farmers to adopt self-reliant approaches to the risk of drought; to minimise the degradation of the natural resource base during droughts; to preserve adequate reproductive capacity in livestock herds in affected areas during drought periods; and to ensure the continuous supply of potable water to communities, and particularly to their livestock, schools and clinics.

4.3 Policies on Water

The following policy documents are the most relevant to water and wetland resources in Namibia:³⁸

The 1993 **Water and Sanitation Policy** deals with water supply and sanitation issues. It aims to improve sustainable food self-sufficiency and security, and provides a foundation for the equitable and efficient development of water supply in Namibia.³⁹ The policy promotes the supply of water, as well as, improved sanitation at an affordable cost to all Namibians. The objective here is to subject these developments to Environmental Impact Assessments to guarantee their sustainability. The policy states that improved provision of sanitation can contribute to improved health, ensure a hygienic environment, protect water sources from pollution, promote water conservation, and stimulate economic development. The policy laid the foundations for the establishment of a Directorate of Rural Water Supply, the community-based management of rural water supplies, and over 200 Water Point Committees countrywide. The policy grants communities the right, with due regard for environmental needs, to plan, maintain and manage their own water supply and choose their own solutions and levels of service. Yet, the policy makes it clear that this right is subject to the obligation that beneficiaries should contribute towards the cost of the water provision services. Furthermore, the policy stresses the environmentally sustainable development and utilisation of water resources. The Water Point Committees are obliged to raise concerns about any developments or alterations that may pose a threat to the water supply and their water resources. They are also responsible for implementing specific management measures, such as the strict allocation of an ecological water reserve and water demand management measures. With these provisions, the policy places strong emphasis on community involvement, participation and responsibility.

In 2002 Cabinet approved the **National Water Policy White Paper**,⁴⁰ which formed the foundation of the Water Resources Management Act⁴¹. The policy provides a framework for equitable, efficient and sustainable water resources management and water services, and stresses sectoral coordination, integrated planning and management as well as resource management aimed at coping with ecological and associated environmental risks. It states that water is an essential resource to life and that an adequate supply of safe drinking water is a basic human need. The policy makes it clear that water concerns extend beyond human needs for health and survival. Water is essential to maintain natural ecosystems, and the policy recognises that, in a country as dry as Namibia, all social and economic activity depends on healthy aquatic ecosystems. The National Water Policy stresses that the management of water resources needs to harmonise human and environmental requirements, recognising the role of

³⁸ Heyns (2005:89-106, at 95f. and 105).

³⁹ Ibid:95.

⁴⁰ GRN (2000a).

⁴¹ No. 24 of 2004.

water in supporting the ecosystem. One of the strategies to ensure environmental and economic sustainability is that in-stream flows are adequate – both in terms of quality and quantity – to sustain the ecosystem.

The vision of the 2004 **Draft Wetland Policy**⁴² is to manage national and shared wetlands wisely by protecting their vital ecological functions and life-support systems for the current and future benefit of people's welfare, livelihoods and socio-economic development.⁴³ The objectives of the policy are to protect and conserve wetland diversity and ecosystem functioning to support basic human needs, to provide a framework for sustainable use of wetland resources, to promote the integration of wetland management into other sectoral policies, and to recognise and fulfil Namibia's international and regional commitments concerning shared wetlands and wetlands of international importance. The basic principles of the policy are intended to provide a framework for the development of all water-related policies. In terms of ecosystem values and sustainability, the Policy follows the Ramsar Convention on Wetlands' definitions and guidelines regarding the wise use of wetlands.⁴⁴

Namibia's 2001 **Aquaculture Policy**⁴⁵ deals with the responsible and sustainable development of farming aquatic plants, fish, molluses and crustaceans. It advocates responsible aquaculture developments. This policy deals directly with the potential impact of alien and other invasive species and seeks to minimise their often destructive influence on aquatic ecosystems. Issues specifically mentioned include the release of introduced species and genetically modified organisms, the mixing of farmed and wild stock (genetic pollution), and the risk of disease transfer. The policy aims to ensure the protection of the living resources of national and international waters.

4.4 Policy on Forests

Biodiversity conservation is central to the 2001 **Development Forestry Policy for Namibia**,⁴⁶ which aims to reconcile rural development with biodiversity conservation by empowering farmers and local communities to manage forest resources on a sustainable basis. The policy identifies effective property rights; a supportive regulatory framework; good extension services; community forestry; and forest research, education and training as instruments essential to the successful implementation of sustainable forestry management in Namibia. The policy also paves the way for the establishment of community forests and their custodianship by the people most dependent on such resources. In 2005, the Ministry of Agriculture, Water and Forestry's Directorate of Forestry introduced the Community Forestry Guidelines.⁴⁷ The main objective of these guidelines is to provide all stakeholders with a standard for establishing and managing community forests, by describing the legal procedures involved in setting up a community forest; describing the organisational arrangements and administrative procedures necessary for the sustainable management of community forests; and by specifying the respective roles of Government forestry officials, communities and other stakeholders involved.⁴⁸

⁴² GRN (2004c).

⁴³ On wetlands in Namibia, cf. Ruppel / Bethune (2007).

⁴⁴ The text of the Ramsar Convention is available at <http://www.ramsar.org>.

⁴⁵ GRN (2001b).

⁴⁶ GRN (2001d).

⁴⁷ GRN (2005).

⁴⁸ Ibid.

4.5 Policies on Tourism

The 1994 **Tourism White Paper**⁴⁹ commits the Government to, *inter alia*, develop the tourism industry without threatening Namibia's biodiversity. It requires part of the income derived from tourism be reinvested in the conservation of natural resources, including those associated with wetlands. The policy identifies ecotourism for foreign visitors as the primary product, and assigns the Ministry of Environment and Tourism the lead role in coordinating inter-ministerial activities relevant to tourism and in cooperating with the private sector to create a national tourism identity.⁵⁰

The 1999 draft **National Tourism Policy**⁵¹ aims to secure and develop important tourism areas so that their value is not undermined by other, unsustainable land use options.

In 1995 the **Community-based Tourism Policy**⁵² was developed by the Ministry of Environment and Tourism to recognise the fact that tourism could bring significant social and economic benefits to previously disadvantaged people, whilst also promoting biodiversity conservation. Under the terms of the policy, the Ministry of Environment and Tourism is obliged to ensure that development of the community-based tourism sector is environmentally sustainable, and that no development takes place without the participation of the people affected. This objective is geared to emphasise environmental sustainability, biodiversity conservation and community participation in tourism.

Finally, in 2001, the Ministry of Environment and Tourism issued the **Revised Draft Tourism Policy 2001–2010**.⁵³ This policy stresses that no tourist development should be at the cost of biodiversity, and requires that some of the income derived has to be reinvested into natural resource conservation.

4.6 Climate Change Policy

In recognition of environmental constraints and vulnerability, the **National Policy on Climate Change for Namibia**⁵⁴ was launched in 2011. The policy seeks to outline a coherent, transparent and inclusive framework on climate risk management in accordance with Namibia's national development agenda, and the relevant legal framework. The general aim of the Policy is to contribute to the attainment of sustainable development in line with Namibia's Vision 2030 through strengthening of national capacities to reduce climate change risk and build resilience for any climate change shocks. This is specified in the following objectives:

- To develop and implement appropriate adaptation strategies and actions that will lower the vulnerability of Namibians and various sectors to the impacts of climate change;
- to develop action and strategies for climate change mitigation;
- to integrate climate change effectively into policies, institutional and development frameworks in recognition of the cross-cutting nature of climate change;
- to enhance capacities and synergies at local, regional and national levels and at individual, institutional and systemic levels to ensure successful implementation of climate change response activities; and

⁴⁹ GRN (1994a).

⁵⁰ Section 3.13 of the 1994 Tourism Policy.

⁵¹ GRN (1999b).

⁵² GRN (1995a).

⁵³ GRN (2001e).

⁵⁴ GRN (2011b).

- to provide secure and adequate funding resources for effective adaptation and mitigation investments on climate change and associated activities.

5 Statutory Law

The development of Namibian environmental law is closely linked to the history of environmental law in South Africa due to Namibia's history. Article 140 of the Namibian Constitution provides that all law in force immediately before the date of Independence shall remain in force until repealed or amended by Act of Parliament. Thus, South African legislation plays a significant role even after Namibia's Independence. Some of the environmental laws valid in Namibia are inherited from the South African legal system. South Africa had enacted a variety of environmental legislation regarding the conservation of natural resources.⁵⁵ The Water Act,⁵⁶ the Soil Conservation Act,⁵⁷ the Mountain Catchment Areas Act,⁵⁸ the Hazardous Substances Ordinance⁵⁹ the Nature Conservation Ordinance,⁶⁰ and the Atmospheric Pollution Prevention Ordinance⁶¹ are only some examples for South African legislation relevant for environmental conservation which passed on to Namibia, and which has been applicable way beyond Independence. However, Namibia, since Independence, has put a strong emphasis on integrating environmental concerns into the post-colonial legal framework. Many legislative steps have been taken, in order to comply with its obligations under international law and to ensure the conservation of natural resources by legislative means.

The Constitution provides the framework and Independence created the opportunity to revise a wide range of national policies and laws. This, together with the emphasis placed on environmental concerns at the Rio Summit in 1992 and increased awareness triggered widespread legislative reform, particularly in terms of natural resource management.

A wide number of enactments are pertinent – directly or indirectly – to environmental issues. Environmental framework legislation of cross-sectoral nature such as the Environmental Management Act⁶² or the Nature Conservation Ordinance⁶³ are rather broad in scope, while sectoral legislation such as the Forest Act⁶⁴ or the Water Management Act⁶⁵ cover specific environmental issues. The following list, which raises no claim to completeness, shows the rich body of environmental legislation in Namibia. The substantial number of enactments emphasises the relevance of environmental concerns in Namibia on the one hand, on the other, it reflects the fragmentation of environmental law, which is one of the major challenges of environmental law with a view to administration and enforcement. Only some of the listed statutory laws can be introduced briefly.

⁵⁵ Kidd (2011:12f.).

⁵⁶ No. 54 of 1956.

⁵⁷ No. 76 of 1969.

⁵⁸ No. 63 of 1970.

⁵⁹ No. 14 of 1974.

⁶⁰ No. 4 of 1975.

⁶¹ No. 11 of 1976.

⁶² No. 7 of 2007.

⁶³ No. 4 of 1975.

⁶⁴ No. 12 of 2001.

⁶⁵ No. 11 of 2013.

Selected Environmental Legislation in Namibia

- Agricultural (Commercial) Land Reform Act No. 6 of 1995
- Agricultural Pests Act No. 3 of 1973
- Animals Protection Act No. 71 of 1962
- Atmospheric Pollution Prevention Ordinance No. 11 of 1976
- Atomic Energy and Radiation Protection Act No. 5 of 2005
- Biosafety Act No. 7 of 2006
- Communal Land Reform Act No. 5 of 2002
- Controlled Game Products Proclamation No. 42 of 1980
- Diamond Act No. 13 of 1999
- Environmental Management Act No. 7 of 2007
- Environment Investment Fund of Namibia Act No. 13 of 2001
- Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No. 36 of 1947
- Forest Act No. 12 of 2001
- Game Products Trust Fund Act No. 7 of 1997
- Hazardous Substances Ordinance No. 14 of 1974
- Inland Fisheries Resources Act No. 1 of 2003
- Livestock Improvement Act No. 25 of 1977
- Marine Resources Act No. 27 of 2000
- Minerals (Prospecting and Mining) Act No. 33 of 1992
- Mountain Catchment Areas Act No. 63 of 1970
- Namibia Wildlife Resorts Company Act No. 3 of 1998
- National Fishing Corporation of Namibia Act No. 28 of 1991
- National Heritage Act No. 27 of 2004
- Nature Conservation Ordinance No. 4 of 1975
- Petroleum (Exploitation and Production) Act No. 2 of 1991
- Petroleum Products and Energy Act No. 13 of 1990
- Plant Quarantine Act No. 7 of 2008
- Prevention and Combating of Pollution of the Sea by Oil Act No. 6 of 1981
- Soil Conservation Act No. 76 of 1969
- Water Act No. 54 of 1956
- Water Resources Management Act No. 11 of 2013

5.1 The Environmental Management Act No. 7 of 2007

The Environmental Management Act (EMA) is an important tool in terms of environmental protection. On 6 February 2012, Government gazetted several notices related to the EMA.⁶⁶ It has *inter alia* been determined that with publication in the Gazette, the EMA becomes operational.⁶⁷ The Act requires adherence to the principle of optimal sustainable yield in the exploitation of all natural resources. The Act gives effect to Article 95(l) of the Constitution by establishing general principles for the management of the environment and natural resources. It promotes the coordinated and integrated management of the environment and sets out responsibilities in this regard. Furthermore, it intends to give statutory effect to Namibia's Environmental Assessment Policy; it enables the Minister responsible for the environment to give effect to Namibia's obligations under international environmental conventions; and provides for associated matters. In order to promote the sustainable management of the environment and the use of natural resources, the EMA states its objective in Section 2 and has established a bundle of principles for decision-making on matters affecting the environment in Section 3. The EMA promotes inter-generational equity in the utilisation of all natural resources. Environmental impact assessments and consultations with communities and relevant regional and local authorities are provided for to monitor the development of projects that potentially have an impact on the environment.

⁶⁶

See Government Gazette No. 4878 (2012), Government Notices 28-30.

⁶⁷

Government Gazette No. 4878 (2012) Government Notice No. 28, Commencement of the Environmental Management Act, 2007.

According to the EMA, Namibia's cultural and natural heritage is required to be protected and respected for the benefit of present and future generations. The Act provides for a Sustainable Development Advisory Council to be established⁶⁸ to advise the Minister on issues that promote cooperation and coordination between organs of state, non-governmental organisations, community based organisations, the private sector and funding agencies, on environmental issues relating to sustainable development. An Environmental Commissioner advises Government bodies on the preparation of environment plans, receives and records all applications for environmental clearance certificates, determines whether a particular listed activity requires an environmental assessment, reviews environmental assessment reports, issues environmental clearance certificates and conducts inspections to monitor compliance with the EMA.

The Act provides for administrative mechanisms such as the necessity of environmental clearance certificates and environmental assessments. The impact of activities on the environment has to be considered and interested or affected parties have to be given an opportunity to participate in environmental assessment when Government institutions or private persons are intending or planning anything likely to have a significant effect on the environment. With regard to such activities, environmental assessments have to be conducted before any decisions are made. For specific activities or projects having an environmental impact, an environmental clearance certificate is required.

All activities which need an environmental clearance certificate must follow the Regulations for Environmental Impact Assessments⁶⁹, which have been made according to Section 56 of the EMA.⁷⁰

5.2 The Nature Conservation Ordinance No. 4 of 1975

One of the major biodiversity related laws in Namibia is the legislation governing the conservation of wildlife, and protected areas, the Nature Conservation Ordinance 4 of 1975. With the introduction of communal conservancies, amendments to the ordinance and its regulations were made and came into effect in 1996. The amendments were made to take into account the establishment of conservancies and Wildlife Councils. In terms of the amendment, rural communities have to form a conservancy in order to be able to acquire the use-right over wildlife. Wildlife conservancies are gaining importance granting communities custodianship of their natural resources particularly wildlife and fish.

⁶⁸ In February 2012, the Government of Namibia gazetted the Regulation for the implementation of Environmental Management Act No. 7 of 2007. Subsequently, the Ministry of Environment and Tourism invited nominations for appropriate persons from the public, organisations, associations or institutions to sit on the Sustainable Development Advisory Council. The Sustainable Development Advisory Council has been inaugurated in January 2013. The Sustainable Development Advisory Council consists of members drawn from both Government and the private sector who will serve for a period of three years beginning 1 September 2012. The eight members of the Advisory Council are Anna Shiweda, the Deputy Permanent Secretary in the Ministry of Agriculture, Water and Forestry; Annely Haiphene, the National Planning Commission's Chief National Development Advisor; Dr Gaby Schneider, the Director of Geological Survey in the Ministry of Mines and Energy; Dr Malan Lindeque, the Permanent Secretary in the Ministry of Trade and Industry, and the four public nominated members include Martha Mwandingi, Sioni Ikela, Dr Chris Brown and Dr Michael Humavindu.

⁶⁹ Government Gazette No. 4878 (2012) Government Notice No. 30, Environmental Impact Assessment Regulations: Environmental Management Act, 2007.

⁷⁰ For more details see Chapter 8.

Although efforts are currently in progress to repeal this piece of legislation in its entirety, the Nature Conservation Ordinance is still one of the most comprehensive environment-related legal instruments in Namibia.

The Ordinance is arranged as follows: Chapter I establishes the Nature Conservation Board. Chapter II deals with game parks and reserves, and in particular its Section 13 is about the Etosha National Park. The Ordinance provides for a restriction of the right to enter game parks and nature reserves under specific conditions and prohibition of certain acts therein. One of the most important provisions with regard to the protection of game is Section 20, which prohibits hunting in game parks and nature reserves. With regard to plant protection, Section 24 prohibits the picking of indigenous plants in private nature reserves. Chapter III of the Ordinance on wild animals *inter alia* regulates hunting of specifically protected and protected game and of huntable game, game birds, exotic game and other wild animals. Provision is also made for the lease of hunting rights in Section 35. An own Chapter of the Ordinance is on problem animals, which are wild animals, declared as problem animals by the Executive Committee by respective notice in the Government Gazette. The provisions of Chapter V on the protection of fish in inland waters have been repealed by the Inland Fisheries Resources Act. Chapter VI aims at the protection of indigenous plants. The Minister of Environment and Tourism, who is responsible for the preservation of wild animals, exotic game, fish and plants may destroy decrease or eliminate any species that is detrimental to any other species, undertake research and surveys on any species, take the measure for the control of aquatic vegetation and issue regulations with regard to the import, cultivation and control of any plant, indigenous or not detrimental to, any wild animal, fish or indigenous plant. Chapter VII of the Ordinance contains several general provisions of more procedural and administrative nature, and focuses on permits, licences, registrations, approvals, permissions, exemptions and criminal implications and consequences for those who trespass specific provisions of the Ordinance. The Schedules of the Ordinance amongst others, list specially protected game, protected game, huntable game, huntable game birds, and protected plants. The Ordinance is considered to be the most important environmental law in Namibia with regard to case law.⁷¹ Unfortunately, this legal instrument is not equipped with adequate enforcement mechanisms, and the penalties attached to the offences hardly have a deterring effect.

5.3 Legislation on Water

The Water Act No. 54 of 1956 remains in force until the new Water Resources Management Act comes into force upon signature by the Minister. Although the new Water Resources Management Act No. 11 of has been passed by Parliament, signed by the President and published in terms of the Namibian Constitution,⁷² it has not yet come into operation as the Minister has not yet determined a date for the Act to come into operation as required by Section 134 of the Act. Once in operation, the Act repeals both, the Water Resources Management Act No. 24 of 2004 (which had *de facto* never come into force) and the Water Act No. 54 of 1956 as a whole.

⁷¹ *S v Ngombe* 1990 NR 165 (HC); *S v Machinga* 1990 NR 157 (HC); *Skeleton Coast Safaris v Namibia Tender Board & Others* 1993 NR 288 (HC); *S v Makwele* 1994 NR 53 (HC); *S v Koortzen* 1994 NR 356 (HC); *S v Kau & Others* 1995 NR 1 (SC); *S v Vorster* 1996 NR 177 (HC); *S v Seibeb & Another; S v Eixab* 1997 NR 254 (HC); *S v Maritz* 2004 NR 22 (HC); *S v Aukemeb* 2009 (1) NR 19 (HC); *Van Rensburg & Another v Government of the Republic of Namibia* 2009 (2) NR 431 (HC); *Uffindell t/a Aloe Hunting Safaris v Government of Namibia & Others* 2009 (2) NR 670 (HC).

⁷² See Government Gazette No. 5367 (2013) Government Notice No. 332.

Thus the Water Act of 1956 is generally referred to as the old Water Act and often in the past tense, although strictly speaking it remains applicable until it is officially repealed. This Act gives the Minister the power to, amongst others, investigate water resources, plan water supply infrastructure, develop water schemes, control water pollution, protect, allocate and conserve water resources, inspect water works, levy water tariffs and advise on all matters related to the water environment in general. It basically makes the Department of Water Affairs responsible for the use, allocation, control, and conservation of Namibia's surface and groundwater resources. It makes provision for the protection of river catchments, drilling of boreholes and making of wells, it controls effluent discharge into rivers and weather modifications such as cloud seeding and outlines regulations that govern the optimal use of water resources. It clearly defines the interests of the state in protecting water resources.

The **Water Resources Management Act No. 24 of 2004** has been approved and published in the Government Gazette. However, it has not come into force as a date for commencement of the Act as prescribed by Section 138(1)(b) of the same Act has not yet been determined by the Minister. The 2004 Act was based on the National Water Policy and provided for the management, development, protection, conservation, and use of water resources; and it established the Water Advisory Council, the Water Regulatory Board and the Water Tribunal. The objective of this Act was defined to ensure that Namibia's water resources are managed, developed, protected, conserved and used in a sustainable manner for the benefit of every Namibian.

The **Water Resources Management Act No. 11 of 2013** was enacted to provide for the management, protection, development, use and conservation of water resources; for the regulation and monitoring of water services and for incidental matters. The aim of this new Act includes to ensure that Namibia's water resources are managed, developed, used, conserved and protected in a manner consistent with, or conducive to, specific fundamental principles including, among others, equitable access to safe and sufficient drinking water; the maintenance of the water resource quality for ecosystems; and the promotion of the sustainable development of water resources based on an integrated water resources management plan which incorporates social, technical, economic, and environmental issues. The Act provides for the establishment of a Water Advisory Council to advise the Minister on issues such as water policy development and review; water resources management; and water abstraction and use. Furthermore, a Water Regulator is to be established under the Act, to determine the tariffs of fees and charges that may be levied by a water services provider or that are payable by licence holders for the abstraction of water or the discharge of effluent or the supply or re-use of effluent. The Water Regulator also performs other functions with regard to water service providers, which have to be licenced under the Act. Basin Management Committees are further institutions that may be established under the Act to further the Government's objective in achieving an integrated management of water resources.

5.4 Legislation on Fisheries and Marine Resources

The **Marine Resources Act⁷³** provides for the conservation of the marine ecosystem and the responsible utilisation, conservation, protection and promotion of marine resources on a sustainable basis. For that purpose it provides for the exercise of control over marine resources and for matters connected therewith. It replaces the Sea Fisheries Act 29 of 1992, which in turn replaced the Sea Fisheries Act 58 of 1973.

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No. 27 of 2000.

The **Aquaculture Act**⁷⁴ regulates and controls aquaculture activities and the sustainable development of aquaculture resources. It allows the Minister to formulate policies based on social, economic and environmental factors, as well as the best scientific information and advice from the advisory council to promote sustainable aquaculture and manage, protect and conserve aquatic ecosystems.

The **Inland Fisheries Resources Act**⁷⁵ deals with the conservation and utilisation of inland fisheries resources and allows for the updating and development of new policies for the conservation and sustainable utilisation of Namibia's inland fisheries. It encourages cooperation with neighbouring countries regarding the management and conservation of shared waterways. No fishing is allowed in parks nor by net within 100m from a bridge, culvert or spillway or in a manner obstructing more than half the width of any watercourse. Furthermore it prohibits the use of destructive fishing methods such as the use of poisons, explosives and night lights and the introduction and/or transfer of non-indigenous fish species. Fines or imprisonment are prescribed, for destructive fishing and the use of nets where they are banned.

The **Prevention and Combating of Pollution at Sea by Oil Act**⁷⁶ prohibits the discharge of oil from ships, tankers or off-shore installations and gives the state certain powers to prevent such pollution and to deal with the removal of oil spills. Whereas this Act is applicable to coastal waters, inland water pollution is covered by the Water Act.

5.5 Legislation on Land and Agricultural Production

The **Communal Land Reform Act**⁷⁷ provides for the allocation and administration of all communal land and makes provision for the prevention of land degradation and for mitigating the impact of mining, prospecting, road works and water provision on the natural environment. The Act gives certain rights to communal farmers and traditional authorities, and states that future regulations will address issues pertinent to the conservation and sustainable management of water and watercourses, of woods and to the combating and prevention of soil erosion, the protection of pastoral resources, such as the grazing of stock, and any other matter as the Minister may consider necessary or expedient.

The **Agricultural Pests Act**⁷⁸ has been repealed by the Plant Quarantine Act⁷⁹. The Agricultural Pests Act dealt with the registration of nurseries, the control and eradication of plants, insects and diseases at nurseries, the control and eradication of exotic (vertebrate) animals (excluding farm animals) and plants infected by insects or plant diseases, control of plant, insect and plant disease imports, honey bees, honey and exotic animals, the eradication of plant diseases, insects and locusts as well as defining the powers of inspectors.

The **Plant Quarantine Act**⁸⁰ provides for the preventing, monitoring, controlling and eradication of plant pests. The Act deals with the movement of plants, plant products and other regulated articles within and into or out of Namibia and provides for the certification of the phytosanitary standards of plants and plant products exported from Namibia. The Act makes provision with respect to the prevention and control of pests affecting plants. To this end,

⁷⁴ No. 18 of 2002.

⁷⁵ No. 1 of 2003.

⁷⁶ No. 6 of 1981.

⁷⁷ No. 5 of 2002.

⁷⁸ No. 3 of 1973.

⁷⁹ No. 7 of 2008.

⁸⁰ No. 7 of 2008. The Plant Quarantine Act came into operation on 1 July 2012. See Government Gazette No.

4975 (2012) Government Notice No. 157.

quarantine control measures and places restrictions on the importation of plant and plant material are introduced. The Minister may appoint plant protection officers and may declare areas or pests for purposes of quarantine control. The Ministry, or such other authority as the Minister by Notice in the Gazette may designate, has the authority and responsibility to function as the official national plant protection organisation of Namibia for the purposes of the International Plant Protection Convention. In June 2012, the Ministry of Agriculture, Water and Forestry has made and gazetted regulations⁸¹ relating to issuing of import permits, examination of imported plants, diseases or insects and lodging of appeals.

The **Soil Conservation Act**⁸² makes provision for the prevention and control of soil erosion and the protection, improvement and conservation of soil, vegetation and water supply sources and resources. The **Second Soil Conservation Amendment Act**⁸³ applies the Soil Conservation Act to Namibia and deals mainly with soil conservation, soil stabilisation and fire protection. This Act is being revised by the Ministry of Agriculture, Water and Forestry as part of the new Conservation of Agricultural Resources Bill.

5.6 Legislation on Forestry

The **Forest Act**⁸⁴ consolidates the laws relating to the use and management of forests and forest produce; it provides for the control of forest fires and creates a Forestry Council. It replaces the Preservation of Trees and Forests Ordinance⁸⁵ and the 1968 Forest Act⁸⁶. The 2001 Forest Act defines forest produce in very broad terms as anything that grows or is naturally found in a forest. The Act is formulated around the tenets of sustainable management of forests, and the purpose for which forest resources are managed and developed. This also includes the planting of trees where necessary, as well as soil conservation, the safekeeping of water resources and the maintenance of biological diversity.

5.7 Legislation on Energy and Mining

The **Minerals Prospecting and Mining Act**⁸⁷ makes it illegal for any person to prospect and mine without a licence, as such may have a negative impact on the environment. Section 122 stipulates that the Minister may, for the protection of the environment or the natural resources of Namibia or the prevention of pollution or damage, declare that certain explorative and mining processes may not be carried out or only with special permission.

The **Petroleum (Exploration and Production) Act**⁸⁸ was enacted to provide for the reconnaissance, exploration, production and disposal of, and the exercise of control over, petroleum. Production licences must be obtained to carry on reconnaissance operations and according to Section 71, rights-holders are held responsible for the pollution of the environment or other damages or losses caused.

The **Diamond Act**⁸⁹ contains several provisions aimed at protecting the environment. Section 55 is of specific importance as it prohibits the removal of sand, soil, clay, gravel, stone and

⁸¹ See Government Gazette No. 4975 (2012) Government Notice No. 158.

⁸² No. 76 of 1969.

⁸³ No. 38 of 1971.

⁸⁴ No. 12 of 2001.

⁸⁵ No. 37 of 1952.

⁸⁶ No. 72 of 1968.

⁸⁷ No. 33 of 1992.

⁸⁸ No. 2 of 1991.

⁸⁹ No. 13 of 1999.

rock from restricted areas unless specific permission is obtained. Section 56 prohibits the exportation of such items.

5.8 Selected Environmental Legislation in Preparation

Although the Ministry of Environment and Tourism has been working on an enactment dealing with the protection of wildlife and protected areas since the 1990s, the **Parks and Wildlife Management Bill** is still in the preparation stage.⁹⁰ It envisages to protect all indigenous species and control the exploitation of all plants and wildlife. The Preamble to this Bill states its intention to give effect to paragraph (l) of Article 95 of the Namibian Constitution. In it the state undertakes to establish a legal framework that provides for and promotes the maintenance of ecosystems, essential ecological processes and the biological diversity of Namibia and to promote the mutually beneficial co-existence of humans with wildlife, to give effect to Namibia's obligations under relevant international legal instruments, including the Convention on Biological Diversity and the Convention on International Trade in Endangered Species of Wild Fauna and Flora. In case the proposed Act comes into force, it repeals the Nature Conservation Ordinance 4 of 1975.

In its Principles of Conservation (Section 3) the Bill recognises that biological diversity must be maintained, and where necessary, rehabilitated; and that essential ecological processes and life support systems must be maintained.

The **Pollution Control and Waste Management Bill** aims to promote sustainable development; to provide for the establishment of a Pollution Control and Waste Management Unit; to prevent and regulate the discharge of pollutants to the air, water and land, to regulate noise, dust and odour pollution, to make provision for the establishment of an appropriate framework for integrated pollution prevention and control, to establish a system of waste planning and management and to enable Namibia to comply with its obligations under international law in this regard.

The **Public and Environmental Health Bill** introduced by the Minister of Health and Social Services in 2014 aims to promote public health and wellbeing; prevent injuries, diseases and disabilities; protect individuals and communities from public health risks; encourage community participation in order to create a healthy environment; and to provide for early detection of diseases and public health risks. To this end, the Bill contains several provisions relevant for environmental protection. With a view to water and food safety, the Bill formulates a duty of local authorities to provide and maintain as far as may be reasonably possible, a sufficient supply of potable water for drinking and domestic purposes. Furthermore, the Bill addresses integrated waste management and stipulates among others that in order to prevent environmental pollution and public health risks, local authorities must ensure that all waste generated is collected, disposed of and recycled in accordance with the requirements of all laws governing the management of the different waste streams.

The first **Access to Biological Resources and Associated Traditional Knowledge Bill** was drafted in 1998 and has since then undergone several changes. The objective of this envisaged piece of legislation is to protect biodiversity and traditional knowledge. The Bill applies to the derivatives of the biological resources, community knowledge and technologies, local and indigenous farming communities, and plant breeders. The benefit derived from the resource that is found within a specific area is limited to the inhabitants of that area. The Bill prohibits

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Despite the fact that the Minister of Environment and Tourism has called for a finalisation of that law in 2012 (See <http://www.economist.com.na/general-news/777-environment-minister-calls-for-finalisation-of-laws>; accessed 10 September 2015), this enactment has to date not been signed into law.

patents over life forms and biological processes. Furthermore, it recognises the rights of local and indigenous communities, and lays down a platform for the application of customary law to community rights. Local communities will be entitled to exercise their inalienable right to access, use, exchange, or share their biological resources in sustaining their livelihood systems, as regulated by their customary practices and laws. The Bill has been put on hold but an Interim Bioprospecting Committee (IBPC) mandated with the coordination and implementation of all activities related to access and benefit sharing was set up by Cabinet in 2007 until the Bill is finalised. The IBPC regulates and facilitates all bio-prospecting and bio-trade activities, while at the same time safeguards indigenous peoples and local communities against unlawful exploitation and biopiracy.

6 Roman-Dutch and Common Law

Roman-Dutch law is based on Roman law as it was applied by the courts of Holland and other provinces in the Netherlands; it was developed by writers such as Hugo de Groot and Simon van Leeuwen in the 17th and 18th centuries.⁹¹ Roman-Dutch law came to the Cape of Good Hope, when Dutch East India Company under its local governor Jan van Riebeeck established a refreshment post – today's Cape Town in 1652. Roman-Dutch Law in South Africa was subject to further developments under the influence of particularly English law.⁹² With the effect of Proclamation 21 of 1919, the Roman-Dutch law developed by the South African courts became the common law of the territory, binding on the Namibian courts until Independence.⁹³ This position was affirmed by Article 66(1) of the Namibian Constitution of 1990, which provides that

both the customary law and the common law of Namibia in force on the date of Independence shall remain valid to the extent to which such customary or common law does not conflict with this Constitution or any other statutory law.

Common law⁹⁴ refers to law and the corresponding legal system developed through court decisions and similar tribunals, rather than through statutory enactment. Common law is created and refined by judges: a decision in the case currently pending depends on decisions in previous cases and affects the law to be applied in future cases. When there is no authoritative statement of the law, judges have the authority and duty to make law by creating precedent. According to Article 66 of the Namibian Constitution, the common law in force on the date of Independence remains valid to the extent that the same is not in conflict with the Constitution or any other statutory law.⁹⁵

Several common law doctrines are relevant in terms of environmental protection.⁹⁶ For example, the common law rule of delict can be applied with regards to wrongful acts or omission; fault, either intended or through negligence; or harm to person or property (patrimonial loss).⁹⁷ The law of nuisance, including public and private nuisance is equally applied in cases with environmental impact and the neighbour legal principle of *sic utere tuo ut alienum non laedas* (use your property in a way which does not harm another) is considered to

⁹¹ Du Plessis (1999:40ff.).

⁹² Du Plessis (1999:49ff.).

⁹³ See Amoo (2008a:60ff.).

⁹⁴ For further details on the common law in Namibia see Amoo (2008a:62ff.).

⁹⁵ Cf. Ruppel (2009d).

⁹⁶ Under Roman law, several provisions have been applied for the protection of natural resources. See Wacke (2002); Van den Bergh (1999:495ff.).

⁹⁷ Kidd (2008:133).

be one of the roots of environmental protection. The remedies available under the common law are self-help, an abatement order, action for damages and an interdict. The principal remedies for preventing or restraining an environmental nuisance or delictual conduct are an interdict and, where harm has already been caused, a claim for damages in terms of Aquilian action.⁹⁸

Especially from a common law perspective, environmental litigation is an important facet for the vital development of environmental law. Judicial intervention related to environment-related issues arises when persons resort to court action to seek redress for a grievance. Court action can be either of civil or of criminal nature. While civil action is typically resorted to by private parties, criminal action is generally the preserve of public authorities. Judicial decisions in environment-related decisions are scarce in Namibia, which is no surprise given the novelty of environmental law and Namibia's tender age.⁹⁹ However, being a plural legal system with substantive common law elements, Namibia can greatly benefit from the experience with environment related cases in other countries.¹⁰⁰

Over all, it can be concluded, that the common law rules complement environmental statutory enactments; this is also true, when it comes to their application and interpretation. It is this gradual convergence of conventionally disparate legal families that leads towards a system that recognises the complementary roles of legislation and judicial precedents as sources of law. In this context, the role of judges in the development of the common law and – at the same time – the judicial interpretation of statutes should not be underestimated. However, where pollution is, for example, expressly prohibited by means of legislation, it is usually the state that has the responsibility “to take the necessary steps to put a stop to the action or to prosecute the offender”, whereas under common law the plaintiff needs to take up the matter and therefore has to carry the “burden of expense, time and other pressures”¹⁰¹.

7 Customary Law

Despite the legal influence of the ex-colonial powers, a large number of Namibians still live under indigenous customary law.¹⁰² This makes the Namibian legal system an object of fascination to comparative lawyers as well as to legal ethnologists and sociologists. Legal pluralism prevails, hence two or more types of law or legal traditions operate simultaneously.¹⁰³

Before the arrival of the colonists the indigenous populations have lived for generations according to their own distinctive laws. Customary law was passed on – orally – from generation to generation. Article 66 of the Namibian Constitution lays the foundation for the constitutional recognition of customary law. It states that both the customary law and the common law of Namibia in force on the date of Independence shall remain valid to the extent

⁹⁸ For further literature and South African case law references on the common law and other remedies in environmental law, cf. Paterson / Kotzé (2009).

⁹⁹ Environment-related cases in Namibia are mostly of criminal nature and fall under the scope of the Nature Conservation Ordinance No. 4 of 1975. The cases include but are not limited to the following: *S v Ngombe* 1990 NR 165 (HC); *S v Machinga* 1990 NR 157 (HC); *Skeleton Coast Safaris v Namibia Tender Board and Others* 1993 NR 288 (HC); *S v Makwele* 1994 NR 53 (HC); *S v Koortzen* 1994 NR 356 (HC); *S v Kau and Others* 1995 NR 1 (SC); *S v Vorster* 1996 NR 177 (HC); *S v Seibeb and Another*; *S v Eixab* 1997 NR 254 (HC); *S v Maritz* 2004 NR 22 (HC); *S v Aukemeb* 2009 (1) NR 19 (HC); *Van Rensburg and Another v Government of the Republic of Namibia* 2009 (2) NR 431 (HC); *Uffindell t/a Aloe Hunting Safaris v Government of Namibia and Others* 2009 (2) NR 670 (HC).

¹⁰⁰ For a collection of environmental decisions see UNEP (2001 and 2005).

¹⁰¹ Kidd (2008:134).

¹⁰² Hinz (2002a); Sippel (2003:69ff.).

¹⁰³ Griffiths (1986:1ff.).

that such customary or common law does not conflict with the Constitution or any other statutory law. Section 3 of the Traditional Authorities Act¹⁰⁴ gives certain powers, duties and functions to traditional authorities and members thereof. It is the overall responsibility of traditional authorities to supervise and ensure the observance of the customary law of that community by its members. As to nature conservation it is one of the duties of a traditional authority to ensure that members of the traditional community use the natural resources at their disposal on a sustainable basis and in a manner that keeps the environment and maintains the ecosystem for the benefit of all Namibians.¹⁰⁵ Customary law plays an important role in the sustainable development of natural resources and the protection of biological diversity as it incorporates a broad knowledge of ecosystems relationships.¹⁰⁶ Still, while most of the customary rules have been transmitted orally from generation to generation, the process of ascertaining customary law in Namibia is ongoing.¹⁰⁷

8 Criminal Aspects of Environmental Law

Environmental crimes include violations of environmental laws attracting criminal sanctions. An environmental crime can be defined as an act or omission that damages or endangers the environment. Examples of environmental crimes are *inter alia* the illegal emission of hazardous substances into air, water or soil; illegal harvesting or hunting; dumping of waste and illegal trade in endangered species. Environmental crimes may be committed by enterprises in the widest sense or individuals. Enforcement efforts in terms of environmental duties are partially inadequate as compared with the magnitude of environmental and economic losses imposed by national and trans-national environmental crimes.

Therefore, national and international enforcement programmes are necessary, and adequate resources need to be available to enable them to succeed. Penal law within environmental law aims to protect the environment by deterring detected violators from violating again or deterring other potential violators from violating by sending a message that they too may experience adverse consequences for non-compliance.¹⁰⁸

Many of the environment-related national enactments cited in this publication contain criminal clauses in terms of environmental crimes. Such makes the Nature Conservation Ordinance 4 of 1975 *inter alia* provision for illegal

- hunting, catching or capturing protected game;
- placing, releasing or angling any fish in inland waters;
- picking, selling, donating, exporting and removing of protected plants.

The Communal Land Reform¹⁰⁹ Act may serve as one further example of legislation with the character of a criminal law for it contains criminal implications relating to illegal grazing and fencing. Despite the possibility of withdrawal of grazing rights, the respective penalties include fines up to N\$4,000 or imprisonment up to one year or both.

¹⁰⁴ No. 25 of 2000.

¹⁰⁵ See Hinz (2003:8ff.).

¹⁰⁶ Hinz / Ruppel (2008b:57f.).

¹⁰⁷ Hinz (2010a). For more details see the Chapter 17.

¹⁰⁸ Some relevant Namibian cases include the following: *S v Maritz* 2004 NR 22 (HC); *S v Kau and Others* 1995 NR 1 (SC); *Van Rensburg and Another v the Government of the Republic of Namibia* 2009 (2) NR 431 (HC); *S v Maseka* 1991 NR 249 (HC); *S v Eiseb and Another* 1990 NR 142 (HC); *S v Nangombe* 1990 NR 165 (HC); *S v Makwele* 1994 NR 53 (HC).

¹⁰⁹ No. 5 of 2002.

Sanctions can range from fines for petty offences to imprisonment for serious offences. Despite from these sanctions it may be appropriate to impose specific penalties in addition to the principal punishment. In some cases provisions are made for the forfeiture either of items used for an offence or for items resulting from an offence. Another appropriate measure might be the cancellation or at least suspension of permits or licences that have been granted. In some cases it might even be prescribed that permits or licences might not be renewed in future due to committed offences. Another additional penalty may be the confiscation of property used for the offence and some provisions also contain regulation as to specific compensation or reimbursement of expenses incurred as a result of the offence. Yet, the overall aim of criminal sanctions is deterrence rather than retribution.¹¹⁰ Deterrence can, however, also be achieved by measures not including criminal sanctions. These are, to name but a few, administrative measures (directives and withdrawal of authorisation), civil measures (e.g. interdict), and economic or market based instruments etc.¹¹¹

9 Selected Strategies and Action Plans

9.1 National Biodiversity Strategy and Action Plan

Namibia has taken up the challenge of conserving species and ecosystems to limit the increasing rate of loss of biological diversity by drafting the National Biodiversity Strategy and Action Plan. The aim of this document is to protect ecosystems, biological diversity and ecological processes through conservation and sustainable use, thereby supporting the livelihoods, self-reliance and quality of life of Namibians.¹¹² The Action Plan intends to provide overall strategic guidance for the implementation of Article 95(1) of the Constitution, and detailed, practical activities through which sustainable development can be achieved. Further to this, the Action Plan attempts to provide a national strategic framework for natural resource management activities, involving biological resource management, also including trade and economic incentives. It aims to prioritise activities and measures needed to implement this strategy effectively for the next decade.

The Action Plan also advocates the facilitation of sustainable natural resource management throughout Namibia as a fundamental theme for development planning; this it proposes to do through appropriate ecosystem management and land use practices, and the selective, sustainable harvesting of species. Government is urged to develop monitoring and incentive systems for sustainable natural resource use. It is proposed that the users themselves become the monitoring agents, practising adoptive management, since they are the custodians of resources. Incentive systems should be aimed at making the sustainable management of natural resources profitable.¹¹³

9.2 Namibia's Climate Change Strategy and Action Plan

Namibia's Proposed Climate Change Strategy and Action Plan was drafted in 2009 and provides a background to climate change impacts predicted globally, regionally and nationally.¹¹⁴ It highlights how vulnerable Namibia is in this regard and argues the need for

¹¹⁰ Ruppel (2009d).

¹¹¹ Cf. Kidd (2008:221) with further references.

¹¹² Barnard *et al.* (2000:13).

¹¹³ Sub-strategic aim 2.2 of the National Biodiversity Strategy and Action Plan.

¹¹⁴ Available at [http://www.met.gov.na/Documents/NAMIBIA-repozed%20Climate%20Change%20Strategy%20and%20Action%20Plan%20\(13.pdf](http://www.met.gov.na/Documents/NAMIBIA-repozed%20Climate%20Change%20Strategy%20and%20Action%20Plan%20(13.pdf); accessed 14 September 2015.

climate change adaptation and mitigation. Guiding principles are proposed in the strategy to guide the planning, development, implementation and monitoring and evaluation of climate change response activities. The three main responses to climate change, namely adaptation, mitigation and tackling cross-cutting issues through adaptation and mitigation are highlighted from a Namibian perspective. Adaption focuses on food security and a sustainable resource base, on sustainable water resources, on human health and well-being and infrastructure. Climate change mitigation is addressed through two themes namely sustainable energy provision and low-carbon development and transport. Cross-cutting issues particularly refer to capacity building, training and institutional strengthening, research and information needs, public awareness, participation and access to information, disaster reduction and risk management, financial resource mobilisation and management, international cooperation and networking, technology development and transfer, and legislative development. The Action Plan outlines in detail specifically proposed activities to address each strategic aim through adaptation or mitigation.

9.3 Aquaculture Strategic Plan

Namibia's 2004 Aquaculture Strategic Plan¹¹⁵ was developed to provide guidance on the regulatory framework, business climate, public acceptability, also on strategies to ensure training, research, marketing and infrastructure development for aquaculture. The plan outlines targets for employment creation, investment, training and the value of production. Diverse needs call for sustainable economies in rural areas, both inland and coastal; improved viability of non-productive areas; poverty reduction; and pollution prevention supporting renewable natural resource-based food production. With regard to environmental considerations, the plan emphasises the importance of site selection prior to developing any aquaculture facility, and the permanent assessment of good water quality as the most important prerequisites for successful aquaculture.

9.4 Strategic Action Plan for the Implementation of Renewable Energy Policies

An important aspect of the meaningful and large-scale introduction of renewable energy technologies is to ensure sustainable development by promoting broad economic empowerment, socio-economic development and environmental protection. To this end, this Strategic Action Plan provides that the Renewable Energy and Energy Efficiency Institute should co-ordinate institutional cooperation on gender-based energy issues and promote regionally based broad economic empowerment. Environmental considerations should also form part of its responsibilities. The plan emphasises that increased population pressure results in increased pressure on natural resources as rural households often have no choice, but to rely heavily on wood for energy and shelter; this often happens at the expense of environmental sustainability. For this reason, it is proposed that the Renewable Energy and Energy Efficiency Institute assists in the establishment of environmental impact assessments that consider energy needs within a socio-economic framework. The institute intends to expand the scope of environmental impact assessments to consider the impact of, for instance, power stations' emissions to greenhouse gas development, respiratory diseases from household smoke, etc. within a national, sub-regional, regional and global perspective.

¹¹⁵

GRN (2004b).

9.5 Forestry Strategic Plan

The Forestry Strategic Plan was issued by the Ministry of Environment and Tourism in 1996.¹¹⁶ It is the major instrument for implementing the 2001 Development Forestry Policy. The plan aims to promote development of community level natural forest management, which includes the community management of riparian forests and woodlands.

10 Funding Mechanisms

Besides the broad number of environmental projects funded by international donors such as the GEF, a variety of Government-sponsored funds are in place to facilitate social equity and the promotion of sound environmental management.¹¹⁷ The Solar Revolving Fund is one example. With regard to funding for environmentally relevant projects, the Environmental Investment Fund of Namibia (EIF) is of particular importance. The legal foundation of the EIF is the Environmental Investment Fund of Namibia Act¹¹⁸. The EIF became operational in 2011 after the board and the Chief Executive Officer had been appointed and was officially launched in February 2012. The EIF aims to promote sustainable economic development of Namibia through investment in and promotion of activities and projects that protect and maintain the natural and environmental resources of the country. To this end, the EIF procures funds from international donors for the maintenance of an endowment that will generate a permanent stream of income, and procure funds within Namibia on an annual basis from conservation fees and levies. With the generated funds investments in the following areas will be made:

- sustainable use and management of environmental and natural resources;
- maintenance of the natural resource base and ecological processes;
- maintenance of biological diversity and ecosystems for the benefit of all Namibians; and
- economic improvements in the use of natural resources for sustainable rural and urban development.

¹¹⁶ GRN (1996).

¹¹⁷ Cf. GRN (2012:71).

¹¹⁸ No.13 of 2001.

CHAPTER 5

INTRODUCTION TO INTERNATIONAL ENVIRONMENTAL LAW

Oliver C. Ruppel

This Chapter deals with several aspects of international environmental law with a focus on how these relate to the situation in Namibia. It must be stated beforehand that, especially with regard to the sources of international law, much has been written by internationally-renowned jurists.¹ However, in order to give an overview of this field of the law as comprehensively as possible, but within the limits of this publication, this Chapter summarises the most basic features of international environmental law.

1 The Application of International Law in Namibia

International law has developed rapidly over the past few decades, especially since the dawn of the UN, when rules and norms regulating activities carried on outside the legal boundaries of nations were developed. Numerous international agreements – bilateral, regional or multilateral in nature – have been concluded and international customary rules, as evidence of a general practice accepted as law, have been established. But how do these sources of international law apply domestically? In this regard, two approaches can generally be followed.² The first, the monist approach, assumes that international laws are automatically incorporated into domestic law; the second, the dualist approach, follows the rule that international laws are not automatically incorporated into domestic law and therefore require an act of legal transformation into domestic law.

Article 144 of the Namibian Constitution incorporates international law explicitly as law of the land and it needs no legislative act to become so.³ International law is thus integrated into domestic law. National authorities and the judiciary in particular can, therefore, apply international law directly on the national level, before cases are taken to regional or international judicial or quasi-judicial bodies.⁴ However, international law has to conform to the Constitution in order to apply domestically. Whenever a treaty provision or other rule of international law is inconsistent with the Namibian Constitution, the latter will prevail.⁵

Article 144 also mentions two sources of international law that apply in Namibia: general rules of public international law and international agreements binding upon Namibia. General rules of public international law include rules of customary international law, supported and accepted by a representatively large number of states. The notion of ‘international agreement’ primarily refers to ‘treaty’ in the traditional sense, i.e. international agreements concluded

¹ See for example Sands (2003); Kiss (2004); Dugard (2005).

² Cf. Dugard (2005:47f.).

³ Erasmus (1991:94).

⁴ Bangamwabo (2008:168).

⁵ Erasmus (1991:94).

between states in written form and governed by international law,⁶ but it also includes conventions, protocols, covenants, charters, statutes, acts, declarations, concords, exchanges of notes, agreed minutes, memoranda of understanding, and agreements.⁷ Notably, not only agreements between states, but also those with the participation of other subjects of international law, e.g. international organisations, are covered by the term ‘international agreement’. In general, international agreements are binding upon states if the consent to be party to a treaty is expressed by a signature followed by ratification; or by accession, where the state is not a signatory to a treaty; or by declaration of succession to a treaty concluded before such a state existed.

In Namibia, a treaty will be binding in terms of Article 144 if the relevant international and constitutional requirements have been met in terms of the law of treaties and the Namibian Constitution. International agreements, therefore, will become Namibian law when they come into force for Namibia.⁸ The conclusion of or accession to an international agreement is governed by Articles 32(3)(e), 40(i) and 63(2)(e) of the Namibian Constitution. The Executive is responsible for conducting Namibia’s international affairs, including entry into international agreements. The President, assisted by the Cabinet, is empowered to negotiate and sign international agreements, and to delegate such power. It is required by the Constitution that the National Assembly agrees to the ratification of or accession to an international agreement. However, the Constitution does not require the promulgation of an international agreement in order for it to become part of the law of the land.⁹

Further to Article 144, Article 96 of the Constitution promotes international cooperation, peace and security. It also exhorts respect for international law and treaty obligations as a principle of state policy.

2 Sources of International Environmental Law

The sources of international environmental law are part of the sources of international law in general. Thus, the international legal regime must be consulted in order to trace the sources of international environmental law. International law, like national law, knows different types of law, namely hard law and soft law. Hard law describes those provisions or agreements which are obligatory in nature and thus binding for those to whom these provisions are applicable. The opposite of this is the category of soft law, encompassing non-binding texts such as the Declarations resulting from the Rio and Stockholm Conferences. Soft law has an important influence in international law because acceptance and compliance often develops into international customary law. The major problem is to determine the point at which soft law becomes such law, i.e. hard law. This will be discussed below.

International environmental law comprises both hard law and soft law components. The sources of international law in general are listed in Article 38 of the Statute of the International Court of Justice (ICJ), the principal judicial organ of the United Nations:

1. The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply:

⁶ Definition in Article 1 of the Vienna Convention on the Law of Treaties of 1969, which entered into force in 1980.

⁷ Cf. the definition of ‘treaty’ proposed by the International Law Commission; Article 2(a) of the Draft Articles on the Law of Treaties, with commentary, available at http://legal.un.org/ilc/texts/instruments/english/commentaries/1_1_1966.pdf; accessed 15 September 2015.

⁸ Erasmus (1991:102f.).

⁹ Hinz / Ruppel (2008b:8ff.).

- a. international conventions, whether general or particular, establishing rules expressly recognised by the contesting states;
- b. international custom, as evidence of a general practice accepted as law;
- c. the general principles of law recognised by civilised nations;
- d. subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary mean for the determination of rules of law...

Considering that Article 38 of the Statute of the ICJ was first drafted in 1920, these provisions no longer reflect all the sources of today's international law. New developments in respect of sources of law have to be considered in addition to those recognised in Article 38.¹⁰ In the following paragraphs, however, only those four categories of sources of international law as outlined in Article 38 will be elaborated on, with a focus on their implications for environmental law-related concerns.

2.1 International Conventions: Multilateral Environmental Agreements (MEAs)

International conventions or treaties, as referred to in Article 38 of the ICJ, are defined by Article 2.1(a) of the 1969 Vienna Convention on the Law of Treaties as international agreements "concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation".

International environmental treaties or Multilateral Environmental Agreements (MEAs) as they are commonly referred to, regulate the relationships between states pertaining to the environment. Generally, the first objective of any MEA is the protection and conservation of the environment. However, MEAs will also be beneficial in economic, political or administrative regard. MEAs can protect public health, improve governance, empower the public to get involved, increase solidarity, enhance international political respect, and improve technical and financial assistance and networking.¹¹

As a general rule, MEAs are of a binding nature and are thus to be distinguished from other non-binding international instruments (soft law), which cannot be enforced, but rather serve a guiding role. The binding nature of MEAs derives from the *pacta sunt servanda* principle, which has been reaffirmed by Article 26 of the Vienna Convention on the Law of Treaties.

Although international law typically focuses on obligations among states, it has the potential to influence environmental law at the national level. In some cases the parties to such agreements are international governmental or non-governmental organisations instead of, or in addition to, states.

2.1.1 How MEAs Are Made

International treaties come into being in a multi-stage process.¹² Usually, a draft is the first step and is drawn up by such international organisations as the United Nations, the African Union, or the Council of Europe. As the next step, this draft is negotiated by its stakeholders: national

¹⁰ The list of sources of international law can be supplemented by other sources of international law like duties *erga omnes* and *ius cogens*. *Estoppeil* and acquiescence can be added to the list of sources of international law as well as unilateral legal acts. See Dugard (2005:27).

¹¹ UNEP (2006a:44f.).

¹² Cf. Sands (2003:128ff.); Dugard (2005:408ff.).

delegations including Government officials, scientists, and representatives of NGOs. The negotiation phase is closed by the adoption of an agreed text, which is subsequently signed by the representatives of the state who have been commissioned to this effect by their Government. Certain treaties are signed after the closing session of the negotiations during a determined period. After the end of such period non-contracting states can adhere or accede to the treaty. After the signature of a treaty follows the ratification, which takes place at the national level and according to domestic law. National law stipulates, usually, that a treaty should be ratified by the head of the state after approval by parliament or accepted by the executive. How an MEA becomes applicable under national law depends on the constitutional provisions of the country in question. It follows either a monist or a dualist approach, as explained earlier in this chapter.¹³ The ratification process is in most cases concluded by the deposit of an instrument of ratification,¹⁴ approval or other communication to the secretariat of an international organisation and the treaty subsequently enters into force on a date determined by the treaty itself, in most cases after a certain number of instruments of ratification have been deposited or after a specific period of time has elapsed.

2.1.2 The General Scope of MEAs

International environmental law may be established on the global level, containing rules applicable for the entire, or at least almost the entire, international community.¹⁵ At regional level, international law creates a legal framework for a specific region, such as European environmental law (e.g. EC guidelines) or similarly within the African Union.¹⁶ A regional or continental scope may of course again be subdivided into smaller regional blocs, such as the legal framework of the Southern African Development Community (SADC), often referred to as the sub-regional level.¹⁷ Bilateral environmental agreements are international treaties usually concluded between two states with shared natural resources such as rivers, lakes or parks.

As has been outlined, the geographic coverage of international agreements is one reason for the broad scope of international environmental law. One other reason is the variety of different sectors covered by this field of the law, such as water, land, biological diversity, air and climate, to name only a few. Thus, the number of international agreements directly or indirectly pertinent to the environment is extraordinarily high¹⁸ and no other area of law has

¹³ For a more detailed discussion on the relationship between international and municipal law see Dugard (2005:47ff.). Namibia follows the monist approach by virtue of Article 144 of the Constitution as has been stated earlier in this chapter.

¹⁴ Usually a document issued by the respective state, which states that the treaty has been ratified.

¹⁵ MEAs with effectively whole world membership include the Convention of Biological Diversity (CBD) and its protocol, the 2000 Cartagena Protocol on biosafety; the 1971 Ramsar Convention on Wetlands of International Importance; and the 1973 Washington Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) among others.

¹⁶ The MEA most relevant for Africa is the African Convention on the Conservation of Nature and Natural Resources. For certain aspects of the implementation of AU law on national level see Dinokopila (2015:479ff.).

¹⁷ The SADC Protocols pertinent to environmental issues are such sub-regional environmental agreements.

¹⁸ Kiss (2004:41) speaks of more than one thousand. UNEP's 2005 Register of International Treaties and other agreements in the field of the environment has 272 environmental agreements, not including bilateral agreements or treaties, where the focus is on other issues but which establish environmental obligations, such as the GATT/WTO or regional free trade agreements. The International Environmental Agreements website lists 1260 Multilateral Environmental Agreements, 1599 Bilateral Environmental Agreements, 249 Other (non-multi, non-bi) Environmental Agreements, 217 Multilateral Environmental Non-binding Instruments (non-agreements), 206 Bilateral Environmental Non-binding Instruments (non-agreements),

generated such a large body of conventions on a specific topic as international environmental law has in the past decades.

2.1.3 Typical Structure of MEAs

Many MEAs do have common characteristics, use the same legal techniques and often have a similar structure.¹⁹ Like other international treaties, MEAs are typically arranged as follows: The Preamble, which can be helpful in interpreting the treaty, explains the motivations of the contracting parties but contains in itself no obligatory rules. The main part of a MEA includes substantive rules that define the obligations of the parties, measures of implementation, institutional provisions (e.g. to create treaty bodies such as the Conference of the Parties) and closing measures concerning the life of the treaty itself. Many MEAs have Annexes, which contain specific regulations concerning technical details such as lists of substances or activities, pollution standards, lists of protected species, etc.

2.1.4 Compliance and Enforcement of MEAs

Compliance with and enforcement of MEAs²⁰ are, as in other fields of the law, essential for ensuring that MEAs are not simply pieces of paper.

Compliance, meaning the fulfilment by the contracting parties of their obligations under MEAs, is ensured by different legal means. Compliance measures can be adopted by states or the secretariats and conferences of parties of specific MEAs, and MEAs themselves do often contain provisions on compliance or non-compliance for that matter.²¹ The competent body of a MEA²² can, where authorised to do so, regularly review the overall implementation of obligations under the MEA and examine specific difficulties.

MEAs have to be implemented by parties to the agreement by enacting and promulgating relevant laws, regulations, policies, and other measures and initiatives to meet their obligations. International organisations have developed general guidelines on compliance and enforcement of MEAs.²³ Compliance with MEAs is *inter alia* enhanced through national implementation plans, including monitoring and evaluation of environmental improvement; reporting and verification; establishment of compliance committees with appropriate expertise; and inclusion of compliance provisions and mechanisms within the MEA.²⁴

¹⁹ and 96 Other (non-multi, non-bi) Environmental Non-binding Instruments (non-agreements), see <http://iea.uoregon.edu/page.php?query=home-contents.php>; accessed 15 September 2015.

²⁰ Cf. Kiss (2004:42).

²¹ For a detailed discussion on compliance and enforcement regarding MEAs see UNEP (2006a).

²² See for example Article 34 of the Cartagena Protocol on Biosafety, Article XII of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), or Article 18 of the Kyoto Protocol to the UNFCCC in connection with Decision 27/CMP.1 on the Procedures and mechanisms relating to compliance under the Kyoto Protocol; available at

<http://unfccc.int/resource/docs/2005/cmp1/eng/08a03.pdf#page=92>; accessed 15 September 2015.

²³ Such as the Conference of Parties, with a secretariat, established under Articles 23-25 of the Convention on Biological Diversity.

²⁴ In 2002, UNEP has adopted the Guidelines on Compliance with and Enforcement of Multilateral Environmental Agreements; other relevant guidelines include the 1999 Caribbean Guidelines for MEA Implementation; the 2002 Guiding Principles for Reform of Environmental Enforcement Authorities in Transition Economies of Eastern Europe, Caucasus and Central Asia (EECCA), developed by EECCA Member States and the Organisation for Economic Cooperation and Development (OECD); or the 2003 Guidelines for Strengthening Compliance with and Implementation of Multilateral Environmental Agreements (MEAs) in the ECE (UN Economic Commission for Europe) Region.

²⁵ Cf. the 2002 UNEP Guidelines on Compliance with and Enforcement of Multilateral Environmental Agreements.

The effectiveness of MEAs has to be subject to review. In this regard, monitoring, involving the collection of data, reporting, requiring parties to make regular, timely reports on compliance, using an appropriate common format, or verification of data and technical information in order to assist in ascertaining whether a party is in compliance, may be adequate measures in terms of strengthening compliance. State parties may be obliged to undertake to submit reports on the measures they have adopted which give effect to the rights recognised in the MEAs and on the progress made. Article 26 of the Convention on Biological Diversity (CBD) is one example for review under a MEA. Parties are thereby required to report to the Conference of the Parties (COP) on measures taken to implement the convention and their effectiveness in achieving the objectives of the convention. One major problem regarding national reports under international agreements in general is the issue of non-submission by the respective deadlines, due to various reasons, including limited human, technical, and financial resources. Taking again the CBD as an example, it can be observed that as of 14 September 2015²⁵ only 155 out of 196 CBD parties had submitted the fifth national report that was due on 31 March 2014.²⁶ Namibia has submitted all five national reports under the CBD.

Provisions for settlement of disputes complement the provisions aimed at compliance with an agreement. Several forms of dispute settlement mechanisms, including good offices, mediation, conciliation, fact-finding commissions, dispute resolution panels, arbitration and other possible judicial arrangements are available depending on the specific provisions contained in the applicable MEA. The primary judicial organ of the United Nations is one competent body to hear certain disputes on environmental issues. Other environmental judicial bodies include the Law of the Sea Tribunal, or the International Court of Environmental Arbitration and Conciliation.

While compliance generally applies to the international context, enforcement applies to the national context. Enforcement can be described as the range of procedures and actions employed by a state, its competent authorities and agencies to ensure that organisations or persons, potentially failing to comply with environmental laws can be brought or returned into compliance and/or punished through civil, administrative or criminal action.²⁷ Enforcement is essential to secure the benefits of MEAs, protect the environment, public health and safety, deter violations, and encourage improved performance.²⁸ Enforcement encompasses a set of legal measures which can be applied. Such measures include the adoption of laws and regulations, monitoring outcomes, and various enabling activities and steps that a state may take within its national territory to ensure implementation of an MEA. Furthermore, good enforcement programmes reinforce the credibility of environmental protection efforts and the legal system that supports them and ensures fairness for those who willingly comply with environmental requirements.²⁹

Effective enforcement can *inter alia* be achieved by providing for responses in cases of contraventions of national environmental laws and regulations implementing multilateral environmental agreements (environmental law violations) or in cases of violations or breaches of national environmental laws and regulations that a state determines to be subject to criminal penalties under its national laws and regulations (environmental crimes).

²⁵ According to <http://www.cbd.int/reports/>; accessed on 14 September 2015.

²⁶ See <http://www.cbd.int/reports/search/?type=nr-04>; accessed on 14 September 2015.

²⁷ UNEP (2006a:294).

²⁸ UNEP (2006a:289f.).

²⁹ UNEP (2006a:33).

2.2 International Customary Law

International customary law encompasses norms and rules that countries follow as a matter of custom and they bind all states in the world.³⁰ It is, however, not clear-cut when exactly a principle becomes customary law and thus binding, a situation, which has led to, disputes among states.

Two criteria have, however, crystallised with regard to the requirements for a rule to become international customary law.³¹ The prerequisite for the first criterion, namely that of settled practice (*usus*), is a constant and uniform usage or widespread acceptance of a rule. The acceptance of an obligation to be bound (*opinio juris sive necessitatis*) is the second criterion.³²

Many international customary law rules relevant for the field of environmental law have been developed.³³ The principle that no state may use or permit to use its territory in such a manner as to cause injury to the territory of another state has for example become a principle of international customary law. This principle goes back to the Trail Smelter Arbitration in 1941³⁴ and was taken up by the Stockholm Declaration, repeated in the Rio Declaration and reaffirmed in the Nuclear Weapons Case.³⁵

The duty to warn other states promptly about emergencies of an environmental nature and environmental damages to which another state or states may be exposed is contained in the 1978 Principles Concerning Shared Resources, drafted by UNEP, and also contained in Article 192 of the 1982 UN Convention on the Law of the Sea. This duty was neglected by the Government of the Soviet Union in the case of the Chernobyl disaster in 1986. As a consequence, the 1986 Convention on Early Notification of a Nuclear Accident was adopted, which in Article 2 explicitly imposes a duty upon states to notify those states which are or may be physically affected of a nuclear accident.

2.3 General Concepts and Principles of International Environmental Law

A wide range of general principles guide law and policy on issues pertaining the environment, on the national and international level. Most of these principles go hand in hand with many overlaps and in their entirety they provide for the fundamental framework with regard to environmental protection.

³⁰ Sands (2003:143f.).

³¹ These criteria, which are being applied by national courts as well, have been developed by international jurisprudence inter alia in the following cases: *Asylum case* 1950 ICJ Reports 266; *North Sea Continental Shelf Case (West Germany v The Netherlands and Denmark)* 1969 ICJ Reports 3; *Nicaragua Case (Nicaragua v US)* 1986 ICJ Reports 14.

³² For a detailed discussion see Sands (2003:143ff.) or Dugard (2005:29ff.).

³³ For further reference see Sands (2003: 147ff.) and Kiss (2004:49).

³⁴ *Trail Smelter Arbitration* (1938/1941) 3 RIAA 1905 Arbitral Tribunal: US and Canada.

³⁵ Advisory Opinion, ICJ Rep. 1996, 226 ff. at para 64 ff.

Overview of General Concepts and Principles of International Environmental Law

- State sovereignty
- Cooperation
- Preservation and protection of the environment
- Precaution
- Prevention
- Polluter pays principle
- Information and assistance in environmental emergencies
- Information and consultation in cross-boundary relations
- The rights of individuals: information, participation and access to justice
- Access and benefit sharing regarding natural resources
- Good governance
- Sustainable development, integration and interdependence
- Inter-generational and intra-generational equity
- Responsibility for trans-boundary harm
- Transparency, public participation and access to information and remedies
- Common concern for humanity
- Rights of future generations
- Common heritage of mankind
- Common but differentiated responsibilities

Several concepts provide the foundation of international environmental law. The protection of **rights of future generations** can be seen as one of the key drivers of environmental protection and international environmental law and many international conventions express an obligation to protect the environment for present and future generations.

The single most important among the concepts framing international environmental law, especially for developing countries is probably the concept of **sustainable development**, which has been defined in the 1987 Report of the World Commission on Environment and Development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”³⁶ Sustainable development is thus composed of a variety of interrelated aspects, including economic and social development and environmental protection.³⁷ Closely related to the concept of sustainable development is the **concept of common concern of humanity**. To protect the common concern of humanity might impose obligation on states and can support or limit individual rights and freedoms. The common concern of humanity is materialised in the **concept of common heritage of mankind** with the underlying idea that the general concern of humanity should be safeguarded by special legal regimes applied to specific areas and sites such as the Antarctica or sites which can be considered forming essential parts of the cultural heritage of humanity.

One of the oldest principles of general international law is that of **state sovereignty**. This principle acknowledges that the state has exclusive jurisdiction on its territory, that the state is the only authority which can adopt obligatory legal rules for its territory, that the state has the executive power (administration, police), and that its tribunals are the only ones competent to judge litigation.³⁸ Especially with regard to environmental issues, the principle of state sovereignty faces several challenges, as, for example, pollution of the sea, rivers, lakes and the air and the migrating of species across territorial borders do not adhere to national territorial jurisdictions. It is therefore necessary that treaties and international customary law impose

³⁶ World Commission on Environment and Development (1987).

³⁷ For a detailed analysis see Voigt (2009).

³⁸ Sands (2003:235ff.).

limitations on the sovereignty of states. In the so-called Sutherland Report,³⁹ sovereignty is described as one of the “most used and also misused concepts of international affairs and international law”. Acceptance of almost any treaty involves a transfer of a certain amount of decision-making authority away from states, and towards some international institution. Generally, this is exactly why sovereign nations agree to such treaties: they realise that the benefits of cooperative action that a treaty enhances are greater than the circumstances that exist otherwise.⁴⁰ It is undeniable that discrete, territorially bound state units no longer have exclusive control over the process of governance pertaining to the societies that live in their respective territories. In this context, governance has come to be conceptualised in multilevel terms,⁴¹ as power has become widely dispersed among a range of institutions and actors.

The general international **obligation to cooperate** with others in order to resolve problems concerning the international community is essential to conserve the environment entirely and globally.⁴² This general principle is contained in and elaborated on in many MEAs, for example in Article 5 of the Convention of Biological Diversity (CBD), which underlines the importance of this principle. Cooperation is essential in order to rationally use shared resources; to eradicate poverty as a requirement for sustainable development; to strengthen capacity building by transfer of knowledge, information and technology; and also in order to secure funding and financial assistance.

The general **principle of prevention** can be considered the single most important intention of environmental law. The prevention principle dictates that action must be taken at an early stage, and if possible, before damage occurs. Legal mechanisms to meet the requirements of the prevention principle include the assessment of environmental harm (Environmental Impact Assessment), licensing or authorisation, the adoption of national and international standards, or the adoption of preventative strategies and policies.

Like the prevention principle, the **precaution principle** seeks to avoid environmental harm, but it is to be applied when the consequences of non-action can be particularly serious or irreversible. The precautionary approach aims to provide guidance in the development and application of environmental law where there is scientific uncertainty and has been formulated in Principle 15 of the Rio Declaration on Environment and Development as follows:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of a serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.⁴³

Another important principle with more economic background which has found its way into various MEAs and national environmental enactments is the **polluter pays principle** which seeks to impose the costs related to environmental harm on the person responsible for the pollution. The polluter pays principle is a means of allocating costs of pollution prevention and control measures to encourages the rational use of limited natural resources.

The principle of **common but differentiated responsibilities** as laid down in Principle 7 of the Rio Declaration is reflected in various environmental agreements, such as the United Nations Convention on Climate Change (Article 3(1)). The principle of common but

³⁹ Sutherland *et al.* (2005).

⁴⁰ Ibid.

⁴¹ Cf. Winter (2006).

⁴² Sands (2003:249ff.).

⁴³ Ibid:267.

differentiated responsibilities is composed of the common responsibility of states for the protection of the environment and of the acknowledgement of difference in contributions of states to environmental degradation, and the different ability to address such degradation. The different responsibilities are translated into differential obligations for states.

At the international and national levels, there has been increased recognition of the special needs of indigenous communities for access to benefits of the natural resources on which they rely for their livelihood. Their participation in both decision-making and in management is of high importance for the protection of local ecosystems because of their traditional knowledge and environmental awareness. The **principle of access and benefit sharing of natural resources** has been taken up in Principle 22 of the Rio Declaration:

Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

The principle is also reflected in Article 8(j) of the Convention on Biological Diversity, which imposes on states the obligation to respect, preserve and maintain knowledge, innovations and practices of indigenous people and local communities, to encourage the equitable sharing of the benefits arising from the utilisation of indigenous knowledge, innovations and practices.

Transparency and access to information are both required in order to guarantee effective public participation and sustainable development. Public participation in the context of sustainable development requires, among others, the opportunity to hold and express opinions, and to seek, receive and impart ideas. And it also requires a right of access to the reported, comprehensible and timely information held by governments and industrial concerns, on economic and social policies regarding the sustainable use of natural resources and the protection of the environment, without imposing undue financial burdens on applicants for information, and with adequate protection of privacy and business confidentiality. Conducting environmental impact assessments, with broad public participation in terms of access to information, and the right to make submissions on environmental and impact statements, is one legal mechanism to ensure public participation rights.

Rio Declaration Principle 10 refers to participation rights as follows:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

2.4 Judicial Decisions and Teachings

International environmental law also incorporates the opinions of international courts and tribunals. While there are few such courts and tribunals and they have limited authority, their decisions carry much weight with legal commentators and are quite influential on the development of international environmental law. Such courts are: the International Court of Justice (ICJ); the Law of the Sea Court; the World Trade Organisation's Dispute Settlement Body (DSB); as well as regional treaty tribunals.

Other sources of international law are texts by some of the best-qualified legal scholars. In the jurisprudence of international judicial bodies writings of jurists do also play a role. Examples of this are the Nuclear Test Case⁴⁴ and the Gabčíkovo-Nagymaros Project case⁴⁵, which have without any doubt been influenced by academic and other writings.

3 Multilateral Environmental Agreements Relevant to Namibia⁴⁶

Namibia is a state party to a large number of MEAs. This emphasises Namibia's strong environmental commitment. Every membership of a MEA brings about benefits as well as obligations for Namibia. Aside from the immediate benefits of advanced environmental protection, there are also long-term effects. For instance environment-related public health problems with a bearing on development are dealt with proactively and internationally.⁴⁷ Many MEAs improve environmental governance and generally promote transparency, participatory decision-making, accountability, conflict resolution, and have an indirect positive influence in terms of democratisation processes in any given developing country context. In some cases, it is beneficial to become a party to a MEA in order to obtain financial assistance for addressing environmental problems, and, more importantly, MEAs may also facilitate technical assistance, for example through knowledge and technology transfer.

There are also obligations. A significant amount of human, technical and financial resources is needed to ensure implementation of MEAs. In order for a MEA to have an impact on the ground, legislation, administrative measures, and capacity building for implementation and enforcement at the local and national levels are essential.

The following table lists major international treaties and related instruments in the environment field, to which Namibia is a party⁴⁸, and gives an overview of Namibia's obligations under international environmental law.

⁴⁴ ICJ Legality of the Threat or Use of Nuclear Weapons; Request for Advisory Opinion by the General Assembly of the United Nations, 8 July 1996. Another example is the case on maritime delimitation in the area between Greenland and Jan Mayen *Denmark v Norway* ICJ 14 June 1993 separate opinion by Weeramantry available at <http://www.icj-cij.org/docket/index.php?p1=3&k=e0&case=78&code=gjm&p3=4>; accessed 15 September 2015.

⁴⁵ ICJ *Gabčíkovo-Nagymaros Project* (Hungary/Slovakia), 25 September 1997. Judgement available at <http://www.icj-cij.org/docket/index.php?p1=3&p2=3&k=8d&case=92&code=hs&p3=4>; accessed 15 September 2015.

⁴⁶ The information for this Section is based on UNEP's Register of international treaties and other agreements in the field of the environment. UNEP (2005c). A directory of major multilateral environmental agreements classified by global/regional scope and an overall chronological listing beginning from 1933 and an index of major non-legally binding instruments developed at UNEP (or under the aegis of UNEP) is available at http://www.unep.org/law/Law_instruments/index.asp; accessed 12 November 2010. See also the International Environmental Agreements Database at <http://iea.uoregon.edu/page.php?file=home.htm&query=static>; accessed 15 September 2015.

⁴⁷ UNEP (2006a:44).

⁴⁸ For a more comprehensive and detailed list of MEAs to which Namibia has taken membership actions see the International Environmental Agreements (IEA) Database Project at http://iea.uoregon.edu/page.php?query=country_members&country_preferred=Namibia; accessed 15 September 2015.

Treaty / Agreement	Treaty/Agreement Particularities			Namibian Participation		
	Place of Adoption	Date of Adoption	Entry into Force	Type⁴⁹	Date	Entry into Force
International Convention for the Conservation of Atlantic Tunas	Rio de Janeiro, Brazil	14.05.1966	21.03.1969	R	10.11.1999	10.11.1999
Convention on Wetlands of International Importance Especially as Waterfowl Habitat	Ramsar, Iran	02.02.1971	21.12.1975	Ac	23.08.1995	23.12.1995
Convention Concerning the Protection of the World's Cultural and Natural Heritage	New York, USA	16.11.1972	17.12.1975	At	06.04.2000	06.04.2000
Convention on International Trade in Endangered Species of Wild Fauna and Flora	Washington D.C., USA	03.03.1973	01.07.1975	Ac	18.12.1990	18.03.1991
Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973	London, UK	17.02.1978	02.10.1983	S	18.03.2003	18.03.2002
Convention on the Physical Protection of Nuclear Material	Vienna, Austria	26.10.1979	08.02.1987	Ac	02.10.2002	01.11.2002
Convention on the Conservation of Antarctic Marine Living Resources	Canberra, Australia	20.05.1980	07.04.1982	Ac	29.06.2000	29.06.2000
United Nations Convention on the Law of the Sea	Montego Bay, Jamaica	10.12.1982	16.11.1994	R	10.12.1982	18.04.1983
Protocol to Amend the Convention on Wetlands of International Importance Especially as Waterfowl Habitat	Paris, France	03.12.1982	01.10.1986	Ac	23.08.1995	23.08.1995
Vienna Convention for the Protection of the Ozone Layer	Vienna, Austria	22.03.1985	22.09.1988	Ac	20.09.1993	20.09.1993
Montreal Protocol on Substances that Deplete the Ozone Layer	Montreal, Canada	16.09.1987	01.01.1989	Ac	20.09.1993	20.09.1993
Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal	Basel, Switzerland	22.03.1989	05.05.1992	Ac	15.05.1995	15.05.1995
[London] Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer	London, UK	29.06.1990	10.08.1992	R	06.11.1997	06.11.1997
United Nations Framework Convention on Climate Change	New York, USA	09.05.1992	21.03.1994	S/R	12.06.1992	16.05.1995
Convention on Biological Diversity	Rio de Janeiro, Brazil	05.06.1992	29.12.1993	S/R	12.06.1992	16.05.1997
Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage 1969	London, UK	27.11.1992	30.05.1996	Ac	18.12.2002	18.12.2003

⁴⁹

Ratification (R); Accession (Ac); Acceptance (At); Signature (S); Consent to be bound (P).

Treaty / Agreement	Treaty/Agreement Particularities			Namibian Participation		
	Place of Adoption	Date of Adoption	Entry into Force	Type⁴⁹	Date	Entry into Force
Protocol of 1992 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971	London, UK	27.11.1992	30.05.1996	Ac	18.12.2002	18.12.2003
[Copenhagen] Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer	Copenhagen, Denmark	25.11.1992	14.06.1994	At	28.07.2003	28.07.2003
Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction	Paris, France	13.01.1993	29.04.2997	S/R	13.01.1993	24.11.1995
Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas	Rome, Italy	29.11.1993	24.04.2003	Ac	07.08.1998	07.08.1998
United Nations Convention to Combat Desertification in those Countries Experiencing serious Drought and/or Desertification, Particularly in Africa	Paris, France	17.06.1994	26.12.1996	S/R	24.10.1994	16.05.1997
Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982	New York, USA	28.07.1994	28.07.1996	S/P	29.07.1994	28.07.1995
Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks	New York, USA	04.08.1995	11.12.2001	S/R	19.04.1996	08.04.1998
Comprehensive Nuclear-Test-Ban Treaty	New York, USA	10.09.1996	Not yet	S/R	24.09.1996	29.06.2001
Kyoto Protocol to the United Nations Framework Convention on Climate Change	Kyoto, Japan	11.12.1997	16.02.2005	Ac	04.09.2003	04.09.2003
Convention on the Law of Non-Navigational Uses of International Watercourses	New York, USA	21.05.1997	Not yet	S/R	19.05.2000	29.08.2001
Cartagena Protocol on Biosafety to the Convention on Biological Diversity	Montreal, Canada	29.01.2000	11.09.2003	S/R	24.05.2000	10.02.2005
Convention on the Conservation and Management of Fishery Resources in the South-East Atlantic Ocean	Windhoek, Namibia	20.04.2001	13.04.2003	S/R	20.04.2001	26.02.2002
Stockholm Convention on Persistent Organic Pollutants	Stockholm, Sweden	22.05.2001	17.05.2004	Ac	24.06.2005	24.06.2005

Treaty / Agreement	Treaty/Agreement Particularities			Namibian Participation		
	Place of Adoption	Date of Adoption	Entry into Force	Type⁴⁹	Date	Entry into Force
International Treaty on Plant Genetic Resources for Food and Agriculture	Rome, Italy	03.11.2001	29.06.2004	S/R	09.11.2001	07.10.2004
World Health Organisation Framework Convention on Tobacco Control	Geneva, Switzerland	21.05.2003	27.02.2005	S/R	29.01.2004	07.11.2005

The above table shows, that the list of MEAs to which Namibia is a party is long and it would go beyond the scope of this publication to discuss all the above-mentioned agreements. However, some of the most important MEAs will be introduced briefly in the following section.

The 1971 Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar) was adopted to stem the progressive encroachment on and loss of wetlands now and in the future, recognising the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value. Parties to the Convention are required to designate at least one national wetland for inclusion in a ‘List of Wetlands of International Importance’ and to consider their international responsibilities for conservation, management and wise use of migratory stocks of wildfowl. Furthermore, parties establish wetland nature reserves, cooperate in the exchange of information and train experts for wetland management. Conferences on the conservation of wetlands and water-fowl are to be convened as the need arises.

The 1972 Convention Concerning the Protection of the World’s Cultural and Natural Heritage intends to establish an effective system of collective protection of the cultural and natural heritage of outstanding universal value, organised on a permanent basis and in accordance with modern scientific methods. Each state party recognises that the duty of identification, protection, conservation and transmission to future generations of the cultural and natural heritage belongs primarily to state parties, which commit themselves to integrate the protection of their heritage into comprehensive planning programmes, to set up services for the protection of their heritage, to develop scientific and technical studies and to take necessary legal, scientific, administrative and financial steps to protect their heritage, and to assist each other in the protection of the cultural and natural heritage. The Convention establishes a World Heritage Committee, to which each party will submit an inventory of its national heritage and which will publish a ‘World Heritage List’ and a ‘List of World Heritage in Danger’. A World Heritage Fund is established, financed by the parties and other interested bodies.

The 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) aims to protect certain endangered species from over-exploitation by means of a system of import-export permits. The Convention includes animals and plants whether dead or alive, and any recognisable parts or derivatives thereof. Appendix I to the Convention covers endangered species, trade in which is to be tightly controlled; Appendix II covers species that may become endangered unless trade is regulated; Appendix III covers species that any party wishes to regulate and requires international cooperation to control trade therein; and Appendix IV contains model permits. Permits are required for species listed in appendices I and II stating that export/import will not be detrimental to the survival of the species. The CITES Secretariat is administered by UNEP and is located in Geneva, Switzerland.

The 1980 Convention on the Conservation of Antarctic Marine Living Resources intends to safeguard the environment and protect the integrity of the ecosystem of the seas surrounding

Antarctica and to conserve Antarctic marine living resources. A Commission for the Conservation of Antarctic Marine Living Resources is established to inter alia facilitate research into and comprehensive studies of Antarctic marine living resources and the Antarctic marine ecosystems; to compile data on the status of and changes in populations of Antarctic marine living resources, and on factors affecting the distribution, abundance and productivity of harvested species and dependent or related species or populations; to ensure the acquisition of catch and effort statistics on harvested populations; to identify conservation needs and analyse the effectiveness of conservation measures; to formulate, adopt and revise conservation measures on the basis of the best scientific evidence available; and to implement a system of observation and inspection.

The 1982 United Nations Convention on the Law of the Sea (UNCLOS) was adopted to set up a comprehensive new legal regime for the sea and oceans and, as far as environmental provisions are concerned, to establish material rules concerning environmental standards as well as enforcement provisions dealing with pollution of the marine environment.

The 1985 Vienna Convention for the Protection of the Ozone Layer aims to protect human health and the environment against adverse effects resulting from modifications of the ozone layer. Parties undertake to cooperate in research concerning substances and process that modify the ozone layer and the effects on human health and the environment of such modifications, and on alternative substances and technologies; and in systematic observation of the state of the ozone layer. Furthermore, parties commit themselves to cooperate in formulation and implementation of measures to control activities that cause adverse modifications of the ozone layer, and, particularly, the development of protocols for such purposes, and to exchange scientific, technical, socio-economic, commercial and legal information relevant to the Convention, and cooperate in the development and transfer of technology and knowledge. The Convention has two annexes setting forth important issues for scientific research on and systematic observation of the ozone layer and describing the kinds of information to be collected and shared under its terms.

The 1992 United Nations Framework Convention on Climate Change (UNFCCC) was adopted to regulate levels of greenhouse gas concentration in the atmosphere, so as to avoid the occurrence of climate change on a level that would impede sustainable economic development, or compromise initiatives in food production. The parties are to protect the climate system for present and future generations. The Convention recognises that developing countries should be accorded appropriate assistance to enable them to fulfil the terms of the Convention. The parties should work in cooperation so as to obtain maximum benefit from initiatives in the control of the climate systems. National inventories on greenhouse gas emissions have to be prepared by the parties and programmes for the control of climate change have to be formulated and implemented. It is further provided to undertake cooperation in technology for the control of change in the climate system; incorporate suitable policies for the control of climate change in national plans; and to undertake education and training policies that will enhance public awareness in relation to climate change. The developed country parties (and other parties listed in Annex I) commit themselves to take special measures to limit their anthropogenic emissions of greenhouse gases, and to enhance the capacity of their sinks and reservoirs for the stabilisation of such gases. The developed country parties (and other parties listed in Annex II) undertake to accord financial support to developing country parties, to enable the latter to comply with the terms of the Convention. The Convention establishes a Conference of Parties to be the supreme body of the Convention and to oversee the implementation.

The 1992 Convention on Biological Diversity (CBD) aims at conserving biological diversity, promoting the sustainable use of its components, and encouraging equitable sharing of the benefits arising out of the utilisation of genetic resources. Such equitable sharing includes appropriate access to genetic resources, as well as appropriate transfer of technology, taking into account existing rights over such resources and such technology. The CBD confirms the principle of national sovereignty over domestic natural resources, subject to respect for the rights of other states, but places a duty on parties to conserve biological diversity within their jurisdiction, as well as outside their jurisdiction in certain cases. The CBD provides for the cooperation between state parties, in preserving biological diversity in areas out of national jurisdiction and confers on state parties the responsibility for the formulation and implementation of strategies, plans or programmes for the conservation and sustainable use of biological diversity. Furthermore, state parties are required to monitor the elements of biological diversity, determining the nature of the urgency required in the protection of each category, and in sampling them, in terms of the risks to which they are exposed. One further obligation on states by the CBD is to provide for research, training, general education and the fostering of awareness, in relation to measures for the identification, conservation and sustainable use of biological diversity and for environmental impact assessment of projects that are likely to have significant adverse effects on biological diversity. Further important provisions of the CBD relate to access to genetic resources; access to transfer of technology, for application in the conservation and sustainable use of biological diversity; and on financial resources. The CBD establishes a Conference of Parties, with a Secretariat, to keep the implementation of the Convention under review.

The 1994 United Nations Convention to Combat Desertification in those Countries Experiencing serious Drought and/or Desertification, Particularly in Africa intends to combat desertification and mitigate the effects of drought in the countries affected through effective action at all levels supported by international cooperation and partnership arrangements in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in those areas. This Convention ensures participation of the public in relevant decision-making processes, facilitates national and local action, improves international cooperation and coordination, emphasises developing cooperation among various levels of actors in a country for sustainable use of land and water resources, and takes into full consideration the special needs and circumstances of affected developing countries.

CHAPTER 6

ENVIRONMENTAL LAW IN THE AFRICAN UNION (AU)

Oliver C. Ruppel

1 Introduction

The historical foundations of the African Union (AU) originated in the Union of African States, an early confederation that was established in the 1960s. The Organisation of African Unity (OAU) was established on 25 May 1963. On 9 September 1999, the heads of state and governments of the OAU issued the Sirte Declaration,¹ calling for the establishment of an African Union. The Declaration was followed by summits in Lomé in 2000, when the Constitutive Act of the African Union was adopted, and in Lusaka in 2001, when the Plan for the Implementation of the African Union was adopted. During the same period, the initiative for the establishment of the New Partnership for Africa's Development (NEPAD) was also established. The African Union was launched in Durban on 9 July 2002 by the then South African President, Thabo Mbeki,² at the first session of the Assembly of the African Union. The Union's administrative centre is in Addis Ababa, Ethiopia and the working languages are Arabic, English, French, Portuguese, and Swahili. The African Union has 54 member states with Morocco being the only African State that is not a member. Geographically, the African Union covers an area of 29,757,900 km² and the United Nations Population Division estimated a population total of 1,033,043,000 for 2010.³

Given the African continent's bounty of natural resources, the protection and conservation of the environment must be an overarching aim within the AU; this is reflected in the African Union's legal framework.

2 Structure of the AU

The Assembly is the supreme organ of the Union, and is composed of Heads of State and Government or their duly accredited representatives. The Assembly determines common policies. The Executive Council, composed of ministers or authorities designated by the governments of members states, is responsible to the Assembly and coordinates and makes decisions on common policies.

Together, a Chairperson, the Deputy Chairperson, eight Commissioners and staff members form the Commission. Each Commissioner is responsible for one portfolio (peace and security; political affairs; infrastructure and energy; social affairs; human resources, science and technology; trade and industry; rural economy and agriculture; and economic affairs). The Commission is comparable to a secretariat and plays a central role in the day-to-day management of the AU. The Commission *inter alia* represents the African Union and defends its interests; elaborates draft common positions of the African Union; prepares strategic plans

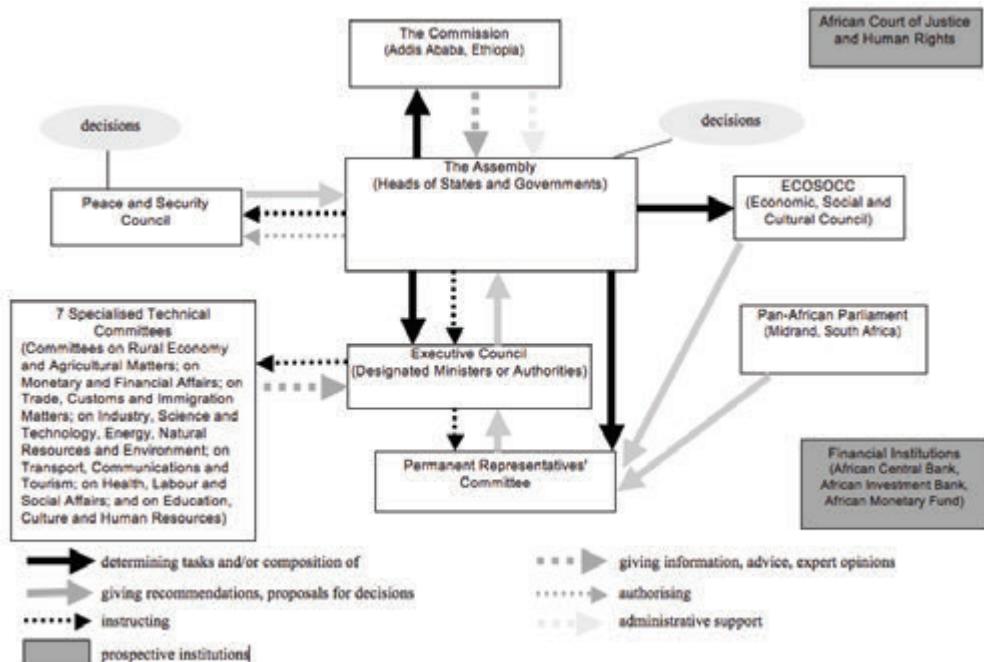
¹ Named after Sirte, in Libya.

² Thabo Mbeki was the African Union's first President.

³ Africa's entire population was estimated to be 1,033,043,000 in 2010, which includes the population of Morocco, estimated at 32,381,000. See <http://esa.un.org/unpp/p2k0data.asp>; accessed 13 February 2012.

and studies for the consideration of the Executive Council; elaborates, promotes, coordinates and harmonises the programmes and policies of the Union with those of the regional economic communities (RECs); and ensures the mainstreaming of gender in all programmes and activities of the African Union. The Executive Council is assisted by the Permanent Representatives Committee and the following Specialised Technical Committees, which assist the Executive Council in substantive matters: The Committee on Rural Economy and Agricultural Matters; the Committee on Monetary and Financial Affairs; the Committee on Trade, Customs and Immigration Matters; the Committee on Industry, Science and Technology, Energy, Natural Resources and Environment; the Committee on Transport, Communications and Tourism; the Committee on Health, Labour and Social Affairs; and the Committee on Education, Culture and Human Resources. The Pan-African Parliament implements policies, while the Economic, Social and Cultural Council is an advisory organ composed of different social and professional groups of the Member States. The Peace and Security Council makes decisions on prevention, management and resolution of conflicts. The financial institutions of the AU will consist of the African Central Bank, the African Monetary Fund, and the African Investment Bank. The African Court of Justice and Human Rights will ensure compliance with the law as outlined in the following sections.

Structure of the African Union⁴



⁴

Chart compiled by C. Luedemann based on Ouazghari (2007:5).

3 Environmental Issues Within the AU's General Legal Framework

The Constitutive Act of the African Union, which was adopted in Lomé, Togo in 2000, provides in Article 13 that the Executive Council coordinates and takes decisions on policies in areas of common interest to the member states. This includes, foreign trade; energy, industry and mineral resources; food, agricultural and animal resources; livestock production and forestry; water resources and irrigation; and the environment and its protection.

The African Economic Community, the African Union's economic institution was established in 1991 by the Abuja Treaty Establishing the African Economic Community. Namibia signed this treaty in 1991. It contains specific provisions regarding environmental protection and the control of hazardous wastes. The Treaty contains broad economic objectives, which touch on the environment, firstly by the general objective of promoting economic, social and cultural development and the integration of African economies in order to increase economic self-reliance and to promote an indigenous and self-sustained development; and secondly, through the specific objective of ensuring the harmonisation and coordination of environmental protection policies, among the States Parties. The Treaty makes provision for several specialised technical committees, including a Committee on Industry, Science and Technology, Natural Resources and Environment. Each of these committees has the mandate to prepare projects and programmes in its sphere of duty, and of ensuring supervision and implementation of these.

Chapter VIII contains provisions with regard to food and agriculture, and provides for cooperation among member states in the development of rivers and lake basins, and the development and protection of marine and fisheries resources, and plant and animal protection. States Parties are required to ensure the development within their borders of certain basic industries that are identified as conducive to collective self-reliance and to modernisation, and to ensure proper application of science and technology to a number of sectors that, according to Article 51, include energy and the conservation of the environment. States have the obligation to coordinate and harmonise their policies and programmes in the field of energy and natural resources, and to promote new and renewable forms of energy and, in line with Article 58, to promote a healthy environment, and, to this end, to adopt national, regional and continental policies, strategies and programmes and establish appropriate industries for environmental development and protection. The Treaty requires member states to take appropriate measures to ban the importation and dumping of hazardous wastes in their territories, and to cooperate among themselves in the trans-boundary movement, management and processing of such wastes, where these emanate from a member state.

The African Charter for Human and Peoples' Rights has progressively taken up the issue of environmental protection by explicitly incorporating a human right to environment, a third generation human right.⁵ Article 24 of the African Charter for Human and Peoples' Rights reads, “[a]ll peoples shall have the right to a general satisfactory environment favourable to their development”.

⁵

See Glazewski (2000:17); Ruppel (2008a) and the Chapter on Human Rights and the Environment in this book. For a detailed discussion on the right to environment under the African Charter on Human and Peoples' Rights see also Mekouar (2001).

4 Specific Environmental Conventions⁶

OVERVIEW						
Treaty / Agreement	Date of Adoption	Date Entry into Force	Date of Last Signature / Deposit	Date of Signature	Date of Ratification / Accession	Date Deposited
Phyto-Sanitary Convention for Africa	13.09.1967	06.10.1992	06.10.1992	-	-	-
African Convention on the Conservation of Nature and Natural Resources	15.09.1968	16.06.1969	24.01.2013	-	-	-
Bamako Convention on the Ban of the Import into Africa and the Control of Trans-boundary Movement and Management of Hazardous Wastes within Africa	01.01.1991	22.04.1998	31.05.2013	-	-	-
African Maritime Transport Charter	11.06.1994	-	27.01.2012	13.07.1999	-	-
The African Nuclear-Weapon-Free Zone Treaty (Pelindaba Treaty)	11.04.1996	15.07.2001	27.01.2014	11.04.1996	06.02.2012	01.03.2012
African Convention on the Conservation of Nature and Natural Resources (Revised Version)	01.07.2003	-	28.03.2014	09.12.2003	-	-
African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa	23.10.2009	06.12.2012	17.03.2015	23.10.2009	-	-
Revised African Maritime Transport Charter	26.07.2010	-	31.01.2014	-	-	-

4.1 The African Convention on Conservation of Nature and Natural Resources, 1968

The 1968 African Convention on the Conservation of Nature and Natural Resources (also referred to as the African Nature Convention or the Algiers Convention), and the forerunner to the 2003 Revised Algiers Convention, which is outlined in the next paragraph, is arguably the centrepiece of the AU's environmental texts.

This regional African Convention was originally adopted in Algiers in 1968 under the auspices of the Organisation of African Unity (OAU) and came into force in 1969. As such it was the successor to the 1900 Convention for the Preservation of Wild Animals, Birds and Fish in Africa, which was later superseded by the 1933 Convention Relative to the Preservation of Fauna and Flora in their Natural State (the London Convention). The need for a treaty to address nature conservation had already been expressed in the Arusha Manifesto of 1961.⁷ Hence, in 1963, the African Charter for the Protection and the Conservation of Nature was adopted, followed soon after by the Algiers Convention.

The objectives of the 1968 Convention encouraged individual and joint action for the conservation, utilisation and development of soil, water, flora and fauna for the present and

⁶ Table compiled by author based on information from <http://www.au.int/en/treaties>; accessed 14 November 2015.

⁷ IUCN (2006:4).

future welfare of mankind, from an economic, nutritional, scientific, educational, cultural and aesthetic point of view. To this end, states undertake to adopt the measures necessary to ensure conservation, utilisation and development of soil, water, floral and faunal resources in accordance with scientific principles and with due regard to the best interests of the people (Article II); to take effective measures to conserve and improve the soil and to control erosion and land use (Article IV); and to establish policies to conserve, utilise and develop water resources, prevent pollution and control water use (Article V). Furthermore, the Convention imposes on states the obligation to protect flora and ensure its best utilisation, the management of forests and control of burning, land clearance and overgrazing (Article VI); and to conserve faunal resources and use them wisely, manage populations and habitats, control hunting, capture and fishing, and prohibit the use of poisons, explosives and automatic weapons in hunting (Article VII). States are required to tightly control traffic in trophies, to prevent trade in illegally killed and obtained trophies and to establish and maintain conservation areas (Article X). A list of protected species that enjoy full total protection, and a list of species that may be taken only with authorisation is part of the Convention.

4.2 The Revised (Algiers) Convention on the Conservation of Nature and Natural Resources, 2003

The Algiers Convention was revised in 2003 (Maputo) to take into account recent developments on the African environment and natural resources scenes, while bringing the Convention to the level and standard of current multilateral environmental agreements.⁸ The revised Convention, which was adopted by the African Union in Mozambique in July 2003,⁹ was described as “the most modern and comprehensive of all agreements concerning natural resources”¹⁰.

As of September 2015, 42¹¹ of the 54 member states have signed the Convention, while only 12 member states¹² have deposited their instrument of ratification.¹³ The revised Convention thus still has to come in force, which will be 30 days after 15 countries have deposited their ratification instruments. Namibia, not being a signatory to the 1968 Convention, signed the revised Convention in December 2003, while no instrument of ratification has been deposited as of yet.

The revised Convention follows a comprehensive and general approach to environmental protection. It defines natural resources, addresses economic and social development goals, and

⁸ Decision of the Revised 1968 African Convention (Algiers Convention) on the Conservation of Nature and Natural Resources, Doc. EX/CL/50(III), Assembly/AU/Dec. 9(II).

⁹ At the second ordinary session of the African Union Assembly held in Maputo, Mozambique in July 2003.

¹⁰ Kiss / Shelton (2007:183).

¹¹ The Convention has been signed by Angola, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Côte d'Ivoire, Comoros, the DRC, Congo, Djibouti, Democratic Republic of Congo, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea-Bissau, Guinea, Kenya, Libya, Lesotho, Liberia, Madagascar, Mali, Malawi, Mozambique, Namibia, Nigeria, Niger, Rwanda, São Tomé and Príncipe, Senegal, Sierra Leone, Somalia, South Africa, Sudan, South Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia and Zimbabwe.

¹² i.e. Angola, Burundi, Côte d'Ivoire, Comoros, Congo, Ghana, Libya, Lesotho, Mali, Niger, Rwanda and South Africa.

¹³ See

<http://www.africaunion.org/root/au/Documents/Treaties>List/Revised%20Convention%20on%20Nature%20and%20Natural%20Resources.pdf> (last accessed 16 September 2015).

stresses the necessity to work closely together towards the implementation of global and regional instruments supporting the goals of the Rio Declaration and Agenda 21.¹⁴

The Preamble sets the tone by providing that its “objectives would be better achieved by amending the 1968 Algiers Convention by expanding elements related to sustainable development”. In this vein, Article 4 on fundamental obligation, states:

The Parties shall adopt and implement all measures necessary to achieve the objectives of this Convention, in particular through preventive measures and the application of the precautionary principle, and with due regard to ethical and traditional values as well as scientific knowledge in interest of present and future generations.

The main objective of the Convention is to enhance environmental protection, to foster the conservation and sustainable use of natural resources, and to harmonise and coordinate policies in these fields with a view to achieving ecologically rational, economically sound and socially acceptable development policies and programmes. In realising these objectives, the Parties should be guided by the principles of a right to a satisfactory environment and the right to development – the so-called third-generation human rights.¹⁵ Parties are required to adopt and implement all measures necessary to achieve the objectives of the Convention, in particular through preventive measures and the application of the precautionary principle, and with due regard to ethical and traditional value as well as scientific knowledge in the interest of present and future generations (Article IV).

The provisions of the Convention address the following areas:¹⁶ Land and soil (Article VI), water (Article VII), vegetation cover (Article VIII), species and genetic diversity (Article IX), protected species (Article X), trade in specimens and products thereof (Article XI), conservation areas (Article XII), process and activities affecting the environment and natural resources (Article XIII), sustainable development and natural resources (Article XIV), military and hostile activities (Article XV), procedural rights (Article XVI), traditional rights of local communities and indigenous knowledge (Article XVII), research (Article XVIII), development and transfer of technology (Article XIX), capacity building, education and training (Article XX), national authorities (Article XXI), cooperation (Article XXII), compliance (Article XXIII), liability (Article XXIV), and exceptions (Article XXV).

The Conference of the Parties and the Secretariat are established by Articles XXVI and XXVII respectively. Article XXXIV relates to the relationship with the 1968 Algiers Convention and provides that for Parties that are bound by the revised Convention, only this Convention is to apply. The relationship between parties to the original Convention and parties to this Convention is to be governed by the provisions of the original Convention (Article XXXIV).

It has to be noted that unlike its predecessor, the 2003 Convention excludes reservations, which reflects the necessity for the parties to apply common solutions to common problems. If the parties had the right to make reservations, differing obligations would jeopardise the attainment of the Convention’s objectives.¹⁷

Disputes regarding the interpretation and application of the Convention are primarily subject to alternative dispute resolution otherwise the African Court of Justice has jurisdiction.

¹⁴ IUCN (2006:5ff.).

¹⁵ IUCN (2006:6).

¹⁶ For a discussion on each of these areas see IUCN (2006:8ff.).

¹⁷ IUCN (2006:7).

4.3 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa

The Convention was adopted in Bamako, Mali on 30 January 1991 and entered into force on 22 April 1998. As of September 2015, it had 35 signatories, of which 25 had ratified the Convention. As of September 2015, Namibia had not become a party to this Convention.

The Convention creates a framework of obligations to strictly regulate the transboundary movement of hazardous wastes to and within Africa. The Bamako Convention in Article 3 categorises hazardous wastes and enumerates general obligations of state parties in respect of the enforcement of a ban on hazardous waste import, and on the dumping of hazardous wastes at sea and internal waters in respect of waste generation, and the adoption of precautionary measures. States are furthermore required to establish monitoring and regulatory authorities to report and act on transboundary movement of hazardous wastes. A Secretariat to serve a Conference of the Parties is established. A list of categories of wastes which are hazardous waste and a list of hazardous characteristics are annexed to the Bamako Convention as well as annexes on disposal operations; information to be provided on notification; information to be provided on the movement document; and on arbitration.

Included as part of the 2003 Convention are three Annexes: on the Definition of Threatened Species, on Conservation Areas, and on Prohibited Means of Taking.

4.4 The Maritime Transport Charters

Considering the importance of cooperation among African countries in the maritime transport sector and in order to find appropriate solutions to the problems impeding the development this sector, the Charter was adopted in 1994. Namibia has signed the Charter in 1999, which has not come into force as of yet.¹⁸ In 2010, the Revised African Maritime Transport Charter has been adopted. This Charter has so far been signed by 11 member states, not by Namibia. Ratification by 15 states is required for the Charter to come into force. The revised African Maritime Transport Charter, in contrast to its predecessor, puts a strong emphasis on the protection of the marine environment. The Charter recognises the interdependence between economic development and a sustainable policy for the protection and preservation of the marine environment. One of the objectives of the Charter is to develop and promote mutual assistance and cooperation between states parties in the area of maritime safety, security and protection of the marine environment. Article 28 provides that parties are to seek intensify their efforts to ensure the protection and preservation of the marine environment and to promote measures aimed at preventing and combating pollution incidents arising from marine transport. Furthermore, parties “commit themselves to the creation of a sustainable compensation regime to cover marine incidents of pollution of the sea that are not covered by existing international compensation regimes.”

4.5 The African Nuclear Free Zone Treaty (Treaty of Pelindaba)

The Treaty, to which Namibia became a signatory in April 1996, entered into force in August 2009¹⁹. Namibia’s instrument of ratification has been deposited in March 2012. The Treaty establishes the African nuclear-weapon-free zone, thereby achieving, *inter alia*, the promotion of regional cooperation for the development and practical application of nuclear energy for

¹⁸ As of May 2012, 13 States have ratified the charter, while ratification of two-thirds of the member States is required for the Charter to come into force.

¹⁹ <http://www.au.int/en/sites/default/files/pelindaba%20Treaty.pdf>.

peaceful purposes in the interest of sustainable social and economic development of the African continent, and keeping Africa free of environmental pollution by radioactive wastes and other radioactive matter.

Each party has the obligation to renounce nuclear explosive devices, prohibit in its territory the stationing of any nuclear explosive device, and prohibit testing of nuclear explosive devices. Any capability for the manufacture of nuclear explosive devices has to be declared and parties undertake to dismantle and destroy any nuclear explosive device, destroy facilities for the manufacture of nuclear explosive devices or where possible to convert them to peaceful uses. Furthermore, the measures contained in the Bamako Convention on the Ban of the Import into Africa and Control of Trans-boundary Movement and Management of Hazardous Wastes within Africa have to be implemented according to Article 7 in so far as it is relevant to radioactive waste and not to take any action to assist or encourage the dumping of radioactive wastes and other radioactive matter anywhere within the African nuclear-weapon-free zone. The use of nuclear science and technology for economic and social development is to be promoted, including cooperation under the African Regional Cooperation Agreement for Research, Training and Development Related to Nuclear Science and Technology. Each party undertakes not to take, or assist, or encourage any action aimed at an armed attack by conventional or other means against nuclear installations in the African nuclear weapon-free zone. The Treaty of Pelindaba establishes the African Commission on Nuclear Energy for the purpose of ensuring compliance with their undertakings under the Treaty. Annual reports have to be submitted by the parties to the Commission and a Conference of the Parties is to be convened.

The Treaty has four Annexes, including a Map of the African-nuclear free zone; and Annexes on Safeguards of the International Atomic Energy Agency and on the African Commission on Nuclear Energy; and an Annex on the complaints procedure and settlement of disputes.

4.6 The Phyto-Sanitary Convention for Africa

The Phyto-Sanitary Convention for Africa was adopted in Kinshasa, DRC, on 13 September 1967. The Convention does not contain any provision relating to its entry into force. However, as of September 2015, 10 member states have deposited their instruments of ratification. The aim of this Convention is to control and eliminate plant diseases in Africa and prevent the introduction of new diseases. To this end, parties undertake to control import of plants and to take measures of quarantine, certification or inspection in respect of living organisms, plants, plant material, seeds, soil, compost and packing material. Namibia is not a party to this Convention.

4.7 The African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa

The African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (hereafter the Kampala Convention)²⁰ was adopted on 23 October 2009 in Kampala. So far, the Kampala Convention has 40 signatories. Twenty-four countries have so far ratified the Kampala Convention and it has entered into force on 6 December 2012. Namibia signed the Convention in 2009, however, ratification is still pending. The Convention is the first regional legal instrument in the world containing legal obligations for states with

²⁰

Text available online at

[http://www.au.int/en/sites/default/files/AFRICAN_UNION_CONVENTION_FOR_THE_PROTECTION_AND_ASSISTANCE_OF_INTERNALLY_DISPLACED_PERSONS_IN_AFRICA_\(KAMPALA_CONVENTION\).pdf](http://www.au.int/en/sites/default/files/AFRICAN_UNION_CONVENTION_FOR_THE_PROTECTION_AND_ASSISTANCE_OF_INTERNALLY_DISPLACED_PERSONS_IN_AFRICA_(KAMPALA_CONVENTION).pdf); accessed 10 October 2015.

regard to the protection and assistance of internally displaced persons. It applies to displacement caused by a wide range of causes including conflict and human rights violations but also to natural or man-made disasters and has thus an environmental component. Member states commit themselves to establish early warning systems and adopt disaster preparedness and management measures to prevent displacement caused by natural disaster. The Convention provides standards for the protection of internally displaced people from arbitrary displacement, protection of internally displaced people while they are displaced and durable solutions to their displacement.

5 The African Union's Judicial System and the Consideration of Environmental Rights

Environmental agreements under the umbrella of the AU each have their own provision on how disputes are to be settled. Alternative dispute resolution plays an important role in this regard as it is the favourable mechanism, as e.g. provided for in the African Convention for Nature Conservation. The judicial system in the AU has subject to continuous development and several amendments in recent years.²¹

In 1998, the African Court on Human and Peoples' Rights (ACHPR) has been established by the Protocol to the African Charter on Human and Peoples' Rights on the Establishment of an African Court on Human and Peoples' Rights, which came into force in 2004. The ACHPR is situated in Arusha, United Republic of Tanzania and has received cases since June 2008.

In 2003, the African Court of Justice as ultimate organ of jurisdiction in the African Union was established by the Protocol of the Court of Justice of the African Union, which entered into force in February 2009. However, the Protocol on the Statute of the African Court of Justice and Human Rights adopted in 2008 during the African Union Summit of Heads of State and Government in Sharm El Sheikh, Arab Republic of Egypt provides for the 1998 and the 2003 Protocols to be replaced and the African Court on Human and Peoples' Rights and the Court of Justice of the African Union to be merged into a single Court to become what is now known as the 'African Court of Justice and Human Rights'. However, the 2008 Protocol on the merger of the courts has so far only been ratified by five²² states and ratification by 15 states is required for the Protocol to come into force. Once operational, the merged court will have two sections, a General Affairs Section and a Human Rights Section, both composed of eight Judges. The court will have jurisdiction over all disputes and applications referred to it, which *inter alia* relate to the interpretation and application of the AU Constitutive Act or the interpretation, application or validity of Union Treaties, as well as human rights violations.

In June 2014, a Protocol on Amendments to the Protocol on the Statute of the African Court of Justice and Human Rights²³ has been adopted to extend the jurisdiction of the African Court of Justice and Human Rights to cover individual criminal liability for serious crimes committed in violation of international law – making the African Court the first regional court with criminal jurisdiction over genocide, war crimes and crimes against humanity once the Protocol comes into operation upon ratification of 15 member states. At the same time, the Protocol gives immunity to sitting Heads of State and Government, and to other senior officials based

²¹ For more details on the creation of judicial structures in the AU see Franceschi (2014:141ff.).

²² As of 17 September 2015, the Protocol has been ratified by Benin, Burkina Faso, Congo, Libya, and Mali. Cf.

http://www.au.int/en/sites/default/files/Protocol%20on%20Statute%20of%20the%20African%20Court%20of%20Justice%20and%20HR_0.pdf; accessed 17 September 2015.

²³ Available at <http://www.au.int/en/content/protocol-amendments-protocol-statute-african-court-justice-and-human-rights>; accessed 16 September 2015.

on their function, before the African Court, which has been subject to criticism as no other international tribunal that provides individual criminal liability for serious crimes allows such immunity.²⁴

The African Commission on Human and Peoples' Rights (hereafter African Commission) is a quasi-judicial body established by the 1981 African (Banjul) Charter on Human and Peoples' Rights (hereafter African Charter) and is responsible for monitoring compliance with the African Charter. The African Charter is a human rights treaty that already proclaims environmental rights in broadly qualitative terms. It protects the right of peoples both to the 'best attainable state of physical and mental health' (Article 16) and to a 'general satisfactory environment favourable to their development' (Article 24). Article 24 of the African Charter establishes a binding human-rights-based approach to environmental protection, linking the right to environment to the right to development.²⁵

In the *Endorois* case,²⁶ the African Commission concluded that several Articles of the African Charter have been violated in the course of the dispossession of their land through the creation of the Lake Hannington Game Reserve in 1973, and a subsequent re-gazetting of the Lake Bogoria Game Reserve in 1978 by the Government of Kenya. Among the rights found to have been violated was the Endorois' right to culture (Article 17 (1) and (2)) and their right to free disposition of natural resources (Article 21) as they were unable to access the vital resources in the Lake Bogoria region since their eviction from the Game Reserve. Moreover, the African Commission held that their right to development (Article 22) had been violated, as the Respondent State's failed to adequately involve the Endorois in the development process.²⁷ The decision of the African Commission in the *Endorois* case,²⁸ was influenced by provisions of Convention No. 169 of the International Labour Organisation (ILO) on Indigenous and Tribal Peoples in Independent Countries.²⁹ The Convention *inter alia* provides criteria for describing the peoples it aims to protect; entails provisions regarding the principle of non-discrimination; calls for special measures to be adopted to safeguard the persons, institutions, property, labour, cultures and environment of indigenous and tribal peoples; recognises cultural and other specificities of indigenous and tribal peoples; and requires that on all issues that affect them, indigenous and tribal peoples are consulted and that these peoples are able to engage in free, prior and informed participation in policy and development processes.³⁰

²⁴ See HRW (2014); Du Plessis (2012).

²⁵ Van der Linde / Louw (2003).

²⁶ Communication 276/03 *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council/Kenya* available at http://www.achpr.org/english/Decison_Communication/Kenya/Comm.%20276-03.pdf; accessed 12 February 2012.

²⁷ The recommendation of the Commission was to recognise rights of ownership and restitution of Endorois ancestral land; ensure that the Endorois community has unrestricted access to Lake Bogoria and surrounding sites for religious and cultural rites and for grazing their cattle; pay adequate compensation to the community for all the losses suffered; pay royalties to the Endorois from existing economic activities and ensure that they benefit from employment possibilities within the Reserve; grant registration to the Endorois Welfare Committee; engage in dialogue with the Complainants for the effective implementation of these aforementioned recommendations and to report on their implementation.

²⁸ *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya*.

²⁹ The Convention came into force on 5 September 1991 and is available at <http://www.ilo.org/ilolex/cgi-lex/convde.pl?C169>; accessed 12 February 2012.

³⁰ It should be noted that of the 22 states that have ratified ILO Convention No. 169, as of February 2012 only one, namely Central African Republic, is from the African continent.

In the *Ogoni* case, the African Commission held, *inter alia*, that Article 24 of the African Charter imposed an obligation on the state to take reasonable measures to “prevent pollution and ecological degradation, to promote conservation, and to secure ecologically sustainable development and use of natural resources”.³¹ The *Ogoni* case is considered to be a landmark decision with regard to the effective protection of economic, social and cultural rights in Africa, particularly the protection of the right of peoples to a satisfactory environment. Article 24 of the African Charter should also be viewed together with the Bamako Convention and the first Organisation of African Unity (OAU) treaty on the environment, the Convention on the Conservation of Nature and Natural Resources, which predates the African Charter. The Revised African Convention on the Conservation of Nature and Natural Resources was adopted by the Second Ordinary Session of the AU Assembly of Heads of State and Government in Maputo, Mozambique, in July 2003. It has, however, not yet come into force.

The recognition of a right to a satisfactory environment by the African Charter and progressive jurisprudence by the African Commission emphasise the issue of environmental protection from a human rights perspective and underline the linkage between climate change and human rights, in a modern holistic approach to one of the most burning issues of today.³² The impacts of climate change on human rights have been explicitly recognised by the African Commission. In its AU Resolution 153 the African Commission called on the Assembly of Heads of State and Government to take all necessary measures to ensure that the African Commission is included in the African Union’s negotiating team on climate change.³³ In the same communication it decided to carry out a study on the impact of climate change on human rights in Africa.³⁴

6 Selected Institutions and Initiatives Particularly Relevant for Environmental Protection

6.1 The African Ministerial Conference on the Environment (AMCEN)

The African Ministerial Conference on the Environment (AMCEN) has a strong regional and sub-regional focus. AMCEN thus builds on the potential that Regional Economic Communities (RECs) have to integrate adaptation measures into regional policies and socio-economic development.³⁵ AMCEN is a permanent forum where African ministers of the environment discuss matters of relevance to the environment of the continent. It was established in 1985 when African ministers met in Egypt and adopted the Cairo Programme for African cooperation. The Conference is convened every second year. In the 2010 Bamako Declaration on the Environment for Sustainable Development, at the thirteenth session of the African Ministerial Conference on the Environment, the Conference’s contribution in providing political guidance and leadership on environmental management to Africa since its creation in 1985 in Cairo was appreciated. AMCEN was established to provide advocacy for environmental protection in Africa; to ensure that basic human needs are met adequately and in a sustainable manner; to ensure that social and economic development is realised at all levels;

³¹ *The Social and Economic Rights Action Center (SERAC) & the Center for Economic and Social Rights (CESR) v Nigeria.*

³² Ruppel (2010i).

³³ ACHPR/Res. 153 (XLV09).

³⁴ Cf. http://www.achpr.org/english/resolutions/resolution153_en.htm; accessed 14 February 2012.

³⁵ Scholtz (2010).

and to ensure that agricultural activities and practices meet the food security needs of the region.

The adequate response to these challenges needs to be aligned with national and regional strategies for development, poverty alleviation, economic growth and the enhancement of human well-being, while increasing resilience to the physical impacts of climate change. The African Heads of State and Government meeting at the seventeenth session of the AU Summit held in July in Malabo, Equatorial Guinea, the fourth session of the African Ministerial Conference on Environment held in September 2011 in Bamako, Mali, and most recently the Seventh Session of the Committee on Food Security and Sustainable Development and the Africa Regional Preparatory Conference on Sustainable Development (Rio+20) held in Addis Ababa, Ethiopia, in October 2011, all identified opportunities and challenges in the transition to green economy with links to the achievement of the MDGs, climate change and sustainable development. In recognition of AMCEN's mandate which includes guidance in respect of key issues related to multilateral environmental agreements, African governments requested that AMCEN should facilitate the provision of information to countries that would assist them towards translating available climate science and current international climate policies in their effort to move towards practical implementation in the context of sustainable development. For this purpose AMCEN prepared a Guidebook towards this end which informs on climate change matters including science, governance, technological, financial and capacity building needs as well as opportunities for effective actions towards sustainable development.³⁶

6.2 Relevant Departments within the AU Commission

Several departments within the AU Commission play an important role when it comes to issues related to environmental protection. The most relevant one is probably the Department of Rural Economy and Agriculture and the Department of Infrastructure and Energy.

One of the objectives for establishing the Department of Rural Economy and Agriculture was to promote sustainable development and sound environmental and natural resources management while ensuring food and nutrition security. Located within the Department of Rural Economy and Agriculture are the Division of Agriculture and Food Security and the Division of Environment, Climate Change, Water and Land Management among others. The mission of the Department of Rural Economy and Agriculture is to

Develop and promote the implementation of policies and strategies aimed at strengthening African agriculture and sound environmental management; by working with AU Member States, RECs, African Citizens, Institutions and other Stakeholders.³⁷

With a view to foster the African agenda on agricultural growth and transformation and sound environmental Management, the Department of Rural Economy and Agriculture has launched its second Strategic and Operational Plan (2014-2017)³⁸ in January 2014, spanning multiple sectors such as environment in general, agriculture, water, fisheries and aquaculture, land, climate change and many more.

Other departments that can be involved with issues pertaining to environmental protection include the Departments of Political Affairs; Infrastructure and Energy; Human Resources, Science and Technology; Trade and Industry; and Peace and Security.

³⁶

Cf. AMCEN (2011).

³⁷

See www.rea.au.int; accessed 16 September 2015.

³⁸

Available at <http://rea.au.int/en/sites/default/files/DREA%202014-2017%20Strategic%20and%20Operational%20%20Plan.pdf>; accessed 16 September 2015.

6.3 The Peace and Security Council (PSC)

Article 3 of the AU Constitutive Act contains the objectives of the AU, including, among other things, the promotion of sustainable development, international cooperation, continental integration, and the promotion of scientific and technological research to advance development of the continent. In the Protocol relating to the Establishment of the Peace and Security Council (PSC) of the African Union, member states committed themselves to various guiding principles (Article 4), including early responses to contain crises situations, the recognition of the interdependence between socio-economic development and the security of peoples and states. Moreover, in Article 6 of the AU Constitutive Act, the functions of the PSC are outlined as, among others, the promotion of peace, security and stability in Africa; early warning and preventive diplomacy; peace-making; humanitarian action and disaster management. All of the aforementioned provisions provide a clear mandate for addressing environmental problems, especially when it comes to natural or man-made disasters.

6.4 The New Partnership for Africa's Development (NEPAD)

The New Partnership for Africa's Development (NEPAD) was adopted in 2001 in Lusaka, Zambia by African Heads of State and the Government of the OAU in 2001 and was ratified by the AU in 2002. South Africa is a founding member-country of NEPAD. Its overall aim is to promote partnership and cooperation between Africa and the developed world and it envisages the economic and social revival of Africa. Its founding document states:

This New Partnership for Africa's Development is a pledge by African leaders, based on a common vision and a firm and shared conviction, that they have a pressing duty to eradicate poverty and to place their countries, both individually and collectively, on a path of sustainable growth and development, and at the same time to participate actively in the world economy and body politic. The Programme is anchored on the determination of Africans to extricate themselves and the continent from the malaise of underdevelopment and exclusion in a globalising world.³⁹

NEPAD includes an environmental component, in that

It has been recognised that a healthy and productive environment is a prerequisite for the New Partnership for Africa's Development, that the range of issues necessary to nurture this environmental base is vast and complex, and that a systematic combination of initiatives is necessary to develop a coherent environmental programme.⁴⁰

NEPAD recognises that the region's environmental base must be nurtured, while promoting the sustainable use of its natural resources. To this end, the environmental initiative targets eight sub-themes for priority intervention:

- combating desertification;
- wetland conservation;
- invasive alien species control;
- coastal management;
- global warming;
- cross-border conservation areas;

³⁹ NEPAD founding document available at <http://www.dfa.gov.za/au.nepad/nepad.pdf>; accessed 1 March 2010.

⁴⁰ Preamble to Chapter 8 of the NEPAD documentation, titled The Environmental Initiative; see generally Van der Linde (2002).

- environmental governance; and
- financing.

A process aimed at a specific NEPAD Environment Action Plan commenced early in the NEPAD initiative, and a framework for the action plan was endorsed by the African Ministerial Conference on the Environment (AMCEN) in 2002 by the AU in the same year. The Environment Action Plan is underpinned by the notion of sustainable development in that it takes account of economic growth, income distribution, poverty eradication, social equity and better governance.

CHAPTER 7

ENVIRONMENTAL LAW IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC) AND CROSS-CUTTING REGIMES

Oliver C. Ruppel

1 The Consideration of Environmental Concerns within the SADC Legal Framework

Environmental concerns are, similar to the protection and promotion of human rights, not at the heart of the constitutive acts of regional economic communities (RECs) like SADC. However, environmental concerns have, at least to some extent, found their way into the legal framework of most RECs.

SADC¹ was established in Windhoek in 1992 as the successor to the Southern African Development Coordination Conference (SADCC), which was founded in 1980. SADC currently counts 15 states among its members, namely Angola, Botswana, the Democratic Republic of Congo (DRC), Lesotho, Madagascar², Malawi, Mauritius, Mozambique, Namibia, the Seychelles,³ South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe.

In founding SADC, environmental protection was explicitly included. The Declaration and Treaty of SADC lays down in Article 5(g) as one of SADC's objectives⁴ to "achieve sustainable utilisation of natural resources and effective protection of the environment". In order to achieve this, member states are, amongst others⁵, called to seek to harmonise their political and socio-economic policies and plans towards this aim and in particular to push forward the institutional development of environmental protection. Considering the multitude of environmental issues in single SADC countries and within SADC as a region, it is of utmost importance to achieve the objective of Article 5(g) of the SADC Treaty to the best possible extent.

¹ For more details on SADC see <http://www.sadc.int/>; accessed 23 September 2015.

² Madagascar was suspended in 2009 after Andry Rajoelina seized power from elected President Marc Ravalomanana in a military coup.

³ The Seychelles was a member of SADC from 1997 to 2004; it re-joined SADC in 2008.

⁴ Other objectives of SADC are to: achieve development and economic growth and alleviate poverty; evolve common political values, systems and institutions; promote peace and security; achieve collective self-reliance, and the interdependence of Member States; maximise productive employment and utilisation of resources of the Region; and to consolidate the long standing historical, social and cultural affinities and links among the people of the region.

⁵ Other means to achieve the objectives of SADC include: Eliminating obstacles to the free movement of capital and labour, goods and services, and of the people of the region among Member States; promoting the development, transfer and mastery of technology; improving economic management and performance through regional co-operation; securing international understanding, co-operation and support; and mobilising the inflow of public and private resources into the region.

1.1 Heterogeneity of SADC States

Selected Indicators for SADC Countries

SADC Country	Surface Area (sq. km) ¹	Surface (% of total SADC) ¹	Population (Mio Persons) ²	GDP (2011 Estimates in Billion USD) ²	GDP per Capita (2011 Estimates in USD) ²	HDI (2011 Estimates) ³	HDI Rank ³
Angola	1,246,700	12,92	19,625	99,325	5,061.252	0,486	148
Botswana	566,730	5,87	1,853	16,390	8,843.914	0,633	118
DRC	2,267,050	23,50	72,571	15,306	210,915	0,286	187
Lesotho	30,360	0,31	2,588	2,690	1,039.532	0,450	160
Madagascar	581,540	6,03	21,851	9,359	428,327	0,480	151
Malawi	94,280	0,98	16,166	5,662	350,261	0,400	171
Mauritius	2,030	0,02	1,289	10,982	8,519.680	0,728	77
Mozambique	786,380	8,15	22,017	12,141	551,417	0,322	184
Namibia	823,290	8,53	2,138	13,015	6,087.231	0,625	120
Seychelles	460	0,00	0,089	0,993	11,116.899	0,773	52
South Africa	1,214,470	12,59	50,591	422,037	8,342.161	0,619	123
Swaziland	17,200	0,18	1,176	3,917	3,332.125	0,522	140
Tanzania	885,800	9,18	42,176	23,197	55,006	0,466	152
Zambia	743,390	7,71	13,585	18,408	1,355.054	0,430	164
Zimbabwe	386,850	4,01	12,575	9,242	734,968	0,376	173
Total	9,646,530		280,201	662,664			

¹ Source: World Bank Development Indicators

² Source: IMF World Economic Outlook Database (September 2011)

³ Source: UNDP

Table compiled by Cord Luedemann

The heterogeneity of SADC member states is not only reflected by surface area, population figures, size of the domestic markets, per capita incomes, the endowment with natural resources and the social and political situation, but also by the variety of legal systems applied in different member states.⁶ In the states of sub-Saharan Africa, the concept of legal pluralism is predominant. In view of such heterogeneity within SADC it is of increasing significance for SADC member states to harmonise the law by means of implementation and transformation of SADC Protocols aiming to reduce or eliminate the differences between national and SADC community law.

⁶

See Ruppel-Schlichting / Ruppel (2011:305-307).

Heterogeneity of Non-religious Legal Systems within SADC			
Country	Legal System		
Angola	Civil Law		Customary Law
Botswana	Roman Dutch Law	Common Law	Customary Law
DR Congo	Civil Law		Customary Law
Lesotho	Roman Dutch Law	Common Law	Customary Law
Madagascar	Civil Law		Customary Law
Malawi		Common Law	Customary Law
Mauritius	Civil Law	Common Law	
Mozambique	Civil Law		Customary Law
Namibia	Roman Dutch Law	Common Law	Customary Law
Seychelles	Civil Law	Common Law	
South Africa	Roman Dutch Law	Common Law	Customary Law
Swaziland	Roman Dutch Law	Common Law	Customary Law
Tanzania		Common Law	Customary Law
Zambia		Common Law	Customary Law
Zimbabwe	Roman Dutch Law	Common Law	Customary Law

1.2 Institutional Structure of SADC

Several institutions build the foundations for SADC: The Summit of Heads of State or Government is the supreme policy-making institution of SADC. It consists of the Heads of State or Government of all member states and is responsible for the overall policy direction and control of the functions of SADC. All decisions reached by consensus are binding. The Council of Ministers consists of one Minister from each member state, preferably the Minister for economic planning or finance. The Council of Ministers oversees the functioning and development of SADC, as well as the proper implementation of SADC policies and approves the policies, strategies and work programmes of SADC. Commissions are convened for specific sectoral tasks or programmes to coordinate the integration of policies and programmes in designated sectoral areas. Commissions report to the Council. The Standing Committee of Officials consists of one permanent secretary or equivalent official from each member state, preferably from the ministry for economic planning or finance ministry. The Committee serves as a technical advisory committee to the Council. The Secretariat is the principal executive institution of SADC. The Secretariat is headed by the Executive Secretary, who is the diplomatic representative of SADC. The Secretariat is responsible for the strategic planning and management of the programmes of SADC. The Secretariat implements decisions of the Summit and of the Council, provides financial and general administration, promotes SADC, and coordinates the policies of member states.

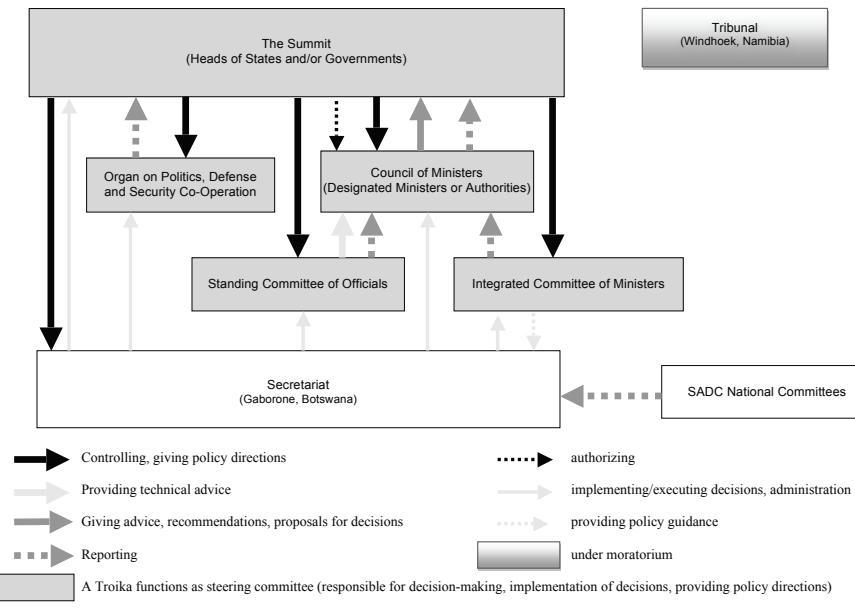


Chart compiled by C. Luedemann

1.3 Environmentally Relevant Legal Framework

1.3.1 The SADC Treaty

SADC was established by signature of its constitutive legal instrument, the SADC Treaty. SADC envisages –

... a common future, a future in a regional community that will ensure economic well-being, improvement of the standards of living and quality of life, freedom and social justice, and peace and security for the peoples of Southern Africa. This shared vision is anchored on the common values and principles and the historical and cultural affinities that exist between the peoples of Southern Africa.⁷

To this end, SADC's objectives include the achievement of development and economic growth, the alleviation of poverty, the enhancement of the standard and quality of life, support of the socially disadvantaged through regional integration, the evolution of common political values, systems and institutions, the promotion and defence of peace and security, and achieving the sustainable utilisation of natural resources and effective protection of the environment.⁸ In terms of SADC community law, the SADC Treaty is the highest source of law within SADC's legal framework. In its Preamble, the Treaty determines, *inter alia*, to ensure, through common action, the progress and well-being of the people of southern Africa, and recognises the need to involve the people of the SADC region centrally in the process of development and integration. As stated above, the sustainable utilisation of natural resources

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For SADC's vision see <http://www.sadc.int/>; accessed 12 September 2015.

8

These are some of the SADC objectives laid down in Article 5 of the SADC Treaty.

and the effective protection of the environment have been laid down in Article 5(g) of the SADC Treaty as one of SADC's objectives. Furthermore, food security, land and agriculture as well as natural resources and the environment have, among other issues, been identified as areas of cooperation by the SADC Treaty.⁹

1.3.2 The SADC Protocols

Besides the aforementioned provisions and objectives in the SADC Treaty, the SADC legal regime becomes responsive to environmental concerns in various other legal instruments as well. One category of such documents constitutes the SADC Protocols. The Protocols are instruments by means of which the SADC Treaty is implemented, and they have the same legal force as the Treaty itself. A Protocol comes into force after two thirds of SADC member states have ratified it. The Protocols which are of most relevance with regard to the environment are listed in the table and briefly explained below.

Protocol	Date of entry into force
Protocol on Energy	17 April 1998
Protocol on Fisheries	8 August 2003
Protocol on Forestry	17 July 2009
Protocol on Health	14 August 2004
Protocol on Mining	10 February 2000
Protocol on Shared Watercourse Systems	28 September 1998
Revised Protocol on Shared Watercourses	22 September 2003
Protocol on Tourism	26 November 2002
Protocol on Trade	25 January 2000
Protocol on Transport, Communications and Meteorology	6 July 1998
Protocol on Wildlife Conservation and Law Enforcement	30 November 2003

1.3.2.1 The Protocol on Energy

The Protocol on Energy strives to outline means of cooperation in the development of energy to ensure security and reliability of energy supply and the minimisation of costs. It is emphasised in the Protocol that development and use of energy must be environmentally sound.¹⁰ To achieve this objective, the Protocol *inter alia* provides for cooperation in the development and utilisation of energy in the sub-sectors of wood fuel, petroleum and natural gas, electricity, coal, new and renewable energy sources, and energy efficiency and conservation. The Protocol formulates the intention to promote increased production of new and renewable sources of energy in an economically and socially acceptable manner, including biogas, windmills, mini-hydro plants, passive solar design of buildings, photo-voltaic, solar thermal and solar stoves and water heaters. The development of national energy efficiency and conservation plans is encouraged. Article 4 establishes an Energy Commission, consisting of the Committee of Ministers, the Committee of Senior Officials, the Technical Unit, and sub-committees. The Commission is responsible for the implementation of the Protocol. Annex 1 to the Protocol contains guidelines for cooperation in the Energy Commission.

⁹ Article 21.3 SADC Treaty.

¹⁰ Article 2.8.

On the basis of the Treaty and the Protocol on Energy, the SADC Energy Corporation Policy and Strategy (1996); the Energy Action Plan (1997) and the Energy Sector Activity Plan (2000) have been drafted in order to

position the energy sector such that the region can derive maximum benefits from a rationalisation of resources and facilities in the region, and to develop initiatives that contribute to building the capacity of energy institutions in the region to participate effectively in future liberalisation of the energy sector, as well as in the regional economy.¹¹

Under the Protocol, the Regional Electricity Regulators Association of Southern Africa (RERA) was established in July 2002. RERA is a formal association of electricity regulators in pursuit of the broader initiative of the New Partnership for Africa's development (NEPAD) and the African Energy Commission (AFREC).¹² RERA strives to facilitate harmonisation of regulatory policies, legislation, standards and practices and to be a platform for effective cooperation among energy regulators within the SADC region. The objectives of RERA fall into three broad categories, namely: Capacity Building and Information Sharing; Facilitation of Electricity Supply Industry (ESI) Policy, Legislation and Regulations, and Regional Regulatory Cooperation. Each SADC country can have one electricity supply industry regulator as a member of RERA.

The draft Renewable Energy Strategy and Action Plan (RESAP) which still needs to be approved intends to contribute to energy supply security, stimulate economic growth and improve access to modern energy services. Furthermore, the action plan seeks to ensure that the regional energy strategy is aligned with global trends towards clean and alternative energy sources.¹³ Alternative fuels and environmental protection are important aspects and goals of the RESAP-Programme. It has been stated that 33% of the electricity demand should be covered by renewable energies by 2020, 39% by 2030. To this end, a total investment of 177 billion US Dollar is required until 2030.¹⁴

In July 2015, The Energy Ministers of the Southern African Development Community (SADC) approved the establishment of the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE). Namibia was confirmed as the host country of the Secretariat of the Centre.¹⁵

Energy is a defining issue and closely linked with key contemporary global challenges in the SADC region – social development and poverty alleviation, environmental degradation, climate change, food security etc. Energy efficiency plays an important role in sustainable growth and development. Better energy efficiency can produce substantial benefits both for global economic growth and poverty reduction as well as for mitigating climate change. In the household sector, improved energy efficiency can directly reduce household expenditures on energy services, and therefore directly help to reduce poverty. Conducive policies are central to the development of sustainable energy generation and markets. Laws governing sustainable energy development and supply cut across many sectors such as, mining, forestry, agriculture, environment, water, industry, electricity, and petroleum, and hence require coordination – a

¹¹ SADC (2009).

¹² For further information see <http://www.rerasadc.com/index.cfm>; accessed 28 September 2012.

¹³ See ETG (2015).

¹⁴ See <http://www.az.com.na/wirtschaft/sadc-bekennt-sich-zu-kostrom.158525.php>; accessed 7 September 2015.

¹⁵ See GRN South Africa (2015).

complex challenge that is not easily overcome.¹⁶ The energy sector and the provision of electricity for southern Africa's population and industries comprise a complex issue without including the influence of climate change to the equation. If SADC intends reducing its GHG and carbon emissions a transition to sustainable energy is inevitable. This requires redefining its competitive advantage from attracting energy intensive sectors on the basis of non-renewable energy (e.g. coal) to building a new advantage around climate friendly technology and energy. What remains a challenge, and that needs to be researched more extensively, is, how emerging regional and national legislation can harmonise and coordinate the work around the issues of sustainable energy. Cross-sectoral coordination and responsibilities need to be streamlined in order to assure decision making to promote energy security in the region through more effective energy trade mechanisms in future. In the same context policymakers and Government officials need to be capacitated to translate international policy to national and local levels, and vice versa. Further research emphasis needs to be placed on linking national, regional and international policymaking, especially in relation to all emerging climate change related issues, such as the Green Climate Fund.

1.3.2.2 The Protocol on Fisheries

Considering that fisheries are essential for the social and economic well-being and livelihood of the people in the region, with regard to food security and the alleviation of poverty, the Protocol on Fisheries provides for cooperation and integrative actions in order to optimise the sustainable use of the living aquatic resources within SADC. Thus, the objective of the Protocol is to promote the responsible and sustainable use of living aquatic resources and aquatic ecosystems, in order to enhance food security and human health, safeguard the livelihood of fishing communities, generate economic opportunities for citizens, and alleviate poverty.

The Protocol recognises the UN Convention on the Law of the Sea (UNCLOS) and takes into account the FAO Code of Conduct for Responsible Fisheries. Its objective is to promote the responsible and sustainable use of the living aquatic resources and aquatic ecosystems and interestingly defines a fish as any aquatic plant or animal and resources as all aquatic ecosystems. The preamble emphasises the necessity for joint co-operative and integrative action at regional level, awareness and support of national initiatives to implement international conventions on sustainable use and recognises the unique trans-boundary character of the aquatic resources and ecosystems and the need to cooperate in their management.¹⁷

Legal measures provided for in the Protocol to achieve this objective include the protection of resources against over-exploitation, the transfer of skills and technologies to other member states to enhance effective regional co-operation, and the exchange of information on the state of shared resources, levels of fishing, measures taken to monitor and control exploitation of shared resources, plans for new or expanded exploitation, and relevant research activities and results. The Protocol envisages to integrate systems to monitor resources, joint fish stock assessment programmes, agreed scientific methodologies, and preparation of best scientific advice on sustainable levels of exploitation. Of specific importance with regard to environmental protection relating to fisheries is the requirement to balance the needs of industrial enterprises, artisanal fishers, subsistence fishers, recreational fishers, and aquaculture

¹⁶ For various aspects related to energy security and renewable energies in sub-Saharan Africa see Ruppel / Althusmann (2015).

¹⁷ Ruppel / Bethune (2007).

practitioners, in a politically, environmentally and economically sustainable manner (Article 12) and the provision providing for the protection of aquatic ecosystems, including their biodiversity and unique habitats (Article 14). The harmonisation of legislation has been taken up by Article 8, asking for cooperation with regard to establishing region-wide penalties for illegal fishing by SADC and non-SADC flagged vessels in the waters of member states. Annexed to the Protocol are a list of international fora, conventions and agreements with which member states are to establish common positions and undertake co-ordinated and complementary actions, as well as a list of international bodies particularly relevant to the Protocol in Annex 2. Appendices 3 and 4 list international declarations on integrated coastal zone management and agreements on international rivers, respectively.

1.3.2.3 The Protocol on Forestry

Forests are dealt with in the Protocol on Forestry; they cover an area of 357 million hectares of the SADC region corresponding to about 33% of the land area.

The basic regional policy for sustainable management of forests in the SADC region is the Protocol on Forestry. It is a set of rules or principles agreed upon by the SADC member states on how to integrate and cooperate among themselves in order to commonly conserve and manage the SADC forests and woodlands for the benefit of the SADC people. The Protocol recognises the trans-boundary nature of these forests, the importance of transboundary management strategies, the vital role of forests in protecting water catchments particularly of shared water courses and understands that potential harm to these forests is not limited by national boundaries. One of the objectives of the protocol is the effective protection of the environment and the ways listed to achieve the objectives include “harmonising approaches to sustainable forest management, forest policy, legislation and enforcement...”¹⁸ The guiding principles include the obligation of member states to “facilitate, promote and continually improve policy and legal frameworks that promote sustainable forest management”¹⁹.

Forests are home to a rich biodiversity, and millions of people live within the forests and woodlands, which directly support their livelihoods. Forest products from which the population can benefit include charcoal, honey, bush meat, and construction materials amongst many others. Thus, the transboundary conservation and management of forests are essential contributions to the protection and conservation of the environment and its biodiversity, and ultimately, to poverty alleviation. Regional approaches for policy harmonisation and transboundary forest conservation and sustainable use concepts are important mechanisms to attain regional integration. Recognising the essential role which forests play with regard to maintaining the earth’s climate, controlling floods and erosion, and as sources of food, wood and other forest products, the Protocol’s primary objective is to promote the development, conservation, sustainable management and utilisation of all types of forests and forest products in order to alleviate poverty and generate economic opportunities. To this end, the Protocol *inter alia* addresses issues of common concern including deforestation, genetic erosion, climate change, forest fires, pests, diseases, invasive alien species, and law enforcement.

Furthermore, states are called upon to facilitate the gathering and monitoring of information, and the sharing and dissemination of information, expertise and technology concerning forests; and to harmonise approaches to sustainable forest management, forest policy, legislation and enforcement, and issues of international concern. Trade and investment are to be promoted based on the sustainable management and utilisation of forests and the rights of communities

¹⁸

Article 3(1)(f) of the Protocol.

¹⁹

Article 4(4) of the Protocol.

are to be strengthened by facilitating their participation in forest policy development, planning, and management. The Protocol emphasises that traditional forest-related knowledge must be protected and requires mechanisms to ensure the equitable sharing of benefits from forest resources. SADC is currently in the process of drafting a SADC Regional Forestry Strategy and implementation plan.

1.3.2.4 The Protocol on Health

The Protocol on Health was primarily adopted in order to enhance cooperation in addressing the health problems and challenges facing member states through effective regional collaboration and mutual support. As a clean environment can provide best for the health of the region's population, member states undertake to collaborate, co-operate and assist each other in a cross-sectoral approach in addressing regional environmental health issues and other concerns, including toxic waste, waste management, port health services, pollution of air, land and water, and the degradation of natural resources (Article 23).

Health largely depends on a minimum protection from diseases and unhealthy lifestyles. Many people in southern Africa are particularly vulnerable with regard to health threats as these threats are usually greater for poor people in rural areas, particularly children, women and indigenous groups due to malnutrition, insufficient access to health services, lack of clean water and other basic necessities.²⁰

1.3.2.5 The Protocol on Mining

The SADC region is extremely rich in natural resources, including minerals, which can contribute to accelerating economic and social development and growth. The Protocol on Mining strives to harmonise national and regional policies and strategies related to the development and exploitation of mineral resources through developing human and technological capacity, including collaboration between the mining industry and training institutions, *inter alia*.

SADC states must ensure a balance between mineral development and environmental protection, including conducting environmental impact assessments (especially in shared systems and cross border projects), and sharing information on environmental protection and rehabilitation (Article 8). According to the 'fixed stock paradigm' mining is unsustainable because it is an unavoidable fact that resources will eventually be exhausted.²¹ According to the 'opportunity cost paradigm' mining can be sustainable because the costs caused by resource depletion will be counter-acted by new technology and future developments.²² With regards to the latter argument, foreign investment certainly plays a key part in the development of SADC's mining sector and effective mining policies and legal frameworks must ensure the best possible outcomes in terms of sustainability of the mining sector in the region.²³

1.3.2.6 The Revised Protocol on Shared Watercourses

The Revised Protocol on Shared Watercourses of the Southern African Development Community repeals and replaces the 1995 Protocol on Shared Watercourse Systems.

This Protocol recognises international consensus on a number of concepts and principles related to water resource development and management in an environmentally sound manner.

²⁰ UNDP (2008).

²¹ Tilton (2009:7).

²² *Ibid.*

²³ Frick (2002:2).

The policy acknowledges the Helsinki Rules, the UN Convention on the law of the Non-Navigational Uses of International Watercourses and Agenda 21 concepts and facilitates the establishment of shared water agreements.²⁴

The scarcity of water restricts economic development and social upliftment in the SADC region.²⁵ Successfully managing water resources in southern Africa will contribute in reaching SADC's vision of sustainable development in the region:

The people of southern Africa call for a desirable future in which the region's environment is conserved among all the competing uses of water, recognising the constraints inherent in natural ecosystems so that the environment can be sustainably improved, used and managed in the spirit of social and environmental justice.²⁶

The Protocol aims to foster closer cooperation for judicious, sustainable and coordinated management, protection and utilisation of shared watercourses and advance the SADC agenda of regional integration and poverty alleviation. In order to achieve the objective, this Protocol, by virtue of Article 2, seeks to promote and facilitate the establishment of shared watercourse agreements and shared watercourse institutions for the management of shared watercourses; advance the sustainable, equitable and reasonable utilisation of the shared watercourses; promote a coordinated and integrated environmentally sound development and management of shared watercourses; promote the harmonisation and monitoring of legislation and policies for planning, development, conservation, protection of shared watercourses, and allocation of the resources thereof; and promote research and technology development, information exchange, capacity building, and the application of appropriate technologies in shared watercourses management.

Recognising the principle of the unity and coherence of each shared watercourse, SADC states undertake to harmonise the water uses in the shared watercourses and to ensure that all necessary interventions are consistent with the sustainable development of all watercourse states and observe the objectives of regional integration and harmonisation of their socio-economic policies and plans. The utilisation of shared watercourses (including agricultural, domestic, industrial, navigational and environmental uses) within the SADC region is open to each watercourse state, in respect of the watercourses within its territory and without prejudice to its sovereign rights, in accordance with the principles contained in the Protocol.

Member states are obliged to respect the existing rules of customary or general international law relating to the utilisation and management of the resources of shared watercourses. According to Article 3.4 of the Protocol, member states commit themselves to maintain a proper balance between resource development for a higher standard of living for their people and conservation and enhancement of the environment to promote sustainable development.

Watercourse states in their respective territories undertake to utilise a shared watercourse in an equitable and reasonable manner taking into account the interests of the watercourse states concerned, consistent with adequate protection of the watercourse for the benefit of current and future generations, and they participate in the use, development and protection of a shared watercourse in an equitable and reasonable manner. Such participation includes both the right to utilise the watercourse and the duty to co-operate in the protection and development thereof, as provided in this Protocol. Furthermore, the Protocol states that member states have to take all appropriate measures to prevent the causing of significant harm to other watercourse states. Where significant harm is caused to another watercourse state, the state whose use causes such

²⁴

See Ruppel / Bethune (2007).

²⁵

SADC (undated).

²⁶

Ibid.

harm is to take all appropriate measures to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation. Disputes between member states regarding the interpretation or application of the provisions of the Protocol which are not settled amicably, are to be referred to the SADC Tribunal under the SADC Treaty.

The Protocol established several SADC water sector organs (Committee of Water Ministers, Committee of Water Senior Officials, Water Sector Coordinating Unit, and Water Resources Technical Committee and sub-committees) and shared watercourse institutions. The Committee of SADC Water Ministers met in Maseru, Lesotho, in September 2011, where it has been stated that:

... climate change has also seen us facing more intense and frequent extremes of weather such as droughts and floods, thus necessitating coordinated management of our shared water courses and resources. For the SADC region with its multiplicity of shared watercourses, issues of cooperation and joint planning and management of the development and utilisation of our shared resources is of paramount importance.²⁷

Various bilateral and multilateral water commissions within the SADC region have been established,²⁸ which include the following:

- The Permanent Joint Technical Commission (PTJC) is an agreement between the governments of the People's Republic of Angola and the Republic of Namibia to endorse and affirm the old agreements between the colonial powers, Portugal and South Africa, in order to re-establish the Permanent Joint Technical Commission (PJTC) and the Joint Operating Authority on the Cunene River.
- The Joint Permanent Water Commission (JPWC) is an agreement between the governments of the Republic of Botswana and the Republic of Namibia on the establishment of a Joint Permanent Water Commission (JPWC). The agreement relates to water matters of common interest. The Commission concentrated its Policy and Legislative Review of Wetland Use and Management in Namibia activities mostly on the Kwando – Linyanti – Chobe River System, a tributary of the Zambezi River that forms the border between Botswana and Namibia in the eastern part of the Caprivi Region in Namibia, and included work on the Okavango River. The Commission became inactive due to the Kasikili/Sedudu Island border dispute between Namibia and Botswana and the fact that the Permanent Okavango River Basin Water Commission (OKACOM), established in September 1994, took over the responsibility of advising the respective governments on issues and developments related to the Okavango River. The negotiations leading to the establishment of the Zambezi River Commission (ZAMCOM) further reduced the need for the JPWC to meet because the Kwando – Linyanti – Chobe River System is a tributary of the Zambezi River and can thus be included under the ZAMCOM.
- The Permanent Water Commission (PWC) is an agreement between the governments of the Republic of Namibia and the Republic of South Africa on the establishment of a Permanent Water Commission (PWC) on water matters of mutual interest,

²⁷ Opening Remarks by the Deputy Executive Secretary – Regional Integration Eng. Joao Caholo at the SADC Ministers Responsible for Water Meeting and the Regional Strategic Water Infrastructure Investor/Donors Conference

http://www.sadc.int/files/1013/1678/2942/REMARKS_BY_DES_AT_SADC_MINISTERS_OF_WATER_MEETING_and_DONORS_CONFERENCE_MASERU_SEP_2011_22h00.pdf; accessed 20 October 2011.

²⁸ For more information see Ruppel / Bethune (2007).

concentrating at present on the lower Orange River. This Commission is active and responsible for the development of the lower Orange River where it forms the common border between South Africa and Namibia.

- The Vioolsdrift and Noordoewer Joint Irrigation Scheme is an agreement between the governments of the Republic of South Africa and the Republic of Namibia on the Vioolsdrift and Noordoewer Joint Irrigation Scheme (on the lower Orange River). The agreement provides for the establishment of a Joint Irrigation Authority (JIA) responsible for the management of the joint irrigation scheme on both sides of the lower Orange River at Noordoewer in Namibia and Vioolsdrift in South Africa.
- The Permanent Okavango River Basin Water Commission (OKACOM) is an agreement between the governments of the Republic of Angola, the Republic of Botswana and the Republic of Namibia, on the establishment of a Permanent Okavango River Basin Water Commission (OKACOM). This Commission is active and the objective is to act as technical adviser to the parties on matters relating to the conservation, development and utilisation of water resources of common interest and to perform such other functions pertaining to the development and utilisation of such resources as the parties may agree to assign to the Commission. The vision of the Commission is to develop an integrated management plan for the Okavango Basin.²⁹
- The Orange-Senqu River Commission (ORASECOM) is an agreement between the governments of the Republic of Botswana, the Kingdom of Lesotho, the Republic of Namibia and the Republic of South Africa on the establishment of the Orange-Senqu River Commission (ORASECOM). This Commission is active and responsible for advising the governments on developments related to the Orange River Basin.
- The Zambezi River Commission (ZAMCOM) is an agreement between the governments of the Republic of Angola, the Republic of Botswana, the Republic of Malawi, the Republic of Mozambique, the Republic of Namibia, the United Republic of Tanzania, and the Republic of Zimbabwe on the establishment of the Zambezi River Commission (ZAMCOM).

1.3.2.7 The Protocol on Tourism

Considering that the tourism sector is one of the largest and fastest growing sectors in the region, the SADC Protocol on Tourism was primarily adopted to increase regional tourism trade and to utilise the wide range of natural, cultural and historical sites in the region as a means to achieve sustainable social and economic development. In order to achieve these objectives, the Protocol requires member states to better use resources through collective efforts and co-operation in an environmentally sustainable manner. Environmentally and socially sustainable tourism development based on sound management practices is to be promoted. The Protocol puts an emphasis on preserving the natural, cultural and historical resources of the region (Article 11).

²⁹

The Future Okavango Project (TFO) analyses ecosystem functions and services within this trans-boundary basin, *inter alia* focusing on the influence of existing economic, legal, and social institutions on individual or collective action in land, forest, pasture, wildlife, and water management in the Okavango River Basin. Cf. http://www.future-okavango.org/subproject_SP07_tfo.php?PHPSESSID=pmd19856fi9q6lrd7pj1h8j2o3; accessed 20 September 2015.

1.3.2.8 The Protocol on Trade

The primary objective of the Protocol on Trade is to liberalise intra-regional trade in goods and services to ensure efficient production within SADC, reflecting the dynamic comparative advantages of its member states, contributing towards the domestic, cross-border and foreign investment climate, and enhancing the development, diversification and industrialisation of the region. Environmental conservation is integrated in that the Protocol provides for general exceptions from the Protocol's principles in order to ensure the conservation of exhaustible natural resources and the environment (Article 9(h)). Furthermore, member states undertake to make compatible their respective standards-related measures, so as to facilitate trade in goods and services within SADC, without reducing the level of protection of human, animal or plant life or health, or of the environment (Article 17).

Regional trade can be a powerful source of economic growth. But trade does not automatically mean economic growth, let alone poverty reduction or sustainable development. The ability to benefit from regional trade and foreign investment is dependent on a number of factors, particularly the quality of the policies and institutions on the ground. Thus, trade should be considered a means to an end, but not as the end in itself. An effective SADC trade regime must first and foremost be friendly to the environment, address poverty reduction and promote sustainable development.

1.3.2.9 The SADC Protocol on Wildlife Conservation and Law Enforcement

The Protocol on Wildlife Conservation and Law Enforcement of SADC aims to establish within the framework of the respective national laws of each member state common approaches to the conservation and sustainable use of wildlife resources and to assist with the effective enforcement of laws governing those resources.

The Protocol applies to the conservation and sustainable use of wildlife, excluding forestry and fishery resources. Each member state has to ensure the conservation and sustainable use of wildlife resources under its jurisdiction, and that activities within its jurisdiction or control do not cause damage to the wildlife resources of other states or in areas beyond the limits of national jurisdiction.

In line with Article 4 of the Protocol, appropriate policy, administrative and legal measures have to be taken to ensure the conservation and sustainable use of wildlife and to effectively enforce national legislation pertaining to wildlife. Cooperation among member states is envisaged to manage shared wildlife resources as well as any trans-frontier effects of activities within their jurisdiction or control. To achieve its overall objectives, the Protocol is to promote the sustainable use of wildlife, harmonise legal instruments governing wildlife use and conservation, enforce wildlife laws within, between and among member states, facilitate the exchange of information concerning wildlife management, utilisation and the enforcement of wildlife laws, assist in the building of national and regional capacity for wildlife management, conservation and enforcement of wildlife laws, promote the conservation of shared wildlife resources through the establishment of trans-frontier conservation areas, and facilitate community-based natural resource management practices for management of wildlife resources.

The Protocol establishes the Wildlife Sector Technical Coordinating Unit; the Committee of Ministers responsible for Food, Agriculture and Natural Resources; the Committee of Senior Officials; and the Technical Committee. The Wildlife Conservation Fund is established by Article 11.

1.3.2.10 The SADC Protocol on Transport, Communications and Meteorology

Member states acknowledge that they are members of the World Meteorological Organisation (WMO) and, through their national meteorological services, constitute an integral part of the regional and global system or network of the WMO's programmes and structures, in particular the World Weather Watch programme (Article 12.1). Within the regional and international cooperative system of the WMO, members are encouraged to provide adequate legal frameworks and appropriate financial support to the national meteorological services to establish an integrated network of observation, data processing and communications systems; and enhance the provision of meteorological services for general and specialised applications in the region and internationally (Article 12.2). Such co-operation framework obliges member states to inter alia strengthen their weather and climate monitoring systems, improve public and specialised weather services, promote sustainable development with the emphasis on climate change and protection of the environment, and strengthen meteorology research capacity in the region. The Protocol emphasises that sustainable development is to be promoted with an emphasis on climate change and protection of the environment. These aims are to be achieved by means of strengthening the capabilities of national meteorological centres in climate applications and advice; enhancing existing environmental monitoring activities; optimising the use of regional structures; and fostering an awareness of the contributions which can be made by national meteorological centres to planning sustainable development in agriculture, forestry and related areas (Article 12.7).

1.3.3 Other SADC Legal and Institutional Instruments Relevant for the Environment

1.3.3.1 The Regional Indicative Strategic Development Plan (RISDP)

Apart from the Treaty and protocols, SADC also provides other instruments at different levels. These are not binding and do not require ratification by SADC member states.

In March 2001, the Heads of State and Government met at an Extraordinary Summit in Windhoek and approved the restructuring of SADC institutions by means of a Regional Indicative Strategic Development Plan (RISDP) which was approved by the SADC Summit in 2003.

The RISDP reaffirms the commitment of SADC member states to good political, economic and corporate governance entrenched in a culture of democracy, full participation by civil society, transparency and respect for the rule of law. With regard to monitoring the implementation of the RISDP, the Summit exercises oversight through progress reports from the SADC Secretariat.

The focal point of the RISDP is thus to provide strategic direction with respect to SADC programmes and activities, and to align the strategic objectives and priorities of SADC with the policies and strategies for achieving its long-term goals. The RISDP is indicative in nature, merely outlining the necessary conditions that should be realised towards achieving those goals. The purpose of the RISDP is to deepen regional integration in SADC. The RISDP has identified gaps and challenges in the current policies and strategies, and used them to reorient those policies and strategies. In light of the identified gaps and challenges, Chapter 4 focuses on a number of priority intervention areas of both cross-sectoral and sectoral nature that are critical for the achievement of SADC's objectives, in particular in promoting deeper regional integration, integrating SADC into the world economy, promoting equitable and balanced

development, eradicating poverty and promoting gender equality, protecting the environment and strengthening sustainable development.

In order to attain these goals, SADC will inter alia need to harmonise policies, legal and regulatory frameworks for the free movement of factors of production and to implement policies to attain macroeconomic stability and build policy credibility. Although it has to be emphasised that RISDP it is not a binding instrument, at every Summit in recent years member states reaffirmed their commitment to regional integration as per the RISDP, which has identified environment and development as cross-sectoral priority intervention areas, as environment and sustainable development present opportunities for the region to advance its programme of action in environment and natural resources management and forge harmonisation of and compliance with environmental policies, standards and guidelines by pursuing the strategic objectives outlined in the RISDP.³⁰

With regard to environment and sustainable development, the RISDP has elaborated the following areas of focus:

- Creating the requisite harmonised policy environment, as well as legal and regulatory frameworks to promote regional cooperation on all issues relating to environment and natural resource management including trans-boundary ecosystems;
- Promote environmental mainstreaming in order to ensure the responsiveness of all SADC policies, strategies and programmes for sustainable development;
- Regular assessment, monitoring and reporting on environmental conditions and trends in the SADC region;
- Capacity building, information sharing and awareness creation on problems and perspectives in environmental management; and
- Ensuring a coordinated regional position in the negotiations and implementation of Multilateral Environmental Agreements (MEAs), and other agreements.³¹

An internal desk assessment of the RISDP in 2011 which was approved by SADC Council in 2011 was followed by an independent mid-term review carried out and approved by Council in 2012 and 2013. In 2014 and 2015, a task force comprising the SADC Secretariat, all member states and key stakeholders developed and finalised the Draft Revised RISDP 2015-2020 and its Implementation Framework and Indicative Costs. In 2015, the SADC Summit has approved the Revised Regional Indicative Strategy of Development Plan (RISDP) and Implementation Framework of 2015-2020.³² The Revised RISDP comprises 7 chapters with 4 priority areas (of which only the first priority area has been revised substantially as compared to the initial RISDP):

- Industrial development and market integration (with a focus on sustainable industrial development, productive competitiveness and supply side capacity; the free movement of goods and services; financial market integration and monetary cooperation; intra-regional investment and foreign direct investment; and stability oriented macroeconomic convergence)

³⁰ Cf. SADC (2003:66ff.).

³¹ Ibid.

³² GRN South Africa (2015).

- Infrastructure in support of regional integration (covering the focus areas of water; energy; transport; tourism; information and communication technology; and meteorology);
- Peace and security cooperation; and
- Special programmes of regional dimension (besides programmes already included in the initial RISDP on human resource development; health, HIV and AIDS and other communicable diseases; food security and transboundary natural resources; statistics; gender equality; science, technology and innovation and research and development, special programmes in the revised RISDP also cover the topics of employment and labour; the environment; and a focus on the private sector).

1.3.3.2 The SADC Declaration on Agriculture and Food Security

With the 2003 Declaration on Agriculture and Food Security, Heads of State and Government gave substantial means to some specific objectives laid down in Article 5 of the SADC Treaty, namely the promotion of sustainable and equitable economic growth and socio-economic development to ensure poverty alleviation, with the ultimate objective of its eradication and the achievement of sustainable utilisation of natural resources and effective protection of the environment. With this Declaration, SADC member states committed themselves to promote agriculture as a pillar of strength in national and regional development strategies and programmes, in order to attain their short-, medium-, and long-term objectives on agriculture and food security.

The Declaration covers a broad range of human-rights-relevant issues including the sustainable use and management of natural resources and human health. This is because increasing temperatures and declining precipitation in the region resulting from climate change are likely to reduce yields for primary crops in the next decades, changes which will have a substantial impact on food security in SADC, although the extent and nature is still uncertain.³³ Periods of drought and flooding will have an impact on food availability, food access, and on nutrient access.³⁴ It is predicted that the impacts of climate change, such as sea-level rise, droughts, heat waves, floods and rainfall variation, could push millions of people into malnutrition and increase the number of people facing water scarcity.³⁵

1.3.3.3 The SADC Charter of Fundamental and Social Rights

The 2003 Charter of Fundamental and Social Rights in SADC, although not legally binding, is an important human rights document that specifies the objectives laid down in Article 5 of the SADC Treaty for the employment and labour sector. The Charter enshrines the right to a safe and healthy environment, among others. To mobilise the policy value, and indeed the legal force, of a right to a safe and healthy environment in the SADC regime requires the introduction of likely human rights impacts and outcomes. For instance, are the specific rights potentially affected by climate change – the rights to food, water, shelter, and health or rights associated with gender, children and indigenous peoples – addressed in context? The right to a safe and healthy environment become highly relevant to the design and implementation of approaches to adverse environmental effects in policy and legal terms. This dimension includes arguments based on human rights obligations of SADC members under a variety of international law instruments. These range from the integration of human rights into country

³³ Boko *et al.* (2007); Niang / Ruppel (2015:1202).

³⁴ Zier vogel *et al.* (2006b). Niang / Ruppel (2015:1221).

³⁵ UNDP (2008); Niang / Ruppel (2015:1217).

strategies in terms of priority entitlements or more procedural rights that are relevant to the design and implementation of national policies (e.g. right to information, participation, or access to decision-making). Recognition of the link between the abuse of the human rights of various vulnerable communities and related damage to their environment is expressed in the concept environmental justice.³⁶ Internationally, the experience of courts that have been asked to decide on cases with regard to environmental rights shows that the judiciary is crucial when it comes to interpreting existing law and policy in a way that takes into account environmental concerns. In the 2009, South African case of *Lindiwe Mazibuko and Others v City of Johannesburg and Others*, O' Reagan J held that –

[t]he purpose of litigation concerning the positive obligations imposed by social and economic rights should be to hold the democratic arms of Government to account through litigation. In so doing, litigation of this sort fosters a form of participative democracy that holds Government accountable and requires it to account between elections [for] specific aspects of Government policy. When challenged as to its policies relating to social and economic rights, the Government agency must explain why the policy is reasonable³⁷

The aforementioned reasoning does not only apply to the domestic level and should thus in future also be considered on the regional level. This shall become even clearer in the passage below dealing with SADC law enforcement and relevant case law.

1.4 SADC Law Enforcement and Relevant Case Law

Other SADC provisions than those of the Treaty and the Protocols are beyond any doubt important mechanisms for practically improving the state of the environment and the managing thereof within SADC. However, given that, in the legal sense, only provisions of a binding nature can be enforced, the SADC Treaty and its protocols are pivotal to enforcing environmental provisions within SADC.

1.4.1 The SADC Tribunal

The SADC Tribunal was established in 1992 by Article 9 of the SADC Treaty as the judicial institution within SADC. The inauguration of the Tribunal and the swearing in of its members took place in November 2005 in Windhoek, Namibia. The Council designated the seat of the Tribunal to be in Windhoek. The judicial body began hearing cases in 2007, but no case dealing specifically with environmental provisions has been received so far.

Originally, the Tribunal was established to have the mandate to adjudicate disputes between states and between natural and legal persons in SADC and to have jurisdiction over all matters provided for in any other agreements that member states may conclude among themselves or within the community and that confer jurisdiction on the Tribunal.³⁸ In this context, the SADC Tribunal also has jurisdiction over any dispute arising from the interpretation or application of environmentally relevant Protocols. The Tribunal was primarily set up to resolve disputes arising from closer economic and political union.³⁹ However, the Tribunal has demonstrated⁴⁰

³⁶ Ruppel (2010i:323).

³⁷ *Lindiwe Mazibuko and Others v City of Johannesburg and Others* Case CCT 39/09 [2009] ZACC 28.

³⁸ Art 15(2) of the Protocol on the Tribunal and Rules of Procedure thereof.

³⁹ Viljoen (2007:503).

⁴⁰ *Mike Campbell and Another (PVT) Limited v The Republic of Zimbabwe* SADC (T) 2/2007 (cited hereafter as the *Campbell* case).

that it can also be called upon to consider the human rights implications of economic policies and programmes.⁴¹

Surprisingly, the SADC Heads of State and Government dissolved the Tribunal during 2010. In all probability, this was linked to the continued non-compliance by Zimbabwe with the Tribunal's judgments which is unfortunate.⁴² It was decided that "a review of the role, functions and terms of reference of the SADC Tribunal should be undertaken and concluded within six months"⁴³ and the SADC Tribunal was suspended. At an Extraordinary Summit of Heads of State and Government in May 2011, the following was decided:⁴⁴

- The Summit reiterated the moratorium on receiving any new cases or hearings of any cases by the Tribunal until the SADC Protocol on the Tribunal has been reviewed and approved;
- The Summit decided not to reappoint members of the Tribunal whose term of office expired on August 31, 2010;
- The Summit decided not to replace members of the Tribunal whose term of office will expire on October 31, 2011;
- And the Summit mandated the Ministers of Justice/Attorneys General to initiate the process aimed at amending the relevant SADC legal instruments and submit a progress report at the Summit in August 2011 and the final report to the Summit in August 2012.

These decisions have been subject to critical debate.⁴⁵ At the 32nd Session of the Summit of the Heads of State and Government in 2012, it was *inter alia* concluded as follows:

24. Summit considered the Report of the Committee of Ministers of Justice/Attorneys General and the observations by the Council of Ministers and resolved that a new Protocol on the Tribunal should be negotiated and that its mandate should be confined to interpretation of the SADC Treaty and Protocols relating to disputes between Member States.

De facto, the aforementioned decision means a drastic limitation of the competence (if not paralysis) of the SADC Tribunal as it was initially provided with the competence to deal with proceedings initiated by private parties against either the community or member states. Without the competence to deal with proceedings initiated by private parties the new SADC Tribunal will only operate with its wings cut and most likely become unemployed, due to the fact that basically all proceedings before the old SADC Tribunal had so far been initiated by natural or legal persons. Instead of strengthening the mandate of the new SADC Tribunal it has been weakened at the cost of national sovereignty thinking. The fear of loss of state autonomy,

⁴¹ For more information on the SADC Tribunal's human rights jurisdiction see Ruppel (2012a, 2011a, 2009a, b, c, k) and Ruppel / Bangamwabo (2008).

⁴² Especially with the judgment in the *Campbell* case.

⁴³ See SADC Communiqué of the 30th Jubilee Summit of SADC Heads of State and Government, 17 August 2010; <http://www.sadc.int/index/browse/page/782>; accessed 25 September 2011.

⁴⁴ Communiqué of the Extraordinary Summit Heads of State and Government of the Southern Africa Development Community Windhoek, Republic of Namibia, 20 May 2011; <http://www.swradioafrica.com/Documents/SADC%20Summit%20240511.pdf>; accessed 10 May 2012.

⁴⁵ For a critical view on these decisions see for example Pillay (2011) as well as the letter to the Executive Secretary of SADC by former president and members of the SADC Tribunal A.G. Pillay, R. Kambovo and O.B. Tshosa dated 13 June 2011 available at <http://www.az.com.na/fileadmin/pdf/2011/az/SADC-Letter-06-24-11.pdf>; accessed 10 May 2012.

the lack of vision and the unwillingness to compromise are obstacles that prompted SADC to decide against strengthening SADC citizens' rights in the regional community.

Since then, the Tribunal remained suspended. In August 2014, SADC Council of Ministers have considered and approved a draft new Protocol on the SADC Tribunal and recommended it to Summit for further consideration, approval and signature.⁴⁶ Not only taking into consideration the variety of binding SADC Protocols with an environmental impact, the revival of the Tribunal would have been an important step towards the development of environmental jurisprudence at the African sub-regional level. However, the draft Protocol for the Tribunal limits its competence, as it was initially provided with the competence to deal with proceedings initiated by private parties against either the community or member states. At its 35th Summit held in Gaborone, Botswana in August 2015, the SADC Heads of State and Government approved a resolution on the establishment of the Southern African Development Community Administrative Tribunal (SADCAT).⁴⁷ In contrast to the old SADC Tribunal, the revised Protocol regarding the SADCAT does not provide for access to the tribunal for individuals, and it will no longer handle cases between countries. The new SADCAT is thus no court of justice as the SADC Tribunal used to be but will merely function as a legal institution for the interpretation of treaties and protocols of SADC.

The following cases with some environmental and human rights impact reflect the promising beginnings of the SADC Tribunal before it had been cut its wings.

1.4.2 Mike Campbell: An Environmentalist

In 2005, the Constitution of Zimbabwe was amended. The Constitutional Amendment (No. 17) Act 2005 allowed the Government to seize or expropriate farmland without compensation, and it bars courts from adjudicating on legal challenges filed by dispossessed and aggrieved farmers. The practical implications of the Amendment Act resulted in farm seizures, where the majority of the approximately 4,000 white farmers were forcibly ejected from their properties with no compensation being paid for the land. On 11 October 2007, Mike Campbell (Pvt) Ltd, a Zimbabwean-registered company, and others instituted a case with the SADC Tribunal to challenge violations by the expropriation of agricultural land in Zimbabwe by that country's Government.⁴⁸ Mike Campbell had purchased the farm in question on the open market in 1980, after Zimbabwe's Independence.

On 28 November 2008, the SADC Tribunal in its final decision ruled in favour of Mike Campbell and other white commercial farmers.⁴⁹ In its decision the Tribunal held that the Republic of Zimbabwe was in breach of its obligations under Articles 4(c) and 6(2) of the SADC Treaty and that the applicants had been denied access to the courts in Zimbabwe;⁵⁰ and

⁴⁶ See Outcome of the SADC Council of Ministers Meeting held on 14-15 August 2014 at Victoria Falls, Zimbabwe ; available at http://www.sadc.int/files/2314/0821/8588/Outcome_of_the_Council_of_Ministers_meeting_of_August_14_and_15_2014L.pdf; accessed 3 September 2014.

⁴⁷ See Communiqué of the 35th Summit of SADC Heads of State and Government held in Gaborone, Botswana 17-18 August 2015 available at http://www.sadc.int/files/7814/3997/3204/Final_35th_Summit_Communique_as_on_August_18_2015.pdf, accessed 24 August 2015.

⁴⁸ For more information on the *Campbell* Case see Ruppel (2012a, 2011a, 2009a, b, c, k) and Ruppel / Bangamwabo (2008).

⁴⁹ *Mike Campbell (Pvt) Ltd and Others v The Republic of Zimbabwe* SADC (T) Case No. 2/2007.

⁵⁰ Ibid.

the applicants had been discriminated against on the ground of race.⁵¹ The Tribunal further directed the Republic of Zimbabwe to take all necessary measures to protect the possession, occupation and ownership of the lands of those applicants who had not yet been evicted, and to pay fair compensation to those who had already been evicted. The ruling was considered to be a landmark decision expected to shape the legal landscape in the SADC region.⁵² Despite the rule that the Tribunal's decisions are final and binding,⁵³ the Zimbabwean Government never accepted the Tribunal's judgement in the Campbell case.⁵⁴ Subsequently, the farm of Mike Campbell was invaded.⁵⁵ This raised the question of how the Tribunal's judgements were to be enforced. In early April 2011, the South African Advocate Jeremy Gauntlett filed an urgent application before the SADC Tribunal on behalf of Mike Campbell and another against the Summit of the Heads of State or Government of SADC, the Presidents of its 15 countries, the Council of Ministers of SADC and the Republic of Zimbabwe. The application requested an order that ensures that "the [SADC] Tribunal continues to function in all respects as established by Article 16 of the Treaty".⁵⁶ On 9 April 2011, the South African *Sunday Times* newspaper published the following:

Mike Campbell, 78, the commercial farmer who made legal history when he took President Mugabe to the Southern African Development Community (SADC) Tribunal in 2007 and won the case a year later, died at his temporary home in Harare this week.'

It is further reported that:

Campbell never recovered from the abduction and brutal beatings meted out to him, his wife Angela and son-in-law Ben Freeth by ZANU-PF thugs The 78-year-old farmer sustained severe head injuries, which resulted in brain damage, broken ribs and damage to his lower limbs⁵⁷

The dealings around the Campbell case reflect that the rule of law is in a state of flux in SADC and the recent dissolution of the SADC Tribunal is obviously linked to the continued Zimbabwean non-compliance with the Tribunal's judgments.

⁵¹ The issue of racial discrimination was decided by a majority of 4 to 1. Judge OB Tshosa, in his dissenting opinion, concluded that "Amendment 17 does not discriminate against the applicants on the basis of race and therefore does not violate the respondent obligation under Article 6(2) of the Treaty". He argues that "the target of Amendment 17 is agricultural land and not people of a particular racial group and that – although few in number – not only white Zimbabweans have been affected by the amendment". See *Mike Campbell (Pvt) Ltd and Others v The Republic of Zimbabwe* SADC (T) Case No. 2/2007, dissenting opinion of Hon. Justice Dr Onkemetse B. Tshosa.

⁵² Cf. Ruppel (2009k).

⁵³ Article 16(5) SADC Treaty.

⁵⁴ On 28 February 2009, Zimbabwe's President Robert Mugabe said that "[t]here is no going back on the land reforms", and that "[s]ome farmers went to the SADC tribunal in Namibia but that's nonsense, absolute nonsense, no one will follow that We have courts here in this country that can determine the rights of people. Our land issues are not subject to the SADC tribunal" See *The Namibian* 2 March 2009 "Mugabe says Zim land grabs will continue".

⁵⁵ On 25 February 2009, Michael Campbell and his wife had to leave the farm in fear of their safety after a group of two vehicles led by Peter Chamada, nephew of Cabinet Minister Nathan Shamuyarira, claiming to be from the Lands Office, came to the farm and said that they did not care about the law or the police, and that they had come to take over the land. See *The Namibian* 27 February 2009 "Campbell flees farm invasion in Zimbabwe".

⁵⁶ See <http://www.radiovop.com/national-news/5978-new-application-to-sadc-tribunal-makes-history.html>; accessed 4 April 2011.

⁵⁷ See <http://www.timeslive.co.za/sundaytimes/article1010628.ece/Farmer-who-took-Mugabe-to-court-dies-from-injuries>; accessed 9 April 2011.

In March 2012, the African Commission on Human and Peoples' Rights decided to register and consider a complaint about the suspension of the SADC Tribunal. The claimants requested the African Commission to refer their communication to the African Court of Justice so it can order the SADC Summit and its member states to lift, with immediate effect, the suspension of the tribunal; to reappoint the tribunal's judges and to give the tribunal the funding it needs to get on with its work. However, the African Commission has concluded that neither the separate analysis of Articles 7 (on the right to have ones case heard) and 26 (on the independence of the courts) of the African Charter on Human and Peoples Rights, nor a combined reading of the two provisions do create an obligation to ensure access to the SADC Tribunal. The African Commission thus found no violation of Articles 7 and 26 of the African Charter by the respondent states.⁵⁸

With regard to the question whether it can still realistically be expected that SADC will take appropriate action against Zimbabwe, one can only refer to the late Mike Campbell and conclude without reservation that 'justice delayed is justice denied'. Mike Campbell was an environmentalist as has been eloquently reflected in the following press passage:

Campbell was an early conservationist, and after Zimbabwe gained independence in 1980, the purchase of a neighbouring farm provided the space to introduce giraffe, impala and eland. Wildlife drew visitors to the family's Biri River safari lodge. He grew tobacco and maize and raised a resilient herd of Mashona-Sussex cattle, while mangoes from the 40,000 trees generated foreign currency from sales in British supermarkets. The Government-sanctioned invasion of white-owned commercial farms began in earnest two decades after independence. Mugabe promised a 'fast-track' redistribution of 3,000 farms to landless black people. Mount Carmel was a plum target.... The documentary 'Mugabe and the White African' (2009), which won a British independent film award, depicts Campbell and his wife enjoying a sundowner as a farm worker comes to warn that an armed gang is headed for the house. In a moment worthy of Sir Francis Drake on Plymouth Hoe, he tells his wife, Angela, he will deal with them "when I have finished my drink". Campbell refused to hand over his farm to the so-called war veterans (few were old enough to have featured in the war), and instead gave them a shed to live in, as he did not want them "chopping down trees to build your huts". The invaders moved to Bruce's house, and in time burned down the safari lodge, poached the wildlife and slaughtered or rustled the cattle. Not even a warthog remained, he said later.⁵⁹

1.4.3 Swissbourgh and the Lesotho Highlands Water Project (LHWP)⁶⁰

This case is also relevant to a discussion of the SADC Tribunal, the environment and common economic goals of the SADC region. The case was heard in the High Court and Court of Appeal of Lesotho as well as the High Court of South Africa. Nine years after it was first heard it was brought before the SADC Tribunal. In August 2010 it was decided that "a review of the role, functions and terms of reference of the SADC Tribunal should be undertaken and concluded within 6 months"⁶¹ and the SADC Tribunal was suspended. On 25 January 2011, the South African based Josias van Zyl and the Swissbourgh Group filed an application with

⁵⁸ See *Luke Munyandu Tembani and Benjamin John Freeth vs Angola and Thirteen Others* Communication 409/12 decision done in Banjul, the Gambia during the 54th Ordinary Session of the African Commission on Human and Peoples Rights, 22 October to 5 November 2013; available at http://www.achpr.org/files/sessions/54th/comunications/409.12_achpr54_409_12_eng.pdf; accessed 22 September 2015.

⁵⁹ Cf. <http://www.guardian.co.uk/world/2011/apr/24/mike-campbell-obituary>; accessed 14 October 2011.

⁶⁰ *Swissbourgh Diamond Mines & Others v The Kingdom of Lesotho* Case No. SADC (T) 04/2009.

⁶¹ SADC Communiqué of the 30th Jubilee Summit of SADC Heads of State and Government, 17 August 2010; at <http://www.sadc.int/index/browse/page/782>; accessed 25 September 2011.

the SADC Tribunal to set aside the SADC Summit decision to suspend the Tribunal. The Swissbough Group claimed that Lesotho, South Africa and Zimbabwe are facing massive financial claims resulting from their respective international law violations stemming from a case in which the Swissbough Group launched against the Kingdom of Lesotho for compensation and damages suffered following the expropriation of its mineral rights in the execution of the Lesotho Highlands Water Project (LHWP) Treaty. The 1986 Treaty is a contractual agreement governing the design, construction, operation, and maintenance of the Project, as well as the export of water to South Africa.⁶² The suspension of the SADC Tribunal brought the case of the Swissbough Group to a halt.⁶³ The case has not been resolved.

1.5 Some Challenges Ahead

SADC's vision includes a 'common future' that will ensure economic and social well-being for all the people of Southern Africa.⁶⁴ The objectives of the SADC Treaty in particular include "promotion and equitable economic growth and socio-economic development that will ensure poverty alleviation with the ultimate objective of its eradication".⁶⁵ Although a basic legal framework is in place these objectives stand largely unfulfilled at present. Unsustainable development in SADC is a reality due to "economic and sectoral policies which are too narrowly conceived and focused and which neglect the negative consequences on the people and the environment."⁶⁶ Other obstacles in SADC include "duplication and fragmentation of authority" and "institutional failure ... caused by policies that are not backed up by legislation and therefore cannot be legally enforced".⁶⁷

The SADC legal framework provides for a broad bandwidth of provisions with high relevance for environmental protection and it cannot be overemphasised that the rule of law, good governance and the protection of the environment play an essential role in economic development which again contributes to growth, productivity and employment creation, all being essential for sustainable reductions in poverty. However, a major part of any successful legal strategy towards sustainable development includes enforcement. The rule of law means nothing without effective access to justice, without compliance with and enforcement of judgments made by legitimate courts. With regards to the recent dissolution of the SADC Tribunal the legal fraternity in the region responded as follows:

Heads of State from the Southern African Development Community (SADC) have unlawfully sabotaged the SADC Tribunal and undermined the right of citizens to access justice ... by violating regional laws and acting unconstitutionally⁶⁸

Having said this, it must be concluded that the dissolution of the SADC Tribunal violates the right to a fair trial, non-discrimination, access to justice and effective legal remedies within the legal framework of SADC.

⁶² See <http://www.lhwp.org.ls/overview/treaty.htm>; accessed 21 April 2011.

⁶³ See Sasman (2011).

⁶⁴ Cf. <http://www.sadc.int/index/browse/page/715>; accessed 19 June 2011.

⁶⁵ Article 5 Amended Declaration and Treaty of SADC 1992.

⁶⁶ Susswein (2003:297).

⁶⁷ Ibid:303.

⁶⁸ See <http://www.thezimbabwean.co.uk/news/zimbabwe/35444/sadc-leaders-undermine-regional-tribunal.html>; accessed 20 August 2011.

2 The Consideration of Environmental Concerns in Cross-cutting Regimes

2.1 The Southern African Customs Union (SACU) and SACU Related Trade Agreements

Having celebrated its 100th anniversary in 2010, the Southern African Customs Union (SACU) is the world's oldest customs union.⁶⁹ SACU has five members, namely South Africa, Botswana, Lesotho, Namibia, and Swaziland. All five SACU member states are also members of the SADC. One objective of SACU is to facilitate the cross-border movement of goods between the territories of the member states. In order to achieve trade liberalisation, the free movement of domestic products is part of the SACU Treaty (Article 18). Goods grown, produced or manufactured in the common customs area are generally free of customs duties and quantitative restrictions within the common customs area. However, member states have the right to impose restrictions on imports or exports in accordance with national laws and regulations for the protection of health of humans, animals or plants, the environment or intellectual property rights and exhaustible natural resources.

In 2006, SACU signed an FTA with European Free Trade Area (EFTA) states (Iceland, Liechtenstein, Norway and Switzerland).⁷⁰ SACU and the EFTA states have laid down in Article 28 of the Free Trade Agreement on investment that "it is inappropriate to encourage investment by relaxing health, safety or environmental standards". The broad nature of environmental protection is reflected in the somewhat vague formulation of Article 31, which provides that the conservation of the environment has to be taken into account in the "implementation of assistance in the various sectors to which it is relevant".

As a first step towards the creation of a Free Trade Area between the Mercado Común del Sur (MERCOSUR) and SACU, SACU has signed a Preferential Trade Agreement (PTA) with MERCOSUR countries⁷¹ in 2009.⁷² Trade liberalisation is the focus of this agreement and read together with its annexes, specific preferences are granted by MERCOSUR to SACU and vice versa. The PTA only indirectly refers to environmental concerns in making reference to the general exceptions provision in the General Agreement of Tariffs and Trade (GATT) Article XX.

In 2008, SACU⁷³ and the United States signed a Trade, Investment and Development Cooperation Agreement (TIDCA) in order to "to promote an attractive investment climate and to expand and diversify trade between SACU and the United States".⁷⁴ As laid down in the Preamble, the parties of the TIDCA recognise the "importance of protecting and preserving the environment in accordance with each Party's environmental laws, and desiring to ensure that trade and environmental policies are mutually supportive in the furtherance of sustainable development".

⁶⁹ For further details on SACU see Ruppel (2010k).

⁷⁰ For the text of the Agreement, which came into force in 2008, see <http://www.sacu.int/docs/tradeneg/efta-ftha2006.pdf>; accessed 20 May 2010.

⁷¹ Common Market of South America, consisting of Argentina, Brazil, Paraguay and Uruguay.

⁷² For text of the Agreement see http://www.tralac.org/cause_data/images/1694/I_Texto_Principal.pdf; accessed 24 March 2011.

⁷³ For text see <http://www.sacu.int/docs/tidca/agreement.pdf>; accessed 24 March 2011.

⁷⁴ Article 1 TDCA.

2.2 The EAC-COMESA-SADC Tripartite Initiative

In October 2008, the Heads of State of the member states of SADC, the Eastern African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA) negotiated a communiqué as the basis of the Tripartite Partnership. Therein the Heads of State representing all three regional economic communities agreed that the communities should merge into a single market in order to promote the rapid social and economic development of the region.⁷⁵ With the 2011 Second Tripartite Communiqué the respective Heads of State adopted the following developmental approach to the Tripartite Integration process:

... that will be anchored on three pillars ...: Market integration based on the Tripartite Free Trade Area (FTA); Infrastructure Development to enhance connectivity and reduce costs of doing business as well as Industrial development to address the productive capacity constraints⁷⁶

According to the Communiqué, the Tripartite initiative incorporates 26 countries, almost half of the African Union, with 600 million people and a Gross Domestic Product (GDP) of approximately US\$1.0 trillion. An Agreement for the Tripartite Free Trade Area (TFTA) was adopted in June 2015⁷⁷ with several post-signature issues still to be finalised:

Main features of trade in goods, the elimination of customs duties, trade remedies and rules of origin still need to be negotiated. In a second negotiation phase, a Protocol on Trade in Services and Protocols on trade-related matters, including on competition policy, cross-border investment, trade and development, and intellectual property rights are to be negotiated. For these Protocols to be negotiated, the TFTA envisages a timeframe of 24 month upon entry into force of the TFTA, which will only be the case after 14 member states of EAC, COMESA or SADC have ratified the TFTA.⁷⁸

The outcomes of both phases have great significance for the environment in the single market and it remains to be seen whether the Tripartite initiative will also bring prosperity to the people that have so far been left behind in sub-Saharan Africa. Transforming society will require comprehensive legal, political, social, and economic reforms and development initiatives, such as investing more in education, public services, and infrastructure, enhancing participation in trade and protecting the environment for present and future generations. Moreover, it also remains to be seen whether the Tripartite initiative will push the regional integration agenda to empower the poor and reduce pressures such as under-development, unemployment, environmental neglect, health emergencies, and strife.

The approach of the TFTA to protect the environment is congruent with that followed by the WTO. Environmental interests are considered within the system of general exceptions. The agreement in its Article 31 provides for a number of general exceptions to the basic principle of non-discrimination to allow countries in certain circumstances to take account of economic and/or noneconomic interests and values that compete with free trade. Amongst others, these

⁷⁵ Cf. First Communiqué of the COMESA-EAC-SADC Tripartite Summit of Heads of State and Government *COMESA EAC SADC TRIPARTITE* (2008); <http://www.comesa-eac-sadc-tripartite.org/sites/default/files/documents/Final%20Communique%20-%20The%20Tripartite%20Summit%202008.pdf>; accessed 19 October 2011.

⁷⁶ Cf. Second Communiqué of the COMESA-EAC-SADC Tripartite Summit of Heads of State and Government *COMESA EAC SADC TRIPARTITE* (2011); <http://www.comesa-eac-sadc-tripartite.org/sites/default/files/documents/Communique%20of%20the%202nd%20Tripartite%20Summit%20-%20English%20-%2012.06.2011.pdf>; accessed 19 October 2011.

⁷⁷ Available at <http://www.tralac.org/images/docs/7531/tfta-agreement-june-2015.pdf>; accessed 22 September 2015.

⁷⁸ For further details on the TFTA and its implications for SADC see Erasmus (2015 a and b).

exceptions justify measures necessary to protect human, animal or plant life or health as well as measures relating to the conservation of exhaustible natural resources, provided that “such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade”.

The agreement also follows the WTO approach with regard to the system of dispute settlement. According to Article 30 of the Agreement, a panel is to be established for the purposes of dispute settlement, where an amicable resolution is not achieved over disputes dealing with the implementation of the provisions of the agreement.

The East African Community (EAC), the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC) have already initiated discussions towards the establishment of the COMESA-EAC-SADC Tripartite climate change programme to facilitate their long-term vision of working together.

2.3 The BRICS Partnership

The BRICS partnership is a grouping of leading emerging economies, namely Brazil, the Russian Federation, India, China and South Africa, that plays a key role in the world economic development scenario.⁷⁹ The five BRICS states cover more than a quarter of the world’s land area and almost the half of the world’s population lives within their territories. BRICS is neither an international organisation nor a trade bloc in terms of a regional (or preferential) economic community. BRICS considers itself to be “a platform for dialogue and co-operation amongst countries that represent 43% of the world’s population, for the promotion of peace, security and development in a multi-polar, inter-dependent and increasingly complex, globalizing world.”⁸⁰ The BRICS partnership is of economic and political importance in many regards, and it is predicted that the BRICS economies could become a much larger force in the world economy.⁸¹ While China and India are considered to be the ‘world’s factory’ and the ‘world’s office’, respectively,⁸² Russia has come to be known as the ‘world’s gas station’ and Brazil as the ‘world’s farm’. In this context, South Africa could serve as the ‘gateway to Africa’ and its rich natural resources⁸³ as most foreign direct investment attracted by African states relates to natural resources.⁸⁴

Environmental issues have played an important role throughout the BRICS meetings, as stipulated in the Summit Declarations. On 14 April 2011, the leaders of the five BRICS states signed a joint declaration on the global economy, international financial issues and developmental affairs, in Sanya, China.⁸⁵ The Sanya BRICS Declaration contains various

⁷⁹ Prior to South Africa’s first attendance of the summit in 2011, the group was named BRIC (Brazil, Russian Federation, India and China). South Africa had received a formal invitation to join from China in 2010. The first BRIC summit was held in 2009 in Yekaterinburg in Russia, the second BRIC summit in 2010, in Brasília, Brazil, followed by the third BRICS summit in 2011 in Sanya, China, the fourth Summit in 2012 in New Delhi, India, the fifth Summit in 2013 in Durban, South Africa, the sixth Summit in Fortaleza, Brazil in 2014 and the seventh Summit in Ufa in Russia in 2015. The eighth Summit will take place in 2016 in New Delhi, India.

⁸⁰ See para 3 of the Delhi Declaration, available at www.bricsindia.in/delhi-declaration.html; accessed 9 April 2012.

⁸¹ See Ruppel / Ruppel-Schlichting (2013); Wilson *et al.* (2010).

⁸² Fujita (2006).

⁸³ Van den Bosch (2011).

⁸⁴ Marafa (2009:13).

⁸⁵ Sanya Declaration <http://www.bricsindia.in/thirdSummit.html>; accessed 8 April 2012.

linkages with regard to trade and the environment. The declaration emphasises that “[I]n the economic, financial and development fields BRICS serves as a major platform for dialogue and cooperation” and the group has agreed to continue further expanding and deepening economic, trade and investment cooperation among BRICS countries. Furthermore, BRICS countries, by signing the declaration have committed themselves “to assure that the BRICS countries will continue to enjoy strong and sustained economic growth supported by our increased cooperation in economic, finance and trade matters, which will contribute to the long-term steady, sound and balanced growth of the world economy.”⁸⁶ The declaration refers to environmental matters with climate change leading the way as climate change is considered to be “one of the global threats challenging the livelihood of communities and countries.”⁸⁷ In this regard and highlighting the principle of equity and common but differentiated responsibilities, BRICS leaders have committed themselves “to work towards a comprehensive, balanced and binding outcome to strengthen the implementation of the United Nations Framework Convention on Climate Change and its Kyoto Protocol”⁸⁸ and to enhance “practical cooperation in adapting our economy and society to climate change.”⁸⁹ Moreover cooperation has been envisaged in order to “reach new political commitment and achieve positive and practical results in areas of economic growth, social development and environmental protection under the framework of sustainable development.”⁹⁰

In its fourth Declaration signed in New Delhi in March 2012,⁹¹ the BRICS states again emphasised their strong commitment to enhancing sustainable development by also focusing on environmental protection. In the Declaration the BRICS states affirm their commitment towards the implementation of the UNFCCC and the CBD, amongst others. It is specifically pointed out that “sustainable development should be the main paradigm in environmental issues, as well as for economic and social strategies”⁹². Noteworthy is that the Delhi Declaration points out the commitment of the BRICS states towards environmental protection and respective MEAs, just as the achievement of the MDGs but the Declaration is also very clear regarding the responsibilities of developed nations and the need to ensure that growth in non-developed countries is not affected.⁹³

In the 2013 Durban eThekwini Declaration,⁹⁴ BRICS reaffirmed its commitment to the promotion of international law, multilateralism and the central role of the United Nations (UN). The discussions also reflected a growing intra-BRICS solidarity, as well as the shared goal to contribute positively to global peace, stability, development and co-operation based on an inclusive approach of shared solidarity and co-operation towards all nations and peoples.⁹⁵ In the eThekwini Declaration BRICS leaders have acknowledged climate change as being “one of the greatest challenges and threats towards achieving sustainable development”⁹⁶ and have

⁸⁶ See para 13 of the Sanya Declaration at <http://www.bricsindia.in/thirdSummit.html>; accessed 8 April 2012.

⁸⁷ See para 22 of the Sanya Declaration.

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ para. 23 of the Sanya Declaration.

⁹¹ Delhi Declaration at <http://www.bricsindia.in/delhi-declaration.html>; accessed 9 April 2012.

⁹² Ibid at para. 32.

⁹³ See for example Delhi Declaration paras 29, 30, 31, 33, 34, 35.

⁹⁴ 2013 Durban 5th BRICS Summit eThekwini Declaration and Action Plan at www.brics5.co.za/fifth-brics-summit-declaration-and-action-plan; accessed 24 November 2013.

⁹⁵ Para. 2 of the 2013 eThekwini Declaration.

⁹⁶ Para. 37 of the eThekwini Declaration.

included in the eThekwini Action plan to hold a consultative meeting of BRICS senior officials in the margins of relevant sustainable development, environment and climate related international fora, where appropriate.

In July 2014, the 6th BRICS Summit was held in Fortaleza, Brazil under the theme ‘Inclusive Growth: Sustainable Solutions’. The Summit has produced various outcomes, including the Fortaleza Declaration and Action Plan, and, most importantly, the Agreement on the New Development Bank,⁹⁷ the purpose of which has been defined as to mobilise resources for infrastructure and sustainable development projects in BRICS and other emerging economies and developing countries, complementing the existing efforts of multilateral and regional financial institutions for global growth and development.⁹⁸ BRICS leaders have stated to “support the creation of a facilitation mechanism for the development, transfer and dissemination of clean and environmentally sound technologies and call for the establishment of a working group within the UN on this proposal”.⁹⁹ With regard to climate change, BRICS leaders have called upon all countries to “build upon the decisions adopted in the UN Framework Convention on Climate Change (UNFCCC) with a view to reaching a successful conclusion by 2015, of negotiations on the development of a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties, in accordance with the principles and provisions of UNFCCC, in particular the principle of common but differentiated responsibilities and respective capabilities.”¹⁰⁰ Furthermore, it has been reiterated that “renewable and clean energy, research and development of new technologies and energy efficiency, can constitute an important driver to promote sustainable development, create new economic growth, reduce energy costs and increase the efficiency in the use of natural resources.”¹⁰¹

In 2015 the 7th BRICS Summit was held in Ufa, Russia. The Ufa declaration emphasises “the importance of economic growth based on the balanced development of all economic sectors and on the development and introduction of advanced technologies and innovations, (depends on) the mobilization of resources from financial institutions and the encouragement of private investment.” Private investment also means Africans investing in Africa.¹⁰² Furthermore, BRICS reaffirmed its commitment to the ambitious post-2015 development Agenda, which should reinforce the international community’s commitment to eradicate poverty achieve sustained, equitable and inclusive economic growth and sustainable development fully comply with all principles of the UN Conference on Environment and Development held in Rio in 1992, including, in particular, the principle of Common But Differentiated Responsibilities (CBDR).¹⁰³ Moreover, BRICS expressed its readiness to address climate change in a global context and at the national level and to achieve a comprehensive, effective and equitable agreement under the United Nations Framework Convention on Climate Change.¹⁰⁴

⁹⁷ Available from <http://brics6.itamaraty.gov.br/agreements>; accessed 18 August 2014.

⁹⁸ For the NDB’s potential in the field of development co-operation see Mota Prado / Salles (2014).

⁹⁹ Para. 55 of the Fortaleza Declaration.

¹⁰⁰ Para. 52 of the Fortaleza Declaration.

¹⁰¹ Para. 53 of the Fortaleza Declaration.

¹⁰² Cf. McNamee *et al.*

¹⁰³ Para. 65 of the Ufa Declaration.

¹⁰⁴ Para. 67 of the Ufa Declaration.

CHAPTER 8

ENVIRONMENTAL MANAGEMENT

I. GENERAL PRINCIPLES OF ENVIRONMENTAL MANAGEMENT IN NAMIBIA

Katharina Ruppel-Schlichting

1 Introduction

Environmental management is concerned with taking charge and controlling the biological and physical elements of our surroundings including land, air, water, plants and animals. Environmental management has been defined as

a multi-layered process associated with the interactions of state and non-state environmental managers with the environment and with each other. Environmental managers are those whose livelihoods are primarily dependent on the application of skill in the active and self-conscious direct or indirect, manipulation of the environment with the aim of enhancing predictability in a context of social and environmental uncertainty.¹

Undertaking environmental management can bring about higher standards of safety and security (e.g. by addressing global warming as a cause for environmental disasters) and benefits to the lifestyle of people (e.g. by protecting the quality of water resources in order to preserve fish stocks as a source of food). The reduction of costs by improving environmental performances (optimising process efficiency minimises the use of raw materials and energy and the amount of waste production) and the minimisation of environmental risks are considered to be further advantages of environmental management.

In the absence of environmental management, people will be more vulnerable to natural disasters and development is unlikely to be sustainable.² One main objective of environmental management is thus to work towards ecologically sustainable development.

Several principles guide all environmental management processes. Generally, the principles which are captured in major international environmental agreements, such as the Stockholm Declaration and the Rio Declaration also govern processes of environmental management. Of particular relevance for environmental management are the following principles:

- The principle of responsibility for environmental harm entails firstly the duty to prevent environmental damage and secondly, to compensate for any environmental damage caused.³

¹ Wilson / Bryant (1997:7).

² Barrow (2005:19).

³ See Principles 21 and 22 of the Stockholm Declaration and Principles 2 and 13 of the Rio Declaration. International judicial bodies have recognised this principle, for example in the Case on the *Legality of the Threat or Use of Nuclear Weapons* decided by the International Court of Justice.

- Intergenerational equity is another principle important for environmental management. It aims to ensure that the needs of the present generation are met without compromising the ability of future generations to meet their own needs.⁴
- The precautionary principle provides that if an action has a suspected risk of causing harm, in the absence of scientific consensus that the action is not harmful, the burden of proof that it is not harmful falls on those taking the action. Lack of full certainty about social or environmental threats should thus not be used as a reason for approving any planned action.⁵
- The polluter pays principle states that the cost of avoiding or compensating for social impacts should be borne by the person having caused the environmental harm.⁶

Environmental principles that are generally accepted are to avoid or minimise waste and pollution; to minimise the use of natural resources, non-renewable resources in particular; and to protect biodiversity.

Governments, industry and institutions make use of a number of environmental management tools to address environmental problems, including but not limited to the following:⁷

- Public participation ensures that the public is involved in decision-making by having access to relevant information and by being granted the opportunity to provide input. Stakeholders must have the opportunity to influence decisions that have an environmental component.
- Monitoring compliance ensures compliance with relevant environmental legislation, regulations and other requirements is the cornerstone of making any environmental management processes effective.
- Environmental impact assessment serves as a tool to identify the environmental, social and economic impacts of a project prior to decision-making.
- Strategic environmental assessment is an environmental management tool that usually covers a wider range of activities (it might be applied to an entire sector) or a wider (geographical) area and often over a longer time span than the environmental impact assessment of projects.
- Social impact assessment is applied to analyse, monitor and manage the social consequences (e.g. consequences on human life, livelihoods and human settlements) of development.
- Environmental management system consists of a number of interrelated processes and practices such as review, analysis, evaluation and monitoring that function together to achieve the objective of effective environmental management.
- Environmental auditing is a systematic assessment of Government, institutional and corporate management systems, practices and policies as they affect the environment.
- Environmental labelling is used to provide information about the environmental impact of a product. Environmental labelling schemes award an environmental label to those products that are judged to be less harmful to the environment than others within the same product group.

⁴ See Principle 2 of the Stockholm Declaration and Principle 3 of the Rio Declaration.

⁵ See Principle 15 of the Rio Declaration.

⁶ See Principle 16 of the Rio Declaration.

⁷ See Thompson (2005) and Nhamo / Inyang (2011) for more details.

- Environmental policies signal a commitment to environmental management and can prepare the way for further environmental management activities. Environmental policies set out the aims and intentions with respect to the environment.
- Environmental reporting is the communication of environmental management initiatives to improve environmental performance to the outside world, e.g. by way of publishing an environmental report.

In Namibia, the legal foundation for environmental management is the Environmental Management Act No. 7 of 2007 (EMA). The general features of environmental management as sketched above are mirrored in the EMA, as will be outlined in the following sections.

2 The Environmental Management Act No. 7 of 2007

This important piece of Namibian environmental legislation has been enacted to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment. The EMA was gazetted in 2007⁸ and came into force in 2012⁹. It governs all processes related to environmental management and lays down the institutional structures and legal mechanisms to further the national environmental interest and to ensure that environmental considerations are taken into account in public and private activities and decision-making. The scope of application of the EMA is wide ranging as it functions as framework legislation, covering all sectors of environmental law. The objective of the Act is laid down in its Section 2:

The object of this Act is to prevent and mitigate, on the basis of the principles set out in section 3, the significant effects of activities on the environment by -

- (a) ensuring that the significant effects of activities on the environment are considered in time and carefully;
- (b) ensuring that there are opportunities for timely participation of interested and affected parties throughout the assessment process; and
- (c) ensuring that the findings of an assessment are taken into account before any decision is made in respect of activities.

2.1 Environmental Management Principles in the EMA

The principles of environmental management have to be applied by Government institutions and private persons including companies, institutions and organisations, when doing or planning things, which may have a significant effect on the environment. These building the cornerstone of the EMA are well elaborated in Section 3(2) and reflect the general principles of environmental law as already developed on international level, and contained in various international environmental texts such as the Stockholm or the Rio Convention:

- (a) renewable resources must be used on a sustainable basis for the benefit of present and future generations;
- (b) community involvement in natural resources management and the sharing of benefits arising from the use of the resources, must be promoted and facilitated;

⁸

See Government Notice No. 232, Government Gazette No. 3966 (2017).

⁹

See Government Notice No. 28, Government Gazette No. 4878 (2012).

- (c) the participation of all interested and affected parties must be promoted and decisions must take into account the interest, needs and values of interested and affected parties;
- (d) equitable access to environmental resources must be promoted and the functional integrity of ecological systems must be taken into account to ensure the sustainability of the systems and to prevent harmful effects;
- (e) assessments must be undertaken for activities which may have a significant effects on the environment or the use of natural resources;
- (f) sustainable development must be promoted in all aspects relating to the environment;
- (g) Namibia's cultural and natural heritage including, its biological diversity, must be protected and respected for the benefit of present and future generations;
- (h) the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term must be adopted to reduce the generation of waste and polluting substances at source;
- (i) the reduction, re-use and recycling of waste must be promoted;
- (j) a person who causes damage to the environment must pay the costs associated with rehabilitation of damage to the environment and to human health caused by pollution, including costs for measures as are reasonably required to be implemented to prevent further environmental damage;
- (k) where there is sufficient evidence which establishes that there are threats of serious or irreversible damage to the environment, lack of full scientific certainty may not be used as a reason for postponing cost-effective measures to prevent environmental degradation; and
- (l) damage to the environment must be prevented and activities which cause such damage must be reduced, limited or controlled.

The above principles provide a high potential for decision-makers and for courts to develop a foundation for good environmental governance in Namibia.

2.2 Ministerial Competencies

The EMA assigns general functions to Minister of Environment and Tourism in Section 4. The functions are to

- (a) determine policies for the management, protection and use of the environment;
- (b) prepare and publish policies, strategies, objectives and standards for the management and protection of the environment;
- (c) co-ordinate environmental management at national level; and
- (d) monitor and ensure compliance with this Act.

Giving effect to international agreements by way of legislation or regulations is a further competence of the Minister laid down in Section 48. Regulations pertaining to the contents of the EMA are made by the Minister according to Section 56. Most importantly, the Ministry of Environment and Tourism under Section 56 of the EMA has drafted regulations regarding

Environmental Impact Assessment.¹⁰ Furthermore, the Minister has certain powers with regard to waste as provided in Section 5. The Minister is the instance of appeal for decisions of the Environmental Commissioner in the exercise of any power in terms of the EMA.

2.3 Institutions / Officials under the EMA

The EMA provides for the following institutions / officials:

- The Sustainable Development Advisory Council (Sections 6 to 15)
- The Environmental Commissioner (Sections 16 and 17)
- Environmental Officers (Section 18)

The EMA provides for a Sustainable Development Advisory Council to be established to advise the Minister on issues that promote cooperation and coordination between organs of state, non-governmental organisations, community based organisations, the private sector and funding agencies, on environmental issues relating to sustainable development. The Sustainable Development Advisory Council consists of members drawn from both Government and the private sector and the first Council has been inaugurated in January 2013.¹¹ The Council advises the Minister on the development of a policy and strategy for the management, protection and use of the environment, and on the conservation of biological diversity, access to genetic resources in Namibia, and the use of components of the environment, in a way and at a rate that does not lead to the long-term decline of the environment. According to Section 15, the Sustainable Development Advisory Council must prepare an annual report on its activities to be tabled in the National Assembly by the Minister. The EMA establishes further institutions responsible for the different concepts under the Act. These include the Environmental Commissioner and the Environmental Officers. By appointing the Environmental Commissioner in February 2012 as required by Section 16 of the EMA, the full operationalisation of the EMA has been underlined.¹² The functions and duties of the Environmental Commissioner include advising Government bodies on the preparation of environment plans, receiving and recording all applications for environmental clearance certificates, determining whether a particular listed activity requires an environmental assessment, reviewing environmental assessment reports, issuing environmental clearance certificates and conducting inspections to monitor compliance with the EMA.

Environmental Officers in the public service assist enforcing the EMA. To this end, Environmental Officers are endowed with certain powers, including the powers to search, seize and issue compliance orders in cases of violations of the EMA.

2.4 Environmental Plans under the EMA

One mechanism aiming at the realisation of the objectives of the Act is the provision for environmental plans to ensure better co-ordination amongst Government agencies. Organs of

¹⁰ See Government Gazette no. 4878 (2012), Notice No. 30.

¹¹ In February 2012, the Government of Namibia gazetted the Regulation for the implementation of Environmental Management Act No. 7 of 2007. Subsequently, the Ministry of Environment and Tourism invited nominations for appropriate persons from the public, organisations, associations or institutions to sit on the Sustainable Development Advisory Council. The eight members of the Advisory Council are Anna Shiweda, the Deputy Permanent Secretary in the Ministry of Agriculture, Water and Forestry; Annely Haiphene, the National Planning Commission's Chief National Development Advisor; Dr Gaby Schneider, the Director of Geological Survey in the Ministry of Mines and Energy; Dr Malan Lindeque, the Permanent Secretary in the Ministry of Trade and Industry (Chairperson of the Council), and the four public nominated members include Martha Mwandingi, Sioni Ikela, Dr Chris Brown and Dr Michael Humavindu.

¹² In February 2012, Cabinet appointed Teofilus Nghitila as Namibia's Environmental Commissioner.

state (including Government offices, Ministries or agencies at national, regional or local level) which exercise functions that may affect the environment are supposed to make environmental plans in order to minimise the duplication of procedures and functions and to promote consistency in the exercise of functions that may affect the environment. The organs of State that are supposed to draft such management plans are to be listed by the Ministry of Environment and Tourism in the Government Gazette according to Section 24. Environmental plans, which can be done through Strategic Environmental Assessments, are submitted to the Environmental Commissioner who examines whether the Environmental Plan follows the principles of environmental management, satisfies the objects of environmental plans and takes into account existing environmental plans (Sections 24 to 26). Compliance with an Environmental Plan is monitored by the Environmental Commissioner.

2.5 Environmental Clearance Certificates and Environmental Assessments under the EMA

The Act provides for administrative mechanisms such as the necessity of environmental clearance certificates and environmental assessments.¹³ The EMA's Sections 27 to 48, together with the Namibia's Environmental Assessment Policy and the Environmental Impact Assessment Regulations form the basis of all environmental assessments in Namibia. Furthermore, Procedures and Guidelines for Environmental Impact Assessment and Environmental Management Plans have been drafted in 2008.¹⁴

The impact of activities on the environment has to be considered and interested or affected parties have to be given an opportunity to participate in environmental assessment when Government institutions or private persons are intending or planning anything likely to have a significant effect on the environment. With regard to such activities, environmental assessments have to be conducted before any decisions are made. For specific activities or projects having an environmental impact, an environmental clearance certificate is required.

To obtain an environmental clearance certificate, a person who wants to carry out an activity listed in Section 27 of the EMA must follow a multi-stage process in line with Sections 32 to 37 of the EMA¹⁵ and with the regulations for the implementation of the EMA as gazetted in February 2012 which have listed certain activities that may not be undertaken without an environmental clearance certificate.¹⁶ Environmental clearance certificates are required for specific activities in the following sectors:

- Energy generation, transmission and storage activities
- Waste management, treatment, handling and disposal activities
- Mining and quarrying activities
- Forestry activities
- Land use and development activities
- Tourism development activities

¹³ For a detailed outline of environmental assessment legislation in SADC see Walmsley / Tshipala (2010).

¹⁴ MET (2008b).

¹⁵ See MET (2008a:32ff.). For further details see also the Regulations for Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) and the Procedures and Guidelines for Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) drafted by the Ministry of Environment and Tourism in 2008.

¹⁶ Government Gazette No. 4878 (2012) Government Notice No. 29, List of activities that may not be undertaken without Environmental Clearance Certificate: Environmental Management Act, 2007.

- Agriculture and aquaculture activities
- Water resource developments
- Hazardous substance treatment, handling and storage
- Infrastructure
- Other activities

All activities which need an environmental clearance certificate must follow the Regulations for Environmental Impact Assessments,¹⁷ which have been made according to Section 56 of the EMA. These require *inter alia* that the proponent of an activity designates an environmental assessment practitioner (EAP) to manage the assessment process and ensures that the environmental assessment procedures, specified in the EMA, the regulations and guidelines, are followed. The application for an environmental clearance certificate must be submitted to either the Environmental Commissioner, or to any other organ of State, if so required by Section 30(1) of the EMA. The Environmental Commissioner decides whether an environmental assessment is required or not. If it is decided that an environmental assessment is not required, the Environmental Commissioner decides further, whether or not an environmental clearance certificate is granted. This decision can be subject to appeal to the Minister. If it is decided that an environmental assessment is required, the Environmental Commissioner decides on the scope and procedure for the assessment and informs the proponent on the requirements and time frame for the assessment.

Environmental assessments are conducted in order to:

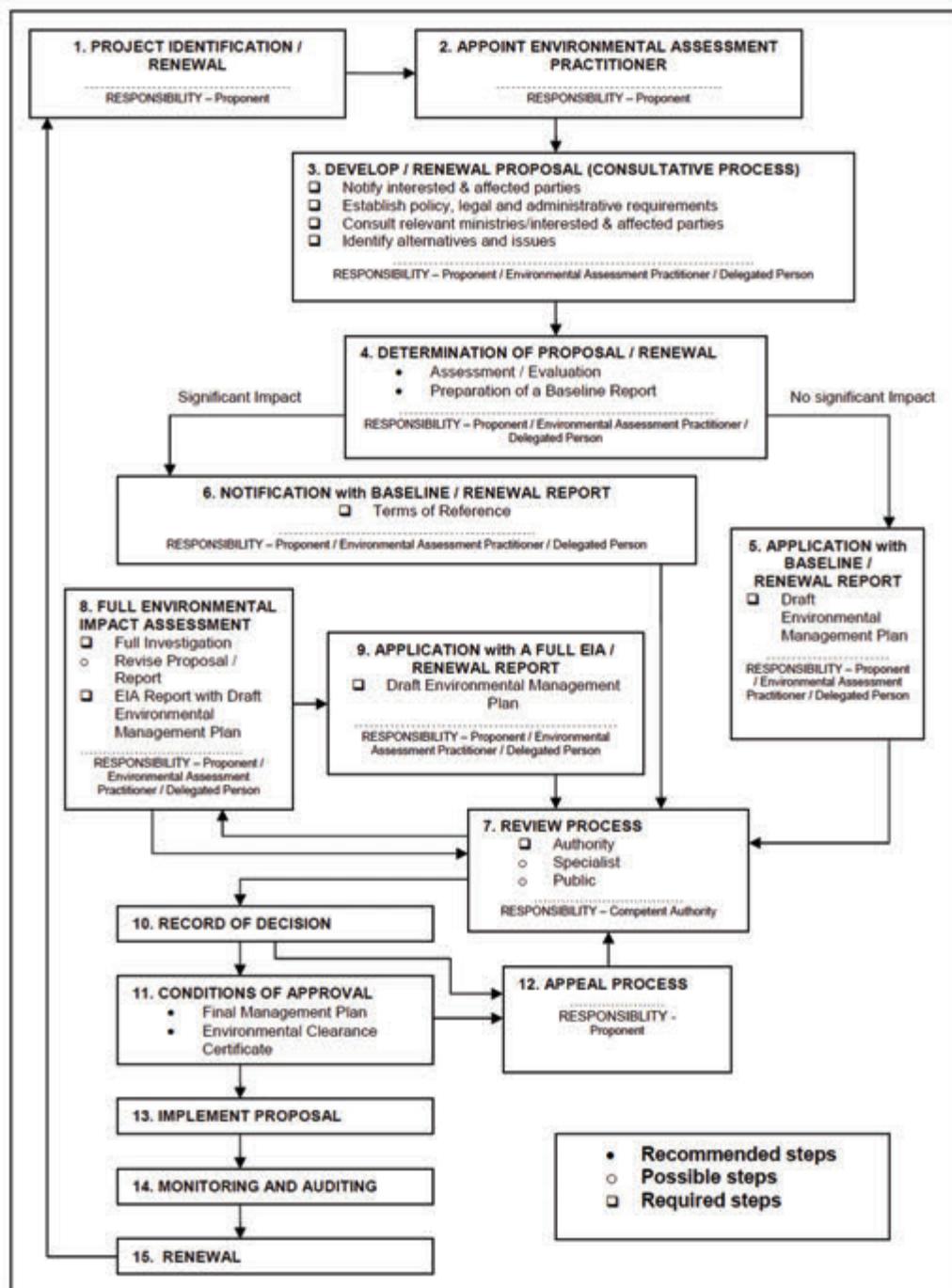
- ensure that activities which may have a significant effect on the environment follow the principles of environmental management planning and development process;
- analyse the possible environmental impacts of activities, and look at ways to decrease negative impact and increase positive ones;
- make sure that the environmental effects of activities are given adequate consideration before the activities are carried out; and to
- provide an opportunity for public participation in considering the environmental impact of a project.¹⁸

The assessment has to be carried out according to these requirements and an assessment report has to be submitted to the Environmental Commissioner. Public participation is ensured in that it is required, that persons who may be affected by the activity applied for must be notified and given a chance to inspect the assessment report and make submissions on it. Upon review of the assessment report, the Environmental Commissioner decides whether or not to grant an environmental clearance certificate. The Commissioner's decision may be subject to appeal to the Minister of Environment and Tourism according to Section 50 of the EMA.

¹⁷ Government Gazette No. 4878 (2012) Government Notice No. 30, Environmental Impact Assessment Regulations: Environmental Management Act, 2007.

¹⁸ MET (2008a:29).

Stages and Procedures of Environmental Assessment¹⁹



¹⁹

See MET (2008b:7).

2.6 Enforcement and Appeals under the EMA

Environmental officers are appointed to carry out the provisions of the EMA. They are the main persons responsible for enforcement of the EMA. Environmental officers not only have specific powers such as the powers of entry and inspection, they can also issue compliance orders to any person who has violated the EMA or a condition of an environmental clearance certificate (Sections 19 and 20).

Decisions of the Environmental Commissioner are subject to appeal to the Minister According to Sections 50 and Section 25 of the Regulations. Decisions of the Minister are subject to appeal to the High Court according to Section 51.

3 Concluding Remarks

Namibia has a relatively young history of environmental management under the new legal framework with the EMA, which is only in operation since 2012. The body of cases giving practical meaning to the Act by decision-makers and courts is thus still relatively limited. It can be stated, however, that the EMA provides a solid legal framework for environmental management in Namibia and implementation of the Act slowly gains pace. The most important step towards making the Act functional was, without doubt, the appointment of the Environmental Commissioner, whose duties, functions and responsibilities under the Act are wide-ranging. That the practical relevance of the EMA is slowly increasing becomes apparent from some recent appeals dealing with processes under the EMA, such as court actions related to Craton Mining²⁰ and an appeal to the Minister by Rössing against the decision, requesting that the Environmental Commissioner reconsiders Rössing's application for an environmental clearance certificate.²¹

²⁰ See IBML Update on Pending Court Actions in Namibia at <http://www.interbasemetals.com/sites/default/files/documents/news/2015/draft-3-press-announcement-pending-court-action.pdf>; accessed 24 October 2015.

²¹ See Tlhage (2015).

II. PRACTICAL IMPLICATIONS OF ENVIRONMENTAL MANAGEMENT IN NAMIBIA: THE CASE STUDY OF OHORONGO

Peter Koep and Meyer van den Berg

1 Background

The independence of the Republic of Namibia on 21 March 1990 brought with it increased attention and interest in the country, its people, its resources and its environment. Prior to independence it would have been unusual for a financier or developer to insist on an Environmental Impact Assessment (EIA) before agreeing to finance and/or develop a particular project. This changed with the independence of Namibia and the enactment of the Constitution, which specifically provides for the:

... maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living, natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular, the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory.¹

But not only was this introduced in Namibia, it was a trend which was adopted world-wide and with the increased demands made by a growing world population, the protection of the environment has taken on a different meaning in that an EIA is a *conditio sine qua non* for obtaining permission to proceed with a development that could alter the natural environment. Furthermore, financial institutions around the world are reluctant to finance a project which is not environmentally friendly and which has not received the approval by the appropriate authority.

The preparation of an EIA and to a greater extent the protection of the environment is a cost factor with which every developer has to contend. When instructing an environmental consultant, that consultant must on the one hand take into consideration the pressure which a developer exerts in wanting their development to become a reality, and to, above all, become profitable for its shareholders, while at the same time not putting their professional integrity on the line when it comes to making recommendations which may not be popular or which may make the whole scheme more expensive in order to protect the environment as it is inevitable that mining activities will have a negative impact on the environment.

2 Ohorongo's Mining Activities

Ohorongo Cement (Pty) Limited obtained Mining Licence No. 153 on 14 July 2008. This entitled Ohorongo to prospect and mine for minerals necessary for the production of cement. A cement plant was erected on the Farm Sargberg, situated approximately 30km north of Otavi and 40km south of Tsumeb, on the western side of the B1 north-south highway. The Mining Licence was only granted after the Ministry of Mines and Energy had studied and evaluated an EIA in respect of the proposed plant. The conditions of that Mining Licence are that:

The holder of the mining licence shall observe any requirements, limitations or prohibitions on his or her mining operations as may in the interest of the environmental protection, be imposed by the Minister.

¹

Article 95(l) of the Constitution of the Republic of Namibia.

The holder of the mining licence shall undertake an Environmental Impact Assessment over the area covered by the mining licence, formulate and forward to the Ministry of Mines and Energy for approval an Environmental Management Plan Report (EMPR) within six (6) months from the date of issue of the licence. The EMPR should specifically address, amongst others, the water supply and sustainability for the life of the mine.

The holder of the mining licence shall enter into an Environmental Contract with the Ministry of Environment and Tourism and that of Mines and Energy once the EMPR is approved.

The holder shall come up with a concise approach on how the land issue is going to be addressed and how mining operations are to be conducted in terms of land rehabilitation.

The holder of the mining licence shall create an Environmental Trust Fund for the purpose of Environmental Rehabilitation and aftercare.²

This must be read together with the obligations of holders of mineral licences contained in the Minerals (Prospecting and Mining) Act.³

3 The Environmental Impact Assessment

The EIA was drafted and compiled by Colin Christian & Associates CC. The approach to the Scoping Report was:⁴

1. Public participation meetings;
2. Consultations with Authorities;
3. Consultation with Specialists;
4. A field trip;
5. Review of literature;
6. The RSA DEAT (1992) checklist of Environmental Characteristics.

Those mining activities which were most likely to have a negative impact on the environment were identified in the Scoping Report as:⁵

- the sustainable yield and potential impact on neighbouring farmers' boreholes;
- the potential impact on species of conservation importance in the quarry area as far as vegetation is concerned;
- the potential impacts on animals and birds;
- air pollution, mainly dust from quarry area and any unpaved roads, for instance the access road;⁶
- noise from blasting, vehicles and from the factory itself;
- the rehabilitation of the quarry area.

The other prerequisites are dealt with in the report itself.

² The terms of Mining Licence 153.

³ No. 33 of 1992. See Section 98 of the Act.

⁴ Colin Christian Environmental Scoping Report, page 4 ("the Report").

⁵ Page 23 and 24 of the Report.

⁶ In the meantime the access road has been tarred.

The Environmental Impact Assessment and Management Plan was also prepared by Colin Christian & Associates CC in February 2008. It dealt with related matters as follows:

3.1 Water

As the site is situated within a subterranean water controlled area⁷, a permit would be required to drill boreholes and to utilise the water for industrial and domestic purposes.

A borehole was sunk into the dolomite formation and the water level was found at 31.52m below the ground surface. A yield of approximately 4m³ per hour was achieved and a draw-down of 9.72m was recorded. As the yield from one borehole would have been insufficient, it was suggested that another three boreholes be drilled in order to deliver approximately 70,000m³ per year. In fact, as a result of the technology used very little water would be used in the cement production process and it would only be used in the process of grinding the clinker. Most of the water consumption would, in fact, be for domestic use, such as the washing of vehicles, the courtyard, the gardens and for dust suppression (insofar as this may still be necessary).

3.2 Vegetation

It was noted that none of the species listed and found in the project area had a special status and it was found that no species would be regionally threatened by the project⁸.

Concomitantly, the report proposed that “trained personnel working with the machine on the ground [be used]” as a possible environmental harm mitigation method during the cement plant construction and installation phase. It goes on to suggest that “a person who is acquainted with the species of protected bushes and trees should walk ahead of the machine in order to identify to the operator protected species and so ensure their protection.”⁹

In order not to fall foul of any of the provisions of the Nature Conservation Ordinance of 1975, it was stated that the Operator (and Ohorongo) should take all possible steps to ensure that protected plant species, as well as the eggs of protected and huntable bird species, were not disturbed or destroyed.¹⁰

3.3 Animals

A separate study was undertaken by the zoologist M. Griffin, who found that there were a number of amphibians, reptiles and mammals in the area and he came to the conclusion that whereas 92 species of mammals were expected to occur within the cement plant development area, and that as the footprint of the proposed development was relatively small, the mammal fauna should not be affected enough to alter the national conservation status of any species. He recommended that effort should be made to prevent Ohorongo staff from collecting firewood and wildlife from the area adjacent to the development area and that the disruption of the natural surface substrate, in particular the rock outcrops, should be kept to a minimum. He also found that as far as amphibians, reptiles and mammals were concerned, no species were expected to be affected to the extent that their regional or national conservation status would be degraded.¹¹

⁷ GN 1969 of 13 November 2010 in terms of Proclamation 278 of 31 December 1976.

⁸ See page 10 of EIA.

⁹ See page 111 of the Report.

¹⁰ As this will be almost inevitable and impossible to ensure it may be advisable to apply for a permit from the Ministry of Environment and Tourism.

¹¹ See the EIA, page 16 and the report referred to there.

3.4 Dust

As far as dust was concerned, all facilities would have de-dusting filters (baghouse filters with maximum dust emissions of 20mg per m³). The average was below approximately 10mg per m³.

Approximately 80% of the total dust emissions were less than 10um (PM10) (i.e. extremely small particles which have the potential for human health impacts if concentrations exceed international emissions standards for these small particles). The total dust emissions, including PM10, would be within the limits of international emissions standards (to question this in the light of tarring the road). All dust emissions levels would be according to international standards and/or far below European legal provisions. In fact, all the requirements of environmental principles as set out in ISA14001 would be implemented with technical equipment.¹²

3.5 Noise

Noise is from blasting, vehicles and the plant itself.

3.6 Air Pollution

In light of the fact that Ohorongo uses sophisticated filters, it is unlikely that it would commit an offence in terms of the Air Pollution Prevention Ordinance (APPO).

4 Rehabilitation

In terms of the Mining Licence, Ohorongo was compelled to register a Rehabilitation Trust into which sufficient funds would have to be transferred for the rehabilitation of the mining area on the eventual termination of the mining activities.

Even though the scoping report and the EIA referred to legal and policy requirements which had to be observed and taken into account, these were, it is submitted, insufficient in order to give legal force to implement the constitutional principles referred to earlier¹³. Namibia does not yet have a central environmental statute, or an overriding statute, covering all environmental sectors which clearly determine the principles of environmental policies, their aims and objectives and the control mechanisms. Much of the environmental legislation was inherited from South Africa at the time of independence and was therefore out-dated and fragmented.

The Minerals (Prospecting and Mining) Act¹⁴ was one of the few pieces of legislation which imposed various duties on the holder of a licence to, for example, prepare an EIA, provide details of the impact of mining activities on the environment, etc.¹⁵

The true value of any law lies in its efficacy and its enforcement. Laws which are not enforced or not enforced consistently lead to confusion and tend to be ignored by those against whom they should be enforced and for whom such laws were ultimately made. Whereas the Ministry of Mines and Energy previously had in their employ mining inspectors, whose duty it was to control the adherence to and the implementation of the conditions contained in mineral licences, there were no longer such dedicated inspectors. There were few, if any, known instances where these laws were being enforced and more specifically where the environment had in fact been damaged. In terms of the Minerals Act, the Minister has the authority to close

¹² See page 7 of the Report.

¹³ Article 95(1) of the Constitution of the Republic of Namibia.

¹⁴ No. 33 of 1992.

¹⁵ For further details see Chapter 13.I on Mining and Energy in Namibia.

a mine should it not adhere to the conditions of its licence or fail to comply with those directives.¹⁶

In an under-regulated society such as Namibia, it often depends on the integrity of the investor to what extent that investor takes it upon itself to comply with international environmental standards. An example of self-regulation, to be emulated, is that of the uranium mining industry, which had, as a result of poorly-constructed legislation prescribing regulation of the sector, implemented its own form of regulation. Every producer and most of the licence holders of nuclear fuels voluntarily became members and have contributed financially to the maintenance of the regulator and undertook to observe and adhere to agreed rules and regulations.¹⁷

The actual construction of the Ohorongo Cement plant was another example of self-regulation. As the site on which the plant was built is situated on agricultural land,¹⁸ the design and the construction was not subject to any building regulation other than those which the owners decided to impose upon themselves. The EIA also did not touch upon issues such as the building of sewers, the depth of foundations, height restrictions, etc. The decision to build the most modern plant using the best available technology by a world-renowned construction company was motivated by a commitment to professionalism and compliance with generally accepted standards, none of which was imposed by legislation.

From the outset, the promoters of the Ohorongo Cement Plant¹⁹ had a vision that alternative fuels should be used to fire the kiln of the plant. They also operated various cement plants in Europe, one of which was fired exclusively by alternative fuels while others used mostly alternative fuels.

In their endeavour to identify alternative fuels, the promoters struck upon the idea of using invader bush, so prevalent on much of the farmland in the northern parts of Namibia. Studies were conducted, samples of invader bush were taken to Germany, their energy content determined, and it was concluded that if sufficient amounts of invader bush could be harvested, it could be used to fire the kiln to such an extent that only 20% of the fuel required would consist of coal and that the remainder would consist of alternative fuels, mainly invader bush.

In line with the modern approach and in keeping with the Namibian Constitution, and for this Energy-to-Fuel-Project, an EIA was prepared.²⁰ The EIA described in some detail the most relevant aspects of the project environment and highlighted those parts of the environment, which could be affected, such as climate, topography, geology, soils, vegetation, animals, birds, arthropods as well as the socio-economic impact.²¹

Even though there have been many attempts to clear invader bush by various means, including mechanical, mechanical combined with manual labour, manual labour only and chemical, none had been as potentially invasive or on a similar scale to what was described in the EIA.

The scale of the bush-to-fuel project was a first of its kind in Namibia. The effects of the bush clearing and the methods used would be of importance to the future sustainability, not only of

¹⁶ Section 55 of the Act.

¹⁷ To obtain information, contact the Uranium Institute, c/o the Chamber of Mines, Swakopmund.

¹⁸ See Section 1 of the Agricultural (Commercial) Land Reform Act No. 6 of 1995, as amended.

¹⁹ Schwenk Zement International KG.

²⁰ See Environmental Impact Assessment Report April 2010 prepared by Colin Christian & Associates CC.

²¹ Page iii of the Report.

this, but also of other similar projects. Bush clearing activities were being used in order to generate electricity from invader bush. Other such projects are planned.²²

This project is of potential interest to the farmer/landowner, as it would open up areas for utilisation that were previously of little, if any, economic value. As a result of traditional energy resources becoming expensive and scarce, this has changed. All of a sudden a piece of land, which previously could not be used due to sometimes impenetrable invader bush, opened up new possibilities to its owner and to the parties wanting to make use of such bush.

However, there was another side to the coin, which was unexpected and amounted to a new revelation. Throughout the report, the author was careful to highlight the importance of what he referred to as the “aftercare” and the tension between the needs of EFF and the needs of farmers:

The services offered by EFF will be limited to cutting and transport of the material to the processing plant near the cement plant. EFF will not undertake any aftercare activities....²³

For many cattle farmers the ideal would be to achieve a stable state of open savannah matrix with optimum grazing productivity. The degree to which they can achieve this ideal would depend, again, on species, environmental conditions, rainfall etc., but also the resources committed to aftercare, the methods used therefore and the time spent thereon. To the extent that the farmer was successful in achieving the ideal of sustainable grazing, he would reduce the bush cutting potential of the area in question.²⁴

The author of the report goes into greater detail as far as aftercare was concerned:

The most important economic benefit is expected to be increased rangeland productivity for many commercial farmers. In order to optimise this benefit, farmers would be well advised to do aftercare to control the regrowth of encroacher bush species.....

.... aftercare is likely to deliver the best environmental outcomes and the more sustainable grazing resources.....

....If aftercare is not implemented especially where *sekelbos* is dominant, the result is often increased bush densities after a few years, resulting in a worse problem as before....²⁵

An important part of an EIA is to be able to hear, assess and report on the views of the public, especially those immediately affected by the activities of the company.²⁶

A description of the Public Participation Process was included in the Plant Report.²⁷

All previous attempts at bush clearing, apart maybe from the use of chemicals, did not require an EIA and whether or not there was compliance in all or some of the instances is uncertain.²⁸ As a result of a dearth of legislation regulating the clearing of invader bush, it has been left up to the farmer/landowner to employ those means which he/she can afford and the manner best

²² There are bush clearing activities by the CFF.

²³ See page 88, 8.10.7 of the Report.

²⁴ See page 89 of the Report. It is submitted that this will be of little concern for EFF, as at harvesting rate of 4,250 ha/year it would take 78 years before it would be necessary to return to the areas already harvested, see page 90 of the Report.

²⁵ Page 112 of the Report.

²⁶ Part of the cement plant study.

²⁷ Page 14.

²⁸ Attempts to establish this from the responsible authorities proved impossible.

suitied to the particular circumstances. As a result, there was little if any scientific record available to guide EFF, or indeed the author of the EIA.

The Ohorongo cement plant would have capacity of producing approximately 700,000 tonnes of cement per year. For this it would need between 70,000 to 75,000 tonnes of coal per year at full production. However, by substituting 85,000 tonnes with invader bush chips, it would be possible to save 55,300 tonnes of coal per annum, this being a saving of an estimated 73%to 79% per year²⁹.

Machines would be built, which would be track mounted, in order to be manoeuvrable and therefore be able to selectively harvest the bush. It would cut and shred the bush and blow the chips into a hopper which would be situated behind it. These wood chips would be stored and further processed to reduce the size, in order to be able to be blown into the furnace for rapid combustion in the kiln.

It was proposed that blocks of at least 200ha would be cut per farm per year, it being estimated that approximately 4,000ha per year would yield the required amount of bush chips.

The key motivations for the project were to:

- reduce the demand for imported coal (a non-renewable energy resource);
- contribute to reducing greenhouse gasses in the atmosphere (relative to fossil fuels);
- restore grazing potential leading to restored beef production;
- consequent benefits to meet industries and exports;
- management;
- potential restoration of biodiversity, assuming appropriate environmental groundwater recharge may also be improved in some cases.³⁰

It was estimated that it would take 75 years to clear 4,000ha per year of invader bush within a radius of 75km from the cement plant. This was without harvesting the same land twice during that period.

The idea to use invader bush as an alternative source of fuel and at the same time combating bush encroachment was an innovative idea which should benefit the shareholders of Ohorongo, as well as farmers, as the techniques of combating invader bush develop. As a result of unexpected technical difficulties this project has not progressed as was intended. However, the promoters of the plant remain committed to the idea of replacing as much coal as possible with invader bush for all the reasons mentioned in this article.

²⁹ See the Report, page 2.

³⁰ See EIA report, page 2.

CHAPTER 9

POLLUTION CONTROL AND WASTE MANAGEMENT

Katharina Ruppel-Schlichting

1 Introduction

Despite the fact that Namibia is a large country with a sparse population and the amount of solid waste generated is thus relatively low, major environmental challenges in Namibia, just as in Southern Africa in general are related to pollution control and waste management. ‘Pollution’ can be defined as “the presence in or introduction into the environment of a substance which has harmful or poisonous effects.”¹ A similar though more detailed definition of ‘pollution’ is for example provided by the Solid Waste Management Policy of the City of Windhoek, which defines pollution as

- any change in the environment caused by –
- (a) any waste, substance or matter; or
 - (b) noise, odour, dust or heat, emitted from or caused by any activity, including the storage or treatment of any waste, substance or matter, building and construction, and the provision of any service, whether engaged in by any person or an organ of state if that change has an adverse effect on public health or well-being or on the composition, resilience and productivity of a natural or managed ecosystem (both short term and long term), or on material useful to people, or will have such an adverse effect in the future.²

The term ‘waste’ is closely related to pollution but not identical. The characteristic of a ‘failure to use for its proper purpose’ is inherent to the term ‘waste’, which has thus been defined as

- any substance or matter whether solid, liquid or any combination thereof, irrespective of whether it or any constituents thereof may have value or other use, and includes –
- (a) any undesirable, rejected, abandoned or superfluous matter, material, residue of any process or activity, product, by-product;
 - (b) any matter which is deemed useless and unwanted;
 - (c) any matter which has been discarded, abandoned, accumulated or stored for the purposes of discarding, abandoning, processing, recovery, reuse, recycling or extracting a usable product from such matter; or
 - (d) products that may contain or generate a gaseous component which may originate from residential, gardening, business, commercial, trade, industrial, educational, agricultural, medical, building and demolition activities, and any other activities, and further includes industrial waste, hazardous waste and health care risk waste.³

¹ See Oxford Dictionary for Advanced Learners.

² See the introductory definitions section of the Solid Waste Management Policy of the City of Windhoek.

³ Ibid.

While pollution does not necessarily need to be caused by waste it can also be caused by other pollutants. Waste – if handled correctly – does not necessarily cause pollution. As from a legal and statutory point of view, many provisions that apply to pollution also apply to waste, whereas in many cases specific statutes deal with waste.

Pollution control and waste management are essential in environmental protection as pollution and waste are a threat to human health, plant and animal life and ecological systems. Ensuring proper waste management is crucial to a broad spectrum of human rights such as the rights to life, health, food, water and sanitation and to a clean and satisfactory environment to name but a few. Preventing and managing pollution must thus be considered as a priority issue, especially in the light of the rising quality of life, high rates of resource consumption patterns and industrialisation.

A 2012 World Bank Report⁴ provides the following alarming figures: While ten years ago there were 2.9 billion urban residents who generated about 0.64 kg of municipal solid waste per person per day (0.68 billion tonnes per year) it is estimated that today these amounts have increased to about 3 billion residents generating 1.2 kg per person per day (1.3 billion tonnes per year). By 2025 this is likely to increase to 4.3 billion urban residents generating about 1.42 kg/capita/day of municipal solid waste (2.2 billion tonnes per year). Although data is particularly lacking for Sub-Saharan Africa, the report estimates that waste generation is approximately 62 million tonnes per year (likely to increase to 161 million tonnes by 2025), spanning a wide range from 0.09 to 3.0 kg per person per day with an average of 0.65 kg per capita per day. The data for Namibia provided in the report is calculated using a per capita rate of 0.5kg per capita per day. Based on this, Namibia, with a population of 2,104,900 generates 1,052 tonnes per day, corresponding to 383,980 tonnes per year.

The aforementioned facts call for an efficient legal framework in order to limit pollution and waste to an absolute minimum. Ecosystems can only be protected and utilised optimally where an efficient legal framework is supported by an effective administrative system. Against this background integrated pollution control acknowledges that the environment functions as a whole which requires a holistic approach which integrates legal, institutional and scientific instruments.

2 Legal and Policy Framework

The following section shall provide a broad overview of the most relevant legislation dealing with pollution control and waste management. As a starting point it can be stated, that Namibia's legal framework dealing with the aforementioned substantive matters is fragmented, partially outdated, incomplete and sectoral rather than integrated.⁵

2.1 International Law

A broad range of Multilateral Environmental Agreements (MEAs) are pertinent to pollution control and waste. Owing to the fact that pollution knows no boundaries, a rich body of international law conventions deals – directly or indirectly – with transboundary pollution. Among the prominent relevant conventions to which Namibia is a party are the Stockholm Convention on Persistent Organic Pollutants (2001), the United Nations Framework

⁴ Hoornweg / Bhada-Tata (2012:x).

⁵ This was the summarising finding of a Baseline Study on pollution control and waste management conducted by the Polytechnique of Namibia as early as 2001. Not much has happened since. Although the Environmental Management Act has eventually been signed into law, the Draft Pollution Control and Waste Management Act is still in the preparation stage.

Convention on Climate Change (1992) and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989).

With regard to transboundary pollution the legal and policy framework of the Southern African Development Community (SADC), to which Namibia is a party, also contains some relevant provisions. The SADC Protocol on Shared Watercourse Systems for example provides that permits must be acquired before discharging any and all types of wastes into shared waters, provided that the intended discharge will not have a detrimental effect on the watercourse system; member states must furthermore take all measures necessary to prevent the introduction of alien aquatic species into a shared watercourse system which may have detrimental effects on the ecosystem; and agreements should be reached on water control and utilisation in shared watercourse systems including the regulation of the flow and drainage.⁶ In the Revised Protocol on Shared Watercourses, the prevention, reduction and control of pollution has been expanded to include lists of substances, which may not be introduced into the waters of a shared watercourse, and calls for the joint setting of water quality objectives. The SADC Protocol on Health contains a provision on environmental health, which seeks for cooperation among member states in addressing regional environmental health issues and other concerns, including toxic waste, waste management, port health services, pollution of air, land and water, and the degradation of natural resources.⁷

But not only MEAs, also judgements of international judicial bodies shape the body of international environmental law related to pollution and waste. One example includes one of the most prominent international environmental law cases, namely the *Trail Smelter Arbitration (US v Canada)* which deals with trans-boundary pollution⁸. Another relevant dicta refers to the WTO's Dispute Settlement Body dealing with imports of re-treaded tyres (*EC v Brazil*)⁹.

2.2 Pollution under the Constitution

The Namibian Constitution does not provide for an environmental clause directly relevant to pollution. However, the provisions generally relevant for environmental protection, namely Article 91(c), which assigns to the Ombudsman the duty to investigate complaints concerning the over-utilisation of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia; and Article 95(l), which commits the state to actively promote and maintain the welfare of the people by adopting policies aimed at the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation

⁶ See Article 2 of the SADC Protocol on Shared Watercourse Systems.

⁷ Article 23 of the Protocol on Health.

⁸ *Trail Smelter Arbitration* (1938/1941) 3 RIAA 1905 Arbitral Tribunal: US and Canada. The smelter in Trail, British Columbia, operated by the Consolidated Mining and Smelting Company (COMINCO) and had processed lead and zinc since 1896. Smoke from the smelter caused damage to forests and crops in the surrounding area and also across the Canada-US border in Washington. The smoke from the smelter distressed residents, resulting in complaints to COMINCO and demands for compensation. The dispute between the smelter operators and affected landowners could not be resolved, resulting in the case being sent to an arbitration tribunal. Negotiation and resulting litigation and arbitration was settled in 1941.

⁹ WT/DS332 Panel and Appellate Body Report adopted on 17 December 2007. See http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds332_e.htm; accessed 30 January 2014. In 2005, the EC requested consultations with Brazil regarding its imposition of measures that adversely affected exports of re-treaded tyres from the EC to the Brazilian market. The EC challenged the ban as a violation of WTO rules, whereas Brazil claimed that the imports of re-treaded tyres led to a faster accumulation of waste tyres and defended the measure as necessary to protect health and the environment.

of living natural resources on a sustainable basis. In particular, Article 95(l) requires Government to provide measures against dumping or recycling of foreign nuclear and toxic waste on Namibian territory.

2.3 Common Law Aspects of Pollution

Common law provides a broad range of principles related to pollution control and waste management. The branches of criminal law, the law of delict and the law of nuisance all highly relevant in the context of pollution and waste.

An actionable delict can be given in cases of pollution provided that:¹⁰

- there has been an act or omission;
- the act or omission has been wrongful;
- fault, in the form of either intention or negligence is present;
- harm to person or property has been suffered in the form of quantifiable monetary damages (patrimonial loss); and
- there is causation in that the act or omission of the defendant has caused the harm.

The law of nuisance with its three distinct types of nuisance, namely public nuisance, private nuisance and statutory nuisance may be applied in the context of pollution and typically result in an interdict (to refrain from establishing a threatening nuisance or from continuing an existing nuisance) or in an action for damages.¹¹

In many cases national statutory law such as the Environmental Management Act (EMA) or specific waste legislation does, however, offer more specific provisions to address environmental concerns than the body of common law principles.

2.4 Framework Legislation: The Environmental Management Act No. 7 of 2007 (EMA)

Pollution control and waste management within the EMA (which is in force since 6 February 2012) are predominantly anchored within its Section 3 on the principles of environmental management, which guide the implementation of EMA and any other law relating to environmental protection, serve as the general framework for environmental plans and as guidelines for any organ of state when making any decision in terms of the EMA or any other law relating to the protection of the environment. In fact, all of the principles stipulated in Section 3(2) apply to pollution and waste, at least to some extent. However, of particular relevance are the principles (h) to (j) of Section 3(2), which provide as follows:

- (h) the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term must be adopted to reduce the generation of waste and polluting substances at source;
- (i) the reduction, re-use and recycling of waste must be promoted;
- (j) a person who causes damage to the environment must pay the costs associated with rehabilitation of damage to the environment and to human health caused by pollution, including costs for measures as are reasonably required to be implemented to prevent further environmental damage.

¹⁰ For more details see Glazewski (2014:20-7 to 20-24).

¹¹ Ibid.

In Section 5 EMA empowers the Minister of Environment and Tourism to declare a site to be a waste disposal site and provides that waste or dispose may not be discarded or caused to be discarded except at a disposal site. Contraventions are an offence and fines not exceeding N\$500 000 or imprisonment for a period not exceeding 25 years or both may be imposed.

According to Section 27(1) of the EMA, the Minister of Environment and Tourism may list activities, which may not be undertaken without an environmental clearance certificate. Article 27(2) exemplarily lists various fields in which an environmental clearance certificate may be required. The most relevant ones with regard to waste and pollution are the areas of (b) water use and disposal; and (i) waste and sewage disposal and chemical treatment. A list of activities, which may not be undertake without an environmental clearance certificate has been drafted by the Ministry of Environment and Tourism and published by respective notice in the Government Gazette.¹² Specific activities beneficial with regard to pollution control and waste management that may not be undertaken without environmental clearance certificate have been listed relate to activities in the following sectors:

- energy generation, transmission and storage activities;
- waste management, treatment, handling and disposal activities;
- mining and quarrying activities;
- forestry activities;
- land use and development activities;
- tourism development activities;
- agriculture and aquaculture activities;
- water resource developments;
- hazardous substance treatment, handling and storage;
- infrastructure; and
- other activities, including the construction of military demonstration and testing sites as well as cemeteries, camping, leisure and recreation sites.

As to waste management, treatment, handling and disposal activities, the list of activities requiring an environmental clearance certificate stipulates the following:

- The construction of facilities for waste sites, treatment of waste and disposal of waste;
- Any activity entailing a scheduled process referred to in the Atmospheric Pollution Prevention Ordinance of 1976;
- The import, processing, use and recycling, temporary storage, transit or export of waste.

The Minister of Environment and Tourism as per Article 56 of the EMA has the competence to make regulations relating various issues of environmental concern, including the requirements for listing or delisting of activities in terms of Section 27; what constitutes an activity for purposes of listing or delisting in terms of Section 27; and to the disposal of certain types of

¹²

See Government Gazette No. 4878 (2012), Notice No. 29.

waste. Most importantly, the Ministry of Environment and Tourism under Section 56 of the EMA has drafted regulations regarding Environmental Impact Assessment.¹³

At this stage, the EMA together with the Environmental Assessment Policy and the Environmental Impact Assessment Regulations form the basis of Namibia's approach to pollution control and waste management. Moreover, sectoral legislation applies as will be outlined in the following.

2.5 Sectoral Legislation

2.5.1 The Pollution Control and Waste Management Bill

As stated above, the legal framework relating to pollution control and waste management is varied and patchy. This is not only problematic in terms of the variety of laws which sometime reflect overlaps and regulatory gaps. Another major concern is the multitude of administering bodies involved. Where some of the laws and policies are administered by the Ministry of Environment and Tourism, others mandate action from the Ministry of Health and Social Services; the Ministry of Agriculture, Water and Rural Development; the Ministry of Works, Transport and Communication; the Ministry of Mines and Energy, the Ministry of Trade and Industry, the Ministry of Fisheries and Marine Resources and the Ministry of Regional and Local Government and Housing. In other cases, local authorities are responsible for enforcing certain laws. The collection and disposal of waste is the responsibility of local and regional authorities.

Once signing into law the envisaged Pollution Control and Waste Management Act would be a major step towards ensuring a more effective instrument drawing together the waste management and pollution control functions from all ministries involved. However, this draft piece of legislation has been in preparation for more than fifteen years. Apparently, the Ministry of Environment and Tourism is currently in the processes of reviewing and harmonising both, the EMA as well as the Pollution Control and Waste Management Bill with a particular focus on potentially conflicting provisions within both legal instruments. It is not clear at this stage, whether the review will result in an incorporation of the bill into the EMA or whether both pieces of legislation will remain separate documents. Regarding enforcement of the law it is envisaged to involve conservation scientists (environmental inspectors).¹⁴

2.5.2 The Public and Environmental Health Bill

In 2014, the Minister of Health and Social Services introduced the Public and Environmental Health Bill¹⁵ in order to promote public health and wellbeing; prevent injuries, diseases and disabilities; protect individuals and communities from public health risks; encourage community participation in order to create a healthy environment; and to provide for early detection of diseases and public health risks. The Bill contains several provisions relevant for environmental protection. With a view to water and food safety, the Bill formulates a duty of local authorities to provide and maintain as far as may be reasonably possible, a sufficient supply of potable water for drinking and domestic purposes.¹⁶ Furthermore, the Bill addresses integrated waste management and stipulates among others that in order to prevent

¹³ See Government Gazette No. 4878 (2012), Notice No. 30.

¹⁴ See Ngatjihue (2015a).

¹⁵ The Bill is available at http://www.parliament.na/index.php?option=com_phocadownload&view=category&id=58:bills-2014&Itemid=1269; accessed 16 September 2015.

¹⁶ Sections 45 to 49.

environmental pollution and public health risks, local authorities must ensure that all waste generated is collected, disposed of and recycled in accordance with the requirements of all laws governing the management of the different waste streams.¹⁷ Health nuisances are addressed in Part 10 of the Bill, in which specific health nuisances are identified, including among others polluted sources of water supply, the accumulation or deposit of refuse, which is injurious or dangerous to health and other conditions which are offensive, injurious or dangerous to health. According to Section 68, the Minister may require the preparation of public and environmental health plans.

2.5.3 The Soil Conservation Act No. 76 of 1969

The Soil Conservation Act dates back to 1969 and was made applicable in Namibia with effect from 1 April 1971 by Act 38 of 1971. This Act is another important legal document with regard to pollution as it covers the prevention and combating of soil erosion, the conservation, improvement and manner of use of the soil and vegetation, and the protection of water sources.¹⁸ As per the Act, the Minister has the power to declare directions applicable with reference to land conservation and may order construction of soil conservation works. Soil Conservation Committees may be established under this Act to advise the Minister, owner or occupier of land on all matters relating to soil conservation.

2.5.4 The Hazardous Substances Ordinance 14 of 1974

This ordinance provides for the control of toxic substances and thus also relevant for pollution control. It covers the control of hazardous substances, as well as their manufacture, sale, use, disposal, dumping, import and export.

2.5.5 The Atmospheric Pollution Prevention Ordinance 11 of 1976

The Atmospheric Pollution Ordinance of 1976 pertinent to the prevention of air pollution with particular focus on public health contains detailed provisions on air pollution. The Ordinance deals with administrative appointments and their functions; the control of noxious or offensive gases; atmospheric pollution by smoke; dust control; motor vehicle emissions; and general provisions. As per the Ordinance, control areas can be established in order to control noxious or offensive gases or atmospheric pollution by smoke. So far, the Ordinance has been of minor practical relevance.

2.5.6 The Atomic Energy and Radiation Protection Act No. 5 of 2005

The Atomic Energy and Radiation Protection Act provides for protection of the environment of current and future generations against harmful effects of radiation. The Act regulates the control of the production, processing, handling, use, holding, storage, transport and disposal of radiation sources and radioactive materials, and radiation sources and nuclear materials. An Atomic Energy Board is established under the Act as well as a National Radiation Protection Authority. According to Section 43 of the Act, the Minister may make for the purpose of protection against environmental pollution, or of people against exposure to radiation, and for the purpose of ensuring the safety and security of radiation sources make regulations prescribing the requirements with which radiation sources and any facilities or equipment used in connection therewith must comply.

¹⁷ Sections 51 to 55.

¹⁸ Section 2.

2.5.7 The Minerals Prospecting and Mining Act No. 33 of 1992

This Act makes provisions for various types of licences relating to mining operations such as exclusive and non-exclusive prospecting licences, mining claims, mineral licences, reconnaissance licences, mineral deposit retention licences, and mining licences.¹⁹

The Act contains some relevant provisions for pollution control related to mining activities in the country. The Act not only provides that a holder of a licence claim must take all reasonable steps necessary to prevent or minimize any pollution of the environment,²⁰ it also requires that the holder of a mineral licence must prepare an environmental impact assessment indicating the extent of any pollution of the environment before any mining activities can be carried out as well as an estimate of any pollution likely to be caused by the respective mining activity.²¹ The application for a mining licence must inter alia contain particulars “of the manner in which it is intended to prevent pollution, to deal with any waste, to safe guard the mineral resources, to reclaim and rehabilitate land disturbed by way of the prospecting operations and mining operations and to minimize the effect of such operations on land adjoining the mining area.”²² Under specific circumstances, the Minister has the power to reserve land from mining operations. Should the Minister for instance consider it necessary in terms of the protection of the environment or natural resources, he or she may declare that a mining activity may only be carried on with the special permission of the Minister.²³ The Act furthermore provides that mineral licence holders are liable for any damage to land, water, plant or animal life caused by spilling or pollution and must take all such steps as may be necessary to remedy such spilling, pollution, loss or damage at his or her own costs.²⁴

2.5.8 Water Related Legislation

For obvious reasons, pollution control also plays a major role in Namibia’s legislation related to water. Considering that Namibia is an arid country, which is dependent on limited groundwater and surface water, pollution control of this scarce natural resource must be of primary concern. Pollution of surface and groundwater by mismanagement of solid waste or other mechanisms has widespread and long term impacts which must be avoided. Major sources of water pollution include human and animal faecal material arising from inadequate sewage works or deposited directly on land or in water; poorly-managed or situated landfill sites; and pollution by agricultural and health pesticides. Selection and monitoring of waste disposal sites is another crucial factor. Waste disposal sites should not be situated next to flowing waters or Oshanas, so to avoid leak pollutants into the water or overflow during rains.

National water related legislation addresses water pollution through various channels. First of all, the EMA, the Environmental Assessment Policy and related regulations contain various provisions relevant for the protection of water resources from pollution. Water resource developments that may not be undertaken without environmental clearance certificate include the abstraction of ground or surface water for industrial or commercial purposes; any water abstraction from a river that forms an international boundary; construction of canals and channels including the diversion of the normal flow of water in a riverbed and water transfer schemes between water catchments and impoundments; the construction of dams, reservoirs,

¹⁹ For more details see the Chapter on Mining in this book.

²⁰ Section 41(1)(e).

²¹ Section 50(f)(i).

²² Section 91(f)(iii).

²³ Section 122(2)(b).

²⁴ Section 130.

levees and weirs; the construction of industrial and domestic wastewater treatment plants and related pipeline systems; or irrigation schemes for agriculture excluding domestic irrigation.

The latest achievement in specific national water legislation was the promulgation of the Water Resources Management Act No. 11 of 2013. The Act has been passed by Parliament, signed by the President and published in terms of the Namibian Constitution.²⁵ The Act repeals both, the Water Resources Management Act No. 24 of 2004 and the Water Act No. 54 of 1956 as a whole. However, the 2013 Water Resources Management Act has not yet come into operation, as the Minister has not yet determined a date for the Act to come into operation as required by Section 134 of the Act. As the Water Resources Management Act of 2004 has never come into operation ever since its promulgation, the only applicable law at this stage is the rather outdated Water Act of 1956.

The Water Act of 1956 contains specific provisions with regard to the prevention of water pollution in Section 22. As a general rule, the person who has control over land on which any thing was or is done which involved or involves a substance capable of causing water pollution, must take steps to prevent any public or private water on or under that land, including rain water, or the sea from being polluted. Steps to prevent water pollution may also be taken by the Minister.²⁶ Emergency action may be taken in cases of pollution incidents by the Director-General of Water Affairs and Forestry.²⁷ Water pollution is an offence as per Section 23 of the Water Act. Moreover, the Minister may make regulations with regard to the prevention of water pollution, the Minister may for example draft regulations relating to the prevention of wastage or pollution of public water and private water, including underground water, of pollution of sea water, and of damage to the environment caused by water.²⁸

One of the fundamental underlying principles of the 2013 Water Resources Management Act is the “prevention of water pollution and implementation of the principle that a person disposing of effluent or waste has a duty of care to prevent pollution”. A further principle governing the Act is that “a polluter is liable to pay all costs to clean up any intentional or accidental spill of pollutants”.²⁹ To this end, the Act devotes an entire part to water pollution control.³⁰ Part 13 of the Act contains general provisions relating to water pollution and related liability and prohibits the discharge of wastewater, effluent or waste without licence and sets forth specific requirements for such licence.³¹

Besides the part on water pollution control, also other provisions are particularly relevant in terms of the protection of water resources: Water protection areas may be determined according to Sections 85 to 87 in order to

to protect and enhance any water resource, riverine habitat, watershed, ecosystem or other environmental resource that is at risk of significant changes to resource quality, depletion, contamination, extinction or disturbance from any source, including aquatic or terrestrial weeds.³²

²⁵ See Government Notice No. 332 of 2013, Government Gazette No. 5367.

²⁶ Section 22A.

²⁷ Section 22B.

²⁸ Section 26.

²⁹ Section 3(k) and (l).

³⁰ Part 13.

³¹ Section 70.

³² Section 85.

Provisions are made for water related emergency or pollution threats in Sections 88 and 89. The Minister may furthermore require water services providers and bulk water users to develop and adopt water services plans, including water conservation and water demand management strategies.

The Prevention and Combating of Pollution of the Sea by Oil Act No. 6 of 1981 amended by the Prevention and Combating of Pollution of the Sea by Oil Amendment Act No. 24 of 1991 provides for the prevention and combating of pollution of the sea by oil and determines liability in certain respects for loss or damage caused by the discharge of oil from ships, tankers or offshore installations. The general message of this Act is that the discharge of oil from a ship, tanker or offshore installation is prohibited. As a general rule the Act provides that the owner of any ship, tanker or offshore installation is liable for any loss or damage caused elsewhere than on such ship, tanker or offshore installation, in the area of Namibia by pollution resulting from the discharge of oil from such ship, tanker or offshore installation. According to Section 4 of the Act, the Minister is empowered to take steps to prevent pollution of the sea where oil is being or is likely to be discharged.

3 Waste Management in the City of Windhoek

The collection and disposal of waste is the responsibility of local and regional authorities. As stipulated by Section 94 of the Local Authorities Act No. 23 of 1992, a local authority council may, after consultation with the Minister responsible for Regional and Local Government and Housing make regulations by notice in the Gazette in relation to various areas relevant to pollution control and waste management, including the supply, distribution and use of water in its local authority area (including the protection from pollution of water);³³ the regulation, protection and use of a system of sewerage and drainage;³⁴ and “the provision, regulation and control for the removal or disposal of night soil, refuse, slop water, garden and stable litter and otherwise offensive or unhealthy matter”.³⁵ Local authorities do thus play an important role in waste management and pollution control. In the bigger cities, this mandate has resulted in an improvement of the waste situation in the country. However, within rural communities, the handling of waste remains a major concern.

Despite the fact, that Windhoek has been considered one of the cleanest cities in Africa, environmental management in Windhoek is challenged by urbanisation as people from rural areas are increasingly populating Namibia’s capital in search of jobs and a higher standard of living. Population pressure is, no doubt, one of the factors that contribute to waste production and pollution. The City of Windhoek is committed to the principles of sound environmental management and in the promotion of improved quality of life for all residents of Windhoek by rendering environmental practices aiming to ensure a healthy, clean and secure environment for all residents, while at the same time creating an environment for socio-economic and sustainable development.³⁶

³³ Section 94(1)(a) of the Act. Such Regulations have for example been made by the City of Windhoek General Notice No. 16 by the Windhoek Municipality on Waste Management Regulations: Local Authorities Act, 1992 Government Gazette No. 4650 (2011) and the Town Council of Oranjemund, see General Notice No. 269 by the Oranjemund Town Council, Waste Management Regulations: Local Authorities Act, 1992 Government Gazette No. 5767 (2915); or the Ondangwa Town Council, see Waste Management Regulations: Local Authorities Act, 1992 General Notice No. 169 Government Gazette 5726 (2015).

³⁴ Section 94(1)(b) of the Act.

³⁵ Section 94(1)(c) of the Act.

³⁶ See Hasheela (2009).

Two documents form the foundation for waste management in the City of Windhoek, namely the Solid Waste Management Policy³⁷ launched in October 2010 and the Waste Management Regulations gazetted in 2011.³⁸ The formulation process of the Solid Waste Management Policy started as early as 2005 with the objective to streamline waste management operations and guarantee an integrated approach towards all waste management activities within the city. Underlying principle of the Solid Waste Management Policy is the waste management hierarchy, according to which waste prevention and minimisation are the primary focus, followed by reducing, reusing and recycling of waste and disposal only as a last resort. Further principles governing the Solid Waste Management Policy include the principles of sustainable development;³⁹ sustainable consumption and cleaner production;⁴⁰ the polluter pays principle;⁴¹ the duty of care principle;⁴² and the best practical environmental option principle stating that any waste management activities must provide the most benefit for the least damage to the environment at an acceptable cost both in the long and short term. The vision of the Solid Waste Management Policy thus states:

The vision of the SWM Policy encompasses the concepts of integrating all required waste management activities based on the minimisation of pollution and waste across various sectors, as well as the management of waste activities in accordance with the Principles of the Integrated Waste Management Hierarchy. Through the SWM Policy, the City of Windhoek aims to maintain control over all waste management activities within its area of jurisdiction, including industrial, business, institutional and household levels.⁴³

Specific objectives that have been laid down in the policy relating to legislative framework, political will and cooperative governance; waste minimisation, cleaner production and sustainable Consumption; optimisation of resources; integrated waste management planning; integrated waste information system; health care risk waste management strategy and plan; priority waste; capacity building through education and awareness raising; community participation in waste management activities; research and development; and best practice guidelines and standards.

The Solid Waste Management Regulations are the regulatory framework to enforce, promote and support the principles within the Solid Waste Management Policy. The regulations contain a detailed set of provisions dealing among others with the storage, collection, transportation, treatment and disposal of various kinds of wastes, including garden, bulky and household hazardous waste; builder's waste; industrial, business waste and recyclable waste; hazardous

³⁷ City of Windhoek (2010).

³⁸ See General Notice No. 16 by the Windhoek Municipality on Waste Management Regulations: Local Authorities Act, 1992 Government Gazette No. 4650 (2011).

³⁹ Defined as development that meets the needs of the current generation without compromising the ability of future generation to meet their needs.

⁴⁰ Sustainable consumption is described as a concept based on the continuous improvement of processes; housekeeping, raw material input and products to increase efficiency, whilst reducing the potential impact to the environment and human health, while cleaner production encompasses two key features, namely that to purchase and use only what is required to satisfy human need favouring a good quality of life through decent but not decadent standards of living; and to looking at the "cradle to grave" cycle of a product in terms of performance when purchasing in order to make more "waste-wise" choices.

⁴¹ Which transfers the burden of the cost for integrated and therefore environmentally and socially responsible waste management to the polluter in terms of costs associated with the rehabilitation of the natural environment and human health caused by the pollution.

⁴² The duty of care principle requires every generator of waste to be responsible for the fate of their waste as soon as it has been generated.

⁴³ See Vision of the Solid Waste Management Policy, City of Windhoek (2010).

waste; and health care risk waste. Further provisions relate to disposal sites and the selling and recycling of waste, which must be performed in compliance with occupational health and safety law; environmental law; health law; labour law; and other relevant law. Chapter 5 of the regulations spells out certain prohibitions in terms of accumulating waste, littering, dumping, abandoned articles and certain prohibited advertising. According to provisions contained in Chapter 6 of the regulations, certain types of waste may only be collected by a waste contractor in possession of a valid licence, issued by the Council. The regulations stipulate that any person who contravenes or fails to comply with any provisions of the regulations commits an offence. Enforcement has been dealt with in Chapter 7 of the regulations. Waste inspectors are appointed by the Council to administer, implement and enforce any provisions of the regulations and any other waste management related regulations promulgated by the Council.

Solid waste generated in Windhoek is managed by the City of Windhoek's Solid Waste Management Division (SWM). One general and hazardous waste landfill site and seven satellite landfill sites are operated in Windhoek. While general and hazardous waste is disposed at the Kupferberg landfill site, the disposal of garden refuse and building rubble is possible at the satellite landfill sites (in Havana, Olympia, Khomasdal, Pionierspark, Ludwigsdorf, Otjomuise and Eros).

At Kupferberg landfill site residents have to pay the solid waste management charge as well as through the tariffs charged to the users when disposing of waste at the site. Waste disposal approximately amounts to 6,500 tones per month for general waste and 450 tones per month for hazardous waste.⁴⁴ The waste quantities for garden refuse and building rubble at the satellite landfill sites approximately amount to 7,500 m³ per month and 12,500 m³ per month respectively.⁴⁵

At the Kupferberg landfill site, the waste is dumped and subsequently compacted with a trash compactor and covered with sand or soil to prevent flies, rodent, dogs and people from searching through the waste after it has been dumped. To prevent leakage of water that might form from the decomposing waste and to keep contaminants from leaking and polluting into underlying groundwater, the base of the landfill site consists of liners.

A recycling initiative has been launched by the City of Windhoek in cooperation with a private enterprise called Rent-A-Drum in 2010.⁴⁶ The project encourages residents to separate their recyclables and has introduced the Clear Bag System (CBS) with which residents are required to separate paper, bottles, cans and plastics from the rest of their household waste for recycling. So far, approximately 60 tonnes of waste is recycled per month through the CBS, a figure that bears potential for improvement considering that in total, approximately 2,500 tonnes of waste is generated by households monthly⁴⁷ and against the backdrop that Windhoek's landfill and dumping sites are rapidly reaching maximum capacity. The collected recyclable waste is sorted, bailed and transported to available markets. Most of the recyclables

⁴⁴ See <http://solidwastemanagement.org.na/landfill-satellite-sites/kupferberg-general-and-hazardous-landfill-site>; accessed 28 August 2015.

⁴⁵ See <http://solidwastemanagement.org.na/landfill-satellite-sites/satellite-landfill-sites>; accessed 28 August 2015.

⁴⁶ Rent-A-Drum is a privately owned Namibian company active in waste management in Namibia, which offers service to Namibian corporations, mines and smaller companies, including the citizens of Windhoek. Rent-A-Drum has branches in Oshakati, Walvis Bay, Swakopmund (where a new waste sorting plant has just recently begun operations), the Husab Mine, and Windhoek.

⁴⁷ See <http://solidwastemanagement.org.na/recycling-initiative>; accessed 28 August 2015.

are sold to South Africa or exported overseas; only a small market for recyclable plastics exists in Namibia.⁴⁸

4 Concluding Remarks

In 2004, it has been stated that

in Namibia today, poor waste management practices pose the most serious and challenging environmental problems associates with infrastructure development and urban land-use planning. Waste products are increasing all the time due to the increasing population, particularly in urban areas, coupled with an increased standard of living and industrialisation. This places enormous strain on existing waste management activities such as collection, transportation, storage, and disposal. It is necessary, therefore, to develop more effective waste management programmes and sage waste disposal practices. Small municipalities, town councils and village councils in Namibia lack effective waste management practices covering collection, transportation and disposal programmes, mainly due to a lack of sufficient resources. There is an increasing acknowledgement by the public and authorities of the importance of adequate and effective waste collection and disposal.⁴⁹

Until today, this statement remains true, at least to a large extent. Waste management is increasingly shifting into the public focus and is becoming an area of concern, interest and activity throughout the country. The regulatory framework developed by the City of Windhoek with its waste management hierarchy and integrated waste management approach is a commendable starting point for a cleaner environment on local level, provided that implementation and enforcement are effective. However, it is also being lamented that waste is becoming a serious concern in many towns, settlements, villages and in rural areas, especially in the northern parts of the country. Poorly managed waste not only affects the beauty of the country, thus negatively impacting the tourism industry. It is also becoming a serious threat for the environment with and negative effect on people's health.⁵⁰ This is also reflected in more recent studies on waste management in Namibia. A study on waste management in the three northern towns of Oshakati, Ongwediva and Ondangwa concludes that the general waste management practice in these towns

is not in the line with international solid waste management standards neither with the national laws of waste management. Waste is being treated as waste and people are not always aware of the benefits related to the proper waste management. There is limited understanding of the harm that waste can cause to the environment, diseases caused to people and to animals and also the potential benefits, such as income that can be generated from recycled goods and the reuse or selling of the used products.⁵¹

Pollution control and waste management are serious environmental challenges for Namibia that need to be addressed by a sound and harmonised legal and policy framework, awareness raising through education and information, active involvement of the public and private sector, and, last but not least, by sufficient financial and human resources to ensure effective implementation and enforcement.

On a more positive note, waste does not only provide challenges, but more and more opportunities, especially when investigating the nexus between waste and energy. We live in an innovative age and recycling doesn't just have to be urban (plastics etc). Agricultural

⁴⁸ See Croset (2014:23).

⁴⁹ See MET (2006:85).

⁵⁰ See Heinrich (2015).

⁵¹ Mughal (2014:11).

examples elsewhere *inter alia* relate to self-sustainable biogas plants. In order to make this work, however, further consolidated law and policy may be needed.

CHAPTER 10

LEGAL PROTECTION OF BIODIVERSITY IN NAMIBIA

Manfred O. Hinz and Oliver C. Ruppel

1 Introduction

This Chapter intends to give a synoptic overview of biodiversity conservation under environmental law in Namibia.¹ The aim of this overview about the legal protection of biodiversity in Namibia is to describe in broad terms the legal framework in which efforts to protect biodiversity have to be understood. Prior to introducing specific international agreements applicable in Namibia connected to the protection of biodiversity, some general remarks on biodiversity and the legal protection thereof are provided. Then, relevant provisions in the Constitution of Namibia are highlighted before turning to statutory law pertinent to the protection of biodiversity. Chapter 17 in this publication deals extensively with customary law and the environment and focuses on biodiversity amongst others, customary law aspects of biodiversity protection will thus not form part of this Chapter.

2 Biodiversity in Perspective

In the 1980s, when the concept of biological diversity (now more commonly biodiversity) was in its infancy, biological diversity comprised an estimate of roughly 1.5 million described species living on earth. Today's estimates range widely, largely because most living species are micro-organisms and tiny invertebrates. Estimates range from 5 to 30 million species. Roughly 1.75 million species have been formally described and given official names. The number of unclassified species is much higher.² The coinage of the term biological diversity can be attributed to Lovejoy³, Norse and McManus⁴ and Wilson⁵. Lovejoy was probably the first person to use the term in 1980.⁶ Biological diversity can be defined as the variability among living organisms from all sources, including terrestrial, marine and freshwater ecosystems, which includes diversity within species, between species, and habitats or ecosystems.⁷ Biodiversity has also been defined as the “totality of genes, species, and ecosystems of a region”. This describes most circumstances and presents a unified view of the traditional three levels at which biodiversity has been identified: Genetic diversity, referring to the diversity of genes within a species. There is a genetic variability among the populations and the individuals of the same species. Species diversity means the diversity among species in an ecosystem; and ecosystem diversity describes diversity at a higher level of organisation, the ecosystem. Ecosystem diversity refers to all the various habitants, biological communities and

¹ This Chapter is substantially based on the publications by Hinz / Ruppel (2008b); (2010); Hinz *et al.* (2012) and Hinz (2013c).

² Heywood (1995).

³ Lovejoy (1980).

⁴ Norse / McManus (1980:32).

⁵ Wilson (1985:400).

⁶ Lovejoy (1980).

⁷ Article 2 of the 1992 Convention on Biological Diversity.

biological processes as well as the variations and interconnections and interrelations between and or among various ecosystems.

As the fundamental building blocks for development, biological resources provide the basis for local food sufficiency, and a backbone for many countries' economies.⁸ At the same time, biological diversity is a global asset, and is expected to benefit people in all parts of the world.⁹ For millennia, people have relied on ecosystems to meet their basic needs such as food, water and other natural resources. Apart from these, there are a multitude of further benefits of biodiversity. For instance, a significant proportion of drugs are derived, directly or indirectly, from biological sources. As early as the mid-19th century, the Scottish adventurer and missionary David Livingstone brought plants from the African continent, hoping they would serve as a basis for medicinal drugs.¹⁰ Over the last decade, the interest in drugs of plant origins and their use in various diseases has increased in many industrialised countries since plants used in traditional medicine are more likely to yield pharmacologically-active compounds.¹¹ Indeed, in most cases, it is impossible to synthesise plant-based medicinal drugs in a laboratory setting. Higher biodiversity also controls the spread of certain diseases as viruses will need to adapt to infect different species. Moreover, a wide range of industrial materials are derived directly from biological resources. These include building materials, fibres, dyes, resins, gums, adhesives, rubber and oil. Many people also derive value from biodiversity through leisure activities. And finally, many cultural groups view themselves as an integral part of the natural world and show respect for other living organisms.

Biological diversity has to be safeguarded and conserved. The term conservation is defined as the management of human use of the biosphere, so that it may produce the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of the future generations. Thus, conservation embraces the preservation, maintenance, sustainable utilisation, restoration, and enhancement of the natural environment. While ecosystems may be used by present generations for their benefit, they should only be used in a way not depriving future generations of their right to use such ecosystems in the same manner for their survival. The maintenance of biological diversity at all levels is fundamentally the maintenance of viable populations of species or identifiable populations.¹²

Efforts to maintain the diversity of biological resources are urgently required at local, national, and international level Southern Africa and Namibia, as part of this region, is no exception. Van Wyk and Gericke introduced their publication, titled *People's Plants*, by stating the following:¹³

Southern Africa is exceptionally rich in plant diversity with some 30,000 species of flowering plants, accounting for almost 10% of the world's higher plants. The region also has great cultural diversity, with many people still using a wide variety of plants in their daily lives for food, water, shelter, fuel, medicine and the other necessities of life.

In the last few decades, the Southern African region has seen great changes in access to modern health care and education, shifts from rural to urban areas, changes from subsistence farming to cash-crop production, greater flows of migrant labour, and unprecedented

⁸ Ruppel (2009h and j).

⁹ McNeely *et al.* (1990).

¹⁰ Blaikie (2004).

¹¹ Paing *et al.* (2006:1).

¹² Groombridge (1992:xvi). The book by Wulfmeyer (2006) is an interesting record on how this global task has been incorporated into Namibia's education system.

¹³ Van Wyk / Gericke (2000:7).

environmental degradation. These changes in the socio-cultural and environmental landscape have severely eroded the indigenous knowledge base.

Namibia's biodiversity includes innumerable species of wild plants and animals. Indeed, as little as about 20% of Namibia's wildlife species have been captured scientifically to date. More than 13,000 species have been described, of which almost 19% are endemic or unique to Namibia.¹⁴

The 2015 IUCN Red list¹⁵ reveals that the number of species known to be threatened within those species that have been assessed to date counts a total of 105 (critically endangered, endangered and vulnerable categories only) species in Namibia (13 mammals, 27 birds, 5 reptiles, 1 amphibian, 27 fishes, 28 plants and 4 other inverts.). 10 species are listed as critically endangered (including among others the black rhino), 25 as endangered, and 70 as vulnerable.

Five major threats have been identified as threats to biodiversity:

- **Habitat loss, alteration, and fragmentation:** mainly through conversion of land for agricultural, aquaculture, industrial or urban use; damming and other changes to river systems for irrigation, hydropower or flow regulation; and damaging fishing activities
- **Over-exploitation of wild species populations:** harvesting of animals and plants for food, materials or medicine at a rate above the reproductive capacity of the population
- **Pollution:** mainly from excessive pesticide use in agriculture and aquaculture; urban and industrial effluents; mining waste; and excessive fertiliser use in agriculture
- **Climate change:** due to rising levels of greenhouse gases in the atmosphere, caused mainly by the burning of fossil fuels, forest clearing and industrial processes
- **Invasive species:** introduced deliberately or inadvertently to one part of the world from another; they then become competitors, predators or parasites of native species.¹⁶

For most of human history, the natural world has been protected from the most disruptive human influences by relatively humble technology; cultural-ecological factors, such as taboos preventing overexploitation; inter-tribal peace, maintained by keeping wide areas of wilderness 'buffer zones' between groups; land ownership by ancestors or lineages rather than individuals; relatively sparse human populations; and many other factors.¹⁷ All but a handful of countries have national parks and national legislation promoting conservation. Most governments have joined international conservation conventions, and built environmental considerations into the national education system. Non-governmental organisations (NGOs) are active in promoting public awareness of conservation issues, including those dealing with biological diversity. Still, devastation continues. Why?

Naturalists, including interested amateurs and trained biologists, and other non-governmental activists have led the conservation movement. While their contributions have been fundamental, they are unable to fully address the basic problems of conservation because the problems are not only biological, but rather political, economic, social, and even ethical. Pressures influence the decisions, affecting the natural environment and incentives that go far

¹⁴ GRN (2004a:164).

¹⁵ IUCN Red List version 2015.3: Table 5; http://www.iucnredlist.org/about/summary-statistics#Tables_5_6; accessed 15 October 2015.

¹⁶ WWF (2010:12).

¹⁷ McNeely *et al.* (1990:18).

beyond the relatively straightforward technical considerations of what might in theory be best for biological resources. Conservation action, therefore, needs to be based on the best available scientific information and be implemented by development practitioners, engineers, sociologists, anthropologists, agronomists, economists, lawyers and politicians. Local resource users are often the ones who make local-level decisions, and their decisions are, above all, affected by enlightened self-interest. Those seeking to conserve biodiversity need to be able to identify the legitimate self-interest of rural people, and design ways of ensuring that the interest of conservation and community coincides.

Namibia's large biodiversity endowment has been outlined by the then Minister of Environment and Tourism Netumbo Nandi-Ndaitwah as follows:

Namibia has a large biodiversity endowment, which is of global significance. Although predominantly a semi-arid country, Namibia contains a remarkable variety of ecosystems, ranging from hyper-arid deserts with less than 10mm of rainfall to subtropical wetlands and savannahs receiving over 600mm of precipitation per annum. Four major terrestrial biomes exist, namely: Succulent Karoo, Nama Karoo, Desert and Tree and Shrub Savannah. On a finer scale, 29 different vegetation types are currently recognised, many of which are wholly unique to Namibia or to the southern African sub-continent. These biomes are storehouses of high species richness: the country harbours 4,000 species and subspecies of higher plants and 658 species of birds have been recorded, of which approximately 30% is migrant. 217 species of mammals are found including unique arid varieties of desert-adapted rhino and elephant. This biodiversity richness generates global and national benefits through protecting globally important ecosystems.¹⁸

Considering this, it becomes very clear, why biodiversity protection has been given high importance under environmental law in Namibia. But how can legal science contribute to the conservation of biodiversity in Namibia? The aim of environmental protection in general and biodiversity maintenance in particular can be achieved by different means.¹⁹ Traditional legal methods, *inter alia*, include establishing protected areas, to regulate harvesting and trade in certain species, to manage habitats and ecosystems, or to prohibiting the introduction of new, alien or invasive species. Pollution control and the management of hazardous substances are other effective mechanisms to contribute to the preservation of biological diversity. Other innovative regulatory techniques or policies to preserve biological diversity include the access to genetic resources, biotechnology as well as access to and transfer of technology. All aforementioned methods are to a certain extent governed by legal mechanisms and the success of Namibia's effort to control, manage, and conserve the sustainable use of biodiversity depends to a large extent on the effectiveness of the different legal instruments in place.

3 International Environmental Law Pertinent to Biodiversity Protection in Namibia

It has been discussed in Chapter 5, how international law is applied in the national setup. On the global level, several multilateral environmental agreements have been established that directly or indirectly contain provisions relating to the protection of biological diversity. The Convention on Biological Diversity (CBD), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) as the most relevant international biodiversity related agreements will be sketched in the following.²⁰

¹⁸ Nandi-Ndaitwah (2010).

¹⁹ Barnard (1998:283ff.).

²⁰ Other international agreements which also relate to the protection of biodiversity include the UN Convention to Combat Desertification; the UN Framework Convention on Climate Change; the

There was no consensus regarding biodiversity among the nations of this world until the 1992 Earth Summit in Rio. It was at this Summit, the first of its kind at international level, where consensus was reached among scientists, policymakers and civil society that humanity was in the process of unconsciously depleting an invaluable resource central to our food, health and economic security. The consensus reached at the Summit was in the form of a legal instrument, the Convention on Biological Diversity (CBD), which aims to regulate, protect and preserve global environmental resources. The CBD was signed by Namibia on 12 June 1992 in Rio de Janeiro and ratified on 18 March 1997. Accordingly, Namibia is obliged to ensure that its domestic legislation is in conformity with the objectives and obligations of the CBD. Namibia gives effect to the CBD *inter alia* by implementing the National Biodiversity Strategy and Action Plan and has issued its fifth national report under the CBD.²¹

The CBD's Preamble affirms that biodiversity is humankind's common concern and that it has to be conserved for continued human survival. However, rather than lay down substantive rules, the CBD rather sets up overall principles, objectives and goals, leaving it up to the contracting states to develop and adopt detailed means to achieve these. It leaves it up to individual countries to determine exactly how to implement most of its provisions. Thus, major decision-making is placed at national level. The CBD provides guidelines and directions to state parties as to how they should use these resources in a conservative manner for the benefit of present and coming generations. The objectives of the CBD comprise the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources.

Methods applied to ensure the maintenance of biological diversity are *in situ* and *ex situ* conservation. *In situ* conservation is defined as being –²²

... where the maintenance and recovery of habitats, species and populations occur in their natural surroundings or, for domesticated or cultivated species, in the place where they developed their distinctive properties, ...

While *ex situ* conservation refers to the conservation of components of biodiversity outside their natural habitats, for example in zoos and aquaria.²³

The CBD provides that states have and should maintain their sovereign rights over their biological or generic resources, and they bear the power to determine access to these resources through established mechanisms for the fair and equitable sharing of benefits arising from their use. There was consensus on the need to protect, conserve and sustainably utilise the available biological diversity for the benefit of humanity.

Thus, the CBD becomes the basis of domestic legislation on the promotion, protection and preservation of biological diversity. It gives the green light to states to exercise full control over their natural resources, provided that proper mechanisms protecting biological diversity are in place. Article 8(j) of the CBD provides that a state is obliged,

... subject to its national legislation, [to] respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such

²¹ International Convention for the Protection of New Varieties of Plants (UPOV Convention); international conventions containing fishery provisions e.g. UN Convention on the Law of the Sea; the Ramsar Convention on Wetlands; and the Global Biodiversity Strategy.

²² GRN (2014).

²³ Article 2 of the CBD.

²³ Glazewski *et al.* (1998:281).

knowledge, innovations and practices and encourage the equitable sharing of benefits arising from the utilisation of such knowledge, innovations and practices.²⁴

Although national sovereignty is recognised, states are obliged to conserve biodiversity and regulate the sustainable use of its component resources. They are also urged to cooperate with each other regarding areas beyond national jurisdiction and other matters of mutual interest. Article 5 of the CBD states that contracting parties are obliged to develop and adopt national biodiversity strategies, plans, or programmes, and integrate the conservation of biodiversity and the sustainable use of its components into relevant sectoral or cross-sectoral plans, programmes and policies. The CBD has so far been extended by two Protocols. The Cartagena Protocol on Biosafety to the Convention on Biological Diversity, an international treaty governing the movements of living modified organisms (LMOs) resulting from modern biotechnology from one country to another was adopted in 2000 and entered into force on 11 September 2003. The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) which was adopted in 2010 and entered into force on 12 October 2014 provides a legal framework for the effective implementation of one of the three objectives of the CBD, namely the fair and equitable sharing of benefits arising out of the utilisation of genetic resources thereby contributing to the conservation and sustainable use of biodiversity. Namibia ratified the Cartagena Protocol in 2005 and acceded to the Nagoya Protocol in 2014.²⁵

Due to the fact that the trade in wild animals and plants crosses borders between countries, the effort to regulate it requires international cooperation to safeguard certain species from over-exploitation. CITES, a convention that is legally binding on its parties, was conceived in the spirit of such cooperation. Today, it accords varying degrees of protection to more than 30,000 species of animals and plants, whether they are traded as live specimens, fur coats or dried herbs. CITES was drafted as a result of a resolution adopted in 1963 at a meeting of members of IUCN (The World Conservation Union) and entered in force in 1975. CITES provides a framework to be respected by each party, which has to adopt its own domestic legislation to ensure that CITES is implemented at national level. To date, CITES has 181 parties.²⁶ Namibia acceded to the Convention in 1990, and the Convention came into force for Namibia in March 1991.²⁷ The commercialisation of goods and services derived from native biodiversity, referred to as biotrade, has become reasonably well established in Namibia. Over the last five years, exports of indigenous natural plants have contributed to the GDP with an estimated earning for exports of the devil's claw of N\$20-30 million per annum.²⁸ These developments in the biotrade sector have prompted Government to enhance its revenue collection by introducing differentiated rates on the export of all natural resources. In his national budget speech for the financial year 2015 / 2016, the Minister of Finance has proposed an export levy on the export

²⁴ Cf. here also Articles 10(c), 17(1) and (2), and 18(4): The CBD does not differentiate between *indigenous*, *traditional* and *local*, although the terms may refer to different social situations. For example, compare the use of *indigenous* in the United Nations Declaration on the Rights of Indigenous People (UNGA Res. 61/195), which applies to specifically defined groups of people and not to all traditional communities – and certainly not to all that could be called *local*. For the purpose of this study, the term *traditional* is preferred unless there is a need to differentiate.

²⁵ See <https://www.cbd.int/countries/?country=na>; accessed 20 October 2015.

²⁶ For more information on CITES as well as the text of the Convention, see: <http://www.cites.org/>; accessed 14 October 2015.

²⁷ See <https://cites.org/eng/disc/parties/chronolo.php>; accessed 20 October 2015.

²⁸ See Venture Publications (2014:34).

of unprocessed minerals and other natural resources, aimed at the promotion of domestic value-addition in the primary commodity and natural resources sectors.²⁹

One current issue in Namibia under the CITES convention is the production of high-value modern jewellery pieces containing traditional ivory amulets, known as *ekipas*. Such items have thus far used antique *ekipas* considered as pre-Convention ivory. Since the supply of antique *ekipas* has become severely limited, the Ministry of Environment and Tourism in collaboration with the jewellery industry of Namibia, has designed a control system for worked ivory and the legal production of new *ekipas* in particular. CITES approval was sought for the export of items of modern jewellery of high value, involving *ekipas* permanently mounted in precious metals and other materials and rendered uniquely identifiable through a combination of engraved marks, documentation and a photographic record of each item.³⁰

Major foundations of biodiversity protection on the African continental level are contained in the African Union's Convention on the Conservation of Nature and Natural Resources. The original African Convention on the Conservation of Nature and Natural Resources was adopted in Algiers, Algeria in September 1968 and entered into force in June 1969. Of the 53 member states 40, excluding Namibia, have signed the Convention of which 30 have ratified it. Recognising that soil, water, flora and faunal resources constitute a capital of vital importance to mankind, the Convention's fundamental principle is that the contracting states shall undertake to adopt the measures necessary to ensure conservation, utilisation and development of soil, water, flora and faunal resources in accordance with scientific principles and with due regard to the best interests of the people. The Convention contains several provisions related to the conservation and perpetuation of species. Special provisions as to protected species and trade in specimens are formulated.

The Revised African Convention on the Conservation of Nature and Natural Resources was adopted by the second ordinary session of the Assembly of Heads of States and Government of the African Union in Maputo, Mozambique, in July 2003. It commits parties in particular to manage their natural resources more sustainable. The convention has however not yet come into force, as the requirements for coming into force have so far not been fulfilled: According to Article 38 the Convention comes into force on the thirtieth day following the date of deposit of the fifteenth instrument of ratification, acceptance, approval or accession with the Depositary. As of October 2015, 42³¹ of the 54 member states have signed the Convention, while only twelve member states³² have deposited their instrument of ratification.³³ Provisions directly related to the protection of biodiversity are contained in Article IX on Species and Genetic Diversity; Article X on Protected Species; Article XI on Trade in Specimens and Products thereof; and Article XII on Conservation Areas.

²⁹ GRN (2014c:22).

³⁰ GRN (2004d) "Control system for worked ivory in Namibia" Doc CoPIInf. 33; available at <http://www.cites.org/common/cop/13/inf/E13i-33.pdf>; accessed 15 December 2010.

³¹ The Convention has been signed by Angola, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Côte d'Ivoire, Comoros, the DRC, Congo, Djibouti, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea-Bissau, Guinea, Kenya, Libya, Lesotho, Liberia, Madagascar, Mali, Mozambique, Namibia, Nigeria, Niger, Rwanda, São Tomé and Príncipe, Senegal, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia and Zimbabwe.

³² I.e. Angola, Burundi, Comoros, Côte d'Ivoire, Congo, Ghana, Libya, Lesotho, Mali, Niger, Rwanda and South Africa.

³³ See http://www.au.int/en/sites/default/files/Revised%20-Nature%20and%20-Natural%20-Resources_1.pdf; accessed 20 October 2015.

The parties to the Convention shall maintain and enhance species and genetic diversity of plants and animals whether terrestrial, fresh-water or marine. They shall for that purpose, establish and implement policies for the conservation and sustainable use of such resources. Parties are obliged to undertake to identify the factors that are causing the depletion of animal and plant species which are threatened or which may become so, with a view to their elimination, and accord a special protection to such species. Furthermore, domestic trade in as well as the transport and possession of specimens and products must be regulated by the Parties' appropriate penal sanctions, including confiscation measures. To ensure the long-term conservation of biological diversity, the Parties shall establish, maintain and extend conservation areas.

Sub-regional agreements relevant for biodiversity protection in Namibia are the various protocols under the umbrella of the Southern African Development Community (SADC). The Parties may conclude Protocols as may be necessary in each area of cooperation, which shall spell out the objectives and scope of, and institutional mechanisms for, cooperation and integration. SADC Protocols of major concern with regard to biodiversity conservation are the Protocols on Fisheries; on Forestry; on Wildlife Conservation and Law Enforcement and on Shared Watercourse Systems. Furthermore, the Regional Indicative Strategic Development Plan (RISDP) of the SADC originally developed in 1999, recognises a need for policies and strategies to offset the high rate of natural resource degradation, focusing on biodiversity amongst others.

4 Biodiversity Protection under National Environmental Law

Namibian environmental law is a complex and interlocking system of statutes, policies, treaties, common, customary and case law with the Constitution as the supreme law of the land and therefore the ultimate source of law in Namibia. However, research done under the BIOTA project administered in the Faculty of Law of the University of Namibia has demonstrated that many obstacles prevent the societally expected degree of implementation. Statutory environmental law meets challenges from customary law.³⁴ Apart from this, environmental policies and their translation into law are, in general (and this applies in all parts of the world), faced with the economic interests of sections of society that are not easy to harmonise with each other.³⁵

According to its Article 1(6), the Constitution of the Republic of Namibia is the law above all laws. Therefore all legislations ought to be consistent with the provisions of the Constitution. Although the Constitution so far contains no enforceable environmental right as such, the foundation is laid for all policies and legislation in Namibia.³⁶ Two key "environmental clauses" relevant to sustainable use of natural resources are included in the Constitution. On the issue of biological diversity and its protection, the Namibian Constitution is very clear. It is one of the provisions enshrined under the Chapter on principles of state policy. The relevant clause is Article 95(l) which stipulates that the state shall actively promote and maintain the welfare of the people by adopting policies which include the "...maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefits of all Namibians both present and

³⁴ Cf. Hinz / Mapaure (2010); Ruppel (2009h).

³⁵ How to balance environmental policies with economic interests, given the conditions of Namibia, is still an area where more research is needed. Groenewaldt (2008) submitted BIOTA-based legal research in which possibilities to provide incentives in support of individual measures to prevent land degradation were analysed.

³⁶ Ruppel (2010i).

future...”. With this particular Article Namibia is obliged to protect its biological diversity and to promote a sustainable use of its natural resources. Furthermore, Article 91(c) includes in the functions of the Ombudsman “the duty to investigate complaints concerning the over utilisation of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia.³⁷ In addition to these clauses it needs to be emphasised that Article 100 provides that all natural resources, including water, vest in the state, unless otherwise legally owned.

The Constitution sets the framework and Independence created the opportunity to revise a wide range of national policies and laws. This, together with the emphasis placed on environmental concerns at the Rio Summit in 1992, and the increasing awareness, triggered widespread legislative reform particularly in terms of natural resource management. Thus, recent policy and legislative reforms have created a unique opportunity for Namibia to incorporate environmental sensitivity, and as a result Namibian legislation is supported by sound policy direction regarding sustainable development and sustainable use of natural resources.³⁸

So far, no specific Act dealing with the conservation of biological diversity as a main topic exists. A Draft Bill on Access to Biological Resources and Associated Traditional Knowledge aimed specifically at the protection of biodiversity and traditional knowledge formulated in 2000 never materialised.

A Draft Bill on Access and Benefit Sharing has been finalised in 2012 to regulate access to genetic resources and associated traditional knowledge based upon prior informed consent; to protect local communities' rights over and traditional knowledge in respect thereof; to promote a fair and equitable mechanism for benefit sharing; and to establish the necessary administrative structures and processes to implement and enforce such principles. The Bill is yet to be tabled in Parliament.

Namibia's 10-year National Biodiversity Strategy and Action Plan for Sustainable Development through Biodiversity Conservation (2001-2010) was updated in 2012 / 2013. The second National Biodiversity Strategy and Action Plan (NBSAP2) covers the period (2011-2020).

The goal of the first Biodiversity Strategic and Action Plan was to protect ecosystems, biological diversity and ecological processes, through conservation and sustainable use, thereby supporting the livelihoods, self-reliance and quality of life of Namibians in perpetuity.³⁹ The action plan attempted to provide a national strategic framework for natural resource management activities involving biological resource management and the natural environment, including trade and economic incentives, and to prioritise, through detailed action plans, activities and measures needed to address this strategy effectively. The strategic aims of this document included: Conserving biodiversity in priority areas; sustainable use of natural resources; monitoring, predicting and coping with environmental change and threats; sustainable land management; sustainable wetland management; sustainable coastal and marine ecosystem management; integrated planning for biodiversity conservation and sustainable development; Namibia's role in the larger world community; and capacity building for biodiversity management in support of sustainable development.

NBSAP2 Vision reads as follows:

³⁷ On the environmental mandate of the Ombudsman see Chapter 22 in this publication.

³⁸ Ruppel (2008a).

³⁹ Barnard *et al.* (2000:13).

Namibia's biodiversity to be healthy and resilient to threats, and for the conservation and sustainable use of biodiversity to be key drivers of poverty alleviation and equitable economic growth, particularly in rural areas.

NBSAP2 has identified as leading threats to biodiversity: unsustainable water uses; expansion of urban areas and increasing industrialisation; threats and impacts of climate change; mining and prospecting; unsustainable land management practices; uncontrolled bush fires; alien invasive species; illegal harvesting and trade of wildlife and forest and plant resources; and human-wildlife conflict. Five Strategic Goals have been formulated in NBSAP2 with regard to the protection of biodiversity, namely:

- to address the underlying causes of biodiversity loss by mainstreaming biodiversity across Government and society;
- to reduce direct pressures on biodiversity and promote the sustainable use of biological resources;
- to improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
- to enhance the benefits to all from biodiversity and ecosystem services; and
- to enhance implementation of NBSAP2 through participatory planning, knowledge management and capacity building.

With 17 strategic targets and 38 strategic initiatives the above goals are to be realised.

Sectoral legislation covering the protection of biodiversity is wide ranging in Namibia.⁴⁰ A myriad of legislative instruments provide for the equitable use of natural resources for the benefit of all. Only the most relevant legal instruments will be introduced briefly in the following paragraphs.

One of the major biodiversity related laws in Namibia is the legislation governing the conservation of wildlife, and protected areas, the Nature Conservation Ordinance⁴¹. The Ordinance was amended by the Nature Conservation Amendment Act⁴². One of its major highlights is the creation of conservancies in communal areas. In terms of the amendment, rural communities have to form a conservancy in order to be able to acquire the use-right over wildlife. Conservancies can be defined as land units managed jointly for resource conservation purposes by multiple landholders, with financial and other benefits shared between them in some way. Conservancies occur in both communal and commercial land.⁴³ The Ordinance deals with *in situ* and *ex situ* conservation by providing for the declaration of protected habitats as national parks and reserves, and for the protection of scheduled species. It regulates hunting and harvesting, possession of, and trade in listed species. Under the existing laws Namibia has national parks, zoos and safari areas to conserve biodiversity. Most people consider these areas as tourist areas but the same areas have a significant scientific significance as they allow for natural movement of large animals and to ensure that there is enough space and food for all of the species. In addition to the broader national agenda on conservation of biodiversity is the

⁴⁰ Hinz / Ruppel (2008b).

⁴¹ No. 4 of 1975.

⁴² No. 5 of 1996.

⁴³ Barnard (1998:45). Moreover, Section 1(b) of the Amendment Act defines a conservancy. To mean any area declared a conservancy in terms of Section 24A.

Community-Based Natural Resource Management (CBNRM). This has enabled local communities to do *in situ* conservation of natural resources hence biodiversity conservation.

The Environmental Management Act⁴⁴ requires adherence to the principle of optimal sustainable yield in the exploitation of all natural resources. The Act gives effect to Article 95(l) of the Constitution by establishing general principles for the management of the environment and natural resources. It promotes the coordinated and integrated management of the environment and sets out responsibilities in this regard. Furthermore, it intends to give statutory effect to Namibia's Environmental Assessment Policy, and to enable the Minister responsible for the environment to give effect to Namibia's obligations under international environmental conventions; and to provide for associated matters. The Act promotes inter-generational equity in the utilisation of all natural resources. Environmental impact assessments and consultations with communities and relevant regional and local authorities are provided for to monitor the development of projects that potentially impact on the environment.

The proposed Protected Areas and Wildlife Management Bill seeks to protect all indigenous species and control the exploitation of all plants and wildlife. The Bill is intended to give effect to paragraph (l) of Article 95 of the Constitution by establishing a legal framework to provide for and promote the maintenance of ecosystems, essential ecological processes and the biological diversity of Namibia and to promote the mutually beneficial co-existence of humans with wildlife, to give effect to Namibia's obligations under relevant international legal instruments including the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In keeping with the Constitution the principles underlying the draft Act, are simply that biological diversity and essential ecological processes and life support systems be maintained. In case the proposed Act comes into force, it repeals the Nature Conservation Ordinance⁴⁵.

Water-related legislation is manifold in Namibia.⁴⁶ Although the new Water Resources Management Act was approved by Parliament in 2013, the rather out-dated Water Act No. 54 of 1965 remains in force until the new Act has been made operational by respective notice in the Government Gazette. The Water Act of 1956 does not directly refer to the protection of biological diversity; it however contains provisions relating to water quality and conservation which are at least indirectly beneficial for the maintenance of biodiversity.⁴⁷ The new Act which provides for the management, protection, development, use and conservation of water resources provides means with regard to the protection of biodiversity. One of the Act's fundamental principles has been defined as the "harmonisation of human water needs with the water requirements of environmental ecosystems and the species that depend on them, while recognizing that the water resource quality for those ecosystems must be maintained."⁴⁸ Water resource quality is subject to several provisions in the new Act and includes the physical, chemical and biological characteristics as well as the characteristics, condition and distribution of the aquatic biota. The Act specifically endows the Minister with the function to protect the international water resource quality, with the competence to declare certain areas as water protection areas and to reserve certain water resources from being abstracted or used in order

⁴⁴ No. 7 of 2007.

⁴⁵ No. 4 of 1975.

⁴⁶ See Ruppel / Bethune (2007).

⁴⁷ Cf. a critical analysis of water law in the BIOTA project by Mapaure (2010).

⁴⁸ Section 3(c).

to “reasonably protect and maintain aquatic and wetland ecosystems, including their biological diversity, and to maintain essential ecosystem functions.”⁴⁹

The Marine Resources Act⁵⁰ provides for the conservation of the marine ecosystem and the responsible utilisation, conservation, protection and promotion of marine resources on a sustainable basis. For that purpose it provides for the exercise of control over marine resources and for matters connected therewith. It replaces the Sea Fisheries Act,⁵¹ which in turn replaced the Sea Fisheries Act.⁵²

The Aquaculture Act⁵³ regulates and controls aquaculture activities and the sustainable development of aquaculture resources.⁵⁴ All aquaculture ventures will be subject to strict licensing. Section 27 is of most relevance for the protection of biodiversity. A person may not, without written permission granted by the Minister, introduce or cause to be introduced into Namibia or any Namibian waters any species of aquatic organism or any genetically modified aquatic organism or transfer any species of aquatic organism from one aquaculture facility to another or from any location in Namibia to another.

The Inland Fisheries Resources Act⁵⁵ deals with the conservation and utilisation of inland fisheries resources and allows for the updating and development of new policies for the conservation and sustainable utilisation of Namibia’s inland fisheries. It encourages cooperation with neighbouring countries regarding the management and conservation of shared waterways.

Legislation on forest is one further important mosaic in the legal system of biodiversity conservation in Namibia. In 2005, almost 7.7 million hectares of Namibia’s land were covered by forests, corresponding to 9.3% of the total land area.⁵⁶ Major threats to forests in Namibia include the expansion of land for agriculture; the use of fuel wood and charcoal for domestic use; tobacco curing and; land clearing for infrastructure development; uncontrolled wild fires; selective logging through timber concessions and unlicensed curio carving; and habitat destruction by elephants.⁵⁷ The Forest Act⁵⁸ consolidates the laws relating to the use and management of forests and forest produce, provides for the control of forest fires and creates a Forestry Council. Protection of the environment is found in part IV of the Act. This part of the Act deals with protected areas, protection of natural vegetation and control over afforestation and deforestation. Purpose of the Act is to conserve soil and water resources, maintain biological diversity and to use forest produce in a way that is compatible with the forest’s primary role as the protector and enhancer of the natural environment.

In recognising the worldwide diversity situation, the Government of Namibia enacted the Biosafety Act⁵⁹ after having signed the Cartagena Protocol on Biosafety to the CBD, which was adopted in 2000. The Act provides for measures to regulate activities involving research, development, production, marketing, transport, application and other uses of genetically

⁴⁹ Section 37.

⁵⁰ No. 27 of 2000.

⁵¹ No. 29 of 1992.

⁵² No. 58 of 1973.

⁵³ No. 18 of 2002.

⁵⁴ Bethune *et al.* (2004).

⁵⁵ No. 1 of 2003.

⁵⁶ FAO (2005).

⁵⁷ Groenewaldt (2008).

⁵⁸ No. 12 of 2001.

⁵⁹ No. 7 of 2006.

modified organisms and to establish a Biosafety Council. The objective of the Act is *inter alia* to introduce a system and procedures for the regulation of genetically modified organisms in Namibia in order to provide an adequate level of protection to the conservation and the sustainable use of biological diversity.

CHAPTER 11

WATER AND FISHERIES

I. WATER AND FISHERIES RELATED STATUTORY LAW AND POLICY IN NAMIBIA

Shirley Bethune and Oliver C. Ruppel

Namibia is the driest country in sub-Saharan Africa. Less than 5% of the country is arable due to the low and erratic rainfall and scarce ground and surface water.¹ Fresh water scarcity thus remains a major environmental challenge in Namibia. Although NDP3's target of providing 95% of the population with sustainable access to safe water has been reached², sound water management ensuring social, economic and environmental benefits remains high on the agenda. Scarce water resources have to be shared between the growing population, an increasing number of livestock and crops, and an expanding industrial sector. Water supply is a major challenge in Namibia, especially in the rural areas. The water supply infrastructure has to be maintained, facilities have to be managed, and fees are to be collected in order to organise the water supply.³ In this sense, appropriate policy, legislation and regulation are of great significance.

1 The Policy Framework

1.1 The Water Supply and Sanitation Policy

The Water Supply and Sanitation Policy (WASSP) of 2008 is the main policy regarding water use and conservation in Namibia. This policy replaces the National Water Policy of 1992. Its principles are in line with the Integrated Water Resources Management plan, including a strong focus on water demand management.⁴ Generally, it aims at ensuring equitable access to water resources sufficient to maintain life, health and productive activities of citizens.

Under this policy the Government is the custodian of all water resources and has the right to control all water use and disposal. Integrated supply and demand planning is required in both the short and long term. Further, the Policy promotes sustainable water utilisation through suitable pricing, promotion of water-efficient technology, public information and awareness programmes, information sharing and co-operation between parties, the promotion of wastewater re-use and active support of research and data gathering on water conservation. There is also provision made for subsidies to those who cannot afford to pay the full costs of water, however, not all communities who cannot pay receive subsidies.⁵

¹ World Bank (2009c:vii).

² GRN (2012b:54).

³ On water management problems, especially in the Kavango Region, see Falk (2008) and the following sub-chapter.

⁴ GRN (2008).

⁵ Schachtschneider (2001).

1.2 The National Water Policy White Paper

In 2002 Cabinet approved the National Water Policy White Paper⁶ that formed the basis for the Water Resources Management Act⁷. The policy provides a framework for equitable, efficient and sustainable water resources management and water services and stresses sectoral co-ordination, integrated planning and management and resource management aimed at coping with ecological and associated environmental risks. It clearly states that water is an essential resource to life and that an adequate supply of safe drinking water is a basic human need. The policy makes it clear that water concerns extend beyond human needs for health and survival, also recognising that water is essential to maintain natural ecosystems and that in a country as dry as Namibia, all social and economic activity depends on healthy aquatic ecosystems.

The National Water Policy includes a basic principle headed “Ecosystem values and sustainability” which stresses that the management of water resources needs to harmonise human and environmental requirements, recognising the role of water in supporting the ecosystem. One of the strategies provided to ensure environmental and economic sustainability is to ensure that in-stream flows are adequate both in terms of quality and quantity to sustain the ecosystem.

The National Water Policy was developed to guide water resources management in Namibia. It is based on the country’s physical and climatic setting, particularly its aridity, the legacy of the pre-independence era and current trends in development, specifically relating to Namibia’s water resources management. This policy clearly states that water concerns extend beyond human needs for health and survival, that water is essential to maintain natural ecosystems and that in a country as dry as Namibia, all social and economic activity depends on healthy aquatic ecosystems. The policy further recognises the need for inter-sectoral coordination between all stakeholders involved in using and managing water resources. Salient principles contained in the policy include:

- **Ownership of water** – Namibia’s limited and vulnerable water resources are an indivisible national asset, whose ownership is vested in the state on behalf of the whole society.
- **Shared watercourses** – Namibia should strive to promote the equitable and beneficial use of international watercourses based on generally accepted principles and practices of international law, respect the rights of upstream and downstream users in other countries, strive to harmonise domestic legislation with the tenets of international law and respect the right of all stakeholders including basin communities to participate in negotiations and consultations at international level.
- **Integrated management and planning** – Management and planning of water resources should be integrated across economic, environmental, and social dimensions.
- **Development and intergenerational equity** – The country’s water resources should be utilised, developed and managed in a way that promotes equitable and sustainable socio-economic development without prejudicing the benefits and opportunities of future generations.
- **Equity** – All Namibians should have the right of access to sufficient safe water for a healthy productive life.

⁶

White Paper on National Water Policy for Namibia (2000).

⁷

No. 4 of 2004 repealed as a whole by Act No. 11 of 2013.

- **Water for ecosystems** – Water resources management needs to harmonise human and environmental requirements and recognise the role of water in supporting ecosystems.
- **Recognition of economic value** – Economic value of water resources in Namibia should be recognised given their scarcity and vulnerability, and that abstraction, management, conservation and use should be efficient and cost effective.
- **Stakeholder involvement** – Water resources and services planning and management should take place within a framework that encourages awareness and participation among stakeholders at all levels.
- **Information exchange** – Water resources information systems should be developed and made accessible to the public, and that institutions involved in the management and provision of water services should do so in an open and transparent manner.
- **Decentralisation** – The management of water resources and water services should be decentralised to the lowest practicable level and recommends basin management.
- **Roles of institutions** – There is a need to have institutional functions clearly defined.
- **Capacity building** – Capacity building should be a continuous process of institutional and human development and should include participation from public, private, civil society and community structures.

The Policy recognises the need to promote equitable and beneficial use of international watercourses based on generally accepted principles and practices of international law. This realisation originated from the 1974 Water Master Plan that identified the need for Namibia to negotiate for access to shared perennial rivers to complement the internal water sources.

The policy proposes to protect water resources from pollution by enforcing the ‘polluter pays principle’ and regular water quality monitoring on all proposed projects. Furthermore, it proposes to improve knowledge on the vulnerability of critical wetland ecosystems and to develop strategies for their effective management. Two clauses within Sections 2.3 on Water Use and Conservation Principles and 2.5 on Legislative and Regulatory Principles are particularly relevant to shared water resources:

Precautionary environmental protection: The resource base shall be protected against any kind of contamination or pollution that would render any part of it unfit for beneficial human, economic and environmental purposes....applying the precautionary principle.

Factoring environmental considerations in decision making: The need to protect the environment in general, and the aquatic ecosystems in particular, including their biodiversity and the nation’s wetlands will be factored into the allocation of water resources for use and will include the prior assessment of the environmental impacts of proposed water uses.

The totality of the principles found in Namibia's policy framework for water resources management satisfies the criteria for sustainable use of shared watercourse systems and principles found in international law instruments that Namibia is party to and provides sound guidelines for future legislation and regulations.

1.3 Namibia's Draft Wetland Policy

Namibia's Wetland Policy vision is to manage national and shared wetlands wisely by protecting their vital ecological functions, life support systems for the current and future benefit of people's welfare, livelihoods and socio-economic development. The objectives of the policy are to:

- protect and conserve wetland diversity and ecosystem functioning to support basic human needs;
- provide a framework for durable use of wetland resources;
- promote the integration of wetland management into other sectoral policies; and to
- recognise and fulfil Namibia's international and regional commitments concerning shared wetlands and wetlands of international importance.

The basic principles used in Namibia's National Water Policy, which are intended to provide a framework for the development of all water-related policies, have been adapted for the Wetlands Policy in order to complement existing national policy instruments relevant to sustainable development and sound natural resource management and to help meet the national commitments as a signatory to the SADC (Southern African Development Community) Protocol on Shared Watercourse Systems, NEPAD (New Partnership for Africa's Development), several regional water commissions on shared river courses, the Ramsar Convention, the UNCBD (United Nations Convention on Biological Diversity), the UNCCD (United Nations Convention to Combat Desertification) and the UNFCCC (United Nations Framework Convention on Climate Change). It was prepared in consultation with all relevant ministries.

Recognising that wetlands often span two or more political regions within a single country or two or more sovereign states and that this can lead to conflicts of interest, duplication and possible habitat loss, a basin-wide approach to wetland management is advocated and to conserve shared wetlands, the establishment of trans-frontier protected areas is specifically stated.

Legislative and regulatory principles include the development of legislation to protect Namibia's diverse and vulnerable wetlands. Further to this, the need to protect the biodiversity and ecological functioning of wetlands will be factored into all new laws and policies as well as setting aside water for aquatic ecosystems (water for environmental flows). The right to consultation between all relevant stakeholders, including basin communities affected by development decisions occurring at the local, basin and international level shall be respected.

The Draft Wetlands Policy still lacks approval. However, at the occasion of the official launch of Namibia's fifth site listed under the Ramsar Convention, the Bwabwata-Okavango Ramsar site which covers the lower Okavango River⁸ in February 2014, the Minister of Environment and Tourism announced that the Ministry will start to finalise the Draft National Policy on Wetlands in the next two years to provide the policy framework and guidance to the management of wetlands. It is furthermore envisaged by the ministry to establish a National Committee on Wetlands as provided for under the Ramsar Convention to spearhead the national wetland programme of the Government.⁹

1.4 Namibia's Marine Resources Policy

Namibia's 2004 Marine Resources Policy: Towards Responsible Development and Management of the Marine Resources Sector states that Namibia is committed to observe the principle of optimum sustainable yield in the exploitation of marine resources, in line with the Constitution. The overall objective of the policy is to:

⁸ The other four wetlands already listed under the Ramsar Convention are the Orange River Mouth, the Walvis Bay Lagoon, Sandwich Harbour and the Etosha Pan.

⁹ Nakale (2014); see also MET (2015).

... utilise the country's fisheries resources on a sustainable basis and to develop responsible industries based on them in a way that ensures their lasting contribution to the country's economy and overall development objectives, as detailed in Vision 2030 and National Development Plans.

This objective is to be attained by means of the following main strategies:

- Maintaining an appropriate legislative, institutional and administrative framework;
- Conservation and responsible management of marine resources;
- Support for domestic catching, processing and marketing; and
- Enhanced participation for Namibians in all aspects of the marine resources sector.

The policy's fundamental principles include, *inter alia*, Namibia's commitment to responsible fisheries and to conduct the planning, management and development of the marine fisheries sector in accordance with international best practice. Furthermore, the precautionary approach to fisheries management is recognised and it is stated that such approach shall be applied as appropriate.

1.5 Namibia's Aquaculture Policy

The 2003 Aquaculture Policy deals with the responsible and sustainable development of farming with aquatic plants, fish, molluscs and crustaceans and advocates responsible aquaculture developments. This policy deals directly with the potential impacts of alien and other invasive species and seeks to minimise the impacts on aquatic ecosystems. Impacts specifically mentioned include the release of introduced species and genetically modified organisms, the mixing of farmed and wild stock (genetic pollution) and the risk of disease transfer.

One of the principles on which the policy is based is to ensure the protection of the living resources of national and international waters, both marine and freshwater, from possible adverse effects resulting from aquaculture activities, introductions and effluents. The strategies to address the stated objective of responsible and sustainable aquaculture development include maintaining genetic diversity and the integrity of aquatic ecosystems and ensuring responsible aquaculture production. The policy is firmly rooted in the internationally accepted ICES (International Council for the Exploration of the Seas) Code of Conduct on Responsible Fisheries, the Food and Agriculture Organisation (FAO) Technical Guidelines for Aquaculture Development as well as the Holmenkollen Guidelines and recognises international responsibilities in terms of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), Ramsar and other agreements governing shared water resources. The policy recognises the need for specific aquaculture laws and regulations and lays the foundations for these. It thus provides a framework for the subsequent development of the Aquaculture Act to establish both the duties of the state and the responsibilities and the rights of aquaculturalists, and to identify the responsible authorities in terms of enforcement and clear procedures for conflict resolution.

The policy lays the foundations for a National Development Master Plan for Aquaculture and promotes support for communal aquaculture. It recognises the importance of environmental assessments under the authority of the Ministry of Environment and Tourism, particularly in designating aquaculture zones. It specifically states that the Government may take measures

such as the establishment of hatcheries, to reduce reliance on wild-caught juvenile indigenous fish and repeated introductions of exotics in order to protect genetic resources.¹⁰

The policy explicitly deals with maintaining genetic diversity and the integrity of aquatic ecosystems and stresses a precautionary approach.¹¹ Any proposals for further introductions or translocations of freshwater aquatic organisms, particularly the introduction of exotics and potential transfer of disease organisms will be carefully examined and guided by a strict code of practice. Provision is made for lists of allowable and prohibited species to be compiled and regularly reviewed and if required to establish watershed zonation beyond which indigenous or exotic organic organisms may not be translocated. Preservation of genetic diversity will be promoted and care will be taken to limit adverse impacts on internationally shared waters. Responsible aquaculture production practices are outlined, firmly placing the responsibility with the aquaculturalists for safe and efficient farm management. It touches on quality, health and ethical concerns.¹²

2 The Statutory Framework

2.1 The Water Act No. 54 of 1956

This rather out-dated legislation remains in force until the new Water Resources Management Act comes into force upon signing by the Minister. Although two new Water Resources Management Acts have been approved by Parliament, the first in 2004 followed by the approval of the recent Water Resources Management Act in 2013, neither of them has been signed into law. The 2004 Act has in fact never been signed into law and has been repealed as a whole by the 2013 Act, which is yet to be signed by the Minister to become operational. Thus, the 1956 Act remains applicable for the time being.¹³

The main purpose for passing the Water Act, as its preamble states, was to consolidate and amend the laws relating to the control, conservation and use of water for domestic, agricultural, urban and industrial purposes. The Act also aims to make provision for the control of the use of sea water for certain purposes, for the control of certain activities on or in water in certain areas and for the control of activities which may alter the natural occurrence of certain types of atmospheric precipitation. It must be noted that this Act does not apply to Namibia in its entirety since certain sections were suspended or never applied to Namibia.¹⁴ This reveals that this Act cannot cover all the areas of Namibian water law. For this reason, Government drafted the Water Supply and Sanitation Policy (WASSP) which will be considered in brief below.

The Act distinguishes between private and public water. Private water is that which flows, naturally rises, falls or generally drains or is directed into land but is not available for common

¹⁰ Cf. Section 3.1.11(d) of the policy.

¹¹ Cf. Section 4 of the policy.

¹² Cf. Section 5 of the policy.

¹³ The Water Act No. 54 of 1956, was for example still applied by the High Court in Windhoek in the case concerning the use of groundwater by the Valencia Uranium Mine; see Menges (2008).

¹⁴ Only the following provisions of the Act have been made applicable to Namibia: Sections 1-4, with effect from 25 June 1969 – according to Section 180(2) of the Act; Section 162, with effect from 1 April 1971, by Proclamation 281 of 1970 in terms of South African Government Gazette 2921 of 13 November 1970; Sections 5 to 7, 9A, 21 to 23, 26 (excluding paragraph (a)), 27, 28(1), 30, 34 to 43, 44(2), 45 to 51, 54 to 56, 57(1), 59(2), 66, 69, 70 (excluding paragraphs (d), (f.), (g) and (h)), 139 to 152, 164 *bis*, 164 *ter*, 165, 166, 170 (excluding sub-Section (3) and paragraph (c) of sub-Section (5)) and 171 – with effect from 26 June 1971 by Proclamation 151 of 1971 in terms of South African Government Gazette 3167 of 25 June 1971; and Sections 9B; 30A (a) and 170(3) with effect from 18 December 1985 by Act No. 22 of 1985.

use.¹⁵ Public water includes any water flowing or found in or derived from the bed of a public stream, whether visible or not.¹⁶ There is no private property right to public water,¹⁷ and the sole and exclusive use and enjoyment of private water is vested in the owner of the land on which such water is found.¹⁸ The Act thus gives preferential abstraction rights to the landowners on whose land such water is found.¹⁹

The private-public water dichotomy might be unconstitutional in the current constitutional dispensation because whereas the Act provides for private and public water, the Constitution regards natural resources as common resources thus they constitutionally belong to the state unless otherwise lawfully owned. Considering that all water is controlled by the state under the public trust doctrine emanating from Article 100 read together with schedule 5 of the Constitution all the water can be regarded as a common resource – hence public.²⁰ The Act, however, has some balancing provisions whereby the Minister of Agriculture, Water and Forestry (MAWF) has the power to control the amount of water to be used by a person who has private water rights.²¹ Connected to this in terms of Section 21, the Minister has the power to order a person to purify water he has contaminated. A person can, however, apply for an exemption from this duty and the Minister has to use his/her powers to consider whether to grant the application or not.²²

Section 23 prohibits pollution of public or private water, including underground water, or sea-water. Sections 27 to 55 deal with control and use of subterranean water. The President is empowered to declare certain waters to be a subterranean water control area, if the Minister is of the opinion that it is in the public interest to do so.²³ Once proclaimed, Cabinet has extensive powers to determine how that water is going to be extracted and all concomitant matters.²⁴

This Act gives the Minister the power to investigate water resources, plan water supply infrastructure, develop water schemes, control pollution, protect, allocate and conserve water resources, inspect water works, levy water tariffs and advise on all matters related to the water environment in general. It makes the Department of Water Affairs, in MAWF, responsible for the use, allocation, control, and conservation of Namibia's surface and groundwater resources.

2.2 The Water Resources Management Act No. 24 of 2004

This Act has been approved and published in the Government Gazette,²⁵ however, it has never come into force. Instead, it has been amended to take into account certain practical aspects of its implementation and was in the following repealed as a whole by the Water Resources Management Act No. 11 of 2013. For the purpose of comparison, some major aspects of the 2004 Act will be sketched in the following.

15 Section 1.

16 Section 1.

17 Section 6.

18 Section 5.

19 Land-based entitlement: Rights to abstract and use public and private water is based on the riparian principle which means that the right to water usage is determined by the location of the water resources in relation to the land.

20 See similar arguments advanced in GRN (2000b).

21 Section 9A.

22 Section 21(5).

23 Section 28(1) as substituted by sec 5 of Act No. 42 of 1975. Only this sub-Section is applicable in Namibia. The other sub-Sections including Section 29 are not applicable to Namibia.

24 See the powers in Section 30.

25 GG 3357/2004.

The 2004 Act was based on the National Water Policy and provided for the management, development, protection, conservation, and use of water resources. The Act introduced equitable access to water resources for all population groups in Namibia. It provided an integrated, enabling legislative framework within which Namibian water resources could be managed, and water services be provided. The objective of the Act was to ensure that Namibia's water resources are managed, developed, protected, conserved and used in ways, which are consistent with or conducive to certain fundamental principles set out in section 3 of the Act. The management of water resources was required to be consistent with and promote:

- equitable access to water resources by every citizen, in support of a healthy and productive life;
- access by every citizen, within a reasonable distance from their place of abode, to a quantity of water sufficient to maintain life, health and productive activities;
- essentiality of water in life, and safe drinking water a basic human right;
- harmonisation of human needs with environmental ecosystems and the species that depend upon them, while recognising that those ecosystems must be protected to the maximum extent;
- integrated planning and management of surface and underground water resources, in ways which incorporate the planning process, [and] economic, environmental and social dimensions;
- management of water resources so as to promote sustainable development;
- facilitating and encouraging awareness programmes and participation of interested persons in decision-making;
- prevention of water pollution, and the polluter's duty of care and liability to make good; and
- meeting Namibia's international obligations and promoting respect for Namibia's rights with regard to internationally shared water resources and, in particular, to the abstraction of water for beneficial use and the discharge of polluting effluents.

The Act provided for basic human and environmental water needs, although not as specifically as stated in the National Water Policy.

Part V of the Act,²⁶ provided for the establishment of Water Point User Associations²⁷ at community level, consisting of those rural community members who permanently use a water point. Their function was defined as to operate and maintain the water point in question and to make decisions about water use regulations. The Act provided for a Water Point Committee to monitor and enforce compliance with such regulations and for the establishment of a Water Resources Management Agency as well as Basin Management Committees to manage water resources sustainably.

Part IV of the Act paved the way for establishing basin management committees in order to promote the management of water resources on hydrological boundaries taking into account physical, climatic, ecological and human factors affecting the quantity and quality of water resources. By 2011, eight basin management committees had been established.²⁸

²⁶ Sections 16-22 of the Act.

²⁷ For more details on water point associations, see Falk (2008) and the following sub-chapter.

²⁸ GRN (2012:29).

The Act specifically dealt with the control of alien invasive species in Section 133 on regulations, stating that the Minister may declare any species to be alien invasive species and may make regulations for their eradication or control. Further, as the Act requires water resources management to operate according to the principles of environmental sustainability, this implies that where aquatic invasive species threaten water resources and wetland habitats they will be dealt with.

Another fundamental principle upon which the Water Resources Management Act was based is that Namibia meets its international obligations and promotes respect for its rights with regard to internationally shared water resources, resource quality and, in particular, to the abstraction of water for beneficial use and the discharge of polluting effluents. Part 10, on Internationally Shared Water Resources, recognised Namibia's obligations under international treaties, conventions, such as the UNCBD, and agreements and specifically mentions the Law of Non-Navigational Uses of International Watercourses and the revised SADC Protocol on Shared Water Resources. Regarding shared water courses, the Minister was authorised to participate in the development of a common database, joint projects and conflict resolution and to establish institutional links and ensure stakeholder participation with neighbouring riparian states. The Act includes the obligation to collect and share data and information on internationally shared water resources and lists these in Section 55.

According to the fundamental principle of integrated planning and management of surface and underground water resources, an Integrated Water Resources Management Plan for Namibia has been formulated by a consortium lead by Windhoek Consulting Engineers (WCE), in close cooperation with the Ministry of Agriculture, Water and Forestry (MAWF) and the Namibian National Water Partnership (NWP). The plan has not yet been approved.²⁹

2.3 The Water Resources Management Act No. 11 of 2013

Although the new Water Resources Management Act No. 11 of 2013 has been passed by Parliament, signed by the President and published in terms of the Namibian Constitution,³⁰ it has not yet come into operation as the Minister has not yet determined a date for the Act to come into operation as required by Section 134 of the Act. Regulations to implement the Act are currently under preparation. Once in operation, the Act repeals both, the Water Resources Management Act No. 24 of 2004 (which had de facto never come into force) and the Water Act No. 54 of 1956 as a whole.

The Water Resources Management of 2013 was enacted to provide for the management, protection, development, use and conservation of water resources; for the regulation and monitoring of water services and for incidental matters. The aims of this new Act include to ensure that Namibia's water resources are managed, developed, used, conserved and protected in a manner consistent with, or conducive to, specific fundamental principles as set out in Section 3 of the Act, namely:

- (a) equitable access for all people to safe drinking water is an essential basic human right to support a healthy productive life;
- (b) access by all people to a sufficient quantity of safe water within a reasonable distance from their place of abode to maintain life and productive activities;
- (c) harmonisation of human water needs with the water requirements of environmental ecosystems and the species that depend on them, while

²⁹ Ibid.

³⁰ See Government Gazette No. 5367 (2013) Government Notice No. 332.

- recognizing that the water resource quality for those ecosystems must be maintained;
- (d) promotion of the sustainable development of water resources based on an integrated water resources management plan which incorporates social, technical, economic, and environmental issues;
 - (e) availability of open and transparent information about water resources to the public;
 - (f) recognition of the economic value of water in the allocation of water;
 - (g) development of the most cost effective solutions, including conservation measures, to infrastructure for the provision of water;
 - (h) supporting integrated water resources management through human resources development and capacity building;
 - (i) promotion of water awareness and the participation of persons having interest in the decision-making process should form an integral part of any water resource development initiative;
 - (j) consistency of water resource management decisions within the specific mandate from the Government regarding the separation of policy, regulatory and operational functions;
 - (k) prevention of water pollution and implementation of the principle that a person disposing of effluent or waste has a duty of care to prevent pollution;
 - (l) a polluter is liable to pay all costs to clean up any intentional or accidental spill of pollutants;
 - (m) cognisance of Namibia's international rights and obligations in the utilisation of internationally shared water resources and the disposal of waste or effluent; and
 - (n) cognisance of the regional diversity in water resources development and the decentralisation of responsibilities to the lowest level of Government where adequate and appropriate competency exists to manage water resources effectively.

In these fundamental principles, many general principles of environmental law are echoed, such as the principles of prevention, precaution and the polluter pays principle. The Act in terms of Section 4 of the Act imposes on the state an obligation to ensure that water resources are managed and used to the benefit of all people in furtherance of the aims of the Act.

Part two of the Act assigns a variety of powers and functions to the Minister with regard to the management of water resources including among many others the powers to conduct water resources management planning and to ensure an adequate supply of water for domestic use. The Minister is furthermore responsible for international negotiations related to internationally shared water resources and water related matters. Certain powers can be delegated to the Water Regulator, a basin management committee or to the permanent secretary or any other staff member of the ministry. Furthermore, the Minister can make regulations relating to various issues pertaining to the management of water resources and specified in Section 129.

The Act provides for the establishment of a Water Advisory Council in part three to advise the Minister on issues such as water policy development and review; water resources management; and water abstraction and use. The Water Advisory Council is established upon nomination and "consists of 11 members who are persons with extensive knowledge and experience in

water resource management and from authorities or institutions responsible for or involved in water supply or water management.”³¹

Furthermore, a Water Regulator consisting of five members is to be established under the Act, to determine the tariffs of fees and charges that may be levied by a water services provider or that are payable by licence holders for the abstraction of water or the discharge of effluent or the supply or re-use of effluent. The Water Regulator also performs other functions with regard to water service providers, which have to be licenced according to the provisions in part ten of the Act.

Basin Management Committees are further institutions that may be established under part five of the Act to further the Government’s objective in achieving an integrated management of water resources. The Basin Management Committees have several functions, including the promotion of community participation and “to advise the Minister on matters concerning the protection, development, conservation, management and control of water resources and water resource quality in its water management area.”³²

Internationally shared water resources are considered in part six of the Act, which describes in more detail the functions of the Minister related to internationally shared water resources. Specific agreements are listed in relation to which regulations can be made by the Minister to give effect to these agreements. These are in general agreements relating to internationally shared water resources binding on Namibia and announced by the Minister by notice in the Gazette. In particular, the agreements establishing the Orange-Senqu River Commission (Orasecom); the Permanent Okavango River Basin Water Commission (Okacom); the Zambezi Watercourse Commission (Zamcom); and the Kunene Permanent Joint Technical Commission are listed as such international agreements.

One further part of the Act is designated to the management of rural water supply with the option to establish Water point committees and local water committees to be “entrusted with the responsibility of managing and controlling the supply of water at any rural state waterwork.”³³

For the development, conservation, management and control of Namibia’s water resources, the Minister must in cooperation with regional councils, basin management committees and water services providers prepare an Integrated Water Resources Management Plan to be submitted to Cabinet for approval and which is subject to review after ten years following Cabinet’s approval.

Water supply, abstraction and use of water are regulated in part 9 of the Act which foresees a close cooperation between the Minister responsible for water affairs on the one hand and the Minister of health on the other.

As a general rule, a non-transferable licence is required for the abstraction and the use of water.³⁴ This requirement does, however, not apply to the abstraction of water for domestic use and to owners of a private well for the abstraction of domestic use.³⁵ The licence, which is subject to a fee, may be obtained by application to the Minister and can be combined with a licence to discharge effluent as required according to Section 70.

³¹ Section 8.

³² Section 23.

³³ Section 30.

³⁴ Section 44.

³⁵ Sections 38 and 39.

The control and protection of groundwater is addressed in part twelve of the Act, which contains specific provisions as regards to the construction of boreholes and wells and respective licenses. Part thirteen of the Act deals with water pollution control and lays down the precautionary principle. A licence is required to discharge effluent or construct or operate wastewater treatment facility or waste disposal sites.

On the initiative by the Minister or upon application by other persons having an interest, Water Protection Areas can be declared under the provisions of part fourteen of the Act “in order to protect and enhance any water resource, riverine habitat, watershed, ecosystem or other environmental resource that is at risk of significant changes to resource quality, depletion, contamination, extinction or disturbance from any source, including aquatic or terrestrial weeds.”³⁶ The overall effect of declaring an area a water protection area is that there is a duty to comply with any limitation or prohibition imposed and specified in the notice of declaration of the water protection area.

Certain emergency powers for the Minister are stipulated in part fifteen of the Act to limit the right to abstract and use water for example in situations of water shortages or to control pollution.

Further provisions of the Act deal with water services plans and efficient water management practices; dams, dam safety and flood management; the control of activities affecting wetlands, water resources and resource quality (including the control of aquatic invasive species); water services provided by state; and servitudes which may be claimed by licence holders to give effect to that licence.

Offences are addressed by Section 127 of the Act and cover a number of acts related to abstraction or use of water not in conformity with the licence or the pollution of water resources. What is remarkable from a legal point of view is the establishment of an appeal body to be known as the Water Tribunal to hear and decide appeals against decisions by the Minister in matters specified in detail in Section 120, including for example in cases where the issuance of a licence has been refused. The Water Tribunal will consist of a chairperson appointed by the Minister with the concurrence of the Judge President of the High Court and up to 6 other persons selected and appointed by the Minister.³⁷

2.4 The Namibia Water Corporation Act No. 12 of 1997

The Namibia Water Corporation Act establishes the water utility company, NamWater, and places an obligation on NamWater to conduct its functions in an environmentally sustainable and sound manner, and specifies a duty to conserve and protect the environment. It should conduct all activities with due regard for the protection and conservation of ecological resources and habitats. Water is allocated through a permit regulatory system and NamWater is entitled to apply for a permit to impound surface runoff in ephemeral rivers, and to abstract water from perennial rivers as well as groundwater. The Act will be amended by the Water Resources Management Act No. 11 of 2013.

2.5 The Marine Resources Act No. 27 of 2000

The Marine Resources Act provides for the conservation of the marine ecosystem and the responsible utilisation, conservation, protection and promotion of marine resources on a sustainable basis. For that purpose it provides for the exercise of control over marine resources and for matters connected therewith. The provisions of the Act do only apply to coastal waters.

³⁶

Section 85.

³⁷

See Ruppel (2008d) for the role of the executive in safeguarding the independence of the judiciary.

The Marine Resources Act replaces the Sea Fisheries Act³⁸, which in turn replaced the Sea Fisheries Act³⁹. It furthermore replaces the Sea Birds and Seals Protection Act⁴⁰, and the Fishing Boat and Factory Owners' Committee Ordinance⁴¹. However, according to Section 64(2) of the Marine Resources Act, regulations made under previous legislation remain in force. Many such regulations have been drafted, for example on the northern limit of Namibian waters; the licensing of foreign-flag vessels for the purpose of harvesting Namibia's marine resources; or the declaration on the Namibian Islands Marine Reserve. In 2001, regulations relating to the exploitation of marine resources⁴² were made under Section 61(1) of the Marine Resources Act. These regulations set forth procedures for granting rights or exploratory rights, allocating quotas and issuing licences; permits for fishing for recreational purposes; and for conservation measures such as the control of fishing gear used for harvesting for commercial purposes. Furthermore, the regulations contain provisions on the protection of the marine environment.⁴³ In 2015, the Act has been subject to several amendments, in terms of the Marine Resources Amendment Act⁴⁴, which provides for the sovereign exercise of ownership by the state over marine resources and amends the provisions relating to the total allowable catch and allocation of quotas.

2.6 The Aquaculture Act No. 18 of 2002

The Aquaculture Act regulates and controls aquaculture activities and the sustainable development of aquaculture resources. It allows the Minister to formulate a policy based on social, economic and environmental factors, the best scientific information and advice from the advisory council to *inter alia* promote sustainable aquaculture and manage, protect and conserve aquatic ecosystems. All aquaculture ventures are subject to strict licensing.⁴⁵ Important clauses are Sections 27 (1) and (3), dealing specifically with the introduction and transfer of aquatic organisms:

A person may not, without written permission granted by the Minister, introduce or cause to be introduced into Namibia or any Namibian waters any species of aquatic organism or any genetically modified aquatic organism or transfer any species of aquatic organism from one aquaculture facility to another or from any location in Namibia to another. The Minister must not issue any approval under this Section unless the impact of any introduction or transfer of any aquatic species or genetically modified aquatic organism has been assessed, if so required, in accordance with the legislation or policy dealing with environmental assessments.

The import or export of aquatic organisms is subject to written permission from the Minister according to Section 28(1).

³⁸ No. 29 of 1992.

³⁹ No. 58 of 1973.

⁴⁰ No. 46 of 1973.

⁴¹ No. 16 of 1968.

⁴² GN 241/2001 (GG 2657); In a recent report on Seal Harvesting in Namibia (cf. Office of the Ombudsman 2012), the Ombudsman of Namibia has recommended to amend regulations 18 and 20 to bring section 18 (1) of the regulations in line with section 32(1) of the Marine Resources Act and to ensure the humane killing of seals. For further details see also Chapter 19 of this Volume.

⁴³ For an overview of sea fishing laws and regulations see International Business Publications (2015).

⁴⁴ No. 9 of 2015.

⁴⁵ Regulations related to licensing are contained in GN 246/2003 (GG 3104).

2.7 The Inland Fisheries Resources Act No. 1 of 2003

The Inland Fisheries Resources Act deals with the conservation and utilisation of inland fisheries resources and allows for the updating and development of new policies for the conservation and sustainable utilisation of Namibia's inland fisheries. It encourages cooperation with neighbouring countries regarding the management and conservation of shared waterways. No fishing is allowed in parks nor by net within 100m from a bridge, culvert or spillway or in a manner which obstructs more than half the width of any watercourse. Furthermore, it prohibits the use of destructive fishing methods such as the use of poisons, explosives and night lights and the introduction and/or transfer of non-indigenous fish species. Fines or imprisonment are prescribed for destructive fishing and the use of nets where they are banned. Of importance in terms of shared water resources is that it prohibits the introduction, transfer, import and export of any species of fish or crustacean without written permission (Section 19(a) and (b)) and that anyone convicted of this may be fined or imprisoned. The Act makes provision for the establishment of an Inland Fisheries Council and although no environmental officer is specified to serve on this, it makes provision for the appointment of honorary inspectors from the environmental affairs ministry. Section 23(2a) sets out the powers of fishery inspectors. The Act makes it compulsory to have a fishing licence to fish in any inland water body using any regulated fishing gear, specified as a rod, line, hook and/or nets and requires the registration of nets. The Act allows for the protection of endangered fish species as well as the declaration of fisheries reserve areas where no one may fish, pollute the water, dredge the area nor disturb the natural environment of fish and related ecosystems. The Act allows the Minister to make regulations necessary to manage inland fishery resources that range from methods allowed and gear limitations, through allowable fish sizes to types of surveys to be conducted and what data should be collected.

2.8 Prevention and Combating of Pollution at Sea by Oil Act No. 6 of 1981

This Act prohibits the discharge of oil from ship, tanker or any other offshore installation and gives the state certain powers to prevent such pollution and to deal with the removal of oil spills. While inland pollution is covered by the Water Act, the Prevention and Combating of Pollution at Sea by Oil Act is applicable to coastal waters.

II. GOVERNANCE OF RURAL WATER SUPPLY IN NAMIBIA

Thomas Falk¹

Sufficient, safe, physically accessible and affordable water for personal and domestic use has become a nationally and internationally recognised human right.² It is one of the Millennium Development Goals (MDGs) to halve the number of people who do not have access to or can afford safe drinking water.³ In order to achieve this vision, decisions must be made about allocation mechanisms and conservation of water that are compatible with societal objectives such as economic efficiency, sustainability and the equity imperative.⁴

Namibian water policy is driven by these objectives. Water reforms became necessary because, historically, Namibian rural water supply was characterised by racially-based inequality and strong subsidising. This created a low-quality water sector, making the rural population highly dependent on Government hand-outs and unaware of sustainability considerations.⁵ The reform of rural water supply fundamentally changes the paradigm of ‘control and command’ by empowering water users and increasing water management efficiency. Water related ecosystem services shall be provided at an optimal level for the overall society.

The currently implemented rural water supply reform has the objective to reverse the negative effects of previous policies. A stronger involvement of different stakeholders and the empowerment of water users shall encourage the saving of water and maintenance of infrastructure. This is supposed to improve the ecological and financial sustainability of the communities’ water supply. Making better use of the capacities of different stakeholders would decrease the Government’s burden concerning the supply of water allowing it to invest the saved funds in more efficient sectors.⁶

Various laws and policy documents address the water issue.⁷ In line with Article 100 of the Namibian Constitution the Water Resources Management Act No. 11 of 2013⁸ maintains the ownership of water resources in the hands of the state. In this way the Government can control and ensure that water is managed and used to the benefit of all people. This legal perception is not uncontested, because the state’s water ownership is in contradiction to the customary law of at least some ethnic groups.⁹ Customary law is recognised under the Namibian Constitution.¹⁰ Perceived overlapping jurisdictions of statutory and traditional authorities are both a threat and an opportunity for improved water management.

¹ Owing to recent developments in water-related legislation this Chapter has been substantially revised. Earlier versions of this Chapter have been co-authored with Michael Kirk and Bernadette Bock.

² GRN (2000b). The Water Resources Management Act No. 24 of 2004 and UN (2002).

³ UN (2000).

⁴ Bock / Kirk (2006).

⁵ Ibid.

⁶ See GRN (1997c); GRN (2000b).

⁷ See Article 100 and Schedule 5 of the Constitution of the Republic of Namibia; GRN (1997d); GRN (2000a); GRN (2008).

⁸ This Act, which will repeal the Water Act No. 54 of 1956 and the Water Resources Management Act No. 24 of 2004 still hast to come into operation.

⁹ Mapaure (2010).

¹⁰ Article 66 of the Constitution of the Republic of Namibia; see Hinz (2000).

The Water Supply and Sanitation Sector Policy of 2008 highlights that community participation and subsidiarity are key strategies of the Namibian Government in order to achieve the objective of economically, environmentally and socially sustainable water management. The policy includes a strong commitment to a broad stakeholder engagement and specifies the following main principles for the rural water supply reform: a) maximum involvement of users; b) delegation of responsibility to the lowest possible level; c) an environmentally sound utilisation of water resources; d) controlled out-sourcing; and e) cost recovery.¹¹ Already in 1997, it was decided that the responsibility for managing and paying for water services should be progressively devolved to community organisations.¹²

The Water Resources Management Act No. 24 of 2004 was strongly inspired by the above mentioned policy. Following subsidiarity principles, the Act strongly focused on the establishment of Water Point User Associations (WPAs).¹³ These consisted of those community members who permanently use a particular water point. The WPAs had the right and duty to operate and maintain their water points in order to foster a sense of ownership. Their constitutions contained stipulations on water use regulations and access.¹⁴

The Water Resources Management Act No. 11 of 2013 fundamentally departs from the Water Supply and Sanitation Sector Policy of 2008. The new act has no notion of Water Point User Associations anymore. The Ministry of Agriculture, Water, and Forestry (MAWF) may accredit water point committees and local water committees “to be entrusted with the responsibility of managing and controlling the supply of water at any rural State waterwork.”¹⁵ There are no considerations of customary or community ownership. The Act not even makes provisions regarding the water points which already have been handed over to communities in the course of the reform. With this formulation the state indicates that communities are only given management but not ownership rights.

More specific rules e.g. regarding the constitution and powers of water point committees, the appointment of committee members, or the setting of tariffs are supposed to be specified in regulations which have not been publically accessible by the date of this publication. The 2004 Water Resources Management Act was more specific in this regard. It referred for instance to Management Plans which clarified also penalties for violations.

Relevant for the rural water supply management is also the Communal Land Reform Act No. 5 of 2002. It prohibits the prevention of any person to draw water from any water point except with written permission from traditional authorities and ratification of the land board. As a consequence, customary water laws need to be taken into account and communities can make use of enforcement capacities of traditional authorities. The regulations of the Water Resources Management Act will have to be harmonised with the Communal Land Reform Act. The later Act with its acknowledgement of customary law still demands for a polycentric water management approach even if the new Water Act is not specific in this regard.

Namibian policy makers are aware that water is a scarce and valuable resource. Therefore, an economic value is placed on water in order to include environmental externalities in the water costs and to encourage efficient and sustainable resource supply.¹⁶ Cost-effective water supply

¹¹ GRN (2008).

¹² GRN (2000a).

¹³ Water Resources Management Act No. 24 of 2004.

¹⁴ Ibid.

¹⁵ Water Resources Management Act No. 11 of 2013.

¹⁶ GRN (2000b).

is one of the fundamental principles of the Water Supply and Sanitation Policy.¹⁷ At the same time, the policy emphasises that there is a social responsibility to make water available to the poor. For communal farmers, the introduction of cost recovery meant stronger self-support and more responsibility for maintaining and running water facilities.¹⁸ It has been shown that the pricing of water overstrains especially many poor and can be in conflict with Namibia's recognition that water access for personal and domestic uses is a recognised human right.¹⁹ It is likely that for this reason the notion of cost recovery is not included in the 2013 Water Resources Management Act anymore though it has been a key principle in the Act of 2004. It is a theoretical and practical challenge to develop effective support mechanisms for the poor, which do not undermine incentives for sustainable water management.

In summary, Namibian rural water supply governance is polycentric intendedly and unintendedly. The 2004 Water Resource Management Act provided governance mechanisms, which made excellent use of the capacities of different stakeholders. At the same time, it did not dissolve contradictions between customary and statutory water laws and unwillingly challenged the poor. The 2013 Water Resource Management Act tries to heal some of the problems. Policy makers and implementing agencies should, however, be careful not to destroy positive developments achieved under the old Act. The stronger notion of state ownership to water and rural water infrastructure will hopefully not mean a fall back to pre-independence policies of communities' state-dependency. The major upcoming challenge will now be the formulation of regulations under the new act. This should be advanced urgently as there is currently no effective legal framework for rural water management anymore. This creates uncertainty which is a great hazard for sustainable water management.

The author recommends to take the enforcement aspect of water management rules into account. Polycentric and subsidiary approaches which build on the cooperation of different institutional service providers can make use of existing structures. Social and moral-based institutions minimise the need for external enforcement reducing the transaction costs for the state. Only if informal and customary norms and rules are overstrained a reliable backup by the statutory enforcement is required. To date, the enforcement of community water management regulations is not of high priority for the statutory executive and judiciary organs. Given the difficulties to externally enforce by-laws of WPAs it is important that the communities strongly support rules on a moral and social basis²⁰. At the same time it has been shown that social networks can actually hamper the effectiveness of water management institutions.²¹ This indicates that rural water management rules need to be very reflexive to the respective community contexts and that there are no standard rules/constitutions which work well in all cases. Formulating new water management regulations is a chance to address many of the lessons learnt from over 15 years of rural water supply reform in Namibia. The MAWF might be well advised to consult various stakeholders and academics in this process.

¹⁷ Water Resources Management Act No. 24 of 2004; GRN (2008).

¹⁸ GRN (2008).

¹⁹ GRN (2000b and 2004), Falk *et al.* (2009).

²⁰ See also Falk *et al.* (2012).

²¹ Schnegg / Linke (2014).

CHAPTER 12

LAND AND AGRICULTURE

I. LAND AND AGRICULTURAL LAWS AND POLICIES RELEVANT FOR ENVIRONMENTAL PROTECTION IN NAMIBIA

Oliver C. Ruppel, Shirley Bethune and Anielle von Finckenstein

1 Introduction

Land degradation is one of the major environmental concerns in Namibia as land is the basis for survival. Land degradation threatens environmental quality and has a negative economic impact. In Namibia, farming has deep cultural and social meaning. About 70% of the Namibian population depends on agricultural activities for a livelihood.¹ Thus, the conservation of land by legal means is of critical importance for the country.²

Land degradation in Namibia, like elsewhere in the world occurs in different forms and the effects and causes of land degradation are manifold.³ It is, *inter alia*, caused by climatic variations, especially the high variability of rainfall patterns, and human activities. According to the Namibia Household Income and Expenditure Survey 2009/2010,⁴ 23% of Namibian households depend on subsistence farming as the main source of income. This figure has decreased from 38% in 1993/1994 and 29% in 2003/2004. However, many Namibians depend – directly or indirectly – more on farming than on any other economic activity.⁵ Despite the fact that the whole agriculture and forestry sector, which includes processing, only made up 5.1% of GDP in 2009⁶ most of the land in Namibia is used for agricultural purposes.⁷

Overstocking and overgrazing are considered to be the main causes for land degradation in Namibia. Especially in rural areas, poverty forces people into unsustainable environmental management practices such as overstocking and overgrazing in order to ensure food supply. More often than not, the densities of livestock exceed the carrying capacity of the land, which places strain on the environment. Further negative effects on land are caused by the unsustainable harvesting of forest resources, wild plants and game, and the clearing of land for farming or housing purposes.⁸

Land degradation not only has negative economic consequences in that it reduces the country's resources, it also poses a serious threat to food security and rural livelihoods, which

¹ GRN (2007b:1).

² This Chapter is based on Ruppel / Bethune (2007) and Hinz / Ruppel (2008b).

³ Klintenberg / Seely (2004).

⁴ NSA (2012:56).

⁵ Iyambo, N, then Minister of Agriculture, Water and Forestry in his foreword to Mendelsohn (2006).

⁶ HSF (2012:15).

⁷ Mendelsohn (2006:10).

⁸ MET (2006:1ff.).

particularly affects the most vulnerable groups in Namibia's poor and densely populated areas. The most alarming effects of land degradation are deforestation, decreased availability of palatable grass species, soil erosion, bush encroachment and soil salinisation.⁹

In light of this environmental background, the importance of soil conservation becomes apparent. However, both nationally and internationally this area of the environment has not yet gotten the attention it deserves.

2 Soil Protection in the International Legal Framework

Even though some international conventions recognise the importance of soil conservation, no overarching framework exists as yet.

The European Soil Charter of 1972 is held to have been the first international document relating to soil.¹⁰ The World Soil Charter and the World Soils Policy¹¹ was negotiated by the United Nations Environmental Program in coordination with United Nations Food and Agricultural Organization (FAO) and adopted in 1981. Both instruments contain non-binding guidelines and principles relating to soil conservation¹² and were intended to aid states in formulating domestic policies. However, in light of modern environmental practices these instruments are considered to be outdated.¹³ In view of new scientific knowledge gained over the past three decades, "especially with respect to new issues that emerged or were exacerbated during the last decades, like soil pollution and its consequences for the environment, climate change adaptation and mitigation and urban sprawl impacts on soil availability and functions"¹⁴, the World Soil Charter has thus been revised and unanimously endorsed in June 2015 (the international year of soils) by the member states of the FAO during the 39th Session of the FAO Conference. The revised World Soil Charter, is organised in a Preamble, nine Principles, and Guidelines for Action. These guidelines aim to ensure that "soils are managed sustainably and that degraded soils are rehabilitated or restored."¹⁵ The actions are targeted at individuals and the organised private sector, governments and international organisations.

Further documents which contain provisions relating to soil management are the World Charter on Nature¹⁶ and Agenda 21.¹⁷ However, these instruments have been criticised to be inappropriate to aid in soil conservation, due to being too broadly worded.¹⁸

The 1994 Convention to Combat Desertification in Those Countries Experiencing Serious Drought and / or Desertification, Particularly in Africa (CCDC), which is binding upon Namibia, is directly related to soil conservation and the main international legal document to

⁹ Klintenberg / Seely (2004:7).

¹⁰ Alori / Nwapi (2015:105).

¹¹ Text available at
<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=62&ArticleID=553&l=en>; accessed 16 November 2015.

¹² Alori / Nwapi (2015:105).

¹³ Ibid:106.

¹⁴ Introduction to the 2015 Revised World Soil Charter see
http://www.fao.org/fileadmin/user_upload/GSP/docs/ITPS_Pillars/annexVII_WSC.pdf; accessed 16 November 2015.

¹⁵ See Section 3 of the Revised World Soil Charter.

¹⁶ 28 October 1982, UN GA, A/RES/37/7; text available at
<http://www.un.org/documents/ga/res/37/a37r007.htm>; accessed 16 November 2015.

¹⁷ United Nations Conference on the Environment and Development, Agenda 21, UN Doc a/ CONE151/4 (1992).

¹⁸ Alori / Nwapi (2015:106).

combat desertification and mitigate the effects of drought in countries affected through effective action at all levels supported by international cooperation. The definition of desertification in this convention relates clearly to soil conservation.¹⁹ The effect of the convention however remains limited, as the focus is on capacity building, as opposed to binding obligations *per se*.²⁰

The Namibian Program to Combat Desertification (NAPCOD) was established subsequently to the CCDC.²¹ Relating specifically to soil erosion, the NAPCOD focusses on education and awareness surrounding this issue.²² This is done by means of the Regional Awareness Programme, which aims to enhance the understanding of desertification, soil erosion, deforestation and related issues with local and traditional decision makers. The dissemination of information to communities and the creation of engagement were identified as crucial obstacles in raising awareness. The main educational activities were generally centred at the Gobabeb Training and Research Centre, and included programmes to educate teachers in order to allow for them to subsequently undertake environmental education. Furthermore, media awareness workshops are also undertaken by NAPCOD, aimed at raising awareness of the widespread implications arising from desertification.²³ NAPCOD also engages in a range of other programmes related to not only educational, but also practical implementation of efforts to combat desertification.²⁴

Namibia has drafted its Third National Action Programme (2014-2024) to implement the Convention to Combat Desertification.²⁵ NAP3 aims to set forth a framework to allow for the implementation of the UNCCD, for the time period of 2014-2024. It first focuses on illustrating the current obstacles which Namibia faces in regards to the environment, desertification, land degradation and drought processes, and how these pose threats to Namibia's land-based agricultural sector.²⁶ The document further names poverty and population growth, in addition to unsustainable resource usage and severe impact of climate change. This document also highlights the inadequate institutional and individual capacity and weak mechanisms of cross-sector collaboration for sustainable land management.²⁷ The inadequate application of technology is another related obstacle. The objectives set out in NAP3 aim to address these impediments, by setting six specific outcome targets and proposing tangible and pragmatic solutions, in order to achieve the overall objective to "prevent and reverse desertification and land degradation in affected areas and to mitigate the effects of draught in Namibia in support of poverty reduction and environmental sustainability".²⁸ Emphasis is placed on improving cross-sectoral collaboration between Government agencies

¹⁹ "Land degradation in arid, Semi-arid and dry sub-humid areas resulting from various factors including climatic variations and human activities."

²⁰ Alori / Nwapi (2015:107).

²¹ Seely / Montgomery (2009).

²² Ibid:viii.

²³ Ibid:100.

²⁴ These include workshops for farmers and farm managers relating to the prevention of soil erosion and sustainable farming practices, community projects allowing for an increased food and social security standard and general institution and capacity building.

²⁵ See GRN (2014d).

²⁶ Ibid:3.

²⁷ This specifically refers to overlapping and contradictory capacity of Ministries and Departments with opposing goals.

²⁸ GRN (2014d:13).

inter se,²⁹ as well as between relevant actors and research institutes. This is intended to allow for research and subsequent data to be used more effectively when developing and implementing policies and programs.³⁰ Additionally, the NAP3 discusses policies and programs currently in place and proposes improvements where deemed necessary.³¹

The Convention on Biological Diversity³² is another relevant international instrument, as the diversity within species and ecosystems is closely linked and reliant upon the conservation of soils, specifically in Namibia.

However, an overarching and binding instrument concerning soil protection has not yet been drafted. This lack of international guidance is reflected in the lack of national policy and emphasis on an integrated approach to soil conservation.

3 Land Tenure in Namibia

The era of colonial reign over Namibia has skewed land ownership of the country in favour of a white minority. After Namibia acquired Independence, the Government promulgated several laws aimed to implement a comprehensive plan of land reform.³³ Even though there have been shortcomings with regards to the overall success of land redistribution in Namibia, a framework for the reform of land tenure, acquisition and ownership was formulated.

Natural persons, the State and legal entities can hold land in Namibia. Overall, the State holds all communal land in trust for the indigenous tribes who reside on the land, in addition to owning all nature reserves, game parks, military bases and certain urban properties.³⁴ The types of land tenure are ownership/freehold tenure; communal tenure; conservancies and leaseholds. Regarding tenure in informal settlements, the practice inception prior to 1990 of Permissions to Occupy (PTO) still applies but is in the process of being phased out and replaced by leaseholds under the Communal Land Act.³⁵

Ownership and freehold tenure gives owners the rights to property as developed in common law. Most commercial agricultural and urban land is privately owned, amounting to 44% of Namibia's land.³⁶ The Communal Land Reform Act, in addition to the common law, regulate leaseholds. The Communal Land Board can grant communal and commercial land leases for a period of 99 years.³⁷ Land held in such leasehold may be transferred, inherited, renewed and mortgaged.³⁸

Communal tenure is held in trust by the Government, for the benefit of local communities.³⁹ Traditional Authorities and Land Boards generally administer this land and all such land is registered with the Land Board.⁴⁰

²⁹ Ibid:44.

³⁰ Ibid:46ff.

³¹ Ibid:31ff.

³² 1760 UNTS 79, 5 June 1992.

³³ USAID (2014:3).

³⁴ Ibid:6.

³⁵ No. 5 of 2000.

³⁶ USAID (2014:6).

³⁷ Sections 2 and 3 of Act No. 5 of 2000.

³⁸ Amoo (2014:234).

³⁹ USAID (2014:6).

⁴⁰ Ibid. The land is allocated by the traditional authority for residential or agricultural use, as well as other uses as recognised by the Minister.

Conservancies – once established – become legal entities and for such purposes require identified boundaries, a constitution and defined membership in addition to demonstrating the ability to manage finances.⁴¹ The Nature Conservation Ordinance of 1975 and its Amendment in 1996 form the legal framework for this type of land tenure.

The occupancy in informal settlements is still in a period of major transition. As stated above, PTOs as issued during the previous administration are in the process of being phased out. However, these give the holder a right to apply for ownership or leasehold rights once these become available.⁴² The new Flexible Land Tenure Act⁴³ is aimed to provide secure tenure to the large part of the population residing in informal settlements and envisages an alternative system to the formalisation of land rights in this context.⁴⁴

4 Sustainable Farming in Namibia

With roughly 78% of the country being used for farming purposes and more than 1.2 million people living on such land,⁴⁵ the preservation of arable land in Namibia is imperative. It must be kept in mind that, even though commercial farming, most often focussed on cattle farming, contributes 7.7% to the GDP,⁴⁶ farming practices utilised on communal land, impacts the quality of soil and other resources. Thus, in order to fully develop sustainable farming practices, communal farming methods must also be addressed sufficiently. Furthermore, appropriate support must be given to ‘emerging’ commercial farmers, who have received land in the frame of land redistribution in Namibia.

The Third National Action Programme for Namibia (NAP3), is the framework intended to aid in implementing the UNCCD between 2014 and 2024. This programme focuses largely on the importance of sustainable land management in Namibia, in light of its arid climate. The programme also names several problematic practices which need to be addressed in the context of sustainable land management and farming in Namibia. These include overgrazing and overstocking of land, in addition to water and soil degradation. NAP3 further illustrates pragmatic steps which can be taken to address these issues, such as raising awareness and education,⁴⁷ ensuring reliable data is available which can lay the foundation for new policies and implementation of existing ones and providing for a functional monitoring system.⁴⁸

Several national policies are also aimed at making sustainable farming the norm in Namibia. The Ministry of Agriculture, Water and Forestry (MAWF) is responsible for soil management and promotion and development of sustainable soil management practices in Namibia.⁴⁹ The National Agricultural Policy of 1995 promotes the sustainable use of Namibia's land and natural resources,⁵⁰ in addition to demanding the strict implementation of instruments pertaining to soil erosion, which is widely applicable in the context of sustainable farming.

The National Drought Policy and Strategy of 1997 includes provisions aimed at reducing the long term vulnerability to drought, by means of improving soil fertility and moisture retention,

⁴¹ Ibid.

⁴² Ibid.

⁴³ No. 4 of 2012.

⁴⁴ USAID (2014:6).

⁴⁵ Mendelsohn (2006:10).

⁴⁶ See http://www.indexmundi.com/namibia/gdp_composition_by_sector.html; accessed 20 November 2015.

⁴⁷ Seely / Montgomery (2009:98ff).

⁴⁸ GRN (2014d:15).

⁴⁹ MAWF (2014:8).

⁵⁰ GRN (1995c:para. 21).

which is only attainable by means of sustainable farming methods. In this light, the Regional Planning and Development Policy of 1997 promotes strategies such as controlled grazing cycles.⁵¹ However, some measures envisaged in the Drought Policy, such as the subsidy on fodder, have contradicted this objective.⁵²

The successful implementation of the Dry Land Crop Production Programme by the MAWF has aided in increasing food production and security in Namibia.⁵³ Ongoing research into crops which are adapted to Namibia's climate are clear indications of active steps taken to promote sustainable farming practices.⁵⁴ The MAWF has also been collaborating with the FAO, the Namibian Organic Association and the French National Institute for Agricultural Research, to continue research concerning sustainable farming in Namibia.⁵⁵

Case Study: Berg Aukas

The preservation of soil as a natural resource within Namibia is imperative in light of the large reliance on agriculture by great parts of the population.⁵⁶ Soil degradation can take place in various ways, such as desertification due to climatic influence, soil contamination due to industrial impacts and due to unsustainable farming practices.⁵⁷ In Namibia, the agricultural use of land, commercially and communally, is widespread. Even though many commercial farmers are able to mitigate negative impacts by means of rotational grazing and continuous monitoring, these opportunities do not generally exist for communal farmers.⁵⁸

The impact of closed mines has to be taken into account as well, in light of the fact that many abandoned mine sites occupy land in Namibia. The subsequent soil contamination and its influence on continued use of the land for residential and agricultural purposes, is clearly illustrated by a recent study of soil surrounding the abandoned ore processing site at Berg Aukas.⁵⁹ The site at Berg Aukas served as a mine and roasting site until 1979.⁶⁰ During the course of the study, the National Youth Service uses the area for residential purposes, as an agricultural vocational school and parts of the area are being used for agricultural purposes.⁶¹

Impacts on Water and Soil

Analysis of the water and soil was undertaken during the course of the study. The results of the water analysis overall showed that no material health risk was present, except at three boreholes.⁶² Overall, the groundwater quality has not been impacted significantly and the only contamination flowed from water which was pumped directly from the old mine shafts.

⁵¹ GRN (1995c).

⁵² The fodder subsidy has been criticised for leading to unsustainable farming practices, since its inception. See Vigne / Whiteside (1997:51).

⁵³ MWAF (2014:18).

⁵⁴ MAWF (2014:41).

⁵⁵ See <http://www.fao.org/africa/news/detail-news/en/c/296655/>; accessed 20 November 2015.

⁵⁶ Mendelsohn (2006:10).

⁵⁷ GRN (2014d:23ff.).

⁵⁸ Ibid:28. They are generally restricted by the size of the land allocated to them as well as with regards to the technical knowledge and fiscal means.

⁵⁹ The case study will form the basis for the discussion in this section. See Mapani *et al.* (2009:25).

⁶⁰ Ibid. The ore contained lead, vanadium and zinc.

⁶¹ Ibid:26. The agricultural land is an experimental crop farm.

⁶² Ibid:27.

However, the results of the soil analysis show severe adverse impacts. The soil sampling was undertaken in a comprehensive manner,⁶³ which ensures the reliability of the results. In the area of former mining and processing, high levels of arsenic were detected.⁶⁴ Elevated concentration of Cadmium encircled the whole area of Berg Aukas, and is concluded to have been caused by emissions from the roasting of ores. Extreme contamination of soil by lead can be found in selected areas, such as in an area of 800m x 600m located in the central and southwestern part of Berg Aukas.⁶⁵

However this contaminated soil is where the central part of the National Youth Service was located. According to German Guideline Values used in the study, these areas are unsuitable for residential purposes as such lead contamination is hazardous to one's health. This contamination was likely caused by tailing material having been spilled and such material, in addition to slag, having been used for road construction.⁶⁶

Slightly elevated levels of mercury were also found.⁶⁷ However, the most severe contamination is attributed to zinc contamination originating from the former smelting area.⁶⁸

The agricultural products grown at the National Youth Service site was also tested, and the values found exceeded the WHO limits for food.⁶⁹

Conclusions reached by the study

The study overall found that severe contamination occurred in the sites previously used for processing of the ores, including smelting and roasting processes. The contaminants were further spread by wind erosion and other natural processes, which led to a larger contaminated area around Berg Aukas.⁷⁰ It is concluded that persons living and working in this area face health risks from being continuously exposed to the contaminated area.⁷¹ The study classifies the severely contaminated area as a high hazardous risk zone, and recommends the site should not be used for further industrial, residential or agricultural developments.

Remediation possibilities spelt out include rehabilitation of the soils by means of covering top soils with organic matter, the removal and proper disposal of contaminated soils and reprocessing of soil where the contamination penetrated deeply into the soil horizon.⁷² In light of this study, the area was also evacuated by the Ministry of Mines and Energy and relocated to a safer area. The Ministry is further tasked with ensuring remedial action is monitored.

Future use?

In 2014, a preliminary feasibility study was published by China Africa Resources, for the "Berg Aukas Project".⁷³ Apart from extensive research into the financial and geological viability of reopening the mine, the study as discussed above was also shortly addressed.⁷⁴ It

⁶³ Ibid:28.

⁶⁴ Ibid:29.

⁶⁵ Ibid:30. The concentrations varied from 10,000 ppm, with a further 1 km halo surrounding this area in which concentrations between 400 and 10,000 ppm were measured.

⁶⁶ Ibid:32.

⁶⁷ With a maximum concentration of 9.6 ppm.

⁶⁸ Ibid:32. The value vary between 107,000 and 377,000 ppm.

⁶⁹ Ibid:33. The values of arsenic, lead and zinc were primarily evaluated.

⁷⁰ Ibid:34.

⁷¹ The health risks arise form inhalation and ingestion of dust and crops grown in the area.

⁷² Ibid:35.

⁷³ China Africa Resources (2014).

⁷⁴ Ibid:79.

was observed that no remediation or re-arrangement for land usage was undertaken after the National Youth Service was evacuated. However, in compliance with the legal framework regarding mines, Environmental Impact Assessments and Environmental Management Plans will have to be formulated if this mine is to become operational.⁷⁵ Currently, the final feasibility study is in the process of being initiated.⁷⁶

5 Land and Agricultural Policies

A number of policies impact on land and agriculture in general and they do have provisions dealing with environmental protection. These policies include the National Agricultural Policy, the National Drought Policy and Strategy, and the Namibia Forest Development Policy. To ensure environmental protection these policies promote Community-Based Natural Resources Management (CBNRM). This means that the role of the Government is limited to regulatory functions and the provision of technical support that will enable farmers to improve their capacity to manage resources more effectively. The Government provides the necessary fiscal and administrative support under these policies, while the farmers do the groundwork of managing their land and agricultural resources. However, issues such as bush encroachment require collaborative effort.

5.1 Land-use Planning: Towards Sustainable Development

This policy document drafted by the Ministry of Environment and Tourism in 1994 defines five physiographic land forms: Communal state land; privately-owned commercial farmland; proclaimed state land; urban areas; and wetland systems, including their catchment areas. The policy emphasises sustainability of natural resources, biodiversity and essential ecological processes.

5.2 The National Land Policy

The National Land Policy drafted in 1998 is based on constitutional principles and on the national commitment to redress the social and economic injustices inherited from Namibia's colonial past. The policy calls for the establishment and proclamation of urban areas as townships and municipalities and strives to promote decentralisation and community involvement. This policy proposes financial and tax incentives for the protection and rehabilitation of natural environments (e.g. planting of indigenous trees and using alternative energy to reduce rates of deforestation and pollution). It states that, in accordance with Article 95(1) of the Constitution, the policy will promote environmentally sustainable land use, and goes further to state that failure to demonstrate environmental sustainability may be grounds for the denying or termination of a title.

One of the aims of this policy is to establish a Land Use and Environmental Board (LUEB) to promote environmental protection and contribute towards coordinated planning and management at national and regional levels. This LUEB shall ensure that environmental protection is promoted in order to guarantee environmental, social and economic sustainability.

⁷⁵

Ibid:80.

⁷⁶

See

http://www.lse.co.uk/AllNews.asp?code=mjh0foc8&headline=UPDATE_China_Africa_Resources_Loss_Narrows_Focus_On_Berg_Aukas_Mine; accessed 20 November 2015.

5.3 The National Resettlement Policy

This policy provides for resettlement, which is institutionally, socially, economically and environmentally sustainable and will enable the beneficiaries to become self-supporting, in accordance with the basic objectives of the Government.

5.4 The National Land Tenure Policy

The policy covers all land tenure systems in urban, communal, commercial (freehold) and resettlement areas and is intended to guide all land tenure rights in Namibia. The policy promotes sustainable utilisation of the nation's land and other resources, provides a way to regulate different land tenure right systems, provides secure tenure for informal urban settlers, farm workers and occupiers (those who have been employed less than ten years on a single farm and do not have secure tenure elsewhere), and provides guidelines on compensation for occupiers of expropriated land. In keeping with the National Agricultural Policy (1995), the policy recognises the environmental limitations of a country as dry as Namibia.

5.5 The National Agricultural Policy

The National Agricultural Policy of 1995 provides an enabling environment for increased food production by smallholder producers, as a means of improving employment opportunities, incomes, household food security and the nutritional status of all Namibians. In terms of the National Agricultural Policy, long-term or continuing subsidies will be avoided. However, the policy still allows for the possibility that well-targeted subsidies can play an important part in achieving short-term agricultural and socio-economic objectives. There is an apparent need for a well-formulated policy to provide for the management of the savannahs, whether on commercial or communal land. Such a policy has to create a socio-economic environment that provides incentives for farmers to improve the productivity of their pastures by controlling intruder bush and preventing re-infestation in an environmentally sustainable way.⁷⁷ At the same time, improved pasture management practices need to be encouraged to minimise the risks of future land deterioration.⁷⁸

The National Agricultural Policy regards land degradation as a serious problem and recognises that water resources in Namibia are limited and that growth within the agricultural sector should not be at the expense of the natural environment. Furthermore, it encourages the use of Environmental Impact Assessments for agricultural projects and proposes a review of legislation related to the use of agrochemicals. The aims of the National Agricultural Policy are largely economic and focus on increasing agricultural productivity and real farm income as a contribution to national and household food security. It recognises the limitations imposed by the Namibian climate and soils and seeks to promote sustainable utilisation of the land and other natural resources within the context of a vulnerable ecosystem. Potential problems such as deforestation, soil erosion, bush encroachment and over-grazing are addressed.

5.6 The Green Scheme Policy

The Green Scheme Policy of 2003 (GSP)⁷⁹ makes provision for several irrigation projects to be commenced in Namibia.

⁷⁷ Groenewaldt (2008).

⁷⁸ Ibid.

⁷⁹ Text available at <http://www.iwrm-namibia.info.na/downloads/green-scheme-policy---final1.pdf>; accessed 16 November 2015.

The Green Scheme is an initiative conducted by the Ministry of Agriculture, Water and Rural Development to encourage the development of irrigation based agronomic production in Namibia with the aim of increasing the contribution of agriculture to the country's Gross Domestic Product and to simultaneously achieve the social development and upliftment of communities located within suitable irrigation areas, but to also promote the human resource and skills development within the irrigation sub-sector to possibly enhance cross-border investment and facilitate the exchange of relevant and limited resources with neighbouring countries in this regard.⁸⁰

The policy emphasises environmental impacts assessment requirements and water pricing methods. However, the implementation has been haphazard and marked by several obstacles. These are most markedly the potential loss of biodiversity if the project is expanded as planned. The GSP has further been criticised for over-emphasising the potential behind irrigation schemes to become the driving force behind agricultural production, in spite of the fact that Namibia is one of the driest countries south of the Sahara.⁸¹

5.7 The National Drought Policy and Strategy

The National Drought Policy and Strategy of 1997 shifts the onus of drought management from Government aided relief to appropriate farming techniques aimed at empowering farmers to better cope with droughts themselves. Although incentives such as the Forum for Integrated Resource Management (FIRM) promotes this actively in communal areas that participate in the National Programme to Combat Desertification (NAPCOD⁸²) recent responses to crop failures in the north and north east have again reverted to relief programmes. Drought preparedness is one of the important aspects of sustainable resource use and strongly advocated in activities of conservancies elsewhere in the country.

5.8 The Regional Planning and Development Policy

This policy drafted in 1997 under the supervision of the National Planning Commission acknowledges trends of increasing degradation of pastures, rangelands and woodland and gives attention to soil, water and forest management as development tools. It promotes strategies such as soil conservation and controlled grazing cycles.

6 Land and Agriculture Related Legislation

6.1 The Environmental Management Act No. 7 of 2007

Although the Environmental Management Act (EMA) does not include any provisions relating specifically to soil protection and management, the definition of environment in Section 1 does include references to "land" and "all organic and inorganic materials". Furthermore, in Part VII relating to Environmental Assessment, the listed activities which require an environmental clearance certificate to be issued before such activities can be undertaken, include land use and transformation; resource renewal; agricultural processes; waste and sewage disposal as well as any other which the Minister considers necessary for the purposes of listing. These activities can generally relate to soil management and protection, and requiring environmental clearance certificates provides a valuable protection mechanism in this context.

Section 48 in Part IX further allows for the Minister to introduce legislation or make such regulations which give effect to international agreements to which Namibia is a party to. The

⁸⁰ Green Scheme Policy para. 1.1.5.

⁸¹ See GRN (2005b:12).

⁸² Bethune (2003).

provision goes on to list areas which can be covered by such legislation and regulations. To date, no regulations relating specifically to soil and related activities or agreements have been promulgated.

6.2 The Communal Land Reform Act No. 5 of 2002

The Communal Land Reform Act provides for the allocation and administration of all communal land in the areas described in the first schedule to this Act or in any area declared to be communal land under Section 16(1)(a). The Minister is obliged to establish Communal Land Boards to perform the functions conferred on such a board by the Act within the area for which each board is established. The boards are to exercise control over the allocation and the cancellation of customary land rights by chiefs or traditional authorities. They have to consider and decide on applications for the right of leasehold, establish and maintain a register and a system of registration of customary land rights and leasehold rights, and give advice to the Minister.

The Act makes provision for the prevention of land degradation and for mitigating the impacts of mining, prospecting, road works and water provision. It provides for certain rights to communal farmers and traditional authorities and representation on Communal Land Boards. Of note is the provision of Communal Land Boards, with representation of officials from the Ministry of Environment and Tourism and the Ministry of Agriculture, Water and Forestry as well as representatives from any of the conservancies.

The President of Namibia may declare non-alienated state land to be a communal area. Communal areas are vested in the state, in trust, for the benefit of the traditional communities residing in those areas and for the purpose of promoting the economic and social development of the people of Namibia, especially the landless and those with insufficient access to land. Customary land rights are to be allocated upon application for a limited period. Only specific customary land rights may be allocated in respect of communal land, and size limits are imposed.

The Act also provides for the recognition of existing customary land rights, and the granting of a right of leasehold for agricultural purposes or a right of grazing on communal land. The Act makes provision for the prevention of land degradation and, therefore, indirectly contributes to the preservation of biological diversity. Fundamental environmental provisions of the Act refer to the allocation of customary land rights. If a land right is being used predominantly for a purpose not recognised under customary law, customary land rights may be cancelled according to Section 27 of the Act. Furthermore, special provisions are made with regard to grazing rights. A chief or traditional authority is vested with the power to prescribe conditions relating to the kind and number of stock that may be grazed on communal land, as well as to the section or sections of the commonage where stock may be grazed, and the grazing in rotation on different sections. This provision, in particular, ensures the sustainable use of grasses and herbs.

Section 45 of the Act addresses issues pertinent to the conservation and sustainable management of certain natural resources. The Minister may make regulations in relation to watercourses, woods and the use of water (Section 45(g)) and to the combating and prevention of soil erosion, the protection of the pastoral resources and the limitation and control of the grazing of stock.

6.3 The Soil Conservation Act No. 76 of 1969

The Communal Land Reform Act 5 of 2002 specifically refers to the Soil Conservation Act (The Soil Act), and as such makes it clear, that this Act remains applicable in Namibia. The

Soil Act gives wide ranging powers to the Minister. These include powers to issue directives relating to the cultivation of land,⁸³ the management of water and drainage,⁸⁴ in addition to the protection and stabilisation of soil surfaces.⁸⁵

The Act makes provision for the prevention and control of soil erosion and the protection, improvement and conservation of soil, vegetation and water supply sources and resources. Although the jurisdiction of the original Act was limited to commercial land, the recent Communal Land Reform Act of 2002 specifically mentions it and requires compliance in terms of conservation and prevention of soil erosion (Clause 31), implying that these measures apply to communal land areas too.

The Act provides for the construction and maintenance of soil conservation works, at the discretion of the Minister.⁸⁶ The costs of such construction may be attributed to the state or to owners of such land.⁸⁷ Furthermore, the Act empowers the Minister to carry out soil conservation for the purposes of research or demonstrations,⁸⁸ subject to the land owner's consent.

The Soil Conservation Committees as provided for in Part III of the Act are generally appointed for certain areas, and act in an advisory capacity to the Minister.⁸⁹ Even though this discretion exists, the Ministry does not seem to currently have such a committee in session.

A wide power to expropriate land is given to the Minister in terms of Section 18. It is stated, that expropriation may be required for the prevention of soil erosion and stabilisation of land, as well as prevention of drift-sand and protection of catchment areas.⁹⁰

One of the enforcement mechanisms for compliance is set out in Section 21, which provides for penalties in the instance of non-compliance. This conduct is further criminalised as an offence which can be punishable by a fine or imprisonment.⁹¹

One of the biggest obstacles which hinder effective soil conservation in Namibia is the fragmentation of responsibilities relating to soil. Even though the Soil Conservation Act remains in force in Namibia, its implementation is haphazard, with Soil Boards not being operational, and duties having been delegated across directorates and ministries.⁹²

6.4 The Agricultural (Commercial) Land Reform Act No. 6 of 1995

Approximately 36.2 million hectares, representing 44 percent of the total land area or 52 percent of agriculturally utilisable land, continue to be held under freehold title. This land is commonly referred to as the commercial farming sector and it is regulated mainly by the Agricultural (Commercial) Land Reform Act of 1995. This Act, as its preamble states, was passed to provide for the acquisition of agricultural land by the state for the purposes of land reform and for the allocation of such land to Namibian citizens who do not own or otherwise have the use of any or of adequate agricultural land, and foremost to those Namibian citizens who have been socially, economically or educationally disadvantaged by past discriminatory

⁸³ Section 3(1)(a).

⁸⁴ Section 3(1)(c), (d), (f).

⁸⁵ Section 3(1)(e), (g) and (h).

⁸⁶ Part II of the Act.

⁸⁷ Section 7(2).

⁸⁸ Section 8.

⁸⁹ Section 9 (1) and Section 10.

⁹⁰ Section 18(1).

⁹¹ Section 21(1).

⁹² See LAC (2009).

laws or practices. The Act vests in the state a preferential right to purchase agricultural land and it empowers the state to compulsorily acquire certain agricultural land for the purposes of land reform. It also regulates the acquisition of agricultural land by foreign nationals and establishes a Lands Tribunal to adjudicate disputes that may arise in land matters.

6.5 In the Pipeline: The Land Act

In 2007, a process of reviewing and amending the Agricultural (Commercial) Land Reform Act⁹³, and the Communal Land Reform Act⁹⁴, into one Land Act was started. Although this process had been finalised in cooperation with relevant stakeholders,⁹⁵ a respective Bill has not gone to Parliament.

6.6 The Agricultural Pests Act No. 3 of 1973

This Act deals with the registration of nurseries, the control and eradication of plants, insects and diseases at nurseries, the control and eradication of exotic (vertebrate) animals (excluding farm animals) and plants infected by insects or plant diseases, control of plant, insect and plant disease imports, honey bees, honey and exotic animals, the eradication of plant diseases, insects and locusts, as well as defining the powers of inspectors. It is essentially aimed at preventing the introduction and spreading of plants, insects, non-farming exotic vertebrates and diseases that may prove detrimental to the agricultural sector. Section 9 provides for the destruction of exotic animals as well as any plants infected by insects or disease. Section 11 serves to regulate plant and exotic animal imports, prohibiting the import of plants, insects, plant diseases, honey bees, honey, beeswax or exotic vertebrates without permits, whilst Section 12 allows the importation of biological control agents needed for the control or eradication of weeds and pests. There is potential to amend this Act to incorporate a wider spectrum of alien invasive species and make use of the existing measures of inspection and enforcement administered jointly by Customs and Excise and the Phytosanitary Section in the Ministry of Agriculture. This Act will be repealed by the new Plant Quarantine Act⁹⁶ although any permits issued under Section 11(1) that are in force at the commencement of the new Act will remain valid and deemed to be permits as specified in Section 4(1).

⁹³ No. 6 of 1995.

⁹⁴ No. 5 of 2002.

⁹⁵ GRN (2012d:7).

⁹⁶ No. 7 of 2008.

II. LAND USE PLANNING AND THE ENVIRONMENT

Felicity F. !Owoses-/Goagoses

1 Introduction

Unsustainable land management practices have been identified as one of the threats to the environment in Namibia.¹ The manner in which land is used has an effect on the environment. Thus, sustainable land management is an important tool to promote environmental management² and sustainable development. Sustainable land management is the forefront of both academic debates and institutional concerns as many jurisdictions are rethinking and reshaping their existing land use planning systems in an effort to align them to sustainable development. The question is whether Namibia's existing policy, legislative and institutional frameworks on land use planning are functioning and whether these frameworks are geared toward sustainable development.

It is from this premise that this chapter revisits the existing land use planning system in Namibia. The chapter discusses the concept of land use planning from a developmental perspective. It further outlines the current land use planning policy, legislative and institutional frameworks in Namibia. Furthermore, the chapter discusses sectoral aspects of land use planning in the context of town planning and the coastal zone.

2 The Concept of Land Use Planning

Land use planning is concerned with principles of planning as well as law.³ While law is concerned with people and regulation of society, land use planning is concerned with people and regulation of environment.⁴ This interrelationship between land use planning and law is demonstrated throughout this chapter.

Sustainable development is the focus of the current approaches to land use planning and land management. The Food and Agriculture Organization (known as FAO) refers to the following definition of land:

Land is a delineable area of the earth's terrestrial surface, encompassing all attributes of the biosphere immediately above or below this surface including those of the near-surface, climate, the soil and terrain forms, the surface hydrology (including shallow lakes, rivers, marshes, and swamps), the near surface sedimentary layers and associated groundwater reserve, the plant and animal populations, the human settlement pattern and physical results of past and present human activity (terracing, water storage or drainage structures, roads, buildings, etc.).⁵

In terms of the above definition of land, land does not merely relate to the biophysical cover of land, but is an interrelationship between the land, plant, animal and human life on it.

On the other hand, land use refers to the function of land or what the land is used for. These uses include residential, business, institutional, industrial, agricultural, tourism, forestry, parks,

¹ GRN (2010a).

² Kidd (2011:209).

³ Meyer (1987:4); Van Wyk (2012:12).

⁴ Van Wyk (2012:12).

⁵ FAO (1995).

conservancies, wildlife, mining, farming, transport and so on. Land uses may vary depending on the area to which it relates, as such land uses in urban areas and rural areas may differ. Land use patterns are often influenced not only by biophysical factors, but also by cultural, institutional and political aspects as well as demographics and economic dynamics.⁶ Often some of the functions of land have to be provided for by the same piece of land and certain functions of land require or depend on other functions, as illustrated below.

Forest land use might have several economic, environmental and societal functions such as provision of wood for forestry and/or for renewable energy, have a recreational function, be part of a cultural landscape, regulate the supply of air, water and minerals, support biodiversity in the form of landscape cohesion and maintain ecosystem processes.⁷

It is this dynamics in land uses that can lead to land use conflicts and – if land uses are not managed – can lead to environmental degradation and even hamper development.

On the other hand the term ‘planning’ has different undertones depending on the context in which it is used. The word planning as derived from the noun ‘plan’, means a formulated or organised method according to which something is to be done.⁸ Within the planning fraternity the term ‘planning’ has acquired a distinct meaning and is equated with the control and regulation of the use of land.⁹ A functional definition of planning links planning to a set of procedures, tools and instruments which are used to design and make decisions about what is to be done in the future.¹⁰ This leads to the question, what is land use planning?

In terms of the FAO guidelines¹¹ land use planning is the systematic assessment of land and water potential and alternatives for land use and economic and social conditions in order to select and adopt the best land-use options. A developmental perspective on land use planning views it as a cross-sectoral and integrative decision-making process that facilitates the allocation of land uses that give the greatest sustainable benefit.¹²

Land use planning and land management are often seen as two separate concepts, but land management is in itself an integral part of land use planning. Land management, more particularly sustainable land management is

the use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions.¹³

Some of the benefits of land use planning are the following:

- It can be used to minimise land degradation, rehabilitate degraded areas and to ensure optimal use of land resources for present and future generations.¹⁴
- It can be used to improve the well-being of the people. In this sense, sustainable land management can be used as a tool for poverty eradication amongst others.¹⁵

⁶ e Silva (2011:69).

⁷ Ibid:80.

⁸ Van Wyk (2012:12).

⁹ Ibid:1.

¹⁰ Haubt (2009).

¹¹ FAO (1993).

¹² Haubt (2009); GIZ (2011); Van Wyk (2012:57); Becker (2013:1).

¹³ FAO (2015).

¹⁴ FAO (1993).

- Legally binding land use plans prepared in a participatory manner can prevent land grabbing, in cases where such plans address land tenure issues.¹⁶
- Land use planning can also be used as a forum for solving land use conflicts.¹⁷

3 Environmental Aspects of Land Use Planning

Land use planning, development and the environment are interrelated.¹⁸ Land itself is a component of the environment, thus the manner in which land is used impacts the other interrelated aspects of the environment such the people, the animal and plant life.

It has been emphasised in the case of *Fuel Retailers Association of Southern Africa v Director-General: Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province and Others*,¹⁹ that the environment and development are inexorably linked:

But development cannot subsist upon a deteriorating environmental base. Unlimited development is detrimental to the environment and the destruction of the environment is detrimental to development. Promotion of development requires the protection of the environment. Yet the environment cannot be protected if development does not pay attention to the costs of environmental destruction. The environment and development are thus inexorably linked. And as has been observed -

“(E)nvironmental stresses and patterns of economic development are linked one to another. Thus agricultural policies may lie at the root of land, water, and forest degradation. Energy policies are associated with the global greenhouse effect, with acidification, and with deforestation for fuelwood in many developing nations. These stresses all threaten economic development. Thus economics and ecology must be completely integrated in decision making and lawmaking processes not just to protect the environment, but also to protect and promote development. Economy is not just about the production of wealth, and ecology is not just about the protection of nature; they are both equally relevant for improving the lot of humankind.”

Environmental considerations in land use planning have taken forefront, both internationally and domestically. On the international level, the principles of sustainable land management²⁰ and environmental impact assessment²¹ were developed as tools for environmental management. Both these principles require that environmental considerations must guide decisions affecting land use. Domestically, environmental considerations in land use planning and land development are addressed by various policies, plans and legislation.

Under common law environmental considerations were not addressed in decisions concerning land use planning.²² With the adoption of the Constitution in 1990 and the enactment of subsequent legislation dealing with or impacting land use, environmental considerations were built into legislative frameworks. Some of the legislation affecting land use and which have incorporated environmental considerations in land use are: the Minerals (Prospecting and

¹⁵ GIZ (2011).

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Principle 25 of Rio Declaration on Environment and Development. Van Wyk (2012:410). Kidd (2011:209).

¹⁹ CCT67/06 [2007] ZACC 13; 2007 (10) BCLR 1059 (CC); 2007 (6) SA 4 (CC) (7 June 2007) para 44.

²⁰ FAO (2015).

²¹ Principle 17 of the Rio Declaration.

²² Kidd (2011:209).

Mining) Act No. 33 of 1992, the Petroleum Products and Energy Act No. 13 of 1990, the Aquaculture Act No. 18 of 2002, the Water Resources Management Act No. 11 of 2013, and the Forest Act No. 12 of 2001. In 2007, Parliament enacted the Environmental Management Act No. 7 of 2007 as the overarching legislation that requires environmental assessment of activities listed in terms of it, some of which are activities related to land use. Since not all activities are listed in terms of the Act, sector or industry specific legislation requiring environmental consideration remains necessary.

4 Planning Levels

Land use planning takes place at different levels of Government; namely the national, regional and local level. Within these levels of Government various functionaries have different but interrelated and often overlapping powers and functions in respect of land use planning. These powers and functions are in most cases dictated by the policy, legislative and institutional frameworks of the jurisdiction concerned.

5 Land Use Plans

Land use planning takes place through policy plans and in terms of legislation.

On the policy level, land use plans are usually presented in the form of a document or report which sets out the planning area, the responsible authority, the available resources, the maps and statistics relating to the planning area, the specific land uses and alternative uses.²³ These plans take the form of land development objectives, integrated development plans and spatial development frameworks,²⁴ amongst others.

On the legislative level land use planning takes place through statutory instruments.²⁵ Legislation often prescribes the nature and content of the plan as well as the procedure for preparation and adoption and amendment of the plan concerned. Land use plans commonly prescribed by way of legislation include forest plans, structure plans and town planning schemes.

6 The Land Use Planning Process

The land use planning process can be triggered by a number of factors such as conflicts in land uses, urban development, rural development, environmental damage or natural resource degradation.²⁶

Land use planning does not necessarily take place in terms of predefined stages or steps, but is an iterative and cyclical process in terms of which the different stages are revisited in order to adapt the plan concerned to changing circumstances.²⁷ The five common stages²⁸ in the land use planning process are: the organisational stage; the analytical stage; the planning stage; the decision making stage; and the implementation stage.²⁹

During the organisational stage, the institution or body that will organise, steer and guide the entire planning process is identified.³⁰ At this stage the planning area as well as the responsible

²³ FAO (1993); Haubt (2009).

²⁴ Van Wyk (2012:246).

²⁵ Ibid.

²⁶ GIZ (2011); Haubt (2009).

²⁷ GIZ (2011).

²⁸ There can be fewer or more stages. See FAO (1993).

²⁹ GIZ (2011); Haubt (2009); FAO (1993).

³⁰ Haubt (2009).

authority are identified. Furthermore, stakeholders and interested parties to be consulted are identified, notified and consulted.³¹

During the analytical stage, information data and information in the form of maps, statistics and maps are identified, collected and analysed.³² This information relates to present land uses of the area, topographic references and administrative boundaries of the area as well as the population and legislation that will affect a particular land use.³³

During the planning stage, a range of reasonable combinations of land uses are identified as well as alternatives for future-oriented changes and the best option is chosen.³⁴ Stakeholders and interested and affected parties are consulted regarding proposed changes and scoping is carried out to avoid negative impact on the environment. The purpose of the planning stage is to make sure that the proposed changes are in line with existing policies and laws.³⁵

During the decision making stage, decisions are taken as to the selected land uses for designated areas as well as the legislation to be complied with to give effect to the land use plans. At this stage, the land use plan is prepared and presented to the relevant body for approval in order to be binding.³⁶

The implementation stage refers to the realisation of the land use plan. During this stage the plan is implemented according to agreed timelines and responsibilities as well as available resources.³⁷ In order to be effectively implemented, a land use plan needs to have a binding effect.³⁸

7 Approaches to Land Use Planning

The top down approach to land use planning has been criticised as being often non-participatory and unresponsive to changes.³⁹ The top down approach to land use planning refers to centralised planning, carried out largely by technical teams on the national level. The plans are then passed on to local levels for implementation.⁴⁰ The bottom up approach is where land use plans are based on local decision levels and integrating them in the next higher planning levels.⁴¹

The FAO⁴² proposes an integrative approach to land use planning which is constitutive of participatory and comprehensive cooperation between all institutions and groups at national, provincial and local levels, meaning all parts, partners or stakeholders that relate to and deal with land resources planning and the management of such planning. The FAO also acknowledges that successful land uses planning system is dependent on the willingness and cooperation of the actors involved to continuously discuss and find solutions to conflicting demands on land uses.⁴³

³¹ Ibid.

³² Ibid.

³³ Ibid.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Ibid.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² FAO (1995).

⁴³ Ibid.

8 Current Land Use Policy and Legislative Framework

8.1 Land Use Planning Approach

Since Namibia gained Independence in 1990, various discussion documents,⁴⁴ policies and sectoral plans relating to land use planning have been prepared and in some cases been approved by Cabinet or the institution concerned.⁴⁵

Namibia is following an approach of integrated land management and integrated ecosystem management.⁴⁶ The country is praised for having pursued one of the most progressive wildlife and natural resources management approaches worldwide.⁴⁷ Most notable efforts towards sustainable land management are the conservancy programme by the Ministry of Environment and Tourism, the community forest management by the Ministry of Agriculture, Water and Forestry, and fish farming activities by the Ministry of Fisheries and Marine Resources.⁴⁸

Despite these efforts, the major issues that still present a threat to the environment in Namibia are:

- Unsustainable land management practices;⁴⁹
- conflicting land use allocations and uncontrolled land use patterns;⁵⁰
- the absence of structured overall planning system in Namibia, conflicting and unclear policies, legislation and responsibilities;⁵¹ and
- land use plans that are not binding and as a result lack implementation and are not respected.⁵²

It has been echoed that Namibia is in need of a uniform and harmonised land use planning system as well as collaborative implementation.⁵³

8.2 Legislative and Policy Framework on Land Use Planning

Namibia inherited the land use planning system which prevailed in South Africa during the South African administration of South West Africa as Namibia was known.⁵⁴ The two features that informed land use planning system in South Africa were:

- Race, since land was divided and allocated on racial lines; and⁵⁵
- a planning system based on old British systems of planning, which had strong emphasis on physical planning with little or no regard for economic and social considerations.⁵⁶

⁴⁴ GIZ (2011); Haubt (2009); Jones (2009); Raith (2011); Zeidler (2008).

⁴⁵ Ibid.

⁴⁶ Zeidler (2008).

⁴⁷ Ibid.

⁴⁸ Haubt (2009).

⁴⁹ GRN (2010a).

⁵⁰ GIZ (2011).

⁵¹ Haubt (2009); GIZ (2011); Jones (2009).

⁵² GIZ (2011).

⁵³ Haubt (2009); GIZ (2011).

⁵⁴ LAC (2010); !Owoses-/Goagoses (2013:19-29).

⁵⁵ Van Wyk (2012:1).

Namibia inherited this planning system when the planning laws and administration of those laws were transferred to South West Africa during the period 1977 to 1979 by various Administrator-General transfers' proclamations.⁵⁷ With the adoption of the Namibian Constitution in 1990, these laws continued to be in force until amended or repealed by Parliament.⁵⁸ Since Independence in 1990, Namibia faces the challenges of rectifying the injustices in the land use planning system as well as developing a sound sustainable land use planning system that is adapted to the changing circumstances. The question is what principles guide land use planning systems and processes in Namibia. These principles are informed by both, principles of land use planning and the law.

On the policy level, Vision 2030, and the National Development Goals as well as several national policies inform the country's land use planning framework.⁵⁹

Land use planning principles⁶⁰ contained in international agreements binding on Namibia⁶¹ as well generally accepted principles of public international law also shape the country's land use planning system.

The first principle of land use planning is the principle of sustainability.⁶² This principle echoes that land use practises must be sustainable, meaning, that they meet the needs of the present generation while, at the same time, conserving resources for future generations.⁶³ The second is the principle of environmental protection, which echoes that environmental protection constitutes an integral part of and should inform the development process.⁶⁴ Third is the principle of equitability. In terms of this principle development must equitably fulfill the developmental and environmental needs of present and future generations.⁶⁵ Fourth is the principle, that land use practices must be developed taking into account the developmental opportunities and challenges of the area concerned.⁶⁶ Fifth is the principle of public participation,⁶⁷ this principle is concerned with involvement and participation of all persons at the relevant planning level and also that all persons should have access to information on environment. Sixth is the principle of environmental impact assessment,⁶⁸ which requires that assessment be undertaken of proposed policies and activities which may impact the environment in order to minimise environmental damage. Seventh is the precautionary

⁵⁶ Ibid; Silva (2015:75-76).

⁵⁷ !Owoses-/Goagoses (2013:19-29).

⁵⁸ Article 140.

⁵⁹ Policies such as the National Land Policy 1998, the National Agricultural Policy of 1995, the National Coastal Management Policy 2012; the National Policy on Resettlement 2001; the National Forest Policy, the Agriculture policy and National Drought Policy of 1997, the National Policy on Climate Change in 2011, the National Housing Policy 1991 as reviewed in 2009.

⁶⁰ Haubt (2009).

⁶¹ Namibia has agreed to several environmental agreements; among the most notable are the Banjul Charter on Human and Peoples' Rights with its Article 24 on the right to a satisfactory environment, the Stockholm Declaration, the United Nations Convention on Climate Change and the Kyoto Protocol, the Convention on Biodiversity and the Rio Declaration.

⁶² Principle 1 of the Rio Declaration.

⁶³ FAO (1993).

⁶⁴ Principle 4 of the Rio Declaration.

⁶⁵ Principle 3 of the Rio Declaration.

⁶⁶ Principle 11 of the Rio Declaration.

⁶⁷ Principle 10 of the Rio Declaration.

⁶⁸ Principle 17 of the Rio Declaration.

principle,⁶⁹ which echoes that serious threats to the environment be identified and minimised as earliest as possible. Eight is the polluter pays principle⁷⁰ which echoes that those responsible for damage to the environment pay for the cost for rehabilitating the environment or for the damage. Ninth is the principle of preserving the traditional knowledge and culture of indigenous people,⁷¹ meaning that land use practices must have regard to traditional land use practices. The principles stated here are not conclusive but constitute the core principles that must underpin a country's land use planning system.

On the statutory level, the Constitution is the basic norm that must guide the current land use planning system in Namibia. The first principle to inform land use planning in Namibia is contained in the preamble of the Constitution. The preamble echoes that Namibia's land use planning system should address and correct imbalances created by past land practises. Also at the forefront of constitutional norms and principles relevant for land use planning are the democratic values, which are the rule of law, equality and justice,⁷² which must inform the land use planning system developed and implemented by Namibia. The Constitution also guarantees rights and freedoms, such as the right to equality before the law,⁷³ the right to life⁷⁴ and dignity,⁷⁵ the right to property,⁷⁶ the right to culture⁷⁷ and freedom of speech⁷⁸. These rights translate into the right of people to participate and voice their opinions and to give input during the land use planning process. The Constitution also echoes the principle of sustainable development in Article 95 on the promotion of the welfare of the people. This principle, which is also contained in international agreements binding on Namibia, imposes an obligation on the Government to develop a sustainable land use planning system. Also important is the principle of administrative justice⁷⁹ which demands that planning administration must act fairly and reasonably and comply with principles of administrative justice when making decisions related to land use planning. Furthermore, the Constitution echoes that planning policies and legislation must not infringe on rights and freedoms guaranteed by the Constitution⁸⁰ and must observe the limitations set out in the Constitution.⁸¹

Namibia is in need of legislation that sets out principles to guide land use planning in Namibia. The Environmental Management Act No. 7 of 2007 sets out principles which must guide the implementation of any law and decisions relating to environmental protection,⁸² which includes land use planning policies, decisions and laws.

On the statutory level, there are various pieces of legislation that directly deal with or affect land use planning. The following are some of the key legislation dealing with or related to land use planning in Namibia.

69 Principle 15 of the Rio Declaration.

70 Principle 16 of the Rio Declaration.

71 Principle 22 of the Rio Declaration.

72 Article 1(1).

73 Article 10.

74 Article 6.

75 Article 8.

76 Article 16.

77 Article 19.

78 Article 21.

79 Article 18.

80 Article 25.

81 Article 22.

82 Section 3.

- Town Planning Ordinance No. 18 of 1954
- Townships and Division of Lands Ordinance No. 11 of 1963
- Standard Building Regulations of 1970,⁸³ as adopted in terms of the repealed Standards Act No. 33 of 1962,⁸⁴ by town and village councils and building regulations made by various municipal councils
- Subdivision of Agricultural land Act No. 70 of 1970
- Communal Land Reform Act No. 5 of 2002
- Agricultural (Commercial) Land Reform Act No. 6 of 1995
- Biosafety Act No. 7 of 2006⁸⁵
- Aquaculture Act No. 18 of 2002
- Inland Fisheries Act No. 1 of 2003
- Fisheries and Marine Resources Act No. 27 of 2000
- National Heritage Act 27 No. of 2004
- Environmental Management Act No. 7 of 2007
- Public and Environmental Health Act No. 1 of 2015
- Forest Act No. 12 of 2001
- Removal of Restrictions Ordinance No. 75 of 1975
- Nature Conservation Ordinance 4 of 1975
- Flexible Land Tenure Act No. 4 of 2012⁸⁶
- Water Act No. 54 of 1956⁸⁷
- Minerals (Prospecting and Mining) Act No. 33 of 1992
- Road, Traffic and Transport Act No. 22 of 1999
- Crown Land Disposal Proclamation No. 13 of 1920
- Expropriation Act No. 63 of 1975
- Soil Conservation Act No. 76 of 1969
- Mountain Catchment Areas Act No. 63 of 1970

The following part will discuss some of the key legislation dealing with land use planning.

8.2.1 The Town Planning Ordinance

The Town Planning Ordinance deals with the control and regulation of land use in local authority areas. Local authority areas are municipalities, towns and villages and settlement areas, which are governed by municipal, town and village and regional councils respectively.

⁸³ Published in Government Notice R.1830 of 23 October 1970, as amended by Government Notice R.1431 of 17 August 1973.

⁸⁴ Repealed by the Standards Act No. 18 of 2005.

⁸⁵ Not in operation.

⁸⁶ Not in operation.

⁸⁷ This Act will be repealed by the Water Resources Management Act No. 11 of 2013, which is not yet in operation.

The Ordinance requires local authority councils to prepare town planning schemes in respect of land within their areas of jurisdiction. Town planning schemes are land use management tools used by the local authority councils to regulate land use. In terms of town planning schemes land is zoned for various uses, such as residential, industrial and business. Currently, not all local authority councils have prepared and adopted town planning schemes, since the preparation of such schemes are optional, unless the Minister of Urban and Regional Development instructs a local authority council to prepare such a scheme.

8.2.2 The Townships and Division of Land Ordinance

The Townships and Division of Land Ordinance regulates the establishment of townships, which is a component of town planning. Establishment of townships is basically the subdivision of land for development purposes for example residential purposes. Township establishment can be undertaken by a local authority council or a private developer who must get the Minister's approval to establish the same. When approval to establish a township is granted the Minister usually imposes conditions on the land, these can be conditions stating the purpose for which land may be used, creation of servitudes, and limitation of the number of buildings, which can be built on the land.

8.2.3 The Subdivision of Agricultural Land Act

The Subdivision of Agricultural Act prohibits the subdivision of agricultural land without the consent of the Minister of Agriculture.⁸⁸ The purpose of the Act is

- to prevent alienation of undivided portions of land;
- to prevent subdivision of agricultural land into uneconomic units;
- to prevent the use of uneconomic portions of agricultural land for any length of time;
- to prevent encroachment on the use of agricultural land so as to threaten its viability as such.⁸⁹

8.2.4 The Flexible Land Tenure Act

The Flexible Land Tenure Act was enacted to fast track land development for the poor. In terms of this Act a local authority council or regional council, an owner of land or a group of persons, except juristic persons⁹⁰, may apply to the local authority concerned to establish a starter title scheme in respect of land in a local authority area.⁹¹ Before such a scheme is established the land concerned must be subdivided or consolidated so as to reflect as one piece of land so as to be registered as such. Although the formal requirements for township establishment need not be complied with, the outer boundaries of the land must be set out.⁹² Once the required deposit or amount is paid and land and boundary measurements have been carried out the starter title scheme will be established. Once the scheme is established the registered member will be entitled to hold a starter title on a block erf in the land, this title entitles the holder to occupy the block erf, erect a structure on it, to bequeath it or to transfer the title to it.⁹³ Starter title schemes can be converted to land hold title schemes, which entitle

⁸⁸ Section 3.

⁸⁹ *Adlem v Arlow* (782/11) [2012] ZASCA 164. *Theron and Another v Tegethoff and Others* (PA283/00, PA283/00) [2001] NAHC 1 (6 April 2001).

⁹⁰ Section 9(9).

⁹¹ Section 11(1).

⁹² Section 11(2).

⁹³ Section 9.

the holder to have all the rights in the plot concerned that an owner has in respect of his or her erf under the common law.⁹⁴ Starter title schemes or land hold title schemes in an approved township can be converted to full ownership,⁹⁵ but the owner of such scheme must comply with the formal provisions of town planning and township establishment legislation in that regard.

8.2.5 The Agricultural (Commercial) Land Reform Act

The Agricultural (Commercial) Land Reform Act provides for the acquisition of agricultural land by the State for purposes of land reform and for the allocation to Namibian citizens who do not own or otherwise have the use of any or adequate land and who have been socially, economically or educationally disadvantaged by past discriminatory laws or practices.⁹⁶ One of the ways through which this is done is the acquisition of agricultural land by the state in a commercial farming area. This land is subdivided into holdings,⁹⁷ which are surveyed and registered as separate farming units in the Deeds Office.⁹⁸ The registered units are allotted to successful qualifying applicants under 99-year lease agreements.⁹⁹

8.2.6 The Environmental Management Act

One of the objects of the Environmental Management Act is to ensure that environmental impact assessments are undertaken of activities, which may have an impact on the environment.¹⁰⁰ The Act applies to physical activities and the definition of the term ‘activities’ appears to be wide enough to also include plans and policies.¹⁰¹ The Minister of Environment by notice in the Gazette lists activities which may not be undertaken without an environmental clearance certificate by the Environmental Commissioner.¹⁰²

9 Land Use Planning Institutions and Administration

In Namibia, the administration of land use planning takes place at national, regional and local Government level. These spheres of Government are distinct, but interrelated. Land use planning is a facet in all spheres of Government.

At national level, planning is within the executive competence. Executive competence relates to the power to give effect to legal rules.¹⁰³ At national level, executive power is vested in the President and Cabinet, which consists of various Ministers.¹⁰⁴ Insofar as land use planning is concerned, the role of Cabinet as part of the executive is to develop and implement land use policies, initiate land use planning laws and facilitate the implementation and administration of land use planning laws administered by the executive and to direct, co-ordinate and supervise

⁹⁴ Section 10(1).

⁹⁵ Section 15.

⁹⁶ Section 14.

⁹⁷ Section 36.

⁹⁸ Section 36.

⁹⁹ Section 36.

¹⁰⁰ Section 2.

¹⁰¹ Section 1.

¹⁰² Section 27.

¹⁰³ Van Wyk (2012:147); Currie / De Waal (2001:228).

¹⁰⁴ Article 35(1) of the Constitution.

the activities of Ministries and Government departments including para-statal enterprises,¹⁰⁵ which relate to land use planning.

9.1 The National Planning Commission

On the national level, the National Planning Commission (known as NPC), drives socio economic developmental planning in the country. The role of NPC is to coordinate developmental planning on the national level.¹⁰⁶

9.2 The Ministry of Land Reform

Nationally, the primary responsibility for land resides with the Minister of Land Reform. This is evident in the Minister's responsibility for the administration of land, the transfer of land, the ownership of land and the cadastral boundaries of land as outlined in the 2013-2017 Strategic Plan of the Ministry. The Minister thus exercises authority over the land reform programme, the deeds registry, the office of the surveyor general, the national spatial information framework and the administration of land held in trust by the Minister.

This responsibility is also evident from the 2013-2017 Strategic Plan of the Ministry: "To manage, administer and ensure equitable access to Namibia's land resource." It is also clear that the Minister is the competent authority for land use planning and management. This is evident from the Ministry's vision which states in its Strategic Plan: "To ensure that Namibia's land resource is equitably allocated, efficiently managed, administered and sustainably used for the benefit of all Namibians."

In terms of the National Land Policy of 1998 the Ministry of Land Reform is the custodian and implementer of the policy. The policy states that:

The Ministry of Lands, Resettlement and Rehabilitation has the primary responsibility for the implementation for the National Land Policy. This duty will be performed in close consultation with other Ministries, including the Ministry of Agriculture, Water and Rural Development (with reference, *inter alia*, to land use planning); the MRLGH (with reference, *inter alia*, to urban and regional planning, Regional Councils and local authorities); and the Ministry of Trade and Industry (with reference, *inter alia*, to regional planning, investment incentives schemes, export processing zones and the relationship of credit to land rights).

The Land Reform Advisory Commission established under the Agricultural (Commercial) Land Reform Act No. 6 of 1995, advises the Minister of Land Reform on the acquisition and use of agricultural land.

Apart from having institutional responsibility for land the Ministry of land reform administers legislation relating to land use, such as the:

- Communal Land Reform Act No. 5 of 2002;
- Agricultural (Commercial) Land Reform Act No. 6 of 1995;
- Flexible Land Tenure Act No. 4 of 2012;
- Land Tenure Act No. 32 of 1966;
- Deeds Registries Act No. 37 of 1947;
- Disaster Risk Management Act No. 10 of 2012; and
- Land Survey Act No. 33 of 1993.

¹⁰⁵

Article 40 of the Constitution.

¹⁰⁶

Jones (2009).

Although the Minister of Land carries the core responsibility for the administration of land, other ministries, offices and agencies in Government also have legislative and institutional powers and responsibilities in respect of land use planning.

9.3 Ministry of Urban and Rural Development

The Minister of Urban and Rural Development is responsible for the administration of land earmarked for urban and regional development.

Insofar as land use planning is concerned, the Minister administers the Town Planning Ordinance No. 18 of 1954, the Townships and Division of Lands Ordinance No. 11 of 1963, the Local Authorities Act No. 23 of 1992, the Regional Councils Act No. 22 of 1992, and the Town and Regional Planners Act No. 9 of 1996 amongst others.

9.4 Other Authorities, Organisations and Persons

Other ministers and institutions also have responsibilities for land use planning arising from policy and legislative frameworks; aquaculture development for example falls under the responsibility of the Ministry of Fisheries and Marine Resources, forestry management falls under the responsibility of Ministry of Forestry, environmental impact assessment, conservancy establishment, establishment of natural parks and protected areas all fall under the responsibility of Ministry of Environment and Tourism.

At the regional level land use planning is carried out by regional councils and communal land boards amongst others. On the local level land use planning is carried out by local authority councils and traditional authorities. Different organisations and non-governmental organisations and communities also play a role in the land use planning process. The Legal Assistance Centre is active in raising awareness on matters relating to land use planning through workshops and preparation and publication of documents on land use planning.¹⁰⁷ Others include the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) and the Namibia Institute for Democracy (NID) amongst others.

10 Land Use Planning in Local Government

Namibia's current town planning system, inclusive of land use practices and legislation, derives from the South African old British style planning system which was more focused on spatial planning and not on economic development. Referring to the South African town planning system of the 19th century, Claassen and Milton described the South African town planning system of that period as more control oriented rather than developmental oriented.¹⁰⁸ Their argument is that market forces and intentions of owners of land carry more weight than the actual allocated zoning on the town planning scheme.¹⁰⁹ The question that needs to be answered is whether the current town planning system in Namibia is control oriented or development oriented.

Although Namibia's current town planning system can be said to be both, control and development oriented, the control element carries more weight. This is because market forces, such as demand for land and land prices carry more weight than provision of land as a means to improve the well-being of the people. This situation has resulted in land grabbing by some individuals, especially in urban areas. Some notable efforts to curb this situation is the

¹⁰⁷ LAC (2005 and 2012).

¹⁰⁸ Claassen / Milton (1992:716).

¹⁰⁹ Ibid.

proposed Land Bill and Urban and Regional Planning Bill, which introduces a system of decentralised planning, and coupled to that re-engineering of the town planning process in an effort to speed up land delivery in urban and regional areas.

Within the local Government context, land use planning parallels town planning. Town planning is concerned with the control and regulation of land in local authority areas.¹¹⁰ Town planning basically involves zoning of land and the establishment of townships.¹¹¹ The purpose of town planning and township development is to control and harmonise the use of land.¹¹² The proposed Urban and Regional Planning Bill consolidates the law on town planning and establishment of townships. The Bill substitutes the term town planning with urban planning.

Town planning activities are carried out by local authority councils and to a certain extent regional councils, which are treated as local authorities for purposes of town planning. On the local Government level are local authorities which exist in three forms, these are municipalities, followed by towns, and villages at the lowest level. The area of the specific local authority is referred to as the local authority area.¹¹³ Local authorities are governed by either, the Municipal Council, the Town Council or the Village Council. The powers and functions of these councils in respect of town planning are governed by the Townships Ordinance No. 18 of 1954 (hereafter referred to as TO), the Townships and Division of Land Ordinance No. 11 of 1963 (hereafter referred to as TDLO), and the Local Authorities Act No. 23 of 1992. The Minister of Urban and Regional Development administers this legislation.¹¹⁴ The Namibia Planning Advisory Board known as NAMPAB and the Townships Board make recommendations to the Minister regarding the preparation and approval of town planning schemes and the establishment of townships. In terms of the proposed Urban and Regional Planning Bill, these two boards will be substituted by one Board which will be known as Urban and Regional Planning Board.

The primary purpose of town planning is to ensure a co-ordinated and harmonious development of the local authority area or the area to which it relates and to promote health, safety, order, amenity, convenience and general welfare of people in those areas.¹¹⁵

10.1 Town Planning Schemes

Town planning schemes (TPS) are one of the tools used by local authority councils to control and regulate land use in their respective local authority areas. Preparation, approval, adoption and amendment of TPS is a statutory requirement and is governed by the TO. In terms of the TO, certain local authority councils are required to prepare and adopt town planning schemes for certain areas of land under their jurisdiction. In terms of the proposed Urban and Regional Planning Bill, local authority councils will be required to prepare a zoning scheme (currently known as a town planning scheme) for its local authority area.

A town planning scheme is defined as

Town planning schemes are an institutional process for organizing the components of urbanized human settlement in such was as to enhance welfare, prosperity, and progress

¹¹⁰ Although settlement areas are within the jurisdiction of regional councils, they are developed to eventually become local authority areas.

¹¹¹ Van Wyk (1999:5); Van Wyk (2012:360); Meyer (1987:4).

¹¹² !Owoses-Goagoses (2013:1).

¹¹³ Section 1 Local Authorities Act No. 23 of 1992.

¹¹⁴ *Kleynhans v Chairperson of the Council for the Municipality of Walvis Bay and Others* A 310/08 [2011] NAHC 90 (24 March 2011) [35].

¹¹⁵ Section 1 of Town Planning Ordinance No. 18 of 1954; also see !Owoses-/Goagoses (2013:39-40).

to the highest feasible level. In practice the process involved the development of a set of legally enforceable prescriptions which direct, control, and regulate the existing and future uses that owners of immovable property may make of their property.¹¹⁶

The primary purpose of a town planning scheme parallels the purpose of town planning.¹¹⁷ Central to a town planning scheme is zoning, which is concerned with the allocation of different uses to different areas. Through zoning different areas are created in a local authority area and different use activities are permitted or prohibited.¹¹⁸ A TPS sets out different areas or use zones and permit or prohibit certain uses within such areas. For example a property may be zoned for residential, business or industrial purposes. The TPS sets out primary uses, consent uses and prohibited uses in respect of each use zone. Primary uses are those uses for which buildings may be erected and/or used. Consent uses are those uses for which buildings may be erected and/or used only with the consent of the Council. Prohibited uses are those uses for which buildings may not be erected and/or used. A TPS further sets different restrictions with regard to building, such as the building line, height and side spaces as well as density, parking and the floor area applicable to different zones. A town planning scheme also contains provisions relating to building values of buildings to be in different zones. The TPS also contains provisions regulating the subdivision and consolidation of land to which the scheme applies. TPS are supplemented by buildings regulations and advertising regulations of the local authority council concerned which prepared and adopted the TPS concerned.

A TPS also contains provisions regulating changes to land uses. A TPS permits changes to certain land uses through rezoning application and applications for consent use. These applications have to be notified in newspaper for objections by the public, before the relevant local authority council makes any decision in terms of the TPS.

10.2 Structure Plans

While TPS are short-term land use tools, which are reviewed every 5 years, urban structure plans guide the future spatial development of an area and mostly cover a 10 to 20 year period. Currently, the preparation of urban structure plans is not a statutory requirement but, some local authority councils, such as the Windhoek, Swakopmund, Walvisbay municipal councils have taken it on themselves and adopted structure plans for areas under their jurisdiction. In terms of the proposed Urban and Regional Planning Bill, the preparation and adoption of urban structure plans by local authority councils will be a statutory requirement. Although local authority councils will not be obliged to prepare urban structure plans, they must prepare such plans if instructed to prepare such a plan by the Permanent Secretary of the ministry responsible for urban and regional development. In terms of the proposed Bill, an urban structure plan must be aligned to the national development framework.

10.3 Township Establishment

Township establishment is basically land development that parallels subdivision of land. Township establishment is a component of town planning in terms of which the land within local authority areas is developed.¹¹⁹ In terms of the proposed Urban and Regional Planning Bill the term ‘township’ is substituted with ‘urban area’.

¹¹⁶ Kidd (2011:211).

¹¹⁷ Section 1 of Town Planning Ordinance No. 18 of 1954; also see !Owoses-/Goagoses (2013:39-40).

¹¹⁸ Kidd (2011:212); Van Wyk (1999:21 and 39-40); !Owoses-/Goagoses (2013:44-46).

¹¹⁹ von Dönges / Van Winsen (1953:596).

A township is an area earmarked for the future establishment of a local authority area or any area of land registered as one or more pieces of land either contiguous or in close proximity to each other which is being or is intended to be laid out or divided into sites for different land use rights or for urban settlement arranged in such a manner as to be intersected or connected by or to abut on public places.¹²⁰

Township establishment is governed by TDLO. In terms of this Ordinance, an owner of land may apply to the Minister to establish a township on his or her or its land.¹²¹ The Minister forwards the application to the Townships Board, who recommends to the Minister the desirability to establish the township concerned.¹²² The board notifies the application and makes recommendations to the Minister.¹²³ The Minister approves or rejects the application, and if he or she approves it, declares it as an approved township by notice in the Government Gazette.¹²⁴

When a township is established, certain conditions are imposed on the use of erven concerned.¹²⁵ These conditions may not be in conflict with the provisions of the relevant TPS, if such TPS exist in the area of the proposed township.¹²⁶ Some of the measures for restricting ownership are the conditions for establishment and conditions of title which are imposed in respect of certain erven. These conditions may relate to the reservation of erven of the state or local authority or the purposes for which an erf may be used, minimum building values of buildings to be erected on the erf.¹²⁷

11 Regional Planning

Land use planning at the regional level is supervised by the National Planning Commission, Minister of Land Reform and the Minister of Urban and Regional Development.

11.1 Regional Development Plans

Regional councils are established in terms of the Regional Councils Act No. 22 of 1992. Currently, there are 14 regions in the country. The Minister of Urban and Rural Development administers the Regional Councils Act. Where land use planning is concerned in the regional context, regional councils have a coordinating function. Their function is to undertake the planning of the development of the region for which it has been established.¹²⁸ In doing this, they must have due regard to powers and functions of the National Planning Commission¹²⁹ and other laws on planning such as the TPO and TO, and the Communal Land Reform Act amongst others.

The principal means of planning the development of the regions is the preparation of regional development plans (RDPs).¹³⁰ RDPs provide an overview of the region with a situational

¹²⁰ Section 1 of the TDLO.

¹²¹ This definition is ambiguous, on literal interpretation it implies that any person who owns land can establish a township. See !Owoses-/Goagoses (2013:90-92).

¹²² Section 5 of the TDLO.

¹²³ Section 6 of the TPDLO.

¹²⁴ Section 6 of the TDLO.

¹²⁵ Section 6(3) of the TDLO.

¹²⁶ Section 6(1) of the TDLO.

¹²⁷ Section 6 of the TDLO.

¹²⁸ Section 28 of the Regional Councils Act No. 22 of 1992.

¹²⁹ Section 4 of the National Planning Commission Act No. 2 of 2013.

¹³⁰ Mukwena / Drake (2000).

analysis and directions for future developments; the development plan framework for the different sectors and a programme summary with specific objectives, activities and projects.¹³¹ The Division of Land Use Planning and Allocation within the Ministry spearhead the development of RDPs. Under the auspices of this division, Namibia has carried out four Integrated Regional Land Use Planning (IRLUP) projects: for the Kunene Region (1999); the Caprivi Region (2001); the four north-central regions (Omusati, Oshana, Ohangwena and Oshikoto) combined (2002); and Otjozondjupa and Omaheke combined (2005).¹³² The shortcomings identified in respect of IRLP are the non-implementation of these plans as well as the non-alignment of these plans to existing policies and legislation.¹³³

The National Planning Commission is responsible for the development of regional profiles for the different regions. Such profiles set out each of the regions' development potentials and weaknesses.¹³⁴

11.2 Town Planning Function of Regional Councils

Regional councils carry out town planning functions in respect of settlement areas. Settlement areas are areas outside local authority areas but within regional council areas but are earmarked for development as local authority areas. Regional councils control and manage settlement areas as if it's a local authority council. A regional council may in respect of settlement areas exercise powers and functions set out in the Local Authorities Act No. 23 of 1992 as if they were village councils.¹³⁵ Note the emphasis on village council because there are certain limitations on powers and functions of a local authority council based on its status as a municipal council, town council or a village council.¹³⁶ Since regional councils are regarded as a local authorities for the purposes of managing and controlling a settlement area, regional councils have to prepare and adopt TPS in respect of the certain areas of land within the settlement area. Currently, the preparation of TPS is not mandatory but the Minister may require a specific regional council to prepare a TPS in respect of certain areas of land within a settlement area.

In terms of the proposed Urban and Regional Planning Bill regional councils will be required to prepare urban structure plans for each approved urban area (currently known as approved township) within the settlement area concerned. A regional council may also be required to prepare a zoning scheme (currently known as TPS) in respect of land within the settlement area.

11.3 Regional Structure Plans

In terms of the proposed Urban and Regional Planning Bill, regional councils are required to prepare regional structure plans for the region for which it is responsible. The regional structure plan guides the integrated social and economic development and land use patterns in the region concerned. A regional structure plan deals with spatial aspects and potential for social and economic development of a region or part of a region, consists of such integrated statement of policies, plans and such background studies, reports, maps, legislation that affects

¹³¹ Ibid.

¹³² Haubt (2009).

¹³³ Ibid.

¹³⁴ Mukwena / Drake (2000).

¹³⁵ Section 32(1) of the Regional Councils Act.

¹³⁶ Sections 30(2) and (3) of the Local Authorities Act.

the plan. Furthermore the Bill requires that a regional structure plan be aligned to the national development framework and the integrated regional land use plans.

12 Land Use Planning in the Coastal Zone

12.1 Introduction

Namibia has a coastline, which extends some 1,570 km, from the mouth of the Orange River on the South African border, to the mouth of the Kunene River on the Angolan border.¹³⁷ In the last decade there has been a crescendo of residential, recreational, tourism and mining activities at the coastal zone in Namibia. The coastal zone is considered to be the most ecologically sensitive areas in which sustainable land management is needed.¹³⁸

12.2 Policy, Legal and Institutional Frameworks

Namibia does not have a national legislation that governs coastal zone management, but there are various legal provisions that deal with or affect land use planning in the coastal zone.¹³⁹ Above all is the Namibian Constitution of 1990, international agreements ratified or acceded to by Namibia, principles of public international law,¹⁴⁰ and various pieces of legislation that deal with or affect land use in the coastal zone, most notably the Nature Conservation Ordinance No. 4 of 1975; the Sea Shore Ordinance No. 37 of 1958; the Environmental Management Act 7 of 2007; the Minerals (Prospecting) and Mining Act No. 33 of 1992, Petroleum Act; the Town Planning Ordinance No. 18 of 1954 and the Townships and Division of Lands Ordinance No. 11 of 1963, amongst others.¹⁴¹

There are also various policies and plans geared toward the coastal zone management. Most notable is the 2012 National Policy on Coastal Management (hereafter referred to as NPCM).

At the institutional level, the various institutions that play a role in the coastal zone management, are the National Planning Commission, the Ministry of Environment and Tourism, the Ministry of Fisheries and Marine Resources, the Ministry of Land Reform, the Ministry of Urban and Regional Development, Regional Councils, and Local Authority Councils. The responsibilities of these institutions in respect of land use planning are dictated by the various policy and legal frameworks. Non-Government institutions also contribute to the coastal zone management especially through awareness raising and technical support.

12.3 Status of Coastal Zone Management

In 2006 and 2008, strategic environmental assessment reports have been prepared for the coastal zones of the Erongo and Kunene regions and for the Karas and Hardap regions.¹⁴² The purpose of the reports were to be used as decision support tools by political and technical decision makers at local, regional and national levels in order to assist them in taking decisions on biodiversity conservation, land use planning, and social and economic development planning in the four coastal regions.¹⁴³

¹³⁷ GRN (2012f:7).

¹³⁸ Kidd (2011:229).

¹³⁹ NACOMA (2007).

¹⁴⁰ Article 144.

¹⁴¹ These include the 1992 Convention on Biological Diversity, the 1992 United Nations Framework Convention on Climate Change, and Kyoto Protocol, the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.

¹⁴² Skov *et al.* (2010).

¹⁴³ Ibid.

Namibia's coastal zone management has been described as weak.¹⁴⁴ The 2010 Strategic Environmental Assessment (SEA) Report¹⁴⁵ identifies the following challenges in the coastal zone management:

- The lack of institutional capacity, or unclear, over-centralised, confused and/or overlapping legal or institutional mandates, notably in the public sector agencies involved.¹⁴⁶
- Inability by stakeholders to find common understandings and a shared strategic perspective on the economic, social and environmental interactions involved in coastal development and of the adjustments compromises and trade-offs that need to be made to assure better coastal planning and management.¹⁴⁷

12.4 The National Policy on Coastal Management

The NPCM is the result of the 2006 and 2008 strategic environmental assessment (known as SEA) reports, the 2010 SEA report, the 2009 Green Paper and the 2010 White Paper developed under the Namibian Coast Conservation and Management (NACOMA) project under the auspices of National Planning Commission. The Policy will be evaluated, monitored and implemented by the Ministry of Environment and Tourism.

The overarching goal of the NPCM is to ensure a coordinated and integrated approach to coastal governance in Namibia. The NPCM aims to provide a framework to strengthen governance of Namibia's coastal areas to realise long-term national goals defined in Vision 2030 and the more specific targets of National Development Plans, namely sustainable economic growth, employment creation, and reduced inequalities in income.

12.4.1 Defining the Coastal Zone

Of importance is the definition or description of the coastal zone. Although NPCM does not define the coastal zone for the purpose of Namibia, it acknowledges the importance of defining the coastal zone:

Delineating the extent of the coastal zone is necessary for administrative purposes and to clarify areas and issues of responsibility of coastal stakeholders. It is useful for developing appropriate management systems to reduce the impact of our activities on the coast. It is also useful to be able to identify and maximize potential opportunities offered by the offshore and inland areas of our coast and ensure that any benefits are shared equitably.¹⁴⁸

The policy proposes a twofold approach toward defining the coastal zone; namely a broad national definition and a specific definition that considers specific regional and local circumstances which will be undertaken by regional bodies.

The policy further states that:

Delineating the boundaries of coastal management should therefore consider "...terrestrial systems that significantly affect the sea, or are affected by their proximity to the sea, and those marine systems affected by their proximity to the land. This implies boundaries that (a) include those areas and activities within watersheds that significantly

¹⁴⁴ Ibid.

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

¹⁴⁸ GRN (2012f:9).

affect the coast and (b) may, in certain cases, extend seaward to the edge of the continental shelf or the Exclusive Economic Zone (EEZ).¹⁴⁹

Defining the coastal zone is important to determine the scope of coastal zone management.

12.4.2 NPCM Land Use Planning Objectives and Implementation Strategies

Strategies for implementing the NPCM have been identified as follows:

- to ensure meaningful public involvement and participation;
- to improve multiple-use planning and zoning by balance current and future multiple uses of coastal ecosystems and resources so that competing and complementary uses occur in appropriate geographic locations and are harmonised through zoning and planning;
- to ensure that all development and utilisation contribute to environmental sustainability and fall within the acceptable limits of land and resource use. Integrate efforts to maintain, and restore the health and productivity of coastal ecosystems and the services they provide;
- to clearly define, justify and communicate the demarcation of areas of ecological importance to the public;
- to establish a central authority for coastal management. This includes the creation of a Coastal Management Authority (CMA), assignment of coastal areas management to an existing planning, budget or coordinating office (such as the National Planning Commission); and
- the designation of an existing line ministry to act as the lead ministry, and the creation of strategic alliances with a national lead agency.

¹⁴⁹

Ibid quoting from GESAMP (1996).

CHAPTER 13

MINING AND ENERGY

I. MINING AND ENERGY IN NAMIBIA

Meyer van den Berg and Peter Koep

Mineral and petroleum exploitation inevitably result in pollution and environmental degradation.¹ The environmental aspects of mineral and petroleum exploitation are therefore important components of any regulatory framework for mineral and petroleum resources. The environmental aspects of the mining and energy sectors in Namibia are dealt with in terms of various pieces of legislation. The relevant Acts regulating specific resources – the Minerals (Prospecting and Mining) Act No. 33 of 1992 ('Minerals Act') in respect of minerals and the Petroleum (Exploration and Production) Act No. 2 of 1991 ('Petroleum Act') in respect of petroleum – deal to some extent with environmental obligations in respect of minerals and petroleum. However, in February 2012 the Environmental Management Act No. 7 of 2007 came into operation and now provides for a general framework for environmental authorisations.

1 The Environmental Management Act

The Environmental Management Act No. 7 of 2007 ('EMA') came into force on 6 February 2012. This Act has a significant impact on the mining and energy sectors in Namibia. Because the EMA came into operation after the Minerals Act and the Petroleum Act, the latter two Acts do not contain any reference to the EMA. Similarly, the EMA does not contain any reference to either the Minerals Act or the Petroleum Act. The link between these three pieces of legislation may, however, be found in 'listed activities'.²

In terms of section 27(1) of the EMA, the Minister of Environment and Tourism ('Minister') may list certain activities that may not be undertaken without an environmental clearance certificate. This list was published by the Minister on 6 February 2012.³ The listed activities are quite comprehensive and include activities in respect of energy generation, transmission and storage⁴ and mining and quarrying activities.⁵ More specifically, the following activities may not be conducted without an environmental clearance certificate:

- The construction of facilities for the generation of electricity,⁶ the transmission⁷ and supply⁸ of electricity, the refining of gas, oil and petroleum products and nuclear

¹ Glazewski (2005:455); Van den Berg (2015:165-167) with reference to petroleum.

² See also Van den Berg (2015:183).

³ GN 29 in GG 4878 of 6 February 2012.

⁴ Item 1 of GN 29 in GG 4878 of 6 February 2012.

⁵ Item 3 of GN 29 in GG 4878 of 6 February 2012.

⁶ Generation of electricity means the production of electricity by way of natural or artificial processes. See Section 1 of GN 29 of GG 4878 of 6 February 2012.

reaction (including production, enrichments, processing, reprocessing, storage or disposal of nuclear fuels, radioactive products and waste).⁹

- The construction of facilities for any process or activities which requires a licence, right or other form of authorisation (including renewal of such a licence, right or authorisation) in terms of the Minerals Act.¹⁰ This is a reference to the construction of accessory works¹¹ in terms of the Minerals Act, for which the holder of a licence or claim requires additional consent from the Mining Commissioner.¹² The reference to the construction of facilities requiring authorisation in terms of the Minerals Act is, incidentally, the only reference to the Minerals Act in the listed activities.
- Other forms of mining or extraction of any natural resources, whether regulated by law or not,¹³ and resource extraction, manipulation, conservation and related activities.¹⁴ These two broad listed activities are the strongest link between the EMA, the Minerals Act and the Petroleum Act, even though the latter two Acts are not specifically mentioned here. Two important aspects of these two listed activities require further examination. First, it is unclear whether prospecting and exploration activities are included. The Minerals Act and the Petroleum Act deal with the upstream mineral and petroleum industries, in other words the searching for and extraction of minerals and petroleum. ‘Mining’, ‘extraction of resources’ and ‘resource extraction’ clearly refer to those activities regulated by the Minerals Act and the Petroleum Act as well. However, exploration activities in respect of petroleum and prospecting activities in respect of minerals generally only involve the searching for the resource and not the extraction of the resource. Both, holders of exploration licences and prospecting licences may extract samples for purposes of testing.¹⁵ One may argue that the possibility of resource extraction, even for testing purposes only, is sufficient to trigger one of these listed activities. Reconnaissance operations, on the other hand, which involves remote sensing, will not require an environmental clearance certificate as these operations do not include physical disturbances of the

⁷ Transmission of electricity means the conveyance of electricity by means of a transmission system, which consists wholly or mainly of high voltage networks and electrical plan, from an energy source or system to a customer. See Section 1 of GN 29 of GG 4878 of 6 February 2012.

⁸ Supply of electricity means the delivery of electricity to a customer as a commodity. See Section 1 of GN 29 of GG 4878 of 6 February 2012.

⁹ Item 1 of GN 29 of GG 4878 of 6 February 2012.

¹⁰ Item 3.1 of GN 29 of GG 4878 of 6 February 2012.

¹¹ In terms of Section 1 of the Minerals Act, ‘accessory works’ means “any building, plant or other structure required for purposes of reconnaissance operations, prospecting operations or mining operations or for the disposal of any mineral or group of minerals won or mined in the course of any such operations, or is connected with such operations or disposal, including (a) any power plant, transmission line or substation; (b) any water borehole, well, pipe-line, drilling rig, pump station, tank or dam; (c) any airfield, helicopter landing-pad, road, gate, rail or railway siding; (d) any workshop, hangar, store or office; (e) any explosives magazine; (f) any sampling plant, processing plant, smelter or refinery, whether erected on land or constructed on any vehicle or vessel; (g) any waste disposal site; or (h) any camp site or temporary or permanent residential area.”

¹² See Sections 31(3)(a), 58(2)(a), 67(3)(a), 77(3)(a) and 90(2)(a) of the Minerals Act.

¹³ Item 3.2 of GN 29 of GG 4878 of 6 February 2012.

¹⁴ Item 3.3 of GN 29 of GG 4878 of 6 February 2012.

¹⁵ See Sections 67(1)(b) and 67(1)(c) of the Minerals Act in respect of prospecting licences for minerals and Section 29 read with the definition of ‘exploration operations’ in Section 1 of the Petroleum Act in respect of exploration licences for petroleum. See also Van den Berg (2015:185). Petroleum exploration activities are discussed by Van den Berg (2015:42-45).

land.¹⁶ The second issue that warrants discussion in respect of these two listed activities is the extraction of resources beyond the scope of the Minerals Act and the Petroleum Act. In terms of these listed activities, the extraction of natural resources requires an environmental clearance certificate, whether the extraction is regulated by law or not. The Minerals Act and Petroleum Act, on the other hand, only apply in respect of resources that fall under the definition of ‘mineral’ or ‘petroleum’.¹⁷ These two concepts are defined broadly,¹⁸ but the definitions do make provision for certain exceptions. Resources falling either within these exceptions or that generally do not comply with the definitions, will not be regulated by the Minerals Act or Petroleum Act, but extraction thereof will require an environmental clearance certificate. For example, the extraction of soil, sand, clay, gravel or stone *bona fide* required for building works will not require a mining licence in terms of the Minerals Act, as these resources are excluded from the definition of ‘mineral’. A person who wishes to conduct these activities must, however, apply for an environmental clearance certificate, as these are listed activities.

- The extraction of peat.¹⁹ Peat is an organic soil or deposit, consisting of partly decayed plant remains in a wet environment and containing more than 50% carbon.²⁰ As peat is a soil, it will fall outside the definition of ‘mineral’ if it is *bona fide* required for agriculture, building works, fencing or road making, the manufacture of bricks and tiles or the construction of sportsfields, airfields, railways, bridges, dams, reservoirs, weirs, canals or other irrigation works.²¹ A mining licence will therefore not be required, but the person who intends to extract the peat must apply for and be granted an environmental clearance certificate.
- The extraction or processing of gas from natural and non-natural sources, including gas from landfill sites.²² The extraction of gas from natural sources require a production licence in terms of the Petroleum Act, as the definition of petroleum in this Act includes combustible gas existing in a natural condition in the earth’s crust.²³ Production of gas from any source other than its natural source, or production of non-

¹⁶ See also Van den Berg (2015:185).

¹⁷ See for example *Finbro Furnishers (Pty) Ltd v Registrar of Deeds, Bloemfontein* 1985 (4) SA 773 (A) at 784; Badenhorst / Mostert (2014:6-1).

¹⁸ In Section 1 of the Minerals Act, ‘mineral’ is defined as “any substance, whether in solid, liquid or gaseous form, occurring naturally in, on or under any land and having been formed by, or subjected to, a geological process, excluding (a) water, not being water taken from land or from the sea for the extraction therefrom of a mineral or a group of minerals; (b) petroleum, as defined in section 1 of the Petroleum (Exploration and Production Act), 1991 (Act 2 of 1991); or (c) subject to the provisions of subsection (2), soil, sand, clay, gravel or stone (other than rock material specified in Part 2 of Schedule 1) if they are *bona fide* required for purposes of (i) agriculture, building works, fencing or road making; (ii) the manufacture of bricks and tiles; (iii) the construction of sportsfields, airfields, railways, bridges, dams, reservoirs, weirs, canals or other irrigation works; or (iv) any other purpose defined by the Minister by notice in the Gazette.” Section 1 of the Petroleum Act defines ‘petroleum’ as “any liquid or solid hydrocarbon or combustible gas existing in a natural condition in the earth’s crust and includes any such liquid or solid hydrocarbon or combustible gas which has in any manner been returned to such natural condition, but shall not include coal, bituminous shales or other stratified deposits from which oil can be obtained by destructive distillation, or gas arising from marsh or other surface deposits.”

¹⁹ Item 3.5 of GN 29 of GG 4878 of 6 February 2012.

²⁰ Jones (2010:140) and Allaby (2008:424).

²¹ See Section 1 of the Minerals Act, under the definition of ‘mineral’.

²² Item 3.4 of GN 29 of GG 4878 of 6 February 2012.

²³ Section 1 of the Petroleum Act.

combustible gas, will not require a production licence in terms of the Petroleum Act but will require an environmental clearance certificate.²⁴ The same applies to gas arising from marsh or other surface deposits – a production licence is not required to extract this gas, but an environmental clearance certificate will be required.

The listed activities may not be undertaken without an environmental clearance certificate issued in terms of the EMA.²⁵ If any person undertakes a listed activity without the necessary environmental clearance certificate, that person commits an offence and if found guilty, may be liable to a maximum fine of N\$500,000 or to imprisonment for a maximum period of 25 years, or to both such fine and imprisonment.²⁶

An organ of state responsible, under any law, for granting or refusing an authorisation, (referred to as a ‘competent authority’) may not issue an authorisation unless the person proposing to undertake the listed activity (‘proponent’) has obtained an environmental clearance certificate in terms of the EMA.²⁷ This includes the Minister of Mines and Energy responsible for granting authorisations in respect of mineral and petroleum. Therefore, the Minister of Mines and Energy (or a designated official) may not *issue* a licence or claim in respect of minerals before the proponent has obtained an environmental clearance certificate. It should be noted that the prohibition only refers to the *issuing* of authorisations. Therefore, application may still be made for a licence or claim in respect of minerals, and the application may be *granted*, but the licence or claim may not be *issued* to the proponent until the proponent has obtained an environmental clearance certificate.

The process for applying for an environmental clearance certificate is discussed elsewhere in this publication.²⁸ Of note is that the process involves consultation with all interested and affected parties. Their input has to be included in the application to the Environmental Commissioner. Consultation with interested and affected parties is a vital component of any regulatory framework for mineral and petroleum resources, as the exploitation of these resources results in serious inroads into the rights of private landowners.²⁹ Neither the Minerals Act nor the Petroleum Act requires an applicant for a licence to search for and extract minerals or petroleum to consult with interested and affected parties. The introduction of a consultation process under the EMA is therefore an important step towards ensuring a transparent and accountable regulatory framework for mineral and petroleum exploitation.

After receipt of the application for an environmental clearance certificate and all supporting documents and information, the Environmental Commissioner has to decide whether an environmental impact assessment is required or not; if an impact assessment is not required, the Environmental Commissioner will merely issue a clearance certificate.³⁰ In the Minerals Act, however, an impact assessment is in any event required, regardless of whether the Environmental Commissioner deems it necessary.³¹ Similarly, the Minister of Mines and

²⁴ See also Van den Berg (2015:112-117).

²⁵ Section 27(3) of the EMA.

²⁶ Section 27(4) of the EMA.

²⁷ Section 31(1) of the EMA.

²⁸ See Chapter 8.

²⁹ See *Meepo v Kotze and Others* 2008 (1) SA 104 (NC) at 13.1; *Bengwenyama Minerals (Pty) Ltd and Others v Genorah Resources (Pty) Ltd and Others* 2011 (4) SA 113 (CC) at 66.

³⁰ Section 33(1) of the EMA.

³¹ Section 50(f)(i) of the Minerals Act.

Energy may require an applicant for a petroleum licence to carry out an impact assessment.³² In terms of regulation 11 of the Environmental Impact Assessment Regulations,³³ if an assessment is required in terms of any other law or policy and that other law or policy requires that information must be submitted or processes must be carried out that are substantially similar to information or processes required in terms of the Environmental Impact Assessment Regulations, the Minister of Environment and Tourism must take steps to enter into a written agreement with the authority responsible for administering the law or policy in respect of the coordination of the requirements of the law, policy and these regulations to avoid duplication in the submission of such information or the carrying out of such processes.³⁴ To date, no such agreement has been entered into between the Minister of Environment and Tourism and the Minister of Mines and Energy.

2 Mining Laws and Policy

The Minerals Act contains various provisions aimed at protecting the environment. Apart from the Minerals Act, the Minerals Policy for Namibia ('Policy') and the SADC Protocol on Mining ('Protocol') also contain provisions aimed at protecting the environment.

2.1 The Minerals (Prospecting and Mining) Act³⁵

The Act came into force in 1994 and provides in general for reconnaissance, prospecting and mining for, disposal of, and the exercise of control over, minerals in Namibia and related matters. The Act provides for environmental protection at all stages of the mineral exploitation process. The Minerals Act also authorises the Minister, by notice in the Government Gazette, to declare that prospecting and mining operations within a specific area may only be carried on with special permission from the Minister and subject to such conditions as the Minister may impose, if the Minister deems it necessary or expedient for the protection of the environment or prevention of pollution.³⁶

2.1.1 Application for Claims and Licences

When applying for an exclusive prospecting licence, mining licence, mineral deposit retention licence (collectively referred to as 'mineral licence') or the registration of a mining claim, the applicant must provide particulars of the condition of, and any existing damage to, the environment in the area to which the application relates. The applicant must further provide an estimate of the effect which the proposed prospecting and /or mining operations may have on the environment and the proposed steps to be taken in order to minimise or prevent any such effect.³⁷ The same applies to an application for the renewal of a mineral licence or the registration of a mining claim.³⁸

The same does not apply to applications for non-exclusive prospecting licences or reconnaissance licences. The reason for this insofar as it relates to reconnaissance licences is probably that it is not necessary, since reconnaissance operations are non-invasive operations involving remote sensing. The reason why the same does not apply to non-exclusive

³² Section 12(2)(b)(i) of the Petroleum Act.

³³ The Regulations published in GN 30 of GG 4878 of 6 February 2012.

³⁴ Regulation 11 of the EIA Regulations.

³⁵ No. 33 of 1992.

³⁶ Section 122(2)(b) of the Minerals Act.

³⁷ Sections 33(2)(c)(vi), 68(f), 79(f) and 91(f).

³⁸ Section 38(1) read with Section 33(2)(c)(vi), Section 72(1) read with Section 68(f), Section 84(1) read with Section 79(f) and Section 96(1) read with Section 91(f).

prospecting operations, which entails the same activities as exclusive prospecting licences, is uncertain. This is probably an oversight by the legislature. It is submitted, however, that application for non-exclusive prospecting licences or the renewal of these licences should include particulars of the condition of, and any existing damage to, the environment in the area to which the application relates, as well as an estimate of the effect which the proposed prospecting operations may have on the environment and the proposed steps to be taken in order to minimise or prevent any such effect. This is in line with the general tenor of the Act, as well as international standards.

2.1.2 Granting of Mining Claims and Mining Licences

The Minerals Act imposes additional environmental obligations on the Mining Commissioner and the Minister of Mines and Energy in respect of the granting of mining claims and mining licences. These additional obligations in respect of mining are justified in the light of the nature of mining operations, which are generally more invasive than prospecting operations. The Mining Commissioner may not grant the application for the registration of a mining claim unless the Commissioner is on reasonable grounds satisfied that in the course of any such mining operations or any prospecting operations which may be carried on in lieu of such mining operations, appropriate measures will be taken to minimise or prevent any pollution of the environment.³⁹ Similarly, the Minister may not grant an application for a mining licence unless the Minister is on reasonable grounds satisfied that the proposed programme of mining operations to be carried out and the expenditure to be incurred will ensure *inter alia* adequate protection of the environment.⁴⁰

2.1.3 Exercising Rights in Terms of Claims and Licences

It is a term and condition of the registration of a mining claim that the holder of such mining claim shall take all reasonable steps necessary to prevent or minimise any pollution of the environment.⁴¹ The same applies to holders of exclusive prospecting licences, mineral deposit retention licences and mining licences as well,⁴² but not holders of non-exclusive prospecting licences and reconnaissance licences. As discussed above,⁴³ the exclusion of holders of reconnaissance licences from this obligation makes sense with reference to the nature of reconnaissance operations. The exclusion of holders of non-exclusive prospecting licences does not, however, make sense and may be an oversight.

It is furthermore a term and condition of every mineral licence (but not mining claims or non-exclusive prospecting licences) that the holder must prepare an environmental impact assessment indicating the extent of any pollution of the environment before any prospecting operations or mining operations are being carried out. The holder must also provide an estimate of any pollution, if any, likely to be caused by such prospecting operations or mining operations.⁴⁴ If any pollution is likely to be so caused, an environmental management plan indicating the proposed steps is to be prepared in order to minimise or prevent to the satisfaction of the Commissioner any pollution of the environment and consequence of any

³⁹ See Section 35(e)(iii).

⁴⁰ Section 92(2)(c)(ii)(bb) of the Minerals Act.

⁴¹ Section 41(1)(e) of the Minerals Act.

⁴² Section 41(1)(e) read with Sections 74, 86 and 98 of the Minerals Act.

⁴³ At 2.1.1.

⁴⁴ See Section 50(f)(i) of the Minerals Act.

prospecting operations or mining operations carried on by virtue of such mineral licence.⁴⁵ Furthermore, the holder must from time to time as circumstances change revise such an environmental management plan either out of his/her own motion or as required by the Commissioner.⁴⁶ The application of these obligations to reconnaissance licences but not non-exclusive prospecting licences or mining claims is nonsensical. It is submitted that this is probably an oversight.

When in the course of any reconnaissance, prospecting and mining operations carried on under any non-exclusive prospecting licence, a mining claim or a mineral licence, any mineral or group of minerals is spilled or land or water is polluted or any plant or animal life is endangered or destroyed or any damage or loss is caused to any person (including the state) by such spilling or pollution, the holder of the licence or mining claim must immediately report such spilling, pollution, loss or damage to the Minister of Mines and Energy. The holder must then take at his or her own costs all such steps as may be necessary in accordance with good reconnaissance, prospecting or mining practices or otherwise as may be necessary to remedy such spilling, pollution, loss or damage.⁴⁷ If the holder fails to comply with these provisions within such period as the Minister may deem in the circumstances to be reasonable, the Minister may direct the holder by notice to take the necessary steps (as stated in the notice) within the necessary period (also stated in the notice) to remedy the spilling, pollution or damage or loss. The notice must be in writing addressed and delivered to the holder. The Minister may, if the holder fails to comply with such directions to the satisfaction of the Minister within the period specified in such notice or such further period as the Minister may on good cause shown allow in writing, cause such steps to be taken as may be necessary to remedy such spilling, pollution or damage or loss and recover in a competent court the costs incurred thereby from such holder.⁴⁸ This section does not apply to holders of exclusive prospecting licences. It is submitted that this is an oversight by the legislature, as the activities authorised by a non-exclusive prospecting licence and an exclusive prospecting licence are the same.

2.1.4 Mine Closure and Rehabilitation

If a mining claim or reconnaissance, prospecting, retention or mining area is abandoned, the holder of the claim or licence to which such area relates must take all such steps as may be necessary to remedy to the reasonable satisfaction of the Minister any damage caused by any prospecting operations and mining operations carried on by such holder to the surface of, and the environment on, the land in the area in question.⁴⁹ The Minister may, with due regard to good reconnaissance, prospecting or mining practices by notice in writing addressed and delivered to the holder, give directions to such holder in relation to the protection of the environment.⁵⁰

If a non-exclusive prospecting licence, mining claim or mineral licence has been cancelled or has expired, the Minister may by notice direct such person to take all such steps as may be necessary to remedy to the satisfaction of the Minister any damage caused by any prospecting operations and mining operations carried on by such holder to the surface of, and the

⁴⁵ See Section 50(f)(ii) of the Minerals Act.

⁴⁶ See Section 50(g) of the Minerals Act.

⁴⁷ Section 130(1) of the Minerals Act.

⁴⁸ Section 130(2) of the Minerals Act.

⁴⁹ Sections 43(2)(c) and 54(2)(b) of the Minerals Act.

⁵⁰ Section 57(1)(b) of the Minerals Act.

environment in, such area. The notice must be in writing addressed and delivered to the person who was the holder of such licence or mining claim. The same applies if any area to which such licence or mining claim relates has been abandoned or has for any reason ceased to be part of the area to which such licence relates.⁵¹ If the person fails to comply with a direction given in the notice, the Minister may cause such steps to be taken and recover the costs thereof from that person.⁵²

2.2 The Minerals Policy

In 2002, the Ministry of Minerals and Energy published a Minerals Policy for Namibia ('Policy'). This Policy states, in its foreword, that the Government recognises the importance of the mining industry in the social and economic development of Namibia. The vision of the policy is

to achieve a high level of responsible development of national resources in which Namibia becomes a significant producer of mineral products while ensuring maximum sustainable contribution to the socio-economic development of the country [and] [t]o further attract investment and enable the private sector to take the lead in exploration, mining, mineral beneficiation and marketing.⁵³

The mission of the policy is stated as follows:

The Ministry of Mines and Energy (MME), as the custodian of Namibia's rich endowment of mineral and energy resources, facilitates and regulates the responsible development and sustainable utilisation of these resources for the benefit of all Namibians.⁵⁴

The Policy recognises the effect that mining has on the environment and the need for appropriate legislation to regulate the environment in mining. It furthermore recognises that there is little effective environmental management within the Namibian mining industry.⁵⁵ The policy attributes this to inadequate co-ordination between the Ministry of Mining and Energy and the Ministry of Environment and Tourism in relation to environmental legislation; a lack of public awareness, capacity weaknesses and education programmes focused on environmental issues; the absence of an environmental budget, and the public antagonism towards mining activities because of its negative effects on the environment.⁵⁶

The Policy further calls for clear funding mechanisms for environmental rehabilitation, management and control, which will be achieved through the development and implementation of internationally benchmarked Environmental Trust Funds or Bonds, and the implementation of industry good practices in respect of waste management.⁵⁷

The Government's policies with regard to the mining industry and the environment are summed up as follows:

- Government will ensure that the development of Namibia's mining industry proceeds on an environmentally sustainable basis.

⁵¹ Section 128(1)(b) of the Minerals Act.

⁵² Section 128(2)(a) of the Minerals Act.

⁵³ Para. 1.2 of the Policy.

⁵⁴ Para. 1.2 of the Policy.

⁵⁵ GRN (2002e:26).

⁵⁶ Para. 5.2. of the Policy.

⁵⁷ Paras 5.3. and 5.4. of the Policy.

- Government will enact exploration and mining legislation benchmarked against environmental global best practice.
- Government will ensure compliance during rehabilitation with national policies and guidelines, and where appropriate and applicable, with global best practice.
- Government, with relevant stakeholders, will investigate the establishment of financial mechanisms for environmental rehabilitation and aftercare.
- Government, in consultation with the mining industry, will develop waste management standards and guidelines for Namibia.

Although the Policy is not binding, it does reflect the Ministry's attitude towards mining and the environment.

2.3 The SADC Protocol on Mining

The SADC Protocol on Mining ('Protocol on Mining') states that member states must promote sustainable development by ensuring that a balance between mineral development and environmental protection is attained.⁵⁸ Member states must encourage a regional approach in conducting environmental impact assessments especially in relation to shared systems and cross-border environmental effects.⁵⁹ Member states must collaborate in the development of programmes to train environmental scientists in fields related to the mining sector.⁶⁰ Through the Protocol on Mining, member states undertake to share information on environmental protection and environmental rehabilitation.

3 Energy Laws and Policy

3.1 The Petroleum (Exploitation and Production) Act No. 2 of 1991

This Act regulates the upstream petroleum industry. It provides for the reconnaissance, exploration, production and disposal of, and the exercise of control over, petroleum.⁶¹

3.1.1 Application for Licences

An application for a reconnaissance or exploration licence or the renewal of such a licence must set out an estimate of the effect which the proposed operations may have on the environment.⁶² Applications for production licences are more strict. Not only requires an estimation of the significant effect of the production operations on the environment, but must also set out how the company intends to control or limit the effect of the production operations on the environment.⁶³ The stricter requirements in respect of petroleum licences are justified in

⁵⁸ Article 8(1).

⁵⁹ Article 8(2).

⁶⁰ Article 8(3).

⁶¹ Petroleum is defined by Section 1 of the Act as "any liquid or solid hydrocarbon or combustible gas existing in a natural condition in the earth's crust and includes any such liquid or solid hydrocarbon or combustible gas which has in any manner been returned to such natural condition, but shall not include coal, bituminous shales or other stratified deposits from which oil can be obtained by destructive distillation, or gas arising from marsh or other surface deposits."

⁶² Sections 24(1)(c)(iii), 25(1)(c)(iii), 32(1)(c)(iii) and 33(1)(c)(iii).

⁶³ Section 46(2)(i)(vii).

the light of the more invasive effects of production operations when compared with reconnaissance or exploration operations.

3.1.2 Granting of Licences

Upon receipt of an application for, or the renewal or transfer of, petroleum licences, the Minister may, to enable him or her to consider the licence, require the applicant, by notice in writing, to carry out or cause to be carried out such environmental impact studies as may be specified in such notice and to furnish the Minister, within such period as may be specified in the notice, with such proposals, by way of alteration to or in addition to proposals set out in the application, as may be so specified.⁶⁴ The same also applies to applications for the approval for the granting, cession or assignment of interest in a petroleum licence, or an application to be joined as a joint holder of the licence.

There is no obligation on the Minister to refuse to grant an application for a petroleum licence if there appears from the application document that the operations to be undertaken under the licence will have adverse effects on the environment. An applicant is only required to estimate what the significant effect of the operations will be on the environment – even if they are substantial, the legislation makes provision that a licence may still be granted.

3.1.3 Exercising Rights in Terms of Licences

The Petroleum Act regulates the obligations of holders of petroleum licences in respect of the environment in some detail. The Minister of Mines and Energy may, having due regard to good oilfield practices, give directions to the holder of a licence in respect of the prevention of the spillage of substances (including water and drilling fluid) extracted from a well drilled for purposes or in connection with reconnaissance operations, exploration operations or production operations, or substances used in relation to the drilling of such a well.⁶⁵

The Petroleum Act imposes various obligations relating to the environment on the holder of exploration and production licences. The holder of an exploration or production licence has an obligation to carry out exploration and production operations in the exploration or production area in accordance with good oilfield practices.⁶⁶ The holder must also control the flow and prevent the waste, escape or spilling in the exploration area of petroleum, water or any gas.⁶⁷ Further, the holder must prevent the waste or spilling in the exploration or production area of substance (including water and drilling fluid) extracted from a well drilled for purposes of or in connection with exploration or production operations or used in relation to the drilling of such a well.⁶⁸ The holder must prevent damage to petroleum-bearing strata in any area outside the exploration area⁶⁹ and prevent petroleum reservoirs in the exploration and production area or water sources from being connected with each other.⁷⁰

The holder of an exploration or production licence must prevent water or any other substance entering any petroleum reservoir through the wells in the exploration area, except if required by, and in accordance with, good oilfield practices.⁷¹ The holder must also prevent the

⁶⁴ Section 12(2)(b).

⁶⁵ Section 21(1)(d).

⁶⁶ Section 38(1)(a).

⁶⁷ Section 38(2)(a).

⁶⁸ Section 38(2)(b).

⁶⁹ Section 38(2)(c).

⁷⁰ Section 38(2)(d).

⁷¹ Section 38(2)(e).

pollution of any aquifer, estuary, harbour, lake, reservoir, river, spring, stream, borehole and all other areas of water by the spilling of petroleum, drilling fluid, chemical additive, any gas or any waste product or effluent.⁷²

Prior to the drilling of any well, the holder must furnish the Petroleum Commissioner with a report containing particulars of the technique to be employed, an estimate of the time to be taken, the material to be used and the safety measures to be employed in the drilling of such well.⁷³ The holder may not flare any combustible gas, except for purposes of testing such gas, or for operational reasons, or with the approval of the Minister and in accordance with such terms and conditions as may be determined by the Minister.⁷⁴ Finally, a holder may not abandon, close or plug a well without the approval of the Minister.⁷⁵

The Minister may, in consultation with the Minister of Fisheries and Marine Resources and the Minister of Environment and Tourism, exempt holders of exploration or production licences from the above provisions.⁷⁶ The Minister may determine the period for which and the conditions subject to which the exemption is granted.⁷⁷ This discretion of the Minister is not conducive towards a petroleum regulatory regime that respects peoples' right to a clean environment. This in turn reduces accountability on the part of the state as well; by granting the Minister a discretion instead of imposing certain obligations on the Minister, the EMA reduces the scope for holding the Minister accountable.

When in the course of production operations carried out under a production licence any petroleum or other substances are spilled or any pollution is caused, the holder of such production licence must report it to the Minister of Mines and Energy. This must be done as soon as possible and the holder must take, at its own costs, all such steps as may be necessary in accordance with good oilfield practices or otherwise as may be necessary to remedy it.⁷⁸ If the holder fails to do so, the Minister may order the holder to take such necessary steps to remedy the spilling, pollution or damage or loss. This must be done by means of written notice addressed to the holder. If the holder fails to comply with the directions of the Minister, the Minister may cause the necessary steps to be taken to remedy such spilling, pollution or damage or loss. All costs incurred by the Minister must be recovered from the holder by the Minister through a competent court.⁷⁹

In 1999, regulations relating to the health, safety and welfare of persons employed, and protection of other persons, property, the environment and natural resources in, at or in the vicinity of exploration and production areas ('Petroleum Regulations') were published.⁸⁰ These Regulations were made by the Minister of Mines and Energy, acting in consultation with the Minister of Fisheries and Marine Resources and the Minister of Environment and Tourism. The Petroleum Regulations regulate, *inter alia*, electricity, fires and explosions, transport (including transport of hazardous substances), subsea operations, emergency preparedness (including pollution by spilling of petroleum) and safety zones.

⁷² Section 38(2)(f).

⁷³ Section 38(2)(g).

⁷⁴ Section 38(2)(h).

⁷⁵ Section 38(2)(i).

⁷⁶ Section 38(2A)(a).

⁷⁷ Section 38(2A)(a).

⁷⁸ Section 71(1).

⁷⁹ Section 71(2).

⁸⁰ GN 190 of GG 2188 of 23 September 1999.

If the Minister has reason to believe that any works or installations erected by the company or any operations carried out by the company are endangering or may endanger persons or any property of any other person, the Minister may require the company to take reasonable remedial measures within such reasonable period as may be determined by the Minister. The Minister may furthermore require the holder to take reasonable and appropriate steps to repair any damage to the environment. This also applies in respect of any works, installations or operations which the Minister has reason to believe is causing pollution or is harming wildlife or the environment. If the Minister deems it necessary, he or she may require the company to discontinue petroleum operations in whole or in part until the company has taken such remedial measures or has repaired any damage.

3.1.4 Rehabilitation and Closure

Decommissioning, rehabilitation and closure are dealt with primarily under the Petroleum Act and the petroleum agreement.⁸¹ Some provisions of the EMA are also applicable.

An application for a production licence must, apart from what has been stated above, contain a proposed programme of production operations and of the processing of petroleum in question. This program must include separate decommissioning plans⁸² in respect of the production area and any area outside such production area where activities in connection with the production operations in such production area are being carried out. More specifically, it must set out to the satisfaction of the Minister (acting in consultation with the Minister of Environment and Tourism, the Minister of Fisheries and Marine Resources and the Minister of Finance), the measures proposed to be taken after cessation of such production operations to remove or otherwise deal with all installations, equipment, pipelines and other facilities, whether on-shore or off-shore, erected or used for purposes of such operations and to rehabilitate land disturbed by way of such operations.⁸³

The holder of a production licence must review, and if necessary, revise the decommissioning plan. This must be done one year before the estimated date on which 50% of the estimated recoverable reserves of petroleum in the production area would have been produced. The Minister may, acting in consultation with the Minister of Environment and Tourism, the Minister of Fisheries and Marine Resources and the Minister of Finance, approve the reviewed or revised decommissioning plan or refer it back to the holder of the production licence concerned to make such amendments as the Minister may deem necessary.⁸⁴

Other than the general provisions in the Petroleum Act, it is also a term and condition of an exploration licence that the holder thereof remove from the exploration area, or otherwise deal with, as directed by the Minister in consultation with the Minister of Environment and Tourism, the Minister of Fisheries and Marine Resources and the Minister of Finance, all installations, equipment, pipelines and other facilities, whether on-shore or off-shore, not used

⁸¹ See 3.1.5. below in respect of the petroleum agreement.

⁸² The Model Petroleum Agreement defines ‘decommissioning plan’ as “the package of measures proposed by the Company pursuant to s.46(2)(viA) of the Petroleum Act to be taken after cessation of production operations to remove or otherwise deal with all installations, equipment, pipelines and other facilities, whether on shore or off shore, erected or used for purposes of such operations and to rehabilitate land disturbed by way of such operations, reviewed pursuant to s.68A(1) and either approved or revised by the Minister pursuant to s.68A(2) or 68A(3) of the Petroleum Act”. See clause 1.1(n) of the Model Petroleum Agreement.

⁸³ Section 42(2)(i)(vi) of the Petroleum Act.

⁸⁴ Section 68A(2) of the Petroleum Act.

or intended to be used in connection with such exploration operations.⁸⁵ The same condition is not listed for the holder of a production licence.

3.1.5 The Petroleum Agreement

Section 13 of the Petroleum Act requires that, before an exploration licence is issued, the applicant(s) must enter into a petroleum agreement ('PA') with the state. A Model Petroleum Agreement ('MPA') was published in 1998. The PA is entered into between the applicant (the company) and the Minister of Mines and Energy. While the MPA provides a framework for the typical PA entered into between the Company and the Minister, the exact terms of each PA will depend on negotiations between the parties. For now, the focus will be on the provisions of the MPA.

Clause 11 of the MPA deals with environmental protection. In terms of this clause, the company must conduct its petroleum operations in a manner likely to conserve the natural resources of Namibia and protect the environment.⁸⁶ The company must employ the best available techniques in accordance with good oilfield practices⁸⁷ for the prevention of environmental damage⁸⁸ to which its petroleum operations might contribute and for the minimisation of the effect of such operations on adjoining or neighbouring lands.⁸⁹ The company must also implement the proposals contained in its development plan regarding the prevention of pollution, the treatment of wastes, the safeguarding of natural resources and the progressive reclamation and rehabilitation of lands disturbed by petroleum operations.⁹⁰

The company undertakes, for purposes of the MPA, to take all reasonable, necessary and adequate steps in accordance with good oilfield practices to minimise environmental damage to the licence area and adjoining or neighbouring lands.⁹¹ If the company fails to comply with this provision, or contravenes any law on the prevention of environmental damage, and such failure or contravention results in environmental damage, the company must take all necessary and reasonable measures to remedy such failure or contravention and the effects thereof.⁹² These measures and methods must be determined in timely consultation with the Minister upon the commencement of petroleum operations or whenever there is a significant change in the scope or method of carrying out petroleum operations. The company must take into account the international standards applicable in similar circumstances and the relevant environmental impact assessment studies carried out in accordance with the MPA. The company must notify the Minister in writing of the nature of the measures and methods finally determined by the company and must cause such measures and methods to be reviewed from time to time in view of prevailing circumstances.⁹³

⁸⁵ Section 38(1)(d) of the Petroleum Act.

⁸⁶ Clause 11.2(a) of the MPA.

⁸⁷ 'Good Oilfield Practices' means "any practices which are generally applied by persons involved in the exploration or production of petroleum in other countries of the world as good, safe, efficient and necessary in the carrying out of exploration operations or production operations". See Section 1 of the MPA and Section 1 of the Petroleum Act.

⁸⁸ 'Environmental damage' includes "any damage or injury to, or destruction of, soil or water or any plant or animal life, whether in the sea or in any other water or on, in or under land."

⁸⁹ Clause 11.2(b).

⁹⁰ Clause 11.2(c).

⁹¹ Clause 11.3.

⁹² Clause 11.4.

⁹³ Clause 11.6.

If the Minister has reason to believe that any works or installations erected by the company or any operations carried out by the company are endangering or may endanger persons or any property of any other person or is causing pollution or is harming wildlife or the environment to a degree which the Minister deems unacceptable, the Minister may require the company to take reasonable remedial measures within such reasonable period as may be determined by the Minister and to take reasonable and appropriate steps to repair any damage to the environment. If the Minister deems it necessary, he may require the company to discontinue Petroleum Operations in whole or in part until the company has taken such remedial measures or has repaired any damage.

The company must cause a person or persons, approved by the Minister on account of their special knowledge of environmental matters, to carry out two environmental impact assessment studies. These studies must be carried out in order to determine the prevailing situation relating to the environment, human beings, wildlife or marine life in the licence area and in the adjoining or neighbouring areas at the time of the studies.⁹⁴ The environmental impact studies are also carried out in order to establish what the effect will be on the environment, human beings, wildlife or marine life in the licence area in consequence of the petroleum operations to be made under the MPA, and to submit for consideration by the parties to the MPA, measures and methods for minimising environmental damage and carrying out site restoration in the licence area.⁹⁵

The procedure applicable to the environmental impact studies, including the phases in which it must be carried out and information relating to the guidelines it must contain is dealt with in detail in the MPA.⁹⁶ Furthermore, the company's obligations in respect of the environment in every phase of its operations are determined in the MPA, including the company's duty to report to the Minister of Mines and Energy at various stages of its operations and the company's duty to establish a trust fund for purpose of decommissioning.⁹⁷ Lastly, the company must ensure that:⁹⁸

- petroleum operations are carried out in an environmentally acceptable and safe manner consistent with good oilfield practices and that such operations are properly monitored;
- the pertinent completed environmental impact assessment studies are made available to its employees and to its contractors to develop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out its petroleum operations; and any agreement entered into between the company and its contractors relating to its petroleum operations shall include the terms set out in the MPA and any established measures and methods for the implementation of the company's obligations in relation to the environment under the MPA.

3.2 The Atomic Energy and Radiation Protection Act No. 5 of 2005

The Act was passed in Parliament in 2005, and it is administered by the Ministry of Health and Social Services. The Act came into operation on 16 January 2012, with the exception of section 44 which came into operation on 16 May 2005. According to its long title, this piece of legislation was enacted to

⁹⁴ Clause 11.7(a).

⁹⁵ Clause 11.7(b).

⁹⁶ Clause 11.8 to clause 11.10.

⁹⁷ Clause 11.12 to clause 11.17.

⁹⁸ Clause 11.11.

provide for adequate protection of the environment and of people in current and future generations against harmful effects of radiation by controlling and regulating the production, processing, handling, use, holding, storage, transport and disposal of radiation sources and radioactive materials, and controlling and regulating prescribed non-ionising radiation sources.

One objective of the Act is to “minimise the exposure of persons and the environment in Namibia to the effects of harmful radiation.” To this end, an Atomic Energy Board has been established in 2009.⁹⁹ The Board serves as a national advisory board on all matters relating to radiation sources and nuclear energy. An independent National Radiation Protection Authority is also established,¹⁰⁰ which informs the Atomic Energy Board about the extent of radiation exposure in the country; inspects any radiation source or nuclear material in order to assess radiation safety conditions; and to establish and maintain a register of radioactive materials in Namibia, amongst others.

According to Section 16, licences are generally required for the possession, import, and dispose of radiation sources or nuclear materials and every radiation source must be registered in line with Section 18. The application process for such licence follows the procedure of Section 21. As part of the application process, an applicant must include detail of the results of all assessments, including environmental impact assessments, and studies that have been carried out in respect of the practice concerned as well as reports of those assessments and studies when the application is for disposal of radioactive waste or storage of radioactive sources for long periods.¹⁰¹ Before issuing a licence, the Director-General must consider the need to protect the environment and to conserve natural resources.¹⁰²

The licence holder has several duties with regard to the environment.¹⁰³ A holder must for example keep records and compile reports relating to radiation protection or radiation safety standards required to be observed under the Act.¹⁰⁴ A holder must also prepare in consultation with the Board, radiation safety rules and within a practice or for the use, handling, storage, transportation, or disposal of radiation sources or nuclear material produced or prepared by the licence holder.¹⁰⁵ A licence holder is also primarily responsible for the safety and security of radiation sources and nuclear materials.¹⁰⁶

The Act further authorises the Director-General to take immediate action to discontinue or refrain from any activities if he or she is satisfied that the holder is not complying with any condition of an authorisation and that immediate action is required to prevent irreversible damage to animal or plant life or the environment.¹⁰⁷ If the holder fails to do so, the Director-General may take the necessary steps at the cost of the holder.¹⁰⁸

⁹⁹ Section 3(1) of the Act.

¹⁰⁰ Section 33(1) of the Act.

¹⁰¹ Section 21(1)(g).

¹⁰² Section 22(1)(b).

¹⁰³ Sections 29(2), 30, 31 and 32. Section 30 obliges a licence holder to appoint a radiation safety officer. Section 31 obliges a holder to notice of intended termination of operations, while Section 32 obliges the holder to give notice of any accidents.

¹⁰⁴ Section 29(2)(b).

¹⁰⁵ Section 29(2)(c).

¹⁰⁶ Section 29(1).

¹⁰⁷ Section 24(1)(b).

¹⁰⁸ Section 24(2).

The Act makes it an offence for any person to intentionally or negligently operate, store, transport, dispose of or abandon any radiation source in such a manner that any human being may be subject to a dangerous amount of radiation or that a substantial amount of radiation or radioactive material may be released into the environment.¹⁰⁹ On conviction, a person may be liable to a maximum fine of N\$200,000 or to imprisonment for a maximum period of ten years or both such fine and imprisonment.¹¹⁰

The above provisions all operate in pursuit of the objectives of the Act. These objectives include minimising the exposure of persons and the environment in Namibia to the effect of harmful radiation.¹¹¹

3.3 The Petroleum Product and Energy Act¹¹²

The Petroleum Products and Energy Act of 1990 regulates the downstream petroleum industry. The Act states that the Minister of Mines and Energy may make regulations relating to the conducting of business in respect of petroleum products application of health, hygiene, safety and environmental standards.¹¹³ In 1991, regulations relating to the purchase, sale, supply, acquisition, storage, transportation, recovery and re-refinement of used mineral oil were published.¹¹⁴ The Regulations do not directly refer to the environment, but prohibit the disposal, contamination, usage and possession, storage and transportation in certain containers, of used mineral oil without the necessary authorisation.¹¹⁵ ‘Used mineral oil’ means all mineral oil withdrawn from its original use and contaminated by foreign matter through such use.¹¹⁶

3.4 The Draft Gas Bill

The Ministry of Mines and Energy has drafted the Gas Bill¹¹⁷ in order

[t]o promote the establishment of a gas transportation and distribution network in Namibia for the purposes of domestic supply and for export; to establish a framework of licensing for the gas industry and a national gas regulator to monitor the performance of licence conditions and promote reliability of service; to ensure safety, efficiency and environmental responsibility in the transportation and distribution of natural gas; to facilitate investment in pipeline infrastructure by private, public, municipal and mixed owned enterprises; to promote a competitive market in gas in the long term, and to stimulate cross-border trade in gas between Namibia and its neighbours.¹¹⁸

It is envisaged that a Gas Regulatory Authority will be established to make recommendations to the Minister to *inter alia* grant licences for gas transportation, storage, distribution and marketing; monitor and approve of gas transportation, storage, and distribution tariffs and charges; approve tariffs and charges to gas distributors and customers who do not have choice of suppliers; to assist the Minister in the preparation of gas supply regulations; monitor the

¹⁰⁹ Section 44(1)(b).

¹¹⁰ Section 44(1).

¹¹¹ Section 2(a).

¹¹² No. 13 of 1990.

¹¹³ Section 2A(b)(ii).

¹¹⁴ General Notice 112 in *Government Gazette* 281 of 21 October 1991.

¹¹⁵ Regulation 3 of the Petroleum Product Regulations.

¹¹⁶ Regulation 1.

¹¹⁷ See http://www.mme.gov.na/files/publications/e3a_gas_act_draft_2b.pdf; accessed 13 October 2015.

¹¹⁸ See http://www.mme.gov.na/files/publications/e3a_gas_act_draft_2b.pdf; accessed 16 October 2015.

operation of the gas system; and to settle disputes between licensees and between licensees and customers at the request of a licensee or any interested party.

A comprehensive licensing regime has been developed based on the principle that “[N]o activity in connection with the transportation, storage or distribution and marketing of gas may be carried out by any person other than a company authorised to do so by the Minister under the licensing regime set out in this Act.”

The Bill explicitly recognises the importance of environmental protection in that it provides in Section 38 that

- (1) All infrastructure facilities established and operated in connection with a gas supply network shall operate in accordance with the applicable laws with respect to the protection of the environment.
- (2) No pipeline infrastructure shall be laid without an environmental impact assessment first taking place and the results assessed, in accordance with the Environmental Management Act 1998, the Pollution Control and Waste Management Act and the Parks and Wildlife Management Act, where appropriate, including the Petroleum (Exploration and Production) Act, 1991: Regulations relating to the health, safety and welfare of persons employed, and protection of other persons, property, the environment and natural resources, in at or in the vicinity of exploration and production areas, 1999.
- (3) Provision shall be made for the proper restoration of the operating environment to its natural condition, with plans for pipeline decommissioning being submitted according to the environmental laws and the appropriate regulations.

Although the second draft of the Bill dates back to June 2001, the Bill has not materialised. It is also uncertain when this Bill will be promulgated, if at all.

3.5 The Electricity Act No. 4 of 2007

The Electricity Act of 2007 ('Electricity Act') provides for the establishment of the Electricity Control Board ('Board') and provides for the requirements and conditions for obtaining licences for the provision of electricity and the powers and obligations hereunder.¹¹⁹ Electricity may only be generated or distributed with due compliance with the requirements of any other law, in particular laws relating to health, safety and environmental standards.¹²⁰ When considering an application for the issue, renewal or amendment of a licence, the Minister, and the Board, in making its recommendations to the Minister, must give due consideration to matters or activities which may adversely affect, or result in damage to the environment.¹²¹ The Minister of the Board may request the applicant to submit an environmental impact assessment study indicating the extent of any potential damage to or pollution of the environment and the steps proposed to be taken by the applicant to prevent or minimise such damage or pollution and to restore the environment generally and in terms of existing environmental legislation.¹²²

Installations for the provision of electricity, including any alterations or extensions thereto, and all other electricity practices and activities by licensees, customers and other persons, must be

¹¹⁹ See the Preamble to the Electricity Act.

¹²⁰ Section 18(4)(b).

¹²¹ Section 21(1).

¹²² Section 21(2)(a).

built, operated and conducted with due compliance with the requirements of applicable laws, in particular laws relating to health, safety and environmental standards.¹²³

3.6 Draft White Paper on the Energy Policy of Namibia

In 1998, the Energy Policy Committee of the Ministry of Mines and Energy has released the Draft White Paper on the Energy Policy of Namibia.¹²⁴ Effective governance; security of supply; social upliftment; investment and growth; economic competitiveness and efficiency; and sustainability have been declared as goals of this Policy.

White Paper Executive Summary

This White Paper embodies a new, comprehensive energy policy aimed at achieving security of supply, social upliftment, effective governance, investment and growth, economic competitiveness, economic efficiency and sustainability. Policies will affect energy demand (mainly households), supply (electricity, upstream oil and gas, downstream liquid fuels, downstream gas, and renewable energy) and a number of cross-cutting issues (economic empowerment, environment, energy efficiency and regional energy trade and cooperation).

Government is committed to ensuring that energy demand by the productive sectors of the economy continues to be met through reliable competitively-priced energy. Special attention is given in the White Paper to those demand sectors, which have been neglected historically, namely, poor urban and rural households. Policies proposed for these households include those for widening access to electricity as well as other commercial fuels. Generally, not enough is known about the problems and needs in this sector so national studies will be initiated as a basis for future policy development, including the pressing issue of sustainable biomass usage in rural areas and the role of women. Rural energy policies will also be integrated with development initiatives in other ministries.

Government has embarked on the reform of the electricity sector and a study has been commissioned to look at possible rationalisation and restructuring, as well as competition and ownership changes. At the same time, an Electricity Act is being drafted which will put in place an electricity regulator to govern the industry. Tariffs and electrification targets will be governed through a licensing system. The creation of a rural electrification fund is also proposed. New investment in the sector will be encouraged through appropriate regulatory, fiscal and environmental frameworks, harmonised with those in SADC countries.

The legislative framework governing upstream oil and gas is well developed, and the White Paper merely clarifies an accepted policy framework, which seeks to optimise possible national benefits while achieving the necessary balance of interests to attract investment. The policy identifies the different roles and functions of industry participants, and lays out the basic legal and fiscal criteria.

Namibia does not yet but could soon have a downstream gas sector. The key challenge is to create a policy and legislative framework, which attracts initial investment into the sector, while maintaining options for competition in the future and the fair distribution of economic rents. A new Gas Act is proposed, but it is thought premature to install a Gas Regulator. Licensing requirements will include the need for separate accounting for the different operations of gas production, transmission, distribution and marketing, allowance for third party access, and the application of fair and reasonable tariffs.

¹²³

Section 33(1)(a).

¹²⁴

GRN (1998a).

The downstream liquid fuels sector will be subject to controlled and phased deregulation with regard to price setting, subject to competitive behaviour being evident. Government will, however, require obligations in terms of diversified imports, international product specifications, strategic stocks, third party lease access to uncommitted infrastructure, security of forecourt jobs, health and safety, and adequate rural service in terms of access and pricing.

Government will promote the use of renewable energy through the establishment of an adequate institutional and planning framework, the development of human resources and public awareness and suitable financing systems. It also seeks to meet development challenges through improved access to renewable energy sources, particularly in rural electrification, rural water supply and solar housing and water heating.

The energy policy goal of sustainability will further be promoted through a requirement for environmental impact assessments and project evaluation methodologies, which incorporate environmental externalities. Energy efficiency will be promoted through policies on better information collection and dissemination, and particularly with respect to energy efficiency and conservation practices in households, buildings, transport and industry.

The White Paper reaffirms Namibia's commitment to constructive engagement in SADC and SAPP in order to maximise economic benefits. Security of supply will be achieved through an appropriate diversification of economically competitive and reliable sources, but with particular emphasis on Namibian resources.

Finally, the Ministry of Mines and Energy is mindful that the effective implementation of these policies is dependent on the creation of adequate institutional and human resource capacity. Policies have been proposed in each sector to address this issue.

3.7 Namibia's Uranium and Nuclear Energy Policy

The Ministry of Mines and Energy is drafting Namibia's first Nuclear Policy to cover the entire nuclear fuel cycle, being uranium exploration, mining, milling and nuclear energy, as it is envisaged that Namibia will generate electricity from its own nuclear reactor by 2018.¹²⁵ This Policy has not yet been finalised.

3.8 The SADC Protocol on Energy

The SADC Protocol on Energy of 2006 states, as one of its general principles, that member states must ensure that the development and use of energy is environmentally sound.¹²⁶ Various guidelines for cooperation between member states are set forth in an annexure to the Protocol. The Guidelines emphasise the sustainable development of energy. It appears, however, that despite the almost two decades that the Protocol has been in place, very little has been achieved in giving effect to this Protocol.

3.9 Renewable Energy

At this stage, there is very little regulation of renewable energy in Namibia. Renewable energy and the environment is discussed in more detail elsewhere in this publication.¹²⁷ The topic of this chapter does, however, warrant a short discussion of renewable energy.

As stated above, in terms of the White Paper on the Energy Policy of Namibia, Government will promote the use of renewable energy through the establishment of an adequate

¹²⁵ Weidlich (2011).

¹²⁶ Article 2(8).

¹²⁷ See Chapter 13.II and III.

institutional and planning framework, the development of human resources and public awareness and suitable financing systems. It also seeks to meet development challenges through improved access to renewable energy sources, particularly in rural electrification, rural water supply and solar housing and water heating.

In April 2003, the Namibia Renewal Energy Programme ('NAMREP') Phase I was launched and in June 2007 Phase II was launched. The object of NAMREP Phase I and NAMREP Phase II is

to remove barriers to the delivery of commercially, institutionally, and technically sustainable Renewable Energy Systems (RES) including electricity production (for off-grid lighting, radio, TV, water pumping, and refrigeration), and water heating to the household, institutional, commercial, and agro-industrial sectors and to demonstrate the enabled environment through affirming demonstrations of the application of the technologies.¹²⁸

One of the intended outcomes of NAMREP is to ensure that new policies, laws, regulations and actions in support of renewable energy are in place.¹²⁹ The National Implementing Partner of NAMREP is the Ministry of Mines and Energy. Other partners are the Polytechnic of Namibia, the Global Environmental Facility (GEF), the United Nations Development Programme (UNDP), NamPower, Renewable Energy Technology Suppliers (RET Suppliers), the Danish International Development Agency (DANIDA) and the Electricity Control Board (ECB).¹³⁰ All major financing is supplied by GEF.¹³¹

The Development of a Regulatory Framework for Renewable Energy and Energy Efficiency within the Electricity Sector (REEE Regulatory Framework) is one of several projects implemented by NAMREP.¹³² The REEE Regulatory Framework was prepared by Consulting Services Africa.¹³³ The primary objective of the project is "to recommend the essential elements of a regulatory framework for renewable energy and energy efficiency in Namibia."¹³⁴ Two strategic objectives underlie the recommendations of the REEE Regulatory Framework and should be at the heart of Namibia's long-term energy policy and vision for sustainable development.¹³⁵ These are: supporting environmentally sustainable technologies and attaining greater energy security through a steady increase of electricity production in Namibia using fuels or energy sources that are available in Namibia, for example the sun, biomass and wind.¹³⁶ A critical issue for the successful realisation of the REEE Regulatory Framework is that the REEE Regulatory Framework must take into account Namibia's unique socio-economic, infrastructural and environmental features.¹³⁷

On 12 January 2011, a Terminal Evaluation Report (TER) was published.¹³⁸ The purpose of this document is to analyse and assess the achievement and progress made towards achieving

¹²⁸ See <http://www.undp.org.na/namibia-renewable-energy-programme-namrep-phase-i.aspx>; accessed 27 May 2012.

¹²⁹ Ibid.

¹³⁰ Ibid.

¹³¹ Ibid.

¹³² See Kisting (2008).

¹³³ See <http://www.mme.gov.na/pdf/undp-reports/reee-regulatory-framework.pdf>; accessed 26 May 2012.

¹³⁴ See the Executive Summary of the REEE Framework.

¹³⁵ The Executive Summary of the REEE Framework.

¹³⁶ The Executive Summary and paragraph 2.1 of the REEE Framework.

¹³⁷ The Executive Summary of the REEE Framework.

¹³⁸ Deenapanray (2012).

the original objectives of NAMREP Phase II.¹³⁹ Achievement and progress are assessed against five key criteria, one of which is the ‘impact criterion’, which looks *inter alia* at global environmental benefits.¹⁴⁰ Another criterion is the ‘sustainability criterion’, which requires that a project should be environmentally, financially and socially sustainable.¹⁴¹ According to the TER, the intended outcome of NAMREP to ensure that new policies, laws, regulations and actions in support of renewable energy are in place, is highly satisfactory.¹⁴²

Notwithstanding the above, there is no formal regulation of renewable energy in Namibia. Government, however, recognises the need for renewable energy.¹⁴³ It should be noted that facilities constructed for the generation, transmission or supply of electricity (which will include renewable energy) will fall under the EMA and require an environmental clearance certificate. Furthermore, NamPower is also negotiating Power Purchase Agreements with three anonymous prospective wind energy developers.¹⁴⁴ While some renewable energy sources have little impact on the environment, such as solar panels, others may have a much larger initial impact on the environment, such as construction of hydropower facilities or wind power facilities. Prospective legislation must take the potential impact of the construction of renewable energy facilities into account.

¹³⁹ Ibid:4.

¹⁴⁰ Ibid:5.

¹⁴¹ Ibid.

¹⁴² Ibid:28 and 57.

¹⁴³ See for example Smith (2011).

¹⁴⁴ Nyaungwa (2012).

II. NAMIBIA TOWARDS A CONDUCIVE REGULATORY FRAMEWORK IN RENEWABLE ENERGY LAW AND REGULATION

Natalie A. Renkhoff

As you are aware, economic development and growth is an essential need. Peace cannot be maintained if there is no development. Giving people access to modern energy is part of development. I encourage our Government to invest in alternative energy sources, especially with the aim to use these forms of energy in those parts of our country that cannot be economically connected to the national power grid.

Founding President Dr Sam Nujoma named on the occasion of the inauguration of the Omburu solar power plant in May 2015, the importance of enhancing the use of renewable energy sources in Namibia.¹ At present, however, Renewable Energy (RE) still competes “on an unequal footing with conventional forms of energy”.²

It is a well-known fact that Namibia is blessed with abundant solar, wind and biomass resources. Its solar regime has an average direct insolation of 2,200 kWh/m²/year and minimal cloud cover. Therefore, it is believed that concentrated solar power, for instance, can provide more than 250,000 MW of power generation on suitable land ranking the country’s Direct Normal Irradiation (DNI) among the best in the world.³

The challenge faced by Namibia today is that domestic generation is not adequate to meet current and future projected demand. Furthermore, the demand for electricity still continues to grow, especially in the Erongo region where due to the rising number of mines, there is significant economic growth. According to Paulinus Shilamba, the former CEO of NamPower, the period after August 2016 will be critical for Namibia’s power supply, hence the need to ensure security of supply for the country.⁴ RE sources – energy from solar, wind, biomass and the as yet unquantified indigenous resources including geothermal, wave and tidal energies⁵ – could provide viable alternatives to conventional sources such as oil, coal, gas and nuclear power and might help to diminish the Namibian electricity shortage as many RE sources are available without the necessity to build large-scale power plants first.

Although most RE technologies in today’s market are not yet able to withstand competition from fossil fuels, solar photovoltaic (PV), wind technologies, and to a lesser degree biomass generation have dramatically improved their cost competitiveness in the past years.⁶ However, there is still the need for creating a support system in Namibia that is not in place to date.

¹ *Etango Magazine* (2015e:17).

² MME (1998a:44).

³ *Etango Magazine* (2015a:7).

⁴ *Etango Magazine* (2015b:9).

⁵ Hydropower needs specific mention as a renewable source of energy. Though, normally the only contribution to greenhouse gasses by hydropower projects are from plants decaying within the dam basin, the damage done to the surrounding environment by such large-scale projects like the Ruacana hydropower plant for instance should not be underestimated.

⁶ von Oertzen (2015:96).

1 The Energy Sector

1.1 Current and Future Projected Demand

Domestic electricity generation is presently inadequate to meet both current and future projected demand. Namibia's total electric power demand is approximately 540 MW. The total production capacity delivers only 400 MW, rendering a deficit of 140 MW. In reality, however, the deficit is much higher, as supply from Ruacana is dependent on the seasonal flow of the Kunene River.⁷ It is also anticipated that the ongoing developments in the mining sector will continue to cause higher-than-average consumption growth rates in the future.

Up to 70%⁸ of Namibia's electricity requirements are currently imported from the Southern African Power Pool (SAPP) through bilateral and day-ahead market contracts. To complicate Namibia's current situation, supply constraints in South Africa are resulting in Eskom not being able to meet South African electricity needs, much less those of Namibia.⁹ For the past twenty years Eskom has had surplus generating capacity and has sold electricity at extremely low prices by world standards.¹⁰ Due to the low cost of imported electricity, the construction of a new power plant has never been considered for the last twenty years¹¹ while on-grid renewable energy projects were not worthwhile. In recent years, the average cost of electricity has increased by 14% per annum.¹² As of July 2015, the ECB approved a tariff increase of 9.53%. This means an effective bulk tariff increase from N\$ 1.17 to N\$ 1.28 per kWh.¹³

As a result of the huge amount of imported electricity, Namibia has a quite well developed grid in situ in comparison to other African countries thus ensuring large-scale import is possible. The 951 km HVDC line, linking the far north-east with central Namibia, provides a second north-south interconnection to South Africa. Both form parts of the Southern African Power Pool (SAPP) for interconnecting the region.¹⁴ The Caprivi Interconnector, commissioned in November 2010 by Zimbabwe, Zambia and Namibia was supposed to reinforce the electricity supply to Namibia. Before the power line was build, electricity from Zambia came via South Africa, and Namibia had to pay wheeling charges.¹⁵ The West Coast Development Project involves extensive transmission infrastructure planning and development due to the rapid expansion of mining activities in the Erongo region. As such, the 220 kV transmission spine was reinforced with a second line, and a 220 kV line has been completed to service the Trekkopje Uranium Mine. Additional requests from other mine developers have already been made to NamPower.¹⁶ Prior to this, the under-supply had forced the regional energy distributor ErongoRed to encourage new mines to install their own basic power supply for the time being.¹⁷

⁷ *Etango Magazine* (2015c:19).

⁸ It is interesting to compare these with the aim laid down in the White Paper where one can read that it is the Government's aim to supply 100% of the peak demand and at least 75% of the electric energy demand from internal sources by 2010. See GRN (1998a:24).

⁹ Von Oertzen (2014:103).

¹⁰ GRN (2008a:ii).

¹¹ Simasiku (2011:6).

¹² Ndhlukula (2009:7).

¹³ ECB (2015).

¹⁴ GRN (2012c:48).

¹⁵ Simasiku (2011:4).

¹⁶ GRN (2012c:48).

¹⁷ Mischo / Ellmies (2011:7).

Nevertheless, huge parts of the country are still unelectrified as extending the grid to feed small, isolated communities is not cost effective. The Government has therefore prioritised rural electrification. In the last ten years, over N\$250 million has been spent on it.¹⁸

1.2 Current and Prospective Power Generation Projects

The Namibian power sector is presently facing various operational and planning challenges due to the rising demand for electricity and the need to become more independent from imports.

Currently, the Ruacana Hydropower station on the Kunene River is Namibia's main domestic source of power generation. It contributes more than 60% towards the current demand for electricity in Namibia,¹⁹ though it was initially planned that Ruacana would be able to meet Namibia's entire demand.²⁰ In March 2012, the fourth turbine was put into operation at the power station.²¹ This can boost the total output to 339 MW when all four units are running simultaneously.²² However, due to varying rainfall patterns in Southern Angola, the Ruacana station cannot always meet its maximum production capacity.²³

Apart from Ruacana, there are the Van Eck coal-fired power station in Windhoek and the Paratus diesel power station. Both plants were only supposed to be an interim as the Ruacana power station later went on line as initially planned.²⁴ Due to the rising demand however, NamPower is often left with no option other than make use of Van Eck and Paratus. Van Eck and Paratus are very expensive to operate due to extremely high cost of imported coal and diesel fuels, but without these, a constant supply to Windhoek and Walvis Bay, the industrial coastal town, cannot be ensured.²⁵

The Anixas thermal peaking power station, with a capacity of 22.5 MW at Walvis Bay, was inaugurated in November 2011. The power station has already been feeding electricity into the Namibian grid since July 2011 to assist in meeting peak power requirements.²⁶

In May 2015, the Omburu solar power plant close to Omaruru was inaugurated. Inno Sun, a Franco-Namibian company involved in renewable energy projects in Namibia, has thus become the first commercial independent power producer. The capacity of the park is 4.5 MW. This represents 1% of the electricity generation of Namibia or the domestic consumption of 20.000 Namibians. The electricity generated by Omburu is transported through a 1.2 km long powerline, and injected into Omburu transmission substation where it is sold to NamPower. Contrary to experiences expressed by other potential independent power producers, Inno Sun built its solar power plant in four months only following a speedy application process.

As the existing power plants cannot meet the demand and with rising prices for imported electricity, the Government in collaboration with NamPower has put short-, medium and long term plans in place to ensure the security of supply.

Under the Short Term Critical Supply Project a number of short- and medium-term initiatives are planned, while the Kudu gas project and the Baynes hydropower project are Namibia's

18 *Etango Magazine* (2011b:17).

19 GRN (2012c:47).

20 GTZ (2007:1).

21 *Allgemeine Zeitung* (2012a).

22 GRN (2012c:47).

23 *Etango Magazine* (2011b:16).

24 GTZ (2007:1).

25 *Etango Magazine* (2011b:17).

26 GRN (2012c:47).

long-term projects. The Short Term Critical Supply Project will run until 2018 when the new base load power station is expected to be commissioned. Crucial to the success of the STCS is that everyone in Namibia commits his / her own contribution by reducing personal electricity consumption by at least 10%.²⁷

1.2.1 Short-term Projects

There are a number of short-term projects of which the most important undertaking is to enter into power purchase agreements with other SADC countries to be supplied with electricity by them. This includes not only the negotiation of new power purchase agreements but also re-negotiation of existing ones with neighbouring power utilities, namely with South Africa's Eskom, Zesco in Zambia, Zesa in Zimbabwe as well as Aggreko Mozambique.²⁸

Besides doing what Namibia already did for decades, namely importing electricity, short-term projects also include generating electricity from renewable energy sources locally, albeit in smaller scale.

Projects actively involving the people of Namibia are the so-called Demand Side Management (DSM) programmes.²⁹ The programmes include the distribution of 1 million LED lights, the twenty-thousand solar water heater campaign, virtual power station (VPS) and demand reduction (DR) campaigns. Under the theme 'Power of Knowing' public awareness campaigns are run advocating energy saving initiatives. The aim of the LED campaign is the reduction of the lighting load during peak demand times, as well as the stimulation of the local energy efficient lighting market. While the LED campaign is expected to reduce the peak demand by up to 30 MW, the solar water heater campaign will lead to a reduction of approximately 10 MW.³⁰

Furthermore, the turbine runners of the three old units at the Ruacana hydropower station will be replaced. The replacement of the runner for Unit 1 was completed in December 2014, while the commissioning of the runners for Unit 2 and 3 is expected before the end of 2015. This replacement adds additional 15 MW bringing the total installed capacity to 347 MW. The success, however, will depend on the rainfall in coming years. Additionally, the Van Eck coal power station is rehabilitated. NamPower decided to extend the life span of the power station by ten years through replacing and refurbishment most of its major components and to fully automate its functions. Van Eck meets then its original design output of 120 MW and a guaranteed base-load output of at least 90 MW.

NamPower also negotiates with independent power producers who will feed in electricity into the grid from renewable energy sources.

Utilisation options for power plants fuelled by biomass from encroacher bush were already identified in several studies. These options include decentralised biomass power plants as well as decentralised hybrid power plants based on biomass and solar.

²⁷ Renkhoff (2014b:78).

²⁸ The new power purchase agreements with Eskom run until March 2017, however, the contract was changed from "firm" to "off peak" and "supplementary". The re-negotiated contracts with Zesco and ZPC run until January 2020 and March 2025 respectively.

²⁹ NamPower invites the interested public to obtain more information regarding the DSM project at DSM@nampower.com.na.

³⁰ *Etango Magazine* (2015b:8f.).

1.2.2 Medium- and Long-term Projects

Currently, the Government seems to have given priority to the Kudu gas power project. The Kudu gas project had been approved by Cabinet. However, this has happened when the now Prime Minister still has been Minister of Finance. The current Minister of Finance assessed the financial risks of the project and does not support it as he “worries that the Kudu gas project will use up the total fiscal space Namibia has and the country will not have the ability to raise any more funds for other projects”.³¹ For the moment, Kudu became again a controversially discussed topic.

According to the envisaged timeline, the Kudu power project is expected to come on stream in 2018. It is going to be a combined cycle gas turbine power station. Kudu is seen as a strategic project as it will be the only large power station in the country. It is supposed to be a platform for the development of energy intensive, export orientated industries vital to the next phase of Namibia’s economic development.³² The plant is supposed to generate 800 MW of which Namibia will consume about 400 MW while the surplus is intended to be sold to other SADC countries.

For the Kudu project, gas is taken from the Kudu field to the plant via a 170 km pipeline. The Kudu power station will be located in Uvlei, 25 km north of Oranjemund. The Kudu gas field itself lies in the Orange sub-basin at an ocean water depth of 560 feet. It was already discovered in the 1970s. The gas field will have a life span of approximately 23 years.

As the Xaris gas to power project is apparently not high on the agenda currently, the second long-term project Namibia is focussing on is the Baynes hydropower project. For the Baynes power station, with an envisaged capacity of 350-400 MW to be shared equally between Namibia and Angola, the environmental impact assessment has been conducted and the conclusion is that the project is technically and commercially feasible.³³ Both the Namibian and the Angolan governments have agreed to develop the Baynes option further after studies conducted on the Epupa as well as the Baynes site along the Kunene, revealed that while the Epupa site was technically preferable due to greater storage capacity, the Baynes site would be less disruptive to the life of the indigenous Himba community and would have less environmental impacts.³⁴ The next course of action will be the establishment of Baynes project offices both in Windhoek and Luanda that are in charge of planning the support infrastructure such as roads, transmission lines, and housing as well as overseeing the public participation process with affected indigenous communities. The Baynes hydropower plant is supposed to cost approximately US 1.3 billion and is expected to be commissioned by 2024.³⁵ Hydropower projects are subject to intense geo-political considerations in Namibia as all rivers with current and potential hydropower generation are situated along international boundaries and their sources of origin are outside Namibia.³⁶

All long-term power generation projects by Namibia as well as other SADC countries are supported by the so-called Zizabona project. Zizabona is a joint electricity transmission interconnector project which links the power networks of Zimbabwe, Zambia, Botswana and Namibia. It is the aim to establish a second transmission corridor besides the existing central transmission corridor from Zambia through Zimbabwe, Botswana into South Africa.

³¹ Schlettwein in “No cash for Kudu!”, *Confidénte*, 03-09 September 2015.

³² *The Namibian*, 7 February 2014.

³³ GRN (2012:47).

³⁴ GRN (2012:48).

³⁵ *Etango Magazine* (2015d:13).

³⁶ Ndhlukula (2009:9).

The current energy crisis is by no means purely Namibian. The whole SADC region suffers from an energy shortage, and is gradually implementing reforms of the electricity sector so as to ensure that the supply of reliable and adequate electricity is guaranteed, whereupon each country has its own project(s) to be developed. According to the International Energy Agency, sub-Saharan Africa will require more than US\$ 300 billion in investment to achieve universal electricity access by 2030.³⁷ Although universal access is not a realistic goal, it is estimated that half of the amount will indeed be invested by SADC countries in the near future.

The SADC Energy Ministers recently noted a capacity shortfall of 8,247 MW.³⁸ However, within the following year it is expected that almost 2,800 MW will be commissioned, and the whole region is planning to have 24,062 MW of new generation capacity installed by 2019. Noteworthy, 70% of the newly generated electricity will be coming from renewable energy sources. If a majority of SADC countries realise its plans of constructing new power plants, the electricity shortfall within SADC can be described as short- and medium-term, not long-term. This means that putting measures in place to mitigate a looming energy crisis is an urgent issue that cannot be tackled by Namibians long-term project Kudu gas, but will be better addressed by setting up a substantive amount of solar and wind plants with a construction time of only a few months; the Omburu solar plant for instance has been built within four months. Recognising the need for urgent action while fears of uncertainty over the future supply are mounting, Cenored for example has decided on a 5 MW solar power plant for Otjiwarongo and plans exist to set up similar plants for the towns of Tsumeb, Outjo, Okakarara, Okahandja, Grootfontein and Khorixas.³⁹ And so intend more local authorities to do.⁴⁰

Nevertheless, most SADC countries focus merely on long-term planning, and the countries' visions are similar to what Namibia foresees as its desired future. Large scale plants are supposed to be constructed that meet not only the national demand but also supply neighbouring countries with electricity. Once there is a surplus of electricity within SADC, electricity prices for imported electricity might come down again. While it is in line with Namibia's energy policy to meet its own demand by locally produced electricity, even though the SADC electricity market might not demand for this in the foreseeable future, there is no urgent economic need to plan for power plants that produce half of its electricity for export purposes, especially against the backdrop that other SADC countries will be able to produce their electricity from their newly erected power plants cheaper than this will be possible for Namibia's Kudu gas power plant due to the fact that it is costly to harvest gas off-shore in rough seas.

2 Regulatory Framework

The Ministry of Mines and Energy, in cooperation with the Electricity Control Board (ECB), serve as the regulatory bodies of the electricity sector. With NamPower as Namibia's electricity generating utility, the Regional Electricity Distributors (REDs) are in charge of supply and distribution of electricity to consumers, at least where REDs are already in place.

³⁷ Chiguvare, Paper Presented on the 2nd Energy Security Conference, 12 August 2015, Windhoek.

³⁸ See SADC Press Release on the 34th Meeting of SADC Energy Ministers on 4 July 2015, at http://www.sadc.int/files/5714/3809/4355/34th_Meeting_of__SADC_Energy_Ministers.pdf; accessed 13 October 2015.

³⁹ *Etango Magazine* (2015g:11).

⁴⁰ Oshakati, for instance, plans a 10 MW solar park not connected to the national grid, but merely to power the town of Oshakati.

2.1 Ministry of Mines and Energy

The Ministry of Mines and Energy is the custodian of the country's energy sector. Since 1993, the Ministry has had a department responsible for promotion of RE. The power to regulate the RE market is conferred on the Minister through the Electricity Act.⁴¹

The White Paper that fostered the restructuring of the electricity supply and distribution industry in Namibia was the basis for a study,⁴² which was supposed to be in itself, the foundation for the first Electricity Act.⁴³ The initial Electricity Act from 2000, has subsequently been repealed by the Electricity Act No. 4 of 2007, which is still in force. Although the Electricity Act neither deals with RE in detail nor provides any specific provisions for the regulation of the RE market, it contains a rule of jurisdiction for RE. Section 43(j) states: "The Minister may make regulations in relation to instalment and implementation of renewable energy technologies, the use thereof (including the placing of obligations on persons with regard thereto) and the provision of electricity there from." Thus, the Electricity Act states explicitly, that under Namibian law, the entire RE market can be regulated by regulation and the person in charge therefore is the Minister. However, such regulations do not exist yet.

Many other jurisdictions throughout the world require an Act of Parliament for the decision on how to give direction to the development of RE. It is questionable if such an important issue as the opening of the electricity market to RE, is not better left to Parliament, as the democratically elected legislative authority. Generally, to strengthen a democracy, it is desirable to leave those decisions to Parliament that are not only very costly for the tax payer, but more importantly, affect society as a whole, since electricity and its supply is a basic human need.

However, as the Government is undertaking a law reform at the moment, there will be significant developments in the future governing the electricity sector and thus, regulating the sector will not be left to the Minister by way of regulation.⁴⁴ A draft version of the Namibia Energy Regulatory Authority Bill is already available. It deals explicitly with the issue of renewable energies. According to the Bill, the newly established Namibia Energy Regulatory Authority may regulate renewable energy, energy efficiency, and energy conservation through sector specific legislation.⁴⁵

2.2 Electricity Control Board

The Electricity Control Board (ECB) is a statutory regulatory authority established in 2000 under the first Electricity Act No. 2 of 2000. Through the new Electricity Act No. 4 of 2007, the mandate of the ECB and its core responsibilities were expanded. The core mandates of the ECB are according to Section 3 of the Electricity Act, to exercise control over and regulate the provision, use and consumption of electricity in Namibia, to oversee the efficient functioning and development of the electricity industry and security of electricity provision, to ensure the efficient provision of electricity, to ensure a competitive environment in the electricity industry in Namibia with such restrictions as may be necessary for the security of electricity provision and other public interest, and to promote private sector investment in the electricity industry in

⁴¹ Electricity Act No. 4 of 2007.

⁴² GRN (2000c).

⁴³ Electricity Act No. 2 of 2000.

⁴⁴ Renkhoff (2014c:96).

⁴⁵ Available at http://www.ecb.org.na/pdf/Draft_Namibian_Energy_Regulatory_Authority_Bill.pdf, accessed 10 September 2015.

accordance with prevailing Government policy.⁴⁶ As an independent regulatory body, the ECB is thus in charge of regulating electricity generation, transmission, distribution, supply, import and export to Namibia.⁴⁷ The ECB has the sole mandate to approve electricity tariffs in Namibia and in this regard has developed tariff methodologies for generation, transmission and distribution.⁴⁸ In order to make electricity available to the poor, the ECB devised a project that focuses on RE to look at the pro-poor tariffs.⁴⁹ With regard to the Electricity Act's mandate to promote the integration of the private sector into the energy sector, the ECB worked in the past on an independent power producer (IPP) and investment market framework to create a conducive environment for IPP investment. However, the ECB admits that negotiations of power purchase agreements between NamPower and the IPPs have not reached desired objectives yet.⁵⁰ The ECB is also responsible for the issuance of licences,⁵¹ while it is not involved in generation projects itself, its sole duty is to assist the Government in creating an enabling environment.⁵² The Commonwealth's Secretariat Advisory Division: Economic and Legal Section (ELS) assisted the ECB in its improvement process to become the overarching energy regulator that oversees gas, RE and other energy sources.⁵³ The ECB executes its statutory functions through the Technical Secretariat headed by the Chief Executive Officer.

The ECB has established, among other things, the Revolving Fund on Renewables⁵⁴ that is still in operation today and provides guarantees to people who would otherwise not be able to have access to loans from commercial banks for investing in RE systems. The fund was initially managed by the Namibia Development Corporation (NDC), after which it was passed on to the management of NamPower for a short period of time, before it entered the private sector.⁵⁵ However, the Namibian revolving fund is not comparable to the national funds that are being increasingly used around the world to promote RE development. They are normally useful Government tools inasmuch as, although the boundaries of use are set in law, flexibility can be built to ensure that fund resources adapt to changing market needs consistent with national objectives.⁵⁶ The Namibian revolving fund is neither set in a rule of law nor is the fund designed to generally improve the use of RE technologies. The only beneficiaries are families and individuals not connected to the grid that want to buy solar home systems. One also has to differentiate between the revolving fund and the National Energy Fund Act⁵⁷ which does not deal with the promotion of RE. The National Energy Fund Act empowers the Minister only to impose a levy on in Namibia generated hydropower or wind power for the benefit of the fund,⁵⁸ but it does not allow RE producers to benefit from the fund. This had been already

⁴⁶ Section 3 of the Electricity Act.

⁴⁷ Simasiku (2011:2).

⁴⁸ ECB (2012:1).

⁴⁹ Simasiku (2011:3).

⁵⁰ Ibid:4.

⁵¹ The issuance of licences comprises also licences for RE projects that are measured by the same parameters as all other licences, too. In 2003 for instance, the ECB refused to grant a three MW licence for a wind park in Lüderitz that NamPower had applied for on economic grounds.

⁵² Simasiku (2011:3).

⁵³ Duddy (2012).

⁵⁴ Simasiku (2011:3).

⁵⁵ *Etango Magazine* (2008b:7).

⁵⁶ Bjork *et al.* (2011: 45).

⁵⁷ The National Energy Fund was established to provide a safety cushion to absorb oil price fluctuations instead of passing them on the consumer.

⁵⁸ Substitution of Section 19 of Act No. 13 of 1990.

criticised in a study funded by the Renewable Energy and Energy Efficiency Institute Partnership (REEEP) in 2010. It was suggested that the National Energy Fund Act be amended or to pass a regulation under Section 43(j) of the Electricity Act to allow RE producers to also benefit from the fund.

The ECB is also involved in the development of a new legal framework for RE and investigations to find the best procurement mechanism for promoting RE technologies in Namibia. In August 2015, the ECB invited consultants to tender for the development of a Policy on RE, while the first stakeholder meeting has already been hosted by the ECB in February 2015.⁵⁹

2.3 Other Market Actors

The sector's other main market actors are NamPower and the Regional Electricity Distributors (REDs). Namibia's electricity generating utility, the Namibian Power Corporation, is the bulk supplier to mainly REDs, mines and local authorities, where REDs are not operational.⁶⁰ NamPower is wholly owned by the Government of Namibia and has three core businesses, i.e. generation, trading and transmission. The utility also fulfils the role of the system administrator. All electricity imports and exports, and all wheeling arrangements using the Namibian electricity transmission grid, are controlled and managed by NamPower.⁶¹ All independent power producers (IPPs) that want to input electricity from RE technologies into the grid have to initially negotiate power purchase agreements with NamPower. In 2010, NamPower created a new department for RE under the Energy Trading and New Works Business Unit to spearhead RE projects and facilitate their implementation. Meanwhile, the department is involved in three specific broad areas of RE that include wind and biomass energy, bush encroachment for electricity generation as well as hybrid mini-grid systems in off-grid areas.⁶²

The Regional Electricity Distributors (REDs) are responsible for supply and distribution of electricity to consumers within their respective licence areas.⁶³ REDs were introduced in the course of the restructuring of the electricity market in 2000.⁶⁴ Although the reform of the electricity distribution industry (EDI) had started five years ago, it remained incomplete with only three of five envisaged regional energy distributors set up so far.⁶⁵ Currently, there are three REDs operating in Namibia: Erongo Red, Nored and Cenored.

The new Electricity Bill, which is currently under review, is set to modify the single-buyer market model which gave NamPower a monopoly.⁶⁶ The new modified single-buyer market model allows distributors and large off-takers to participate directly in the wholesale market.⁶⁷ The expected time of completion of the new Electricity Bill is mid 2016.

Already back in 2014, a national connectivity policy has been drafted that was supposed to be brought before a Cabinet committee. The then Minister for Mines and Energy agitated for the position that NamPower should not distribute electricity to mines. Under the current legal

⁵⁹ *Etango Magazine* (2015a:7).

⁶⁰ GRN (2012c:47).

⁶¹ von Oertzen (2010:1).

⁶² *Etango Magazine* (2010a:9).

⁶³ von Oertzen (2010:2).

⁶⁴ GTZ (2007:4).

⁶⁵ *Etango Magazine* (2014d:5).

⁶⁶ *The Villager*, 24 August 2015.

⁶⁷ Ruppel / Ruppel-Schlichting (2015:117).

framework NamPower supplies mines with electricity, sidelining the REDs.⁶⁸ It was also suspected that if the duties of REDs are undertaken by municipalities, they might tend to subsidise other sectors through higher electricity tariffs.⁶⁹

2.4 Namibia Energy Institute

In December 2012, Cabinet approved the transformation of the Renewable Energy and Energy Efficiency Institute (REEEI) into the Namibia Energy Institute (NEI). NEI was officially launched on 20 May 2014. Like the Renewable Energy and Energy Efficiency Institute (REEEI), NEI also does not primarily act as a market actor but its practical role in supporting RE technologies should not be underestimated.

NEI is supposed to be a leading institute for energy research and development in Africa. Its mission is to contribute to Namibia's industrialisation by linking energy research, technology, policy, and education to the needs of industry and, to socio-economic development imperatives, initiatives and programme. Other than REEEI, the scope of NEI is not limited to RE and energy efficiency. NEI consists of four centres, namely the Centre for Electricity Supply (CES), the Centre for Petroleum, Oil and Gas (CPOG), the Centre for Nuclear Sciences (CNS), and the Centre for Renewable Energy and Energy Efficiency (CREEE). NEI is involved, among others, in the Off-Grid Energisation Master Plan (OGEMP), the Namibia Energy Efficiency Programme in Buildings (NEEP), the Namibia Wind Resource Assessment Project (NWRAP), the National Integrated Resource Plan (NIRP) and will be engaged in developing a database for Africa Renewable Energy (DARE).

NEI was also involved in initiating the successful bid to host SACREE in Namibia. On 24 July 2015, the SADC Centre for Renewable Energy and Energy Efficiency (SACREE) was launched. Namibia is the host country being able to prevail against five other competitors.

3 Legal Framework

Both off-grid and grid-connected energy production from RE resources requires a special institutional and legal framework which is, unfortunately, not in place to date. This is not only bemoaned by independent power producers of RE but also by state officials. In its annual report of the ECB, one can read that an overwhelming need exists to transform Namibia's energy regulatory and institutional framework because the current one is largely non-existent and partially outdated.⁷⁰ As there is a mutual consent among all involved stakeholders, including those who raise environmental arguments about not using one of the world's best solar, wind and biomass resources, to pave the way for RE technologies, the Government has begun to work on a comprehensive legal framework which is by no means an easy task.⁷¹ The Ministry of Mines and Energy is currently working on a number of projects, such as the review of the White Paper and the New Energy Regulatory Framework, which will eventually provide for RE integration into the overall energy mix,⁷² while the ECB is in the process of preparing a Policy for RE.

⁶⁸ *Etango Magazine* (2014d:5).

⁶⁹ Ibid.

⁷⁰ Duddy (2012).

⁷¹ Energy governance is not only on the national level a challenge, the energy issue is also an example of diffuse global governance. Only one UN agency has an exclusive focus on energy, namely the International Atomic Energy Agency, while at least 16 others work on energy issues every day. While there is no global treaty on energy, there are more than 150 agreements between countries on energy and each of the UN agencies pushes its own agenda. See Gupta (2011:313).

⁷² *Etango Magazine* (2012f:5).

It remains to be seen how the new legal framework on RE is likely to turn out. It is left to hope that it is comprehensive and yet more harmonised as for example the national environmental law turned out to be after countless policies and regulations were implemented that often do not take into account former legislation. This situation, as a matter of fact, also characterises the current status of the RE legal framework. Although it is indeed fragmented, there are numerous programmes, master plans and projects that alas, often overlap in their scope.

3.1 White Paper on Energy Policy of Namibia

The White Paper on Energy Policy, that still forms the basis for Namibia's energy policy, was developed by the Energy Committee, which was established in 1996 for this purpose, and issued by the Ministry of Mines and Energy in 1998. Having framed an initial energy programme within the scope of NDP 1,⁷³ the Ministry wanted to draft a comprehensive energy policy for all energy sub-sectors.⁷⁴ The White Paper is the culmination of a two-year effort by the Committee and an international team of energy experts.⁷⁵ It is currently under review.⁷⁶

The White Paper attempts to balance the Ministry's interest in attracting private sector investments to Namibia with the appropriate level of Government regulation in the energy industry.⁷⁷

With regard to RE, the White Paper is considered to be the landmark policy but it is not the first document addressing RE. First steps to promote RE were already taken shortly after independence. In 1993, MME launched a programme called 'Promotion of the use of renewable energy sources in Namibia', which was supported by the *Deutsche Gesellschaft für Technische Zusammenarbeit* (GTZ, now GIZ). As a result, in 1996, the Government launched the first solar revolving fund under the Home Power Project with support from Renewable Energy for African Development (REFAD), an American development organisation.⁷⁸ All these projects were in line with the Harare Declaration on Solar Energy and Sustainable Development which Namibia signed at the World Solar Summit in September 1996.

The White Paper is divided into four parts. Part 1 describes the economic and development context for the energy sector. Policies for the energy demand sectors are laid down in part 2 with the main focus on energy needs of urban and rural households. Part 3 presents policy choices related to the energy supply sector including RE, whilst part 4 deals with cross-cutting issues.⁷⁹

The White Paper focuses on meeting seven energy goals: effective governance, security of supply, social upliftment, investment and growth, economic competitiveness and economic efficiency as well as sustainability. Special attention is given in the White Paper to those demand sectors that have been neglected historically, namely, poor urban and rural households.⁸⁰ The White Paper points out that at this early stage, not enough was known about the problems and needs in this sector. Therefore, national studies were supposed to be initiated as a basis for future development, including the issue of sustainable biomass usage in rural

⁷³ In 1995, the Namibian Government launched its first National Development Plan. The NDP1 superseded the Transitional National Development Plan which focused on consolidating democracy.

⁷⁴ GRN (1998a:1).

⁷⁵ GRN (1998a:ii).

⁷⁶ *Etango Magazine* (2012f:5).

⁷⁷ GRN (1998a:ii).

⁷⁸ Ndhlukula (2009:1).

⁷⁹ GRN (1998a:2).

⁸⁰ Ibid:v.

areas.⁸¹ In an effort to meet these goals, a number of projects and programmes were initiated, implemented and facilitated by the Government and through partnerships with development organisations and the private sector. Some will be introduced below.

In 2008, in an extensive study under REECCAP, all these policy goals were explored separately within the context of eight scenarios where each scenario attempted to depict a particular policy option.⁸² What has been discovered is that there is not one single scenario that satisfies all of the policy criteria. Some options are economically efficient but do not maximise the use of renewable resources. Several are inexpensive but do not guarantee security of supply. Others, in turn, maximise the use of renewable resources but are expensive.⁸³ The conclusion drawn was that, although all energy goals are technically coequal, there is a necessity for the Government to make a decision as to which option should be given the priority in the long-term.

However, both the REECCAP study and the White Paper clearly show that RE can contribute to the realisation of at least several of Namibia's overall energy policy goals, mainly the goals of social upliftment, economic competitiveness and efficiency, security of supply and sustainability.⁸⁴ The potential to achieve the strongest impact is, according to the White Paper, the widespread use of decentralised solar PV systems to provide basic electricity services in remote areas. Such decentralised options for rural electrification are often cheaper than extending the grid over long distances, allowing for improved economic efficiency in rural areas, thus, contributing to the goal of social upliftment. While off-grid electrification contributes to the goals mentioned, the potential use of RE – including hydropower – for grid-connected electricity can contribute to the policy goals of sustainability as well as security of supply by virtue of diversification and the use of locally available RE resources.⁸⁵

Throughout the White Paper, the role RE can play for poverty reduction is one of the most important topics. As it is a fact that a significant part of the population will not have grid access in the future, the White Paper distinguishes between off-grid and grid electrification and elaborates on the role that RE technologies, particularly solar systems, will play in meeting rural energy needs. In areas where it is not viable to extend the national grid, RE systems will have to substitute grid electrification. RE might also provide an interim, first-step solution in areas where access to the grid is not envisaged in the short to medium term.⁸⁶ Like their urban counterparts, rural communities depend on public facilities to fulfil some of their most basic needs, while the quality of these services can be severely hampered by lack of electricity.⁸⁷ In this respect, the White Paper also discusses the importance of a stable rural water supply where photovoltaic pumps could play a major role in the future as replacements for diesel pumps.⁸⁸

The White Paper also mentions the large gap between as to what renewables can potentially contribute to the energy policy goals and what they are presently contributing. Therefore, the Government has to face various institutional challenges amongst which are: establishment of an adequate institutional and planning framework, which provides for the balanced provision of all forms of energy; development of human resources and public awareness; a set-up of

⁸¹ Ibid.

⁸² See for more details GRN (2008a).

⁸³ GRN (2008a:x).

⁸⁴ GRN (1998a:43).

⁸⁵ Ibid.

⁸⁶ Ibid:23.

⁸⁷ Ibid:47.

⁸⁸ Ibid:48.

suitable financing systems for RE applications, in order to increase their affordability and to encourage economic choices which are based on life-cycle costs; and an improved co-ordination among Government ministries engaged in energy provision.⁸⁹

Meanwhile, some of the so-called policy statements, which are explicitly formulated at the end of each paragraph throughout the White Paper, have been partially reached or at least first steps have been undertaken. This is especially so in the case for those policy statements with regard to human resource development and public awareness. The following policy statements were thus met to the Government's satisfaction through NAMREP: Government will develop and implement RE awareness programmes, ensure education in RE and include the rational use of energy in school curricula, universities, vocational training centres and other institutions of instruction. With regard to the policy statement of improving the institutional and planning framework, one can state that despite the regrettable fact that a comprehensive legal framework is still missing and no in depth support schemes have been developed, at least some single programmes followed the implementation of the White Paper that facilitated supporting the use of RE specifically in off-grid areas for poverty reduction. A comprehensive national support scheme to enhance RE is still missing, although the Government has committed itself to facilitating adequate financing schemes for RE applications and to encourage Government agencies, investors and users to make decisions based on the life-cycle costs of alternative energy options rather than those exclusively based on the initial cost.⁹⁰ However, progress has been made in establishing a loan finance system that is available for the rural poor to finance RE home systems. The White Paper's chapter on RE closes with suggestions that specific tariff structures, as well as fair access to the grid for independent power producers of RE, should be discussed in the future.⁹¹ These two suggestions have become the most urgent in the fourteen years following the introduction of the White Paper.

3.2 Rural Electrification Programme

Even though modern RE planning relies up to the present day on the principles laid down in the White Paper, RE was already an issue immediately after independence and prior to the launch of the White Paper. Only the reasons for promoting RE were still different. Electrification was a priority and since electricity via the grid was cheap and easily accessible, whilst environmental concerns were still not very high on the agenda, RE technologies were only regarded for off-grid electrification. The first rural electrification programme ran parallel to solar systems that were made available for those not benefiting from grid extension. Since independence, great efforts were made in both grid and off-grid electrification with the result that Namibia today has a fairly good network coverage in comparison with other SADC countries. Almost 200,000 out of 500,000 households in Namibia are grid electricity consumers.⁹² This in turn means that not only more consumers are able to benefit from RE fed into the grid, a good network coverage also means more demand for bigger RE installations and calls for well considered schemes of feeding environmental friendly produced electricity into the grid.

⁸⁹ Ibid:44.

⁹⁰ Ibid:46.

⁹¹ Ibid:49.

⁹² The total population enumerated in Namibia during the 2011 census was 2,133,077, of which 903,434 were in urban and another 1,209,643 people in rural areas, constituting 57% rural, and 43% urban. It is estimated that 70% in the urban areas, equalling 632,404 persons, and about 25% in rural areas, equalling 302,411 persons, have access to electricity. Altogether, the population with access to electricity is about 44%.

As use of RE in off-grid areas will always be on a small-scale, one can say that all grid extension endeavours were, at the same time, early efforts to pave the way for today's advanced RE technologies. The Namibian Government forced rural electrification from the very outset having already embarked on a national rural electrification programme in 1991.⁹³ The rural electrification programme commenced in the densely populated central northern regions of the country between 1991 and 93. In 1992/93, the western Kavango Region was electrified, followed by the eastern Kavango Region in 1993/94. Proceeding in a clockwise direction around the country, the electrification programme covered parts of the Otjozondjupa and Omaheke Regions in 1994/95, and most main centres in the Hardap and Karas Regions between 1995 and 98. The first phase of rural electrification in the Caprivi Region took place in 1995/96, with the northern regions benefiting from a second phase during 1997. Larger settlements in the Erongo and Kunene Regions were electrified in 1998/99.⁹⁴ The programme, in its first phase, aimed to cover all main rural centres and large settlements. Typically, these main centres and settlements comprised institutional, commercial and domestic infrastructure plus formal and informal housing.⁹⁵ Consumers located within a 500m radius of the distribution transformers were also offered connections at no charge.⁹⁶ This was the first large-scale rural electrification project to be implemented in the country and is in fact, one of the first of its kind in Southern Africa.⁹⁷ After the first round, roughly 15% of the rural population had access to electricity.⁹⁸ The rural electrification programme is still in force and has been grant-financed since its commencement by the Namibian Government, the Norwegian Government and NamPower.⁹⁹ However, nowadays a restricted approach has been undertaken. Under the new approach, the rural electrification programme will only cater for Government institutions, public institutions and business centres and only up to the step-down transformer for businesses. The new approach will omit individual homesteads. Against restricting the programme to the new group of beneficiaries, socio-economic concerns were raised, however, once the electrification of Government institutions has been completed, the normal countrywide rural electrification programme will resume.¹⁰⁰

In parallel with the grid electrification efforts, after independence, the Ministry of Mines and Energy instituted a revolving credit fund for solar home systems in an attempt to provide remote rural households with the opportunity to acquire basic electrification for their homes.¹⁰¹ Therefore, under the so-called Home Power Project, loans were provided at low interest rates to purchasers of solar home systems. About one hundred technicians from all target regions were trained on how to install and maintain solar home systems. From 1996 until 2001, 456 systems were installed in Namibia.¹⁰² The revolving credit fund nowadays celebrates its revival as the new Solar Revolving Fund that was re-launched in 2011. The new Solar Revolving Fund is nothing other than the replacement of the Home Power Project, only with a reduced emphasis on education and training of suitable personnel.

⁹³ Nakale (2012).

⁹⁴ Ibid:i.

⁹⁵ Ibid:3.

⁹⁶ Ibid:4.

⁹⁷ Ibid:i.

⁹⁸ Ibid:4.

⁹⁹ Nakale (2012).

¹⁰⁰ Ibid.

¹⁰¹ Utonih / Dlamini (2001:4).

¹⁰² Ibid:5.

3.3 REDMP – Rural Electricity Distribution Master Plan

The next step of rural electrification was to cater for substantially smaller and more remote settlements and farms. Cost effectiveness, as well as financial and economic feasibility, was a crucial factor in the allocation of available funds in an equitable manner among unelectrified localities. It was in this context that the Ministry of Mines and Energy, together with NamPower, embarked on the Master-Planning Project, which should take into consideration the country's thirteen regions.¹⁰³ During the ensuing period, the Rural Electricity Distribution Master Plan (REDMP) and the Off-Grid Energisation Master Plan were prepared. The REDMP was compiled in 2000 and updated in 2005.¹⁰⁴ The time-frame of the Master Plan extends over a period of twenty years.¹⁰⁵ In accordance with the Local Authorities Act, rural areas are defined as those that fall outside the proclaimed municipal areas and include diverse settlement types ranging from commercial farms to communal areas. Unelectrified informal settlements around urban areas were not included in REDMP, as they are covered by OGEMP due to the fact they are areas of great population growth. The Master Plan has identified a total of 5,858 settlements without electricity. Of these, only 1,543 are scheduled for electrification within the next twenty years after the launch of REDMP. The remaining settlements, comprising of over 100,000 households, will not be electrified during that time. The Master Plan considers both grid and off-grid electrification options and includes all thirteen regions, mainly prioritising economically active centres such as schools, clinics, businesses and Government institutions but also extends to those households in the immediate vicinity that do not exceed a five hundred metre radius from the transformer point.¹⁰⁶ This means that both REDMP and the new approach of the Rural Electrification Programme have predominantly the same target group, while individual homesteads, especially informal ones, are not covered by either programme.

One objective of REDMP is to provide guidelines and establish priorities for the upgrading and extension of the existing distribution networks which will enable the Ministry to establish new networks to meet the demands of the target groups in both an orderly and cost effective manner.¹⁰⁷ That is why REDMP includes a dynamic planning tool that enables the Ministry to re-evaluate electrification programmes as and when priorities change. Scenario analyses and rankings of electrification projects based on electricity demand and electrification costs are made on a continuous basis to ensure that REDMP always remains current.

3.4 OGEMP – Off-Grid Energisation Master Plan

The Off-Grid Energisation Master Plan¹⁰⁸ was commissioned by the Ministry of Mines and Energy in 2005, released in early 2006 and approved by the Namibian cabinet in mid 2007. It is based on the policy statements laid down in the White Paper. The Ministry designed and launched OGEMP to ensure that those areas, where grid electrification is unfeasible, will be appropriately developed through off-grid energy solutions based largely on solar energy technologies. In 2007, the Cabinet directed the Ministry to make sufficient budgetary allocations for the implementation of OGEMP. The development of OGEMP was already initiated by the Ministry through NAMREP in 2005 and the guidelines for the establishment of

¹⁰³ Ibid:6.

¹⁰⁴ GRN (2005a).

¹⁰⁵ Utonih / Dlamini (2001:7).

¹⁰⁶ Nakale (2012).

¹⁰⁷ Utonih / Dlamini (2001:6).

¹⁰⁸ GRN (2007c).

energy shops were compiled under REECCAP. Workshops and consultative meetings were held prior to the launch to openly discuss the proposed OGEMP concept.¹⁰⁹

The overall objectives of OGEMP are: to promote off-grid rural electrification through the use of RE systems, to promote and utilise indigenous Namibian RE resources for energy provision and to improve the quality of rural life through the provision of energy services.¹¹⁰

To realise these OGEMP objectives, the so-called Solar Revolving Fund (SRF) has been integrated under OGEMP. The idea of a fund was not new. A fund to make energy solutions affordable had already been established by the Government in 1996 under the Home Power Project. When the SRF was introduced fifteen years ago, the Government identified that one of the main barriers to rural electrification was the high upfront costs for solar products.¹¹¹ As this problem remained constant over time, the fund was re-launched in April 2011 by the Ministry of Mines and Energy. Under the SRF scheme, communities have access to credit finance via the OGEMP revolving funds to make RE solutions affordable.¹¹² Thus, clients are able to obtain Government loans for the installation of RE technologies. The SRF is an ownership model, where the end user purchases a solar system by making use of the revolving credit scheme facility and thus, becomes the owner of the system. The system's owner is responsible for the system and its maintenance.¹¹³ To date, technologies that have been financed through the SRF include solar home systems, solar water pumps and solar water heaters.¹¹⁴ The SRF is not only earmarked to finance solar home systems (SHS) and solar water heaters (SWH) but also photo-voltaic pumps (PVP) and energy efficient fridges for end users and energy shops.¹¹⁵ The SRF has financed solar systems to the tune of N\$ 53 million since 2011.¹¹⁶ Of the systems financed, solar home systems accounted for the lion's share (1,671), followed by solar water pumping systems (269) and only 72 solar water heaters.¹¹⁷ Until recently, the scheme has been overwhelmed and had difficulties in meeting the demand for loans as the contribution of the Ministry to the fund was only N\$ 4 million per annum.¹¹⁸ The budget allocated to the SRF increased annually and now the processing time for applications has come down to approximately three months.

Another important approach to meet the OGEMP objectives is the energy shop concept. Therefore, it is stipulated in OGEMP that solar energy shall be promoted by establishing energy shops within a reasonable distance of targeted communities. The shops are supposed to sell suitable, approved energy products and compatible appliances¹¹⁹ and inform people as to their use. The aim of energy shops is to initially stock RE technologies but they are also a central point for information dissemination and a networking hub for SRF.¹²⁰ Additionally, energy shops serve as payment collection centres for the national off-grid energy financing

¹⁰⁹ *Etango Magazine* (2008a:5).

¹¹⁰ *Etango Magazine* (2012f:5).

¹¹¹ *Etango Magazine* (2012d:7).

¹¹² Nakale (2012).

¹¹³ *Etango Magazine* (2012d:7).

¹¹⁴ *Etango Magazine* (2012f:5).

¹¹⁵ *Etango Magazine* (2012d:7).

¹¹⁶ *Etango Magazine* (2015f:13).

¹¹⁷ Ibid.

¹¹⁸ *Etango Magazine* (2012f:5).

¹¹⁹ Nakale (2012).

¹²⁰ *Etango Magazine* (2012f:5).

mechanism, thus working hand in hand with the SRF administrator.¹²¹ Energy shops will be established in all the country's thirteen regions. A total 180 shops are planned to be set up over the next twenty years with one energy shop in each region during the first year. The focus for the first year was on urban, informal settlement areas. Focus will later change to establish energy shops in rural areas.¹²²

One example of an energy shop is the solar cellphone charging business in Windhoek's informal settlement of Havana. The cellphone charging shop consists of a solar panel, a solar cellphone charging system with ten charging sockets and two lights. The system is capable of charging roughly twenty cellphones per day and provides daily electricity for three hours for each light.¹²³

From the very beginning concerns were raised on whether the energy shops being set up in all regions will be successful. Indeed, a review of the operation and performance of 13 energy shops that were launched in 12 regions revealed a number of challenges being faced by the shops, among them the lack of means or desire to finance the purchase of stock, lack of adequate technical expertise in RE technologies and the failure to market their services. The poorly stocked energy shops lacked the technical know-how to draft business plans and other requirements that would help them to access the various available RE loan facilities. The owners of most energy shops were found to be reluctant to invest their income into the relatively new and untested RE sector. Furthermore, the study revealed that none of the 13 energy shops had submitted the required monthly sheets of their stock turn-over as most of them had forgotten about the requirement while others found the process too cumbersome. Generally, however, the energy shops were found to be providing customers with access to a variety of energy technologies, and were consulting with customers regarding their SRF loan applications. The study recommended that energy shops should diversify their services and become solar PV installers for instance in order to make their businesses more viable. It was also emphasised that additional training needs to be offered.¹²⁴

3.5 NEEP – Namibia Energy Efficiency Programme in Buildings

The Namibia Energy Efficiency Programme in Buildings is a programme funded by the Global Environment Facility (GEF) and spearheaded by the Ministry of Mines and Energy with support of the United Nations Development Programme (UNDP). The implementation period ended in 2014. The objective of NEEP was to reduce Namibia's energy-related green-house-gas emissions through nationwide adoption of energy efficient technologies and practices in the commercial and residential building sector, with a focus on Government office buildings, hospitals, hotels, schools and a few residential buildings.¹²⁵

The most sustainable component of NEEP was to increase institutional capacity and awareness, of which, the indicator in this regard is a Green Building Rating System. In order to implement the Green Building Rating System, a Green Building Council for Namibia (GBCN) has been established, which still develops and operates the rating system and promotes and facilitates green building practices.¹²⁶ Additionally, it coordinates its projects and works

¹²¹ Ndhlukula (2009:5).

¹²² *Etango Magazine* (2011g:8).

¹²³ *Etango Magazine* (2011d:22).

¹²⁴ *Etango Magazine* (2014a:20).

¹²⁵ *Etango Magazine* (2011b:17).

¹²⁶ *Etango Magazine* (2012b:8).

closely with the World Green Building Council (WorldGBC).¹²⁷ Shortly before the end of the implementation period, the Ministry of Mines and Energy commenced a still ongoing programme to revise the outdated National Building Codes and to introduce new rules that incorporate RE technologies and energy efficiency principles. This programme is a vital part in Government's efforts to tackle the current energy crisis, as studies have indicated that buildings account for approximately 40% of the world's energy usage.¹²⁸

The Government's intent of using RE in public buildings is by no means a new. It was already the subject matter of a cabinet directive stating that all Government and parastatal buildings' hot water requirements should be met through the installations of Solar Water Heaters (SWH) only. This applies not only to new buildings but also to all replacements or renovations of old Government buildings. The cabinet directive stated that the acquisition and installation of solar water heaters for Government institutions and parastatals should be done through open tender.¹²⁹ The implementation of this directive was part of phase two of NAMREP.¹³⁰ It is desirable if the directive will be extended particularly to the Government's Mass Housing Scheme. The beneficiaries of this scheme will likely rely on grid electricity and such additional use has not been factored into Namibia's electricity demand projections.¹³¹ Besides that, it contradicts NamPower's efforts in its DSM campaign to replace 20,000 electric geysers with solar water heaters. These efforts will be nullified if 185,000 electric geysers will be installed within the Mass Housing Scheme.¹³²

3.6 REEECAP – Renewable Energy and Energy Efficiency Capacity Building Programme

The Renewable Energy and Energy Efficiency Capacity Building Programme ran from 2006 to 2008 and was funded by the Danish Government. The Renewable Energy and Energy Efficiency Institute was the implementer of REEECAP whose objective was to increase the capacity of the Namibian resource base in selected areas to enable it to contribute to the implementation of the national policies for RE and energy efficiency¹³³ as stated in the White Paper and NDP 2.¹³⁴ REEECAP's strategic focus was on enhanced capacity for both rural and urban decision makers in energy planning. A total of twenty-one sub-projects with titles like Energy Efficiency Strategic Plan, Review of Building Codes, and Electricity Supply and Demand Management Options were undertaken. One of the most remarkable studies is the latter.¹³⁵ It is insofar still of importance as it has been the precursor of all later studies answering the question as to the best energy mix for Namibia.

The study developed eight generation scenarios that aim to illustrate different applications and interpretations of the Namibian energy policy as defined in the White Paper. This has been the first comprehensive study for Namibia that considers alternative energy sources, fossil fuels and hydro electricity options plus various possible supply mixes.¹³⁶ As it was one of the

¹²⁷ *Etango Magazine* (2012a:9).

¹²⁸ *Etango Magazine* (2013a:10f).

¹²⁹ *Etango Magazine* (2008a:5).

¹³⁰ *Etango Magazine* (2008c:15).

¹³¹ von Oertzen (2015:86).

¹³² Chiguvare / Ileka (2015:31).

¹³³ Ndhlukula (2009:7).

¹³⁴ Second National Development Plan covering the years 2001 to 2005.

¹³⁵ GRN (2008a).

¹³⁶ Ibid:i.

objectives of the study to explore the potential and role of RE resources, one of the scenarios was the so called ‘maximum renewable energy option (including hydro)’.¹³⁷ The interesting key conclusions, from an electricity price perspective, were that on the one hand the maximum renewable scenario would indeed cause the highest electricity prices.¹³⁸ However, on the other hand, the renewable maximised scenario would make the greatest contribution to GDP due to high construction costs involved in building additional hydroelectric power stations and also the requirement of significant plant size for concentrated solar power stations.¹³⁹ The renewable maximised scenario also created the highest number of jobs as the implementation of the biomass generation option (invader bush) was part of the scenario.¹⁴⁰ The study concluded, generation from renewable resources is desirable but is not without risks and cannot be expected to supply all Namibia’s electricity needs, at least not in the short term. According to the study, if hydro is excluded, it will be possible to have RE producing 20% of electricity needs without escalating end consumer prices more than 7% above the cost of importing electricity from South Africa.¹⁴¹

3.7 NIRP - National Integrated Resource Plan

The National Integrated Resource Plan (NIRP) for the power sector is the latest milestone on the way leading to an integrated legal framework, although the approach was not used for the first time. In July 2011, the ECB in collaboration with the World Bank started to work on an integrated resource plan that is going to look at the resources of Namibia to generating power for the next two decades. It was completed in 2013. NIRP is supposed to determine the optimal resource mix for electricity generation in the country and to answer the question as to what the cheapest source of energy for Namibia is, and how to get energy to Namibia as a whole.¹⁴² The Government’s energy policy calls for domestic power generation to meet 75% of the system’s annual requirement – initially, this target was set to be reached by 2010 already. NIRP developed a power-system demand forecast for the next twenty years. It considered the likely requirements in each sector of the economy, reflecting projected economic and population growth rates. The forecast was adjusted by offsets from energy efficiency gains considered possible from implementation of a demand-side management programme.¹⁴³ Then the full range of power-generation technologies that could be of interest in Namibia and estimated parameters for each were identified. After ranking based on the present value of system costs, ten scenarios were ranked. The scenarios and findings were often not so different from those eight scenarios investigated in the Electricity Supply and Demand Management Options under REECCAP. NIRP also paved the way for an increased use of renewable power by PV and wind-power plants. It made precise recommendations not only for net-metering, but also took into account all other RE procurement mechanisms in its scenarios.

There are several new studies in the pipeline being based on the NIRP findings. These are with a special focus as to how to integrate the policy goal of poverty eradication into Namibia’s energy future. The following two are of special interest: These are the National Electricity

¹³⁷ Ibid:iv.

¹³⁸ Ibid:vi.

¹³⁹ Ibid:vii.

¹⁴⁰ Ibid.

¹⁴¹ GRN (2008a:xi).

¹⁴² Simasiku (2011:4).

¹⁴³ National Integrated Resource Plan for Namibia’s Electricity Sector, available at https://www.hatch.ca/News_Publications/Energy_Innovations/June2013/namibia.html; accessed 13 October 2015.

Support Mechanism and a study to improve electrification of peri-urban and rural areas. The studies, on which the ECB embarked in consultation with the Government, are aimed at addressing the issue of affordability of electricity to low consuming households. Final consultations for the implementation are underway with the Government for the National Electricity Support Mechanism. The latter study is ongoing with recommendations expected to be made to the Government during the last quarter of 2015.¹⁴⁴ Both projects are supposed to bring about positive development-related prospects and opportunities while contributing to the quest of poverty eradication.

3.8 CSP TT NAM and Other RE Projects

The Concentrating Solar Power Technology Transfer for Electricity in Generation in Namibia project (CSP TT NAM project), which is being implemented by NamPower, with MME, UNDP, the National Planning Commission and NEI as key stakeholders, aims to increase the share of RE in the Namibian energy mix by developing the necessary technological framework and conditions for the successful transfer and deployment of CSP technology for on-grid power generation. The CSP TT NAM project has also identified the best possible sites for the establishment of CSP pilot power plants. The only recently launched project is currently maintaining a database of interested local and international CSP role players where about ten international and at least fifty local role players have been registered.¹⁴⁵ This project prepares for the goal to make solar power quickly available to bridge the time until a base load power station goes online.

The fact that the future for RE is beginning to look brighter can be observed from the number of new projects which are currently investigating the opportunities for different RE sources. The CSP TT NAM project is concentrating on CSP only, however, there are more examples focusing on other RE sources:

As a pilot project in Namibia, a scientific and technical research on Namibia's wind resources is currently undertaken. The speciality that makes the project a pilot is the use of existing MTC masts to assess wind resources through measurement, data management and analysis. Using telecommunication masts for wind measurements, although not ideal, can however significantly cut the costs of wind measurement¹⁴⁶ and might therefore become an example for other developing countries.

Namibia has also made use of the existing Memorandum of Understanding between the Austrian Government and SADC to foster development in solar thermal technology in the country. Namibia has become part of a group of SADC countries working on the development of a SADC-wide Solar Thermal Technology Platform that will produce a roadmap for this technology in the region.¹⁴⁷

4 Benefits of and Barriers to Renewable Energy

Sustainable energy means use of resources in a manner that provides ongoing energy to meet the needs of the current population, without comprising conditions for future generations. To achieve this balance, energy must be replenished, environmental harms must be minimised, and costs have to be affordable.¹⁴⁸ Since the political and regulatory focus is on sustainability

¹⁴⁴ ECB (2015).

¹⁴⁵ *Etango Magazine* (2015a:6f.).

¹⁴⁶ *Etango Magazine* (2014c:17).

¹⁴⁷ *Etango Magazine* (2015h:7).

¹⁴⁸ Bjork *et al.* (2011:3).

and not on renewable resources *per se*, the way they are harnessed requires thoughtful analysis to ensure that a RE investment is in fact meeting the sustainability objective.¹⁴⁹

In order to implement governmental decisions in favour of RE technologies and to invest in support schemes to enable RE to withstand competition from fossil fuels, the benefits and obstacles plus all alternatives to RE technologies, have to be carefully balanced against each other. Thereby, Namibia's electricity sector faces several challenges due to its sometimes conflicting imperatives that cannot all be met at one time as they are: safeguarding the security of supply, introducing cost-reflective tariffs without throttling the economy, stimulating investments and attracting new sector participants, continuing the electrification of rural Namibia, and developing Namibia's RE resources.¹⁵⁰

RE offers numerous benefits in the short, medium and long term, whereof, the long-term benefits are probably the most obvious. The use of RE will contribute to not only making Namibia less dependent on imported electricity but above all, independent from imported fossil fuels as the price of oil, natural gas and other materials can be extremely volatile, whereas the price of RE is predictable and stable. This creates a strong incentive for companies looking for energy security.¹⁵¹ By increasing the use of RE, Namibia's future electricity supply mix will capitalise on local comparative advantages, ensure local value addition and job creation¹⁵² if the national generation capacity is expanded through smaller-scale RE technologies.¹⁵³ In terms of environmental sustainability, it has to be taken into account that RE neither produces CO₂ nor other greenhouse gases. And, unlike coal and nuclear power plants, it does not consume huge amounts of water, which is itself a scarce resource.¹⁵⁴ The short-term benefits are most obvious in rural areas where RE contributes to off-grid electrification and thus to poverty reduction. The production of RE is the most promising way of providing affordable energy to areas far from available points of connection to the grid. Due to the vastness of the country and low population density, many areas will probably never be connected to the grid. The Government holds the view that the gap in economic development and quality of life between rural and urban population in the country might be addressed through rural electrification.¹⁵⁵

However, there are some drawbacks that have to be overcome also. These comprise, in the first instance, the potentially higher energy prices. It is a fact that the high installation cost of RE technologies and lack of well-marketed, affordable and easily accessible financing schemes for the purchase, installation and maintenance of equipment as well as a missing guarantee of price stability for independent power producers still remain the major impediments for the implementation of RE technologies in Namibia.¹⁵⁶ The problem that RE technologies often have a higher capital cost – but conversely, often a lower operating cost also – what makes loan finance facilities necessary to spread the cost over time, had already been mentioned in

¹⁴⁹ Ibid.

¹⁵⁰ von Oertzen (2011:1).

¹⁵¹ *Etango Magazine* (2011f:12).

¹⁵² At this stage it is impossible to make predictions for Namibia. In Germany for example there are currently more than 370,000 people employed in the RE sector.

¹⁵³ von Oertzen (2011: 3).

¹⁵⁴ *Etango Magazine* (2011f:13).

¹⁵⁵ Ndhlukula (2009:2).

¹⁵⁶ *Etango Magazine* (2011h:3).

the White Paper as a reason for the existence of a large gap between what renewables can potentially contribute to the energy policy goals and what they are presently contributing.¹⁵⁷ Since then, some circumstances have changed, starting with the creation of the revolving fund that aims to provide a guarantee for people who would otherwise not be able to access loans from commercial banks to buy solar home systems.¹⁵⁸ Today, almost all financial institutions in Namibia offer funding for RE at very low interest rates thanks to the fund. Secondly, the price for electricity has risen dramatically in recent years so that grid parity¹⁵⁹ has been reached for some RE technologies. So long as imported electricity was cheap, most on-grid RE projects were not worthwhile, but now Namibia is reaching the point where, for instance, locally produced solar electricity is cheaper than that bought from the main supplier. Finally, there is a lot of potential for RE technologies in Namibia to be financially supported by development organisations. Namibia has abundant RE resources and RE has become one of the hot topics throughout the world in connection with the international climate change debate. Almost all development organisations in Namibia are involved in RE projects in some way, while no one has the support of coal-fired power plants on the agenda. Some¹⁶⁰ even argue that Namibia has the potential to become the first country¹⁶¹ that meets its energy demand entirely from renewables, something the Danish Samsø island and El Hierro that belongs to the Spanish Canary Islands realised so far.¹⁶² If the Government turned this vision into a national policy goal, a run on investment in RE in Namibia would begin. In any event, any form of legal enhancement of RE technologies must be accompanied by a support scheme that the Government has to decide on. Alas, it has not been done as of yet.

The White Paper considers some more obstacles that contribute to the low input of RE to Namibia's energy budget and to which a solution has yet to be found. It addresses them as key institutional challenges. Among them are first and foremost the establishment of an adequate institutional and planning framework as well as improved coordination among Government ministries. But the White Paper also addresses typical challenges for Namibia, such as the lack of human resources and public awareness of energy efficiency that leads to low social acceptance of the technology.¹⁶³ Indeed, there is only limited technical experience in the country, but raising awareness has already been the subject matter of numerous programmes since the implementation of the White Paper. Additionally, solar panel theft has already become a problem throughout Namibia. The victims are not only corporate entities – the most affected being Telecom, the Namibian Broadcasting Corporation (NBC) and MTC – but also communities and farmers who rely on power-generating solar panels for the functionality of their farms or the entire community. Therefore, in 2009 the Namibia Technical Committee on Renewable Energy formed a taskforce to address the problem of solar panel theft.¹⁶⁴

5 Procurement Mechanisms

The White Paper states that effective governance is of vital importance in the electricity sector. This entails implementation of appropriate legal, regulatory and institutional frameworks,

¹⁵⁷ GRN (1998a:44).

¹⁵⁸ *Etango Magazine* (2008b:7).

¹⁵⁹ For more information about grid parity, see Roedern (2009:6).

¹⁶⁰ Schütt (2014:120).

¹⁶¹ There are predictions that Germany for instance will meet its demand entirely from renewables by 2050.

¹⁶² *Der Spiegel* (2012).

¹⁶³ GRN (1998a:44).

¹⁶⁴ *Etango Magazine* (2009a:17).

combined with increased efforts in building capacity at Government level through development of appropriate governance structures.¹⁶⁵ It states further that at present, RE competes on an unequal footing with conventional forms of energy. Examples of this include the facts that rural electrification, using the grid, is subsidised, while off-grid household electrification, using RE is not. And the institutional structures for planning, supplying and regulating conventional commercial forms of energy are well developed, whereas those for RE technologies, such as solar photovoltaics, are only partially in place.¹⁶⁶

Although RE is supported in the White Paper, explicit support mechanisms are still in the process of being developed. In fact, currently, there are virtually no legal incentives for private producers to produce RE and feed electricity into the grid. There is recognition that market forces alone cannot permit RE technologies to gain ground and contribute significantly, without deliberate support mechanisms in one form or another.¹⁶⁷ Generally, the optimum utilisation of RE requires a contribution of appropriate procurement mechanisms and a favourable investment framework. Doubtless, the pricing mechanism for RE is going to be one of the major bottlenecks to large-scale development of RE projects. In order to ensure that future policy efforts will be based on “the goals of secure supply, profitability and environmental protection”¹⁶⁸, it might be worthwhile for Namibia to look at the lessons learnt from other countries with regard to the political and regulatory frameworks most conducive to development of RE.¹⁶⁹ The experience of countries with a longer tradition of using RE could be tapped regarding the appropriate design since it is an undisputed fact that many countries that have experienced growth in these technologies have done so after a massive energy policy shift.¹⁷⁰

On the basis of already conducted studies and giving careful consideration to experiences made in other countries, the Government is now developing a comprehensive set of regulations and laws that take into account the promotion of RE efficiency, while at the same time facilitating fair market access, market support structures and incentives for those investing in RE plants. It is the Government’s aim to encourage independent power producers to set up RE generation plants in Namibia confident in the knowledge that they can recoup their investments when they feed energy into the grid.¹⁷¹ The Government emphasises that there are currently many barriers to the entry of RE onto the electricity market but there are also numerous procurement mechanisms to address these problems. These are the main instruments used throughout the world:¹⁷²

¹⁶⁵ GRN (1998a:21).

¹⁶⁶ Ibid:44.

¹⁶⁷ Ndhlukula (2009:12).

¹⁶⁸ Ibid:8.

¹⁶⁹ Hinz (2011:86).

¹⁷⁰ Ndhlukula (2009:12).

¹⁷¹ Ibid.

¹⁷² Bjork *et al.* pointed out the importance of proper resource mapping before investigating the right procurement mechanism. Because renewable resources vary considerably from one geographic location to another, within a country as well as across regions, RE development requires a good understanding of optimal siting. This, in turn, requires knowledge of the specific resource characteristics like availability, variability and size or magnitude. Without this information, the ability of a Government to set national policy that correctly targets production of RE from specific indigenous resources is limited and informed analysis is not possible. See Bjork *et al.* (2011: 45). This resource mapping has taken place in Namibia. See for instance the TERNA (Technical Expertise for Renewable Energy Application) programme of the GTZ. In the framework of this programme, which was already launched in the early nineties, it was decided to evaluate the potential of wind energy for electricity generation. In 2011, REEI, together with NamPower,

5.1 Feed-in Tariffs

The most common form of tariff-based incentive used around the world is the type of feed-in tariff that states an obligation for utilities to buy energy at fixed purchase prices for a fixed term.¹⁷³ The purchase price is normally different depending on the type of RE. The feed-in tariff purchase prices are usually based on the cost of RE generation paired with considerations as to social cost, investor requirements and political will. With a feed-in tariff, any customer or entity is normally eligible to sell energy under the terms of the tariff.¹⁷⁴

Feed-in tariffs are often set forth in primary energy legislation, as is the case in, for instance, Kenya and Germany. South Africa also adopted feed-in tariffs in 2009. However, they were marred by controversy from the outset, leading to its abrogation and replacement with a system of public competitive bidding in 2011.¹⁷⁵ Nevertheless, feed-in tariffs are currently the most common procurement mechanism in developing countries.¹⁷⁶

Tariff-based incentives for RE have the disadvantage, that they usually increase the costs of electricity production. It is a principle of electricity regulation that energy prices should reflect economic costs. Where a company or operator has mandatory purchase requirements to buy and resell power produced by renewable resources, the regulator must ensure that the costs relating to that purchase are included in the tariff rate. It is then up to the policymaker to decide whether these additional costs should be spread evenly among all customers, or there should be exemptions for vulnerable customer groups or special industrial and commercial activities and whether or not an increase in tariff rates, will discourage economic expansion.¹⁷⁷

Conversely, feed-in tariffs have the advantage that they create security for investors by allowing a guaranteed payment for electricity from renewable sources that are fed into the grid and therefore, encourage investments in RE. The guarantee stems from a fixed price set by the Government for each defined type of RE over a long period of time. Thus, granting investors the stable and predictable policy and legal frameworks they desire.¹⁷⁸ Among economists, it is often argued that a properly set feed-in tariff is generally the most efficient and effective support scheme for promoting RE.¹⁷⁹ Accordingly, as of 2012, 65 countries have implemented some form of a REFiT, driving 64% of global wind installations and 87% of the photovoltaic capacity that has been installed worldwide.¹⁸⁰

Namibia is also in the process of adopting a REFiT system. The Renewable Energy Feed-in Tariff programme embarked upon by the power utility and the ECB will accommodate small to medium sized businesses in the generation of power from various RE sources up to the maximum of 5 MW per business, but not less than 500 kW.¹⁸¹ For those small systems net-

began a thorough evaluation of wind potential at eighteen different sites throughout Namibia. There is also a hydropower Master Plan in place, for which a study on all perennial rivers had been performed. The aim of the study was to identify and estimate costs and production options for all potential hydropower projects in the Lower Kunene, Kavango and Lower Orange rivers.

¹⁷³ Bjork *et al.* (2011:36).

¹⁷⁴ Ibid:28.

¹⁷⁵ Gachenga (2015:143).

¹⁷⁶ Ruppel / Ruppel-Schlichting (2015:90).

¹⁷⁷ Bjork *et al.* (2011:38).

¹⁷⁸ Ibid.

¹⁷⁹ COM (2008:57).

¹⁸⁰ *Etango Magazine* (2013b:21).

¹⁸¹ *Etango Magazine* (2015d:12).

metering rules will apply. REFiTs will be different for electricity generated by biomass, solar, and wind, whereby the price for solar will be the highest.

The REFiT programme is supposed to encourage small-scale on-grid renewable power generation. The new regime is also expected to promote the growth of local capacity through ownership as each investor is obliged to allocate at least 30% of the ownership of the IPP business to previously disadvantaged Namibians.¹⁸²

So far, a total of 27 companies have been shortlisted for the interim REFiT programme and once licensed, they will fill the capacity of 70 MW reserved for this programme.¹⁸³

5.2 Tendering

In the tendering process, potential investors or producers of RE participate via a competitive bidding system. Generally, the target amount of generated capacity is laid out and the particular type of RE that is bid for is specified. The criteria for the evaluation of the bids are set before each bidding round.¹⁸⁴ The Government decides on the desired level of electricity from each of the renewable sources, their growth rate over time, and the level of long-term price security offered to producers. The bidding is accompanied by an obligation on the part of electricity providers to purchase a certain amount of electricity from renewable sources at a premium price.¹⁸⁵ Once a producer has a long-term contract, he has to pay a penalty in case of a later withdrawal.¹⁸⁶

Tendering procedures require clear processes for application, approval of proposed projects and monitoring performance. From a regulatory perspective, it is important to develop transparent rules to minimise corruption, ensure the adequacy of information that is disseminated to bidders and to level the playing field.¹⁸⁷ This demands significant organisational efforts from the Government authorities and good cooperation between those parties involved as well as a high standard of know-how in the ministry to fulfil the duty of monitoring.

It used to be the ECB's view when it launched the Renewable Energy Procurement Mechanism (REPM) that feed-in tariffs and tender systems have the best global record in terms of bringing renewables to the grid. Whilst the latter brings the benefit of intense price competition, the former have proven themselves as most effective in stimulating industrial and local development. According to the ECB, providing reassurance that differential costs for RE projects can be passed on to the end consumer and setting development targets can be effective supporting measures.¹⁸⁸ In contrast to the ECB's view, tendering has found disfavour in many countries throughout the world because it incentivises bidders into making low-cost offers that are unrealistic or cut corners, leaving questions concerning long-term effectiveness and safety.¹⁸⁹ These disadvantages can surely be balanced, to a certain extent, by an excellent performance by Government authorities. Because of numerous problems involved with tendering, many countries have used tendering only to jump start RE development, though its

¹⁸² Ibid.

¹⁸³ Ngatjihue (2015b).

¹⁸⁴ Bjork *et al.* (2011: 41).

¹⁸⁵ Ibid:42.

¹⁸⁶ Ndhlukula (2010:14).

¹⁸⁷ Bjork *et al.* (2011:42).

¹⁸⁸ *Etango Magazine* (2011e:17).

¹⁸⁹ Bjork *et al.* (2011:42).

success has been questioned.¹⁹⁰ As far as it concerns Namibia, it has been pointed out that a country needs to have a sufficiently large market to effectively run tenders.¹⁹¹ Only few countries in Africa have such a market like for example South Africa where the RE IPP Procurement Programme has been implemented. It has therefore been suggested to explore the potential for Namibia to partner with South Africa in tendering renewable energy capacity.¹⁹² Prior to the implementation of the REPM, the ECB argued that given the complexity and lengthy process of implementing tendering procedures in order to realise the first reference projects in Namibia, a single project power purchase agreement (PPA), with an overall limited risk exposure, would have been the fastest tool.¹⁹³ Meanwhile, the Ministry of Mines and Energy has implemented REPM allowing for transparent tendering for all renewable energy projects exceeding 5 MW. Accordingly, NamPower is now in the process of acquiring an additional 30 MW of IPP capacity – three projects of 10 MW each – via this tendering route.¹⁹⁴ During the tendering process eight companies were short listed for detailed bidding. All pre-qualified bidders agreed to waive the requirement for an Implementation Agreement, i.e. no Government guarantees will be required as a condition for the implementation of the project. Bidders also had to accept to have a local content of at least 26% of the total project value in the form of ownership, sub-contracting and creating employment opportunities for Namibians.¹⁹⁵

5.3 Power Purchase Agreements

Guaranteed long-term PPAs at fixed prices also assist in financing new technologies. PPAs are usually attached to other incentive designs, normally feed-in tariffs, but are also possible outside other procurement schemes. In such a case, PPAs are agreements between parties, rather than rates set by regulators, though the regulatory entity may approve such contracts and issue standard model agreements for consideration to the parties.¹⁹⁶ In Namibia, after a licence is issued to an RE producer, a PPA has to be negotiated with NamPower, which acts as the buyer and Namibian grid operator.

PPAs carry the further problem for the power producer in as much as market conditions might change once feed-in legislation is implemented while the RE producer is further bound to the conditions of the long term PPA.¹⁹⁷ When using PPAs, other procurement mechanisms should be offered in stages, so that while PPAs are useful to provide security, the purchase and sale process should be staggered to allow for market changes and so as not to bind the market in one or a few large deals.¹⁹⁸ It always has to be kept in mind that as RE technologies mature, they will become more efficient and less costly.

If there is one issue with regard to the shaping of Namibia's future energy sector, it is that of as to how to establish a conducive environment for IPPs. Despite many uncertainties, there is beyond doubt an overwhelming private interest in investing in RE projects. However, the key sticking point in the negotiations between the Government and IPPs appear to be a lack of

¹⁹⁰ Ibid.

¹⁹¹ Witte (2015:156).

¹⁹² Ibid:160.

¹⁹³ *Etango Magazine* (2011e:17).

¹⁹⁴ NamPower at <http://www.nampower.com.na/Page.aspx?p=245>; accessed 20 September 2015.

¹⁹⁵ *Etango Magazine* (2015d:12).

¹⁹⁶ Bjork *et al.* (2011:42).

¹⁹⁷ Roedern (2012:2).

¹⁹⁸ Bjork *et al.* (2011:43).

agreement on risk allocation, especially as it pertains to Government risks. The Government appears unwilling to assume these risks, arguing that these are risks private investors should be willing and able to assume.¹⁹⁹ Private developers and particularly banks that are supposed to provide credits for these projects, object and claim that these are risks outside their control that cannot be managed effectively by the private sector in a project finance setting.²⁰⁰ This argument becomes especially important against the backdrop that the Government has effectively changed bulk tariffs in the past by direct subsidisation, thereby increasing the commercial risks for IPPs.²⁰¹

The Government of Namibia in collaboration with NamPower has undertaken some steps in the past to open the national market for IPPs with the result that today 27 licences are issued related to proposed power plants based on wind, solar, biomass, water and coal. However, it must be taken into account that these are conditional licences that will not necessarily lead to the establishment of a power plant. In order to apply for a conditional licence it is not necessary to negotiate a PPA with NamPower. It is rather sufficient to submit a statement of intent to develop the particular site the applicant applies for. Like in the mining sector, where some applicants only intend to secure special areas by applying for an EPL without getting engaged in exploration activities, but rather waiting for an opportunity to sell the EPL profitably, it is possible to keep a conditional licence until this particular site has become attractive for serious developers. Once a site has been secured by a conditional licence and is going to be developed, the applicant must enter into negotiations with NamPower and be issued with a PPA which regulates the amount of electricity fed in the grid as well as the purchase price.

So far, only one project has been commissioned, namely the Omburu solar plant, while one other is currently under construction.²⁰² In order not to worsen Namibia's current energy crisis, it has become imperative to ensure the swift construction of solar PV power plants for which conditional licences have been issued under the independent power producer platform, at least until the adoption of a feed-in tariff law.²⁰³ However, PPA negotiations with other than IPPs of PV power plants, such as Diaz wind power, have been put on hold due to the fact that the implementation agreements which would outline Government guarantees to be provided have not been concluded.²⁰⁴ For wind energy producers in particular, there are, in practice, some difficulties in successfully negotiating PPAs. This is because they are confronted with the argument whereby they have to be responsible for an unpredictable capacity factor and an unstable grid in case wind energy contributes more than 10% of the local generation capacity.²⁰⁵

5.4 Quota Systems and Green Certificates

A quota system is one where the Government sets the percentage or amount of energy, usually annually, that comes from renewable sources and then allows the market place to determine the cost.²⁰⁶ The idea is that a certain amount of energy from RE is mandated, but how this is done

¹⁹⁹ Witte (2015:159).

²⁰⁰ Ibid.

²⁰¹ von Oertzen (2015:118).

²⁰² HopSol-Cenored 5 MW solar plant at Otjiwarongo.

²⁰³ Kinne, paper presented on the 2nd Energy Security Conference, 12 August 2015, Windhoek.

²⁰⁴ *Etango Magazine* (2015d:13).

²⁰⁵ See Roedern (2012:1).

²⁰⁶ Bjork *et al.* (2011:40).

and at what cost is left to the market to decide. The underlying theory is that competition will drive down the costs of supplying renewable electricity and thus minimise the costs to the consumer.²⁰⁷ Such a system involves the issuance of a certificate for each MWh of electricity produced to a RE producer. In turn, certificates provide a vehicle for measuring whether the quota has been met, and for trading to meet the quota or to trade when RE rises above quota requirements.²⁰⁸

A quota system has the advantage that it is not only efficient but also very successful in terms of energy security aspects which is of great importance in the Namibian context.²⁰⁹ Apart from that, the quota system usually involves no or only limited governmental subsidisation.²¹⁰

However, the quota-certificate system usually supports the development of least expensive RE resources because the highest demand is normally for the cheapest resource. This means, in turn, that cheaper technologies are incentivised over others that could be better for long-term development.²¹¹

International comparative studies came to the conclusion that quota systems normally fit the more developed economies better than transitional or developing economies where energy markets are less mature.²¹² According to this result, quota systems are currently not discussed for Namibia.

5.5 Net Metering

Net Metering is a consumer based RE incentive for those consumers connected to the grid who own RE facilities. In its typical form, the mechanism allows for the flow of electricity both to and from the customer. With net metering, during times when a customer's generation exceeds the customer's use, excess electricity flows back into the grid, offsetting electricity consumed at a different time. In such a way, when the consumer produces more electricity than he can use, the utility company has to purchase the excess energy that is then fed into the grid. This means that a unit of electricity can go forward or backward at the same rate. By using net metering, a consumer can utilise RE to offset the total energy provided by the utility company as long as he produces enough to satisfy personal requirements. Normally, those electricity units produced by the customer and fed into the grid will only be credited. No equivalent price shall be disbursed to the consumer. Additionally, no premium for taking part in the scheme is paid. Therefore, net metering will be most economically beneficial when the RE facility is adjusted to produce slightly beneath personal requirements. The payments for deficits then require payments to the utility company through the normal electricity bill. Apart from that, the utility company receives a monthly connection fee from the owner of the RE facility.

Net metering does not require long-term contracts nor does it produce additional costs for customers, thus, it gives consumers the opportunity to remain flexible. On the other hand, this form of RE incentive places the burden for pioneering RE primarily upon consumers. It does not become economically viable before grid parity is reached which is currently the case for photovoltaics. Additionally, net metering does not help to secure a stable energy supply.

In 2012, the ECB initiated the development of net metering rules for small renewable energy systems. Namibia had witnessed many homes, farms and business owners opting for the

²⁰⁷ Ibid.

²⁰⁸ Bjork *et al.* (2011:40).

²⁰⁹ Ndhlukula (2010:15).

²¹⁰ Bjork *et al.* (2011:41).

²¹¹ Ibid.

²¹² Bjork *et al.* (2011:40).

installation of alternative forms of electricity generation facilities and connecting them to their utility's electrical network.²¹³ Therefore, it became necessary to work on clear net metering rules for Namibia. The purpose of these net metering rules is to allow electricity users with roof located PV and wind energy systems, to primarily offset part of their conventional electricity requirements. Furthermore, the rules are intended to encourage private investment in RE resources, stimulate economic growth in the country, contribute to energy security, and enhance diversification on Namibia's energy resources in line with the objective of the White Paper on Energy Policy.²¹⁴ The first phase of the project entailed the development of the draft rules. In March 2015, the ECB published its Met Metering Rules that are now for promulgation at the Ministry of Justice.

Once Net Metering Rules will be in force, all distribution utilities will have to offer net metering to their customers according to rule 2.2. Thus far, only ErongoRed and Cenored offer types of net metering to their customers. The Windhoek municipality started piloting net metering on a small scale at the end of 2014 for those customers having smart meters installed, which measure electricity units consumed, and units fed into the network.²¹⁵

When Cenored decided a year ago to consider electricity approved customers feed-in to the network from the surplus generated by renewable energy systems at their homes and businesses, it has been the second distributor after ErongoRed paying for electricity it receives from customers who have their own solar systems.²¹⁶ The trade-offs were approved by the ECB and based on the average avoided cost by the distributors for not having to buy electricity from NamPower, whereby ErongoRed pays slightly more than Cenored. The main difference between the two net metering systems is that Cenored does not pay in cash, but 'trades off' the kWhs fed into the distribution network against electricity usage as a credit. Any number of exported energy units that exceeds the imported energy units and cannot be traded off, will be carried forward to the next month's exported energy units for renewed consideration. The electricity units cannot be carried forward at the last month of the financial year to the next financial year. In addition, the amount of exported electricity units, being kWh that can be considered for energy trade-off may not exceed the energy units a customer buys from the distributor.²¹⁷

The soon to be expected nationwide net metering rules provide for similar regulations. While according to rule 3.1 generally all renewable energy technologies are eligible for net metering, individual generation is limited according to rule 4.1 to the lesser of the main circuit breaker current rating (converted to kVA) and 500 kVA. Physical, monetary compensation is according to rule 7.2 not allowed. However, net exports will be set off for future imports within a twelve months cycle at the avoided cost. In no case compensation is paid for net exports, which means when generation is above imports.

The ECB supports the idea of net metering consumers being exempted from the requirement to obtain a generation licence and currently determines how this exemption can be implemented legally.²¹⁸

²¹³ *Etango Magazine* (2013c:4).

²¹⁴ Ibid.

²¹⁵ *Etango Magazine* (2014f:4).

²¹⁶ Ibid.

²¹⁷ Ibid.

²¹⁸ ECB, Net Metering Rules, rule 5.1 at 8 and fn. 1.

6 RE Projects in Namibia

Presently, in Namibia, RE technologies are being widely used mostly for off-grid energisation as well as domestic water heating and domestic electricity production. The Renewable Energy Industry Association of Namibia estimates that in Windhoek alone an aggregated 6 to 7 MW of grid connected PV solar systems are in place.²¹⁹

Successful bigger RE projects are found scattered in isolation all over the country. However, the number of large PV plants both off- and on-grid is increasing in Namibia. Examples are the National Breweries that installed a 1.1 MW grid-connected rooftop PV system capable of supplying 34% of its electricity demand, which was then Africa's largest rooftop PV system.²²⁰ NamPower itself installed a 640 kW grid-connected system,²²¹ as did the Ministry of Environment and Tourism.

In an effort to enhance off-grid electrification, the Government commenced in 2013 the off-grid Containerises Solar System Initiative. The first off-grid containerised solar system electrified six remote schools including hostels in the Okahao Constituency in the Omaheke Region. This initiative allows the Government to easily move these systems to other off-grid public institutions once the grid network reaches the schools which are now being powered by the solar system.²²²

Furthermore, an initiative by the Austrian Government, which ran until May 2012, aptly named Southern African Solar Thermal Training and Demonstration Initiative (SolTrain), assisted Southern African countries, including Namibia, to switch from a fossil fuel based energy supply to sustainable energy supply systems based on RE by setting up RE demonstration units at social institutions such as hospitals, orphanages and old peoples homes.²²³ Due to its success the second phase of the project, called SolTrain II, was launched at the end of 2012 and will run until 2016.²²⁴

Only wind power still does not enjoy the attention it deserves. The wind park close to Lüderitz that was expected to be completed in 2013 was not realised to date.²²⁵ In fact, there is currently only one wind turbine of 220 kW installed in Namibia, which feeds the grid in the Erongo region.²²⁶ After all, almost all farms use wind pump installations for water that are in turn forming small PV-wind hybrid islands all over the country.

Generally, there is strong interest from development organisations and NGOs in promoting RE projects in Namibia also. Many already have projects in place, among these are: UNDP, USAID, GIZ, KfW and GEF. They mainly focus on supporting the Government in the essential restructuring of Namibia's legal framework, together with assisting in studies to investigate suitable procurement mechanisms for Namibia. Engagement in all forms of education of stakeholders and the public with the aim of raising awareness is also supported.

²¹⁹ Roedern (2014:15).

²²⁰ *Etango Magazine* (2013d:12f.).

²²¹ Chiguvare / Ileka (2015:26f.).

²²² *Etango Magazine* (2013e:7).

²²³ *Etango Magazine* (2010b:4). SolTrain also encourages training among installers and suppliers of solar equipment. These efforts are aimed at developing and implementing a sense of technical standard among previously disadvantaged installers and suppliers of solar thermal systems, of whom most have received initial training within the NAMREP II project. See *Etango Magazine* (2009b:4).

²²⁴ *Etango Magazine* (2013f:6).

²²⁵ *Allgemeine Zeitung* (2012b).

²²⁶ Chiguvare / Ileka (2015:27).

Slowly Namibia is also undertaking the first careful steps into international carbon trading.²²⁷ Four projects have already attempted to register for carbon credits as contained in the Clean Development Mechanism (CDM) under the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). Two of them were successful. The City of Windhoek registered a project to generate electricity from methane gas expelled from the Gammans sewage reticulation plant for carbon credit to offset the high costs associated with refurbishment.²²⁸ The second project, for which the City of Windhoek is also responsible, involves methane recovery and power generation at the Kupferberg Landfill in Windhoek. The registered operating period for both projects began in January 2014. The projects are classified as small-scale activities and recorded as ‘methane avoidance projects’ with a ‘renewable energy project’ component. Two measures were implemented: recovery of methane which escapes during the process of waste(water) treatment and feeding thermally generated electricity into the grid.²²⁹ In contrast, the application of Ohorongo cement who uses woodchips made from invader bush and sourced from Energy for Future for the manufacture of cement at its Otavi plant, was rejected, after national approval, on the international level.²³⁰ Similarly, the !Aimab Super Diary Farm north of Mariental that is owned by Ohlthaver and List failed in registering using manure of cows to generate power.²³¹

6.1 Tsumkwe and Gam Energy Projects

Finally, two smaller but nonetheless promising RE projects are described in more detail that show the exemplary potential RE can have, especially in the Namibian context as the only purpose these projects serve is not to purely produce energy in an environmentally-friendly way but also to combat urgent problems such as poverty in rural areas and bush encroachment at the same time. One of these projects was even presented at “Rio+20” as a successful example for sustainability.²³²

The Tsumkwe Energy Project²³³ is a small-scale pilot project aimed at improving access to modern energy services for poor, marginalised, indigenous people in remote rural settlements. The N\$ 26 million project was implemented by the Desert Research Foundation of Namibia (DRFN). It is operated by NamPower and mainly co-funded by the European Union. The Tsumkwe Energy Project is not only Namibia’s largest RE off-grid hybrid electricity supply system, it is also believed to be one of Africa’s largest off-grid solar systems. It came on line in August 2011. Over seventy households, twenty different institutions and over fifteen businesses are direct beneficiaries. These include a hospital and a police station. More than 700 residents and the business community in the settlement now have access to modern and affordable energy services. The solar hybrid system is designed to be a fulltime off-grid power station with an overall electrical output of 410 kW, whereas the solar portion of the system

²²⁷ Renkhoff (2014a:46).

²²⁸ However, it is highly disputed whether projects like this should be able to qualify for CDM. Article 12(5)(c) requires reductions in emissions that are *additional* to any that would occur in the absence of the certified project activity. Apart from that, article 12(5)(b) requires that there must be real, measurable, and long-term benefits related to the mitigation of climate change. If these objectives are reached through simple gas flaring is doubtful.

²²⁹ Krause (2014:54f.).

²³⁰ It was not made public for which reasons the application was rejected. It can be assumed that harvesting of invader bush might have been considered as deforestation.

²³¹ Krause (2014:56).

²³² *Allgemeine Zeitung* (2012c).

²³³ Information taken from Tsumkwe Energy. *Etango Magazine* (2012c:11); *Etango Magazine* (2012e:16); and *Etango Magazine* (2011c:7).

produces over 200 kW. The electricity is transferred via a transformer station to two 11 kV mini-grids.

Tsumkwe is a remote San settlement close to the Botswana border that was identified as the largest off-grid area. By definition, this means that no grid connection is expected to be there within the next twenty years. With rising fuel costs, the community previously had limited electricity supply, down to three hours per day, while now it receives a round-the-clock electricity supply. According to cost estimates, connecting Tsumkwe to the grid, which is over two hundred kilometres away, would have cost more than twice the amount the hybrid solar system had cost to implement. The realisation of the energy project did not intend to implement technical improvements only, rather it is also a chance to investigate what additional economic opportunities can be pursued under improved energy supply conditions. Increased access to electricity is meant to improve SME development and diversification of income generating activities. Improved energy supply conditions will, in return, ensure that Tsumkwe will be able to reach a level of economic prosperity that will support the financial sustainability of the hybrid system. As a result of the new power plant, there is no longer the need for Tsumkwe residents to contemplate migrating to urban areas for better living conditions. The Tsumkwe energy project is also intended to protect the direct environment around the settlement as the overdependence on firewood will be reduced.

Due to the success of the Tsumkwe Project, REDMP identified Gam as another off-grid area which may not receive grid electricity in the foreseeable future and embarked therefore on the second large scale mini-grid project after Tsumkwe. The Gam solar project provides electricity for about 2,000 inhabitants.²³⁴ Like the Tsumkwe off-grid electrification project, the Gam solar plant is expected to boost economic activities in the settlement.

6.2 Biomass Power Plants from Encroacher Bush

Energy for Future pioneered in bringing the bush encroachment issue to the attention of a broader public. Since then, through intensive research and the adoption of similar projects, encroacher bush has been recognised as a biomass resource that can contribute to solving Namibia's energy crisis.

It is commonly accepted that Namibian bush encroachment affects some 26 million hectares of farmland.²³⁵ Substantial areas in northern Namibia are covered by so-called invader bush. Thorny bush and shrub species grow in such abundance that they have a significant effect on the growth of grasses and less prevalent species of bushes and shrubs. Such vegetation also dramatically reduces the essential recharge of underground water resources.²³⁶

Against this backdrop, Ohorongo Cement, which went into production in early 2011, developed a method to produce woodchips made from invader bush and sourced from Energy for Future, for the manufacture of cement at its Otavi plant. Energy for Future harvests the invader bush with a harvester on nearby farms that immediately converts the cut wood into woodchips ready for use at the cement plant.²³⁷

This is an example of a win-win situation for both livestock farmers and Ohorongo Cement. The livestock farmers get their grazing areas that prior to these clearing operations could only be used to a limited extend due to bush encroachment while Ohorongo Cement is able to reduce carbon dioxide emissions released into the atmosphere by substituting most of the coal

²³⁴ *Etango Magazine* (2014c:4).

²³⁵ von Oertzen (2014:83).

²³⁶ Ibid.

²³⁷ For more details see Koep / van den Berg (2011:112ff).

with woodchips for energy.²³⁸ Studies conducted in the planning phase of the plant came to the conclusion that if sufficient encroacher bush can be harvested, it can be used to fire the oven to such an extent that only 20% of the fuel required will consist of coal and that the remainder will consist of alternative fuels, mainly, the encroacher bush.²³⁹ In addition, the de-bushing might increase the biodiversity and the groundwater level.

While the scale of the project was a first of its kind in Namibia,²⁴⁰ there are now numerous biomass projects utilising invader bush to generate electricity.

The project, known as C-Bend – Combating Bush Encroachment for Namibia’s Development – is a bush-to-electricity power plant of 250 kW installed on a commercial farm.²⁴¹ It was also the first PPA signed by NamPower with an IPP. However, the power plant does not feed electricity to the grid yet, owing to the low power factor of the connecting line.²⁴² The project is run by the Desert Research Foundation of Namibia (DRFN).

At the end of 2013, Ecologs began with bush clearing. The manufacturing process takes four steps: the bush is harvested, then it is allowed to dry, and later turned into chips, while finally the chips are formed into logs.²⁴³ Furthermore, the Windhoek-based Namibia Breweries is planning to exchange its heavy oil-fuelled boiler with a modern biomass boiler, while MeatCo is exploring options for future biomass utilisation in its industrial boilers at the abattoirs in Windhoek and Okahandja.²⁴⁴

The remarkable interest in this technology shows the exemplary opportunities that lie in bush clearing in order to generate electricity from invader bush. This was also the reason for MAMF/GIZ to run in collaboration with the Directorate of Forestry a national de-bushing programme to substantially upscale current de-bushing efforts.²⁴⁵

Nevertheless, there are no industrial-scale electricity generation activities based on biomass in Namibia yet, although a pre-feasibility study for biomass power plants, conducted by NamPower, revealed that the re-growth of encroacher bush would allow for the operation of forty-five 20 MW plants, totalling a capacity that is 1.5 times today’s national power consumption.²⁴⁶ This is mainly due to the fact that there have been no value addition opportunities. The absence of value addition opportunities has been identified as a main factor hampering previous efforts to initiate large-scale de-bushing programmes.²⁴⁷

7 Concluding Remarks

As Namibia battles to cope with rising demand for energy, the exploration of RE sources is being encouraged by the Government in partnership with the private sector. Therefore, the industry must be opened to the private sector for the purpose of developing a competitive market. This is only possible with a sound legal framework in place, where the postulation for facilitating RE technologies made in the White Paper is implemented. Thus, the outdated framework consisting of numerous programmes and plans that often interfere with each other

²³⁸ *Etango Magazine* (2011a:14).

²³⁹ Koep / van den Berg (2011:112).

²⁴⁰ Koep / van den Berg (2011:113).

²⁴¹ See for more details GRN (2012c:48).

²⁴² Chiguvare / Ileka (2015:28).

²⁴³ *Etango Magazine* (2014b:24).

²⁴⁴ Mlunga / Gschwender (2015:198).

²⁴⁵ Ibid:199.

²⁴⁶ Ibid:197.

²⁴⁷ Ibid:199.

have to be substituted by an Act of Parliament that regulates the sector comprehensively. The most suitable methods of procurement for Namibia have to be selected and implemented in the new Act to give RE producers long-term security. To achieve this ambitious aim, initial steps have to be taken to create some key policy decisions regarding what Namibia's energy mix will look like in the future and to which resource preference is given as not all generation options can be developed further with equal intensity.

III. INTERNATIONAL LAW ASPECTS OF RENEWABLE ENERGIES

Oliver C. Ruppel and Katharina Ruppel-Schlichting

1 Introduction¹

Energy security is one of the most important topics of our times. Energy is an essential requirement for all fields of our daily life, for the functioning of social and political systems, businesses, and communication, and for economic growth and sustainable development, among others. Primary energy is embodied in natural resources such as crude oil, natural gas and coal, which have to undergo anthropogenic conversion in order to become usable energy. Another type of energy is renewable energy, which is

obtained from the continuing or repetitive flows of energy occurring in the natural environment and includes low-carbon technologies such as solar energy, hydropower, wind, tide and waves and ocean thermal energy, as well as renewable fuels such as biomass.²

To secure an energy supply that meets the growing demand is one of the major global energy challenges. So far, no commonly accepted definition of the term ‘energy security’ exists. The International Energy Agency (IEA) has defined energy security as “the uninterrupted availability of energy sources at an affordable price.”³ According to the IEA, energy security has a long-term component which

mainly deals with timely investments to supply energy in line with economic developments and environmental needs. On the other hand, short-term energy security focuses on the ability of the energy system to react promptly to sudden changes in the supply-demand balance.⁴

In very general terms, energy security can be understood as robustness against disruptions of energy supply.

Energy security plays an important role at the crossroads of national security, economic security and environmental security, and is thus equally high on the agenda of national and international politicians, scientists and economists. To achieve secure, clean and efficient energy is the target of many national governments⁵ and regional groups,⁶ as securing energy

¹ This Chapter draws on the author’s earlier contributions, particularly: Ruppel / Ruppel-Schlichting (2015) and Ruppel (2015).

² See the definition of energy by the IPCC in its Special Report on Renewable Energy Sources and Climate Change Mitigation, IPCC (2012:Annex 1, Glossary).

³ See the International Energy Agency at <http://www.iea.org/topics/energysecurity/>; accessed 7 November 2014. Of course, definitions of energy security vary and the definition proposed by the IEA is very broad and leaves questions unanswered, such as the question about what can be considered ‘affordable’ under the definition above.

⁴ International Energy Agency at <http://www.iea.org/topics/energysecurity/>, last accessed 7 November 2014.

⁵ Namibia’s Vision 2030, for example, sets out the objectives to achieve high value-added products and services; to provide security of energy supply through an appropriate diversity of economically competitive and reliable sources; to ensure that households and communities have access to affordable and appropriate energy supplies; and to establish an energy sector that is efficient and that makes contributions to Namibia’s economic competitiveness. Vision 2030 defines, as one of its strategies, the promotion of renewable energy sources and the implementation of projects for production from these sources to meet industry demand. See GRN (2004a:87).

supply is considered to be one of the means to overcome poverty and to achieve the millennium development goals (MDGs).

There is no question about the importance of energy security, in general; nor about its relevance for economic growth and development, in particular. However, in light of the fact that energy-related carbon dioxide emissions make up most global greenhouse gas (GHG) emissions, the world community is charged with the task of balancing the extension of energy supply, on one hand, and the consumption of energy, on the other, in order to reduce the extent of climate change – one of the major challenges of our time. Thus, international climate change negotiations are fundamentally about energy use and the linkages between energy and economic development.

2 Sustainable Energy and Climate Change

The Intergovernmental Panel on Climate Change (IPCC) has launched its *5th Assessment Report (AR5) on Climate Change* in 2013 and 2014.⁷ The fact that energy and particularly renewable energies are closely linked to climate change is not only reflected in the contributions by Working Group I on *The Physical Science Base* in 2013, by Working Group II on *Impacts, Adaptation and Vulnerability* in 2014, and by Working Group III on *Mitigation of Climate Change*, but also in a *Special Report on Renewable Energy Sources and Climate Change Mitigation* (SRREN), which had already been published by the IPCC in 2012. The SRREN has impartially assessed the scientific literature on the potential role of renewable energy in the mitigation of climate change for policy makers, the private sector, academic researchers and civil society. Six renewable energy sources are covered by the report, namely bioenergy, direct solar energy, geothermal energy, hydropower, ocean energy, and wind energy; and an assessment has also been made on how these renewable energy resources are integrated into present and future energy systems. The report furthermore considers the social and environmental consequences associated with the deployment of renewable energy technologies. Strategies to overcome technical as well as non-technical obstacles to their application and diffusion are presented, and costs of energy from renewable energy sources are compared to recent non-renewable energy costs.

The aforementioned reports are of great relevance with regard to many aspects of energy security and contain a solid base for further debate on this important topic. A general message from the reports can be summarised as follows: we live in a world which is altered by climate change, one of the greatest challenges of the 21st century. Climate change poses risks to human and natural systems and has the potential to impose additional pressures on the various aspects of human security.⁸ The risks and impacts related to climate change can be reduced by improving society to decrease vulnerability and hand down the overall risk level (adaptation) and by reducing the amount of climate change that occurs. Thus, energy technologies play an important role in the field of climate change mitigation. Greenhouse gas (GHG) emissions resulting from the provision of energy services have contributed significantly to the increase in

⁶ The European Union (EU) for example “has agreed on ambitious Energy and Climate targets for 2020 and beyond to reduce greenhouse gas emissions, increase the share of renewable energies and improve energy efficiency. Achieving these objectives advances Europe along the path to an energy system that will deliver a competitive and secure energy supply which is sustainable.” See EC (2014a). At a recent meeting of the European Council at the EU Summit in Brussels on 23 and 24 October 2014, EU leaders agreed to reduce greenhouse gas emissions by at least 40% compared to the 1990 level, and to increase energy efficiency and renewables by at least 27%.

⁷ For more details see Chapter 14.

⁸ Adger / Pulhin (2014:760).

atmospheric GHG concentrations and most – about 60% in 2010⁹ – global anthropogenic GHG is attributed to the consumption of fossil fuels. Options for lowering GHG emissions from the energy system while still satisfying the global demand for energy services include energy conservation and efficiency, fossil fuel switching, nuclear and carbon capture and storage (CCS) and low-GHG energy supply technologies such as renewable energy.

Energy security and climate change share the need for innovation and technology, smart policy making, high levels of Government attention, effective diplomacy, and international cooperation. Synergy effects will occur from innovative actions that make for a more secure energy system, as these may also result in reducing the warming emissions that come from energy supplies.¹⁰

The nexus between climate change and energy security has been focused upon in the IPCC's assessment and it has been found that

most climate policies intersect with other societal goals, either positively or negatively, creating the possibility of ‘co-benefits’ or ‘adverse side-effects’. Since the publication of AR4 a substantial literature has emerged looking at how countries that engage in mitigation also address other goals, such as local environmental protection or energy security, as a ‘co-benefit’ and conversely. This multi-objective perspective is important because it helps to identify areas where political, administrative, stakeholder, and other support for policies that advance multiple goals will be robust. Moreover, in many societies the presence of multiple objectives may make it easier for governments to sustain the political support needed for mitigation. Measuring the net effect on social welfare requires examining the interaction between climate policies and pre-existing other policies.¹¹

It has furthermore been observed that the driving forces for climate policy are not solely the concern about climate change. This can be seen from the various efforts of national governments in which the issue of climate change is addressed in the context of other national objectives such as the alleviation of poverty and the achievement of energy security. “For countries that want to reduce their dependence on imported fossil fuels, climate policy can bolster energy efficiency and the domestic renewable energy supply, while cutting GHG emissions.”¹²

It is widely recognised within the international community that the deployment of renewable energies is an important means for mitigating climate change.¹³ Equally well acknowledged is the necessity of promoting renewable energies to foster technological and competitive performance. Correspondingly, support mechanisms have been introduced in many countries worldwide.

The relative importance of the drivers for RE differ from country to country, and may vary over time. Energy access has been described as the primary driver in developing countries whereas energy security and environmental concerns have been most important in developed countries.¹⁴

⁹ Victor *et al.* (2014:122).

¹⁰ See also World Economic Forum (2012).

¹¹ Edenhofer *et al.* (2014:40).

¹² Kolstad / Urama (2014:237).

¹³ See, for example, the speech of the executive secretary of the United Nations Framework Convention on Climate Change, Christiana Figueres on the occasion of the Investor Summit on Climate Risk in January 2014, in which she urged investors to move into green investments, UNFCCC (2014).

¹⁴ See IPCC (2012:148).

The current over-reliance on finite traditional sources of energy, which are patchily distributed across the world's regions, has resulted in an intense competition over these resources. However, when looking at the ratio of proved reserves to current production, it is estimated that, globally, oil and natural gas will be exhausted in about four and six decades, respectively.¹⁵ Assessing the theoretical potential of renewable energy, the IPCC in its SRREN concludes that "the theoretical potential is much greater than all of the energy that is used by all the economies on Earth."¹⁶ If supported by the right enabling public policies, close to 80% of the world's energy supply could be met by renewables by mid-century.¹⁷ While fossil energies are the engine of today's global economy,¹⁸ renewable energies are one of the guarantors of a future-proof energy supply and they do play an important role in the fight against climate change. Wind power, solar energy, hydropower plants, geothermal energy, and energy from biomass are becoming important economic trends and key mechanisms to mitigate climate change. Technologies which supply energy with a limited production of greenhouse gases contribute to reducing the dependency on fossil fuels such as coal, oil and gas and are constantly being developed further with a view to achieving a globally sustainable energy supply.

Efforts to strengthen the renewable energy sector in general and to develop relevant technologies to this end have increasingly been subject to various international climate-related negotiations, particularly to the discussions and decisions of the Conference of the Parties (COP) of the United Nations Convention on Climate Change. In one of its latest decisions, the COP at its 20th session in Lima, Peru, in December 2014 has agreed on the *Lima Call for Climate Action*,¹⁹ in which the Parties reaffirmed that

all developing countries need access to the resources required to achieve sustainable social and economic development and that, in order for developing countries to progress towards that goal, their energy consumption will need to grow, taking into account the opportunities for achieving greater energy efficiency and for reducing greenhouse gas emissions, including through the application of new technologies on terms which make such an application economically and socially beneficial.

With regard to financing, it has been laid down as a guiding principle that the mobilisation and provision of finance will, among others, support the integration of climate objectives into other policy-relevant areas and activities, such as energy and development policy and plans in line with country circumstances and according to countries' priorities. The establishment of an international renewable energy and energy efficiency bond facility has been envisaged.

Although the deployment of renewable energy technologies does face market challenges primarily owing to the maturity of the conventional energy markets and technical and financial restraints in the development of RE technology, the need for promotion of renewable energies is becoming more evident than ever before. It is for good reason that the mitigation of dangerous anthropogenic climate change is seen as one strong driving force behind the increased use of RE worldwide. In addition to this, there are a number of interactions between RE and sustainable development which speak in favour of an increased use of RE: RE

¹⁵

Ibid:122.

¹⁶

Ibid:181.

¹⁷

IPCC (2011).

¹⁸

Within the 2012 estimates on energy share of global final energy consumption, fossil fuels amounted to 78.4%, nuclear energies 2.6% and renewables to 19% of the global share, REN21 (2014:21).

¹⁹

Advance unedited version available at

http://unfccc.int/files/meetings/lima_dec_2014/application/pdf/auv_cop20_lima_call_for_climate_action.pdf; accessed 15 December 2014.

technologies are essential to address energy supply concerns and offer the opportunity to contribute to social and economic development, employment creation and the reduction of environmental and health impacts. Moreover, these technologies do also play an important role in terms of climate change adaptation²⁰. Not only can RE technologies contribute towards less negative effects on our climate by way of emission reduction, such technologies can also contribute towards more reliable energy access, which particularly applies to oil-importing developing countries. For these, an increased uptake of RE technologies could be an avenue to “redirect foreign exchange flows away from energy imports towards imports of goods that cannot be produced locally, such as high-tech capital goods”.²¹

The understanding of the necessity to promote the deployment of renewable energy technologies is reflected in some figures on growth in the renewable energies sector, as provided by the IPCC:

On a global basis, it is estimated that RE accounted for 12.9% of the total 492 EJ of primary energy supply in 2008. The largest RE contributor was biomass (10.2%), with the majority (roughly 60%) of the biomass fuel used in traditional cooking and heating applications in developing countries but with rapidly increasing use of modern biomass as well. Hydropower represented 2.3%, whereas other RE sources accounted for 0.4%. In 2008, RE contributed approximately 19% of global electricity supply (16% hydropower, 3% other RE), biofuels contributed 2% of global road transport fuel supply, and traditional biomass (17%), modern biomass (8%), solar thermal and geothermal energy (2%) together fuelled 27% of the total global demand for heat. The contribution of RE to primary energy supply varies substantially by country and region. Scenarios of future low greenhouse gas futures consider RE and RE in combination with nuclear, and coal and natural gas with carbon capture and storage.

While the RE share of global energy consumption is still relatively small, deployment of RE has been increasing rapidly in recent years. Of the approximately 300 GW of new electricity generating capacity added globally over the two-year period from 2008 to 2009, 140 GW came from RE additions. Collectively, developing countries hosted 53% of global RE power generation capacity in 2009. Under most conditions, increasing the share of RE in the energy mix will require policies to stimulate changes in the energy system. Government policy, the declining cost of many RE technologies, changes in the prices of fossil fuels and other factors have supported the continuing increase in the use of RE. These developments suggest the possibility that RE could play a much more prominent role in both developed and developing countries over the coming decades.²²

3 Regulatory Framework on the International Level

Energy security is crucial for keeping economies competitive, for enhancing sustainable development, and for reducing poverty. It is thus on the one hand surprising that no global energy security system exists. On the other hand, it has to be taken into consideration that global energy governance must take into account a variety of topics, including climate change, development, environmental protection, trade, investment, and human security, which explains the fact that the global energy governance regime is fragmented with its many components being managed in a disjointed manner, bringing about overlaps as well as normative gaps. Numerous instances of inter-state cooperation interrelate and create a normative patchwork with implications for the global energy economy and security. This can be attributed to the

²⁰ See IPCC (2012:40).

²¹ Ibid:122.

²² Ibid:165.

pursuit of national interests, the diversity of energy sources, and the plurality of relevant institutions and agreements.²³

Many international organisations are operating in the field of energy matters and include, among many others, the International Energy Agency (IEA); the Organization of the Petroleum Exporting Countries (OPEC), the Gas Exporting Countries Forum (GECF); the International Energy Forum (IEF); the World Trade Organization (WTO); and the International Renewable Energy Agency (IRENA).

A large number of international processes promote the acceleration of the deployment of renewable energies as an important part of designing a sustainable energy framework for the future. Among them are the millennium development goals and the United Nations secretary general's Sustainable Energy for All Initiative, which is focused on three objectives, namely to ensure universal access to modern energy services (over one billion people worldwide lack access to electricity), to double energy efficiency (global energy-related carbon dioxide emissions could rise 20% by 2035; equipment maintenance, thermostat settings, and upgrades can reduce emissions by up to 50%), and to double the renewable energy share in the overall global energy mix by 2030 (global energy demand will grow up to 33% from 2010 to 2035).²⁴

Relevant instruments of a more legal nature include the UN Charter,²⁵ which sets out some foundation for international agreements relevant to energy-related issues by providing, for example, for the preservation of sovereignty over domestic matters, including the management of natural resources and especially of energy-related resources. Besides this, there are many other relevant international agreements, such as the Energy Charter Treaty and the legal regime of the WTO.²⁶

Interrelating issues between climate change and energy security are most pertinently addressed within the regimes under the United Nations Convention on Climate Change (UNFCCC) and its Kyoto Protocol, which also address the environmental impacts of energy. Commitments to reduce GHG emissions are subject to the ongoing international climate change negotiations and international agreements, and an increased use of RE is a key element in subsequent implementation on the national level.

The UNFCCC, as adopted in 1992, was designed to protect the climate system for present and future generations. It recognises that in order for developing countries to progress towards sustainable social and economic development,

their energy consumption will need to grow taking into account the possibilities for achieving greater energy efficiency and for controlling greenhouse gas emissions in general, including through the application of new technologies on terms which make such an application economically and socially beneficial.²⁷

Within the framework of the Kyoto Protocol, the enhancement of energy efficiency has been stipulated as a means for countries to achieve the quantified emission limitation and reduction commitments. This highlights the need for research, promotion, development, and increased use of new and renewable forms of energy.²⁸ Thus, for many countries the need for promotion

²³ For these and further aspects on the fragmentation of the global energy economy, see Leal-Arcas / Filis (2013).

²⁴ For more details on this initiative, see <http://www.se4all.org>; accessed 11 February 2015.

²⁵ Available at http://www.encharter.org/fileadmin/user_upload/document/IEC/IEC_text_brochure_ENG.pdf; accessed 30 January 2015.

²⁶ On renewable energies, subsidies and the WTO, see Bougette / Charlier (2014).

²⁷ See Preamble of the UNFCCC.

²⁸ Article 2 of the Kyoto Protocol.

of renewable energies results from their obligations under the legal regime of the UNFCCC/Kyoto Protocol. Consequently, there are various activities on the UNFCCC level related to renewable energies, such as discussions on how the deployment of renewable energies and energy efficiency improvements can unlock climate change mitigation opportunities.²⁹

Global energy transition will continue to be high on the international stage in future, not only in terms of a new UN climate agreement, but also regarding a post-2015 agenda with universally applicable (applicable to all countries, not just developing nations and emerging economies), sustainable development goals (SDGs), which have been proposed by the UN Open Working Group³⁰ and unanimously adopted by 193 UN members in September 2015. One of the seventeen SDGs defines the goal pertinent to energy as follows:

Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all:

- 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services;
- 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix;
- 7.3 By 2030, double the global rate of improvement in energy efficiency;
- 7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology;
- 7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.³¹

4 Regulatory Framework in the Southern African Development Community (SADC)

Challenges related to energy are increasingly being addressed on the sub-regional level with regional integration as a motor for the creation of new opportunities for renewable energies and energy efficiency technologies. Major pressing energy challenges include the limited access to energy; energy security; but also household air pollution as a result of cooking and heating with solid fuels and impacts on overall environmental quality resulting from the extensive use of coal. Currently, SADC generates about 74% of its electricity from coal thermal stations. Renewable energy sources, which are in abundance across the region, are not yet considered as major contributors to the region's electricity needs, save for hydropower that accounts for about 20% of SADC's total energy generation.³² According to the African Development Bank, the SADC region has the potential to become a "gold mine" for renewable

²⁹ For example technical expert meetings and related follow-ups on energy efficiency or renewable energy in the pre-2020 period. See <http://unfccc.int/bodies/awg/items/8112.php>; accessed 30 January 2015.

³⁰ Ruchser (2015).

³¹ Available at <https://sustainabledevelopment.un.org/focussdgs.html>; accessed 30 October 2015.

³² *The Villager* (2015).

energy due to the abundant solar and wind resources that are now hugely sought after by international investors in their quest for clean energy.³³

For the time being, however, wide disparities exist in terms of access to electricity between SADC countries and between urban and rural areas as shown in the table below.

Country	Share (%) of population with electricity access (2012)	Share (%) of population with electricity access in urban areas (2012)	Share (%) of population with electricity access in rural areas (2012)	Share (%) of renewable energy in total final energy consumption (2012)
Angola	30	46	6	57.2
Botswana	66	75	51	23.9
DRC	9	24	1	96.0
Lesotho	28	55	17	40.5
Madagascar	15	37	4	78.4
Malawi	9	33	5	78.7
Mauritius	100	100	100	34.0
Mozambique	39	66	27	88.4
Namibia	30	50	17	32.9
Seychelles	97	97	97	0.5
South Africa	85	88	82	16.9
Swaziland	27	40	24	39.9
Tanzania	24	71	7	88.2
Zambia	26	45	14	88.2
Zimbabwe	40	80	14	75.6

Source: Table compiled by author with figures based on REN21 (2015:19f.).

Although SADC is committed to renewable energy, a number of challenges remain:

- Renewable energy entails high upfront costs, especially for technology;
- Most renewable energy equipment is imported, with no local options for manufacturing;
- There may not be capacity to connect large-scale energy projects to the grid;
- Much renewable energy equipment is of poor quality and the region lacks appropriate testing facilities to ensure effectiveness;
- Research, development, and production of renewable energy infrastructure occur outside the region and there are no localisation strategies in place;
- Renewable energy depends heavily on donor subsidies at present;

³³

See Ngwawi (2015).

- There are no guidelines for assessing the impacts and benefits of renewable energy incentives, such as feed-in tariffs;
- Data on possible deforestation caused by biomass development is lacking, inhibiting progress on regulation and decision-making.³⁴

Against the backdrop that large areas of Africa remain without access to modern energy, SADC has emphasised the need to increase energy security throughout the history of renewable energy policy in the region, which is captured in SADC's legal and institutional frameworks. Although implementation of energy related policy has been slow, the region has made some strides, particularly in electricity. At present, nine member states of SADC have merged their electricity grids into the Southern African Power Pool³⁵, reducing costs and creating a competitive common market for electricity in the region. Similarly, SADC has established the Regional Electricity Regulatory Association, which has helped in harmonising the region's regulatory policies on energy and its subsectors.

4.1 The SADC Protocol on Energy

The SADC Protocol on Energy entered into force in April 1996 to develop a coordinated approach towards the development of energy and energy pooling to ensure security and reliability of energy supply and the minimisation of costs. According to the general principles contained in Article 2, SADC member states are encouraged to:

1. Use energy to support economic growth and development, alleviation of poverty and the improvement of the standard and quality of life throughout the Region.
2. Use energy to promote collective self-reliance among Member States.
3. Ensure that the development and use of energy takes cognisance of the gender realities of the Region.
4. Encourage the development and transfer of science and technology related to energy through the promotion of research and development and the evolution and use of comparable methods and standards.
5. Fully accept the responsibility to share the costs associated with institutional mechanisms created for the effective implementation of this Protocol.
6. Settle all disputes peacefully, amicably and in accordance with procedures set forth hereunder in Article 12.
7. Promote and encourage the direct participation of citizens and communities in the development and use of energy.
8. Ensure that the development and use of energy is environmentally sound.
9. Create a conducive environment for the private sector to participate fully in energy development in the Region.
10. Ensure that sectoral and sub-sectoral regional energy policies and programmes shall be in harmony with the overall policies and programmes of SADC and with the strategies and programmes of other SADC sectors.

³⁴

See <http://www.sadc.int/themes/infrastructure/en/hydropower/>; accessed 3 November 2015.

³⁵

For more details see <http://www.sapp.co.zw>; accessed 2 November 2015.

The objectives of energy cooperation within SADC have been captured in Article 3 of the Protocol as to:

1. Strive to harmonise national and regional energy policies, strategies and programmes on matters of common interest based on equity, balance and mutual benefit.
2. Co-operate in the development of energy and energy pooling to ensure security and reliability of energy supply and the minimisation of costs.
3. Co-operate in the development and utilisation of energy in the Region in the following sub-sectors: woodfuel, petroleum and natural gas, electricity, coal, new and renewable energy sources, energy efficiency and conservation, and other cross-cutting themes of interest to Member States.
4. Strive to ensure the provision of reliable, continued and sustainable energy services in the most efficient and cost-effective manner.
5. Promote joint development of human resources and organisational capacity building in the energy sector.
6. Co-operate in the research, development, adaptation, dissemination and transfer of low-cost energy technologies.
7. Strive to achieve standardisation in appropriate energy development and application including the use of common methods and other techniques.

Pursuant to Articles 3 and 10 of the Protocol, Annex 1 of the Protocol on Energy sets forth guidelines for cooperation for promoting renewable energy production and usage. Substantive provisions are made in the Annex with regard to specific sub-sectors, namely electricity; petroleum and natural gas; coal; woodfuel; new and renewable sources of energy; and energy efficiency and conservation. For each of the sub-sectors, a set of target activities is established in Annex 1 to the Protocol and include, among others, the following: developing appropriate financing mechanisms and introducing favourable tax regimes for both renewable energy and energy efficiency, targeting reductions in commercial energy intensity and involving utilities in energy efficiency schemes.

The institutional mechanism for the implementation of the Protocol is a Commission established by Article 4 of the Protocol.

Although the Protocol and its Annex provide an initial guideline for programming, they do not suggest specific mechanisms for implementation, nor do they set quantitative targets or establish any formal monitoring of target achievement.³⁶

4.2 The Regional Indicative Strategic Development Plan (RISDP)

The SADC Regional Indicative Strategic Development Plan (RISDP) was originally adopted in 2003 and contained specific quantitative targets for infrastructure development (including energy) for the period from 2004 to 2018. RISDP envisaged six energy related targets, including that 70% of rural communities within southern Africa should have access to modern forms of energy supplies by 2018.³⁷

In 2014 and 2015, a task force comprising the SADC Secretariat, all member states and key stakeholders developed and finalised the Draft Revised RISDP 2015-2020 and its Implementation Framework and Indicative Costs. In 2015, the SADC Summit has approved

³⁶

See REN21 (2015:61).

³⁷

SADC (2003:68).

the Revised Regional Indicative Strategy of Development Plan (RISDP) and Implementation Framework of 2015-2020.³⁸

4.3 The Regional Energy Access Strategy and Action Plan (REASAP)

The Regional Energy Access Strategy and Action Plan (REASAP)³⁹ was approved in 2010. It sets goals for improving access to modern forms of energy. The REASAP envisages a Renewable Energy and Action Plan (RESAP) to be developed.

The initial consultant report on RESAP suggested a number of targets for renewable energy for the period 2020-2030, including targets for 175 MW of biomass power and 500 MW of solar power by 2020. Significantly, both of these targets fall well short of targets for those SADC countries that are implementing large-scale power generation from renewable sources. Final approval of RESAP is expected in late 2016.⁴⁰

The envisaged SADC Renewable Energy Strategy and Action Plan 2015 to 2020 (RESAP I) aims to encourage the region to achieve a renewable energy mix of at least 32% by 2020, which should rise to 35% by 2030.⁴¹

The establishment of the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE) has been approved by SADC energy Ministers in 2015 and Namibia has been selected as the host country of SACREEE.

4.4 The Energy Sector Plan of the SADC Regional Infrastructure Development Master Plan (RIDMP)

The Energy Sector Plan⁴² was developed in 2012 as part of the SADC Regional Infrastructure Development Master Plan (RIDMP) whose aim is to define regional infrastructure requirements and conditions to facilitate the realisation of key infrastructure in the energy, water, transport, tourism, meteorology and telecommunications sectors by 2027. It proposes that “additional capacity beyond 2027 should be based on a combination of hydro, wind and solar. Apart from hydropower, SADC estimates that the major renewable energy capacity addition will be from wind energy, followed by solar PV, CSP and biomass.”⁴³

5 Regulatory Options to Support Renewable Energies on the National Level

Support mechanisms for renewable energies have been introduced in many countries worldwide, with different types of promotion models. The success of these models varies and is crucially determined by the specific political commitment.⁴⁴ In order to strengthen renewable energies, national legislation can provide for specified tariffs for renewable energy production. In very simplified terms, producers of renewable energy earn a certain income for

³⁸ GRN South Africa (2015).

³⁹ Available at

http://www.sadc.int/files/5713/5791/7436/EUEI_PDF_SADC_Regional_Energy_Access_Strategy_Mar_2010_EN.pdf; accessed 2 November 2015.

⁴⁰ REN21 (2015:62).

⁴¹ *The Villager* (2015).

⁴² Available at

http://www.sadc.int/files/5413/5293/3528/Regional_Infrastructure_Development_Master_Plan_Energy_Sector_Plan.pdf; accessed 2 November 2015.

⁴³ REN21 (2015:24).

⁴⁴ See Lüdemann (2012:315).

every kilowatt hour they generate (for example by installing solar systems) and can either use the produced energy or export it to the national grid and receive an export tariff.

On the national level, two main support models for renewable energies have emerged, namely feed-in tariff schemes and capacity-driven models.⁴⁵ While in feed-in tariff schemes utilities are obliged to buy energy at fixed purchase prices for a fixed term, capacity-driven models are characterised by a price which is to be decided by the market. Capacity-driven models include bidding processes and tradable quotas.⁴⁶ Both these models are given effect by way of policy targets for renewable energies and respective regulation or legislation, with the latter providing a greater level of certainty for investors.⁴⁷ Governments have been innovative when drafting support models for renewable energies, combining distinct policies in new and innovative ways in order to promote renewable energies.⁴⁸

Aside from tax exemptions,⁴⁹ feed-in tariffs are currently the most common renewable energy policy type in developing countries.⁵⁰ One main criticism of feed-in systems is the fixed price level which is not set by market rules but guaranteed by law, which constitutes a substantial market interference. Tariffs must thus be subject to (time and cost-intensive) continuous reviews and adjustments at short intervals in order adequately to reflect market changes and cost trends, considering the latest market developments and the technological state of the art.⁵¹ However, properly set feed-in tariffs are considered to be the most efficient and effective support mechanism for the promotion of renewable energies,⁵² as feed-in tariffs with a reliable legal framework grant investment security for a specific period of time and are beneficial for green economic development and job creation,⁵³ ultimately resulting in more access to energy, more stable electricity prices and a higher diversity in the electricity portfolio. While the integration of renewable energy technologies into the grid may indeed pose technical, financial, and administrative challenges, grid stability can be ensured by way of a strategic approach to renewable energy growth with a focus on the necessary infrastructure and required technical expertise.⁵⁴

Capacity-driven models, particularly competitive tender systems and tradable quota models primarily aim to ensure that a fixed amount of renewable energy is generated. In capacity-driven models, electricity suppliers, electricity consumers or electricity generators are obliged to cover with renewable energies a certain share of their electricity supply, their electricity demand and their electricity generation, respectively.⁵⁵

In competitive bidding procedures, an auction among producers of renewable energy is organised in which tenders are given in respect of a certain quota of each renewable technology. The provider of the lowest asking price is given the contract. The European Commission for example has presented auctioning as standard procedure for allocating

⁴⁵ For a more detailed discussion of these models and their peculiarities, see for example UNEP (2012:10ff.); REN21 (2014:76ff.); Lüdemann (2011:9ff.).

⁴⁶ For further references and details, see Lüdemann (2011); Haas *et al.* (2004); Ringel (2006).

⁴⁷ UNEP (2012:viii).

⁴⁸ Ibid:10.

⁴⁹ Or tax credits reducing tax liability. These are typically calculated on the basis of percentage of project cost or on project output, UNEP (2012:11).

⁵⁰ UNEP (2012:14).

⁵¹ Lyster / Bradbrook (2006:198).

⁵² See for example Eurosolar (2006).

⁵³ See REN21 (2014:63).

⁵⁴ UNEP (2012:7).

⁵⁵ Ibid:12.

support for renewable energy in its Guidelines on State aid for environmental protection and energy 2014–2020.⁵⁶

Competitive bidding systems have a high record in terms of bringing renewable energies to the grid and furthermore have the advantage of an intense price competition. Challenges related to this model include the following:

Not all projects that are selected will actually be carried out: the rate of implementation almost always falls short of 100%. The risks for applicants are higher than in open feed-in schemes, because a proposed project may not be selected and bidders may incur costs or face penalties when they are unable to implement a project that has been selected. A sufficient number of bidders are required to participate, otherwise the auction will not produce a competitive result. Auctions may invoke strategic behaviour of market players which can drive up costs. Market players will also try to exercise market power. Large market actors may have a favoured position over their smaller competitors.⁵⁷

In tradable quota models, usually a percentage or amount of energy to be generated from renewable resources is determined by Government and allotted to certain operators who are free to decide whether they will fulfil the quota themselves or whether they will trade their quotas by paying another entity for covering their allocated amount.⁵⁸ The rationale of this model is that by way of competition, the costs of supplying renewable energy are kept low, in turn minimising the costs to the consumer. Despite being considered efficient in terms of energy security, tradable quota systems are criticised for not creating an economically feasible environment and for not supporting a wide range of renewable energy resources, but rather only the development of least expensive renewable energies, as the demand for these is usually the highest owing to the low prices involved.

Capacity-driven models thus always have to balance between their gains in efficiency on the one hand and possible lack of investor security as well as ecological set backs on the other hand.⁵⁹

The promotion of renewable energies, of course, has financial implications, and cost recovery remains a critical issue, especially for developing countries. Even if renewable energies might be less costly in the long run, the generation costs need to be lowered as much as possible in order to keep renewable energies competitive. This problem can, for example, be addressed by redirecting fossil fuel subsidies. International funding is in some cases obtained from various financing streams which provide support for renewable energy projects, such as the Global Environment Facility (GEF),⁶⁰ the Africa Renewable Energy Fund, and Nationally Appropriate Mitigation Actions (NAMAs).

Worldwide, energy investments are rising. Renewable energy investment has been rising rapidly around the world to US\$260 billion last year and created 2,3 million jobs.⁶¹ Worldwide, climate change mitigation activities attracted US\$350 billion in 2011, mostly related to renewable energy and energy efficiency and approximately 30% of the global distributed adaptation finance went to Africa.⁶² The key to tapping financial resources for more green economic development is to attract local as well as foreign capital. There is thus a

⁵⁶ EC (2014b).

⁵⁷ See De Vos / Klessman (2014).

⁵⁸ Ringel (2006:8).

⁵⁹ Lüdemann (2011:14).

⁶⁰ GEF (2009).

⁶¹ See <http://www.se4all.org/our-vision/our-objectives/renewable-energy/>; accessed 11 February 2015.

⁶² Niang / Ruppel (2014:1241).

critical need, particularly for developing countries, to encourage private sector involvement by creating investment security.

6 Concluding Remarks

One of the biggest challenges of our time is to reduce climate change, and in light of the fact that energy-related carbon dioxide emissions make up most of the harmful global greenhouse gases (GHG) we produce, the world community is necessarily charged with the task of balancing the extension of energy supply, on one hand, and the consumption of energy, on the other. Legal aspects and processes governing the production of secure, clean and efficient energy is an increasingly consuming pursuit of national and international lawmakers and policymakers; and in international and national politics energy security has become the dominant topic at the nexus of national, economic and environmental security.

Renewable energies play an important role in the field of energy security, and although the deployment of renewable energy technologies does face market challenges, primarily owing to the maturity of the conventional energy markets and technical and financial constraints in the development of renewable energy technology, the need for promotion of renewable energies is becoming more evident than ever before.

Global energy governance is intertwined with various facets, including climate change, development, environmental protection, trade, investment, and human security. This explains why the global energy governance regime is fragmented, with its many components being managed in a disjointed manner, bringing about overlaps as well as normative gaps. Numerous instances of interstate cooperation interrelate and create a normative patchwork with implications for the global energy economy and security. This can be attributed to the pursuit of national interests, the diversity of energy sources and the plurality of relevant institutions and agreements. Global energy transition will continue to be high on the international agenda in future, not only in terms of a new UN climate agreement, but also regarding a post-2015 agenda.

CHAPTER 14

CLIMATE CHANGE

I. SETTING THE SCENE: HUMAN VULNERABILITY AND FINDINGS OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

Oliver C. Ruppel

1 Introduction

During the past centuries the world's population increased rapidly to over 7 billion in 2011¹ and a global population of 9.5 billion people is projected for the year 2050.² The expansion of mankind, both in numbers and per capita exploitation of the earth's resources, has been astounding. In an age primarily shaped by people, the so-called *Anthropocene*³, the depletion of natural resources, the transformation of land surface by human action, and the increase in atmospheric concentrations of carbon dioxide are some of the impacts of human activity on Earth and atmosphere. The consequences of human activity are inseparably linked with observed changes in climate and mankind is faced with enormous challenges posed by the effects of climate change⁴, *de facto* and *de iure*.⁵

The following sections introducing the climate change Chapter focus on human vulnerability in Africa and on the Africa-specific findings of the Intergovernmental Panel on Climate Change (IPCC) established by the United Nations Environment Programme (UNEP) and the World Meteorological Organisation (WMO) in 1988.

¹ See UNFPA (2011).

² According to the 2012 Revision of the United Nations World Population Prospects, UNDESA (2012).

³ The term has initially been coined in 2000 by the famous atmospheric chemist and Dutch Nobel Prize winner Paul Crutzen and has ancient Greek roots: *anthropo* meaning *human* and *cene* meaning *new*. In 2000 Crutzen realised that we live in an age primarily shaped by people and that anthropogenic drivers have become major factors regarding the changes of our planet Earth. Crutzen suggested this age be called *Anthropocene* – “the age of man”. See Crutzen / Stoermer (2000).

⁴ According to the IPCC (2014b:1758), climate change refers to “a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions, and persistent anthropogenic changes in the composition of the atmosphere or in land use. Note that the Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: ‘a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods’. The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition, and climate variability attributable to natural causes.”

⁵ See Ruppel (2013:29).

2 Aspects of Human Vulnerability in Africa

The African continent, in particular the SADC region, is one of the poorest in the world despite being richly endowed with natural resources. Approximately 45% of the total SADC population lives on US\$1 per day. Malnutrition is around 36.1%, ranging from 44 to 72% in the some countries of the region. Life expectancy is just below 40 years, and declining. Infant mortality rates remain above 50 per 1000 births in most countries in the SADC region. These figures are indicative of the harrowing and impoverished conditions afflicting most peoples in the region.⁶

Various regions of Africa have experienced changes in weather patterns over recent years, especially concerning the occurrence of droughts and floods.⁷ This has led to property destruction, loss of crops, livestock and settlements, as well as to forced human displacement,⁸ all of which have exacerbated already grinding poverty. Vulnerability to climate change⁹ relates not only to a change in the frequency or duration of climatically unusual conditions, but also to the capacity to respond adequately to such conditions. Two aspects of vulnerability can be distinguished. The first concerns the likelihood that an individual or group will be exposed to and adversely affected by altered climatic conditions. The second aspect of vulnerability relates to the capacity to anticipate, cope with, resist and recover from the impacts of climate change. This capacity to adapt to climate change obviously varies among regions and socio-economic groups, in the sense that those with the least capacity to adapt are generally the most vulnerable to the impacts of climate change. This, to a great degree, speaks to the nature and abundance of the resources available to a given group, individual or region, to mitigate, overcome or adapt to altered climate conditions. Climate change has an impact on socio-economic development, and it affects various sectors crucial to such development – water availability, forestry, agriculture, biodiversity, food security and human health. Human vulnerability has become a key focus of human rights discussions, which now also tend to focus on how flooding, devastated housing, changes in the supply of fresh and irrigation water, contagious diseases, prolonged droughts, forced migration, deforestation, soil denudation, etc., will impact on human lives.⁹

Projected consequences of continued temperature increases include a rise in sea levels, changes in precipitation patterns, and the resultant threat to food security and sustainable development in general, with more people pushed into and caught in poverty, especially in developing countries with fragile economies.¹⁰

One of the major natural resource implications of climate change is that human populations – and the law – will have to adapt to significant shifts regarding fresh water resources, especially where population concentration will create or exacerbate conditions of water scarcity. Almost four decades ago water law expert Frank Trelease wrote, in the context of climate change:

While one function of law is to give stability to institutions and predictability to the results in action, often the strength of law will lie not in immutability but in capacity for change and flexibility in the face of new forces.¹¹

⁶ SADC (2008).

⁷ Cf. Haensler *et al.* (2010:2-4) for a climate history of Namibia and western South Africa.

⁸ The IPCC defines vulnerability as the “propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.” IPCC (2014:5).

⁹ Passage taken from Ruppel (2010a).

¹⁰ Ibid.

¹¹ Trelease (1977).

It is not clear whether climate change in Africa will be pushing the hydro-climate beyond the capacity of existing water resources in future. However, again in the words of Trelease, “We would be wise to plan for the unpredictable”.¹² It is expected that the ‘water side’ of climate change is likely to generate a significant impact on national and global economies; and it is not unlikely that this will result in increased local and international conflict, particularly in Africa.¹³

This may also affect the energy production sector, as water is closely connected to the generation of electricity. An important question repeatedly posed is whether an increase in hydro-electric and nuclear electricity generation will have the required effect of a decrease in greenhouse gas emissions. In fact, the increased water requirements of these kinds of energy generation – to run turbines and for cooling – might exacerbate pressures on already strained water reserves and create new constraints. The interconnectedness and interdependence of water, energy, national welfare and international economies becomes clearer as climate change progresses around the world.

Moreover, the potential consequences of climate change and a decrease in fresh water also pose challenges for animal and plant species and biodiversity,¹⁴ which in turn is likely to influence the human food chain.¹⁵ All these considerations call for global level scrutiny and perhaps for a new and global green deal¹⁶ that reassesses development in a carbon-constrained¹⁷ and water-stressed world.

Various studies highlight the vulnerability of Africans that depend primarily on natural resources for their livelihoods, indicating that their resource base – already severely stressed and degraded by overuse – is expected to be further adversely affected by climate change.¹⁸ Populations already vulnerable as a result of their status – women, children, the aged, minorities and the disabled – will be feeling the effects of climate change the hardest.¹⁹

Women in Africa are especially exposed to climate change related risks due to existing gender discrimination, inequality and inhibiting gender roles.²⁰ Elderly women and girls are expected to be most severely affected. Women are vulnerable to gender-based violence during natural disasters and during migration, and girls are more likely to drop out of school when household incomes and resources come under stress. Rural women are expected to bear the brunt of considerable negative effects on agriculture and deteriorating living conditions in rural areas. This vulnerability is exacerbated by factors such as unequal property rights, exclusion from decision-making and difficulties in accessing information and financial services.

With regard to African children, climate change is expected to increase existing health risks and to undermine support structures that protect children from harm. Extreme weather conditions and scarcity of safe drinking water are major causes of malnutrition and infant and child mortality in Africa. Likewise, increased stress on livelihoods will make it more difficult for children to attend school.²¹ Girls will be particularly adversely affected as traditional

¹² Ibid.

¹³ Scholtz (2010).

¹⁴ Hinz / Ruppel (2010).

¹⁵ Erens *et al.* (2009:207).

¹⁶ Barbier (2010).

¹⁷ Palosuo (2009).

¹⁸ Ibid:85; Leary *et al.* (2006).

¹⁹ Ruppel (2010a,b).

²⁰ Ruppel (2008b, 2010d).

²¹ Ruppel (2010b).

household chores, such as collecting firewood and water, require more time and energy when resources are scarce.

Climate change also poses a threat to indigenous peoples in Africa, who often live in marginal lands and fragile ecosystems, which are particularly sensitive to changes in weather.²² Climate change could become a driver of migration and population displacement and it is acknowledged that indigenous people living in dry-lands are among the most vulnerable communities, as a result of water scarcity. Indigenous peoples have been voicing their concerns about the impacts of climate change on their rights as distinct peoples, and the importance of giving them a voice in policymaking on climate change at both national and international levels; further, to take into account and to build on their traditional knowledge. Customary law²³ and indigenous knowledge should therefore be incorporated into climate change policies in order to foster the development of cost-effective, participatory and sustainable adaptation strategies.²⁴

Populations whose rights are poorly protected are likely to be less well-equipped to understand or prepare for climate change; they would be less able to lobby effectively for Government or international action; and are more likely to lack the resources needed to adapt to expected change in their environment and economic situation. The efforts that have been made so far to place rights at the centre of any future climate change-mitigating dispensation have not been human rights focused. However, human rights impacts are a relevant concern. To mobilise the policy value, and indeed the legal force, of human rights in the construction of a climate change mitigating dispensation, requires the assessment of likely human rights impacts and outcomes of climate change. The specific rights potentially affected by climate change, such as rights to food, water, shelter, and health or rights associated with gender, children and indigenous peoples, must be addressed in context. Each of the human rights²⁵ affected by climate change need to be identified and addressed in order to infuse relevance into on-going consultations, political negotiations, global cooperation discussions and other actions, whether internationally, regionally and nationally.²⁶

Rights and responsibilities regarding the utilisation of environmental resources need to be distributed with greater equity among communities, both globally and nationally. In this context, political participation, access to information and broad public involvement are just as important to the realisation of human rights as the development of quality climate change related education and interdisciplinary research of high standard. In order to become a winner – rather than a loser in the face of climate change – Africa needs more highly skilled experts in this field in order to meet future demand and to be in a position to adequately negotiate around its international interests in a growing and complex, knowledge-based global economy.²⁷

3 Findings of the IPCC

It is the ultimate role of the IPCC to assess – on a comprehensive, objective, open and transparent basis – the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation.

²² Cf. studies on Biodiversity in Hinz / Ruppel (2008a).

²³ Ruppel (2010c).

²⁴ Mfune *et al.* (2009b).

²⁵ Ruppel (2008a).

²⁶ PIK Report (2010).

²⁷ Ruppel (2010a).

Only recently, the IPCC has launched its 5th Assessment Report (*AR5*) on Climate Change,²⁸ with the contribution by Working Group I on *The Physical Science Base* in 2013, the contribution by Working Group II on *Impacts, Adaptation and Vulnerability* in 2014, and the contribution by Working Group III on *Mitigation of Climate Change*. In its report, the IPCC has again most rigorously reviewed and assessed the most recent scientific, technical and socioeconomic information produced worldwide relevant to the understanding of climate change.

The aforementioned reports are of great relevance with regard to all aspects of climate change and contain a solid base for further debate on this important topic. A general message from the reports can be summarised as follows: there is no doubt that we live in a world which is altered by climate change, one of the greatest challenges of the 21st century. Climate change poses risks to human and natural systems and has the potential to impose additional pressures on the various aspects of human security.²⁹ The risks and impacts related to climate change can be reduced by improving society to decrease vulnerability and hand down the overall risk level (adaptation³⁰) and by reducing the amount of climate change that occurs, particularly by decreasing emissions (mitigation³¹).

Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems.³²

Evidence shows that the atmosphere and ocean have warmed, the amounts of snow and ice have diminished and sea level has risen and there is no doubt that human influence has been the dominant cause of the warming observed since 1950.³³ Climate change has caused widespread and consequential impacts on all continents and across the oceans and poses a broad range of future risks for human and natural systems.³⁴ The IPCC's analysis of observed climate trends and future projections reveals that that it is very likely that mean annual temperature has increased over the past century over most of the African continent,³⁵ and that temperatures on the continent will rise faster than the global average increase during the 21st century.

²⁸ Report available from <http://www.ipcc.ch/report/ar5/>; accessed 28 May 2014.

²⁹ Adger / Pulhin (2014:760).

³⁰ Adaptation is defined as “The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.” See IPCC (2014b:1758).

³¹ Mitigation of climate change is defined as “A human intervention to reduce the sources or enhance the sinks of greenhouse gases.” See IPCC (2014b:1769).

³² See IPCC (2014a:2).

³³ IPCC (2014a:2).

³⁴ IPCC (2014a:6).

³⁵ With the exception of areas of the interior of the continent, where the data coverage has been determined to be insufficient. See Niang / Ruppel (2014:1206).

3.1 Main Findings for Africa

Selected Executive Summary Statements of the IPCC AR5 Africa Chapter³⁶

Evidence of warming over land regions across Africa, consistent with anthropogenic climate change, has increased (high confidence). Decadal analyses of temperatures strongly point to an increased warming trend across the continent over the last 50 to 100 years.

Mean annual temperature rise over Africa, relative to the late 20th century mean annual temperature, is likely to exceed 2°C in the Special Report on Emissions Scenarios (SRES) A1B and A2 scenarios by the end of this century (medium confidence). Warming projections under medium scenarios indicate that extensive areas of Africa will exceed 2°C by the last 2 decades of this century relative to the late 20th century mean annual temperature and all of Africa under high emission scenarios.

A reduction in precipitation is likely over Northern Africa and the southwestern parts of South Africa by the end of the 21st century under the SRES A1B and A2 scenarios (medium to high confidence). Projected rainfall change over sub-Saharan Africa in the mid- and late 21st century is uncertain.

African ecosystems are already being affected by climate change, and future impacts are expected to be substantial (high confidence). There is emerging evidence on shifting ranges of some species and ecosystems due to elevated carbon dioxide (CO₂) and climate change, beyond the effects of land use change and other non-climate stressors (high confidence). Ocean ecosystems, in particular coral reefs, will be affected by ocean acidification and warming as well as changes in ocean upwellings, thus negatively affecting economic sectors such as fisheries (medium confidence).

Climate change will amplify existing stress on water availability in Africa (high confidence). Water resources are subjected to high hydro-climatic variability over space and time, and are a key constraint on the continent's continued economic development. The impacts of climate change will be superimposed onto already water-stressed catchments with complex land uses, engineered water systems, and a strong historical sociopolitical and economic footprint. Strategies that integrate land and water management, and disaster risk reduction, within a framework of emerging climate change risks would bolster resilient development in the face of projected impacts of climate change.

Climate change will interact with non-climate drivers and stressors to exacerbate vulnerability of agricultural systems, particularly in semi-arid areas (high confidence). Increasing temperatures and changes in precipitation are very likely to reduce cereal crop productivity. This will have strong adverse effects on food security.

Climate change may increase the burden of a range of climate-relevant health outcomes (medium confidence). Climate change is a multiplier of existing health vulnerabilities (high confidence), including insufficient access to safe water and improved sanitation, food insecurity, and limited access to health care and education. Climate change is projected to increase the burden of malnutrition (medium confidence), with the highest toll expected in children.

In all regions of the continent, national governments are initiating governance systems for adaptation and responding to climate change, but evolving institutional frameworks cannot yet

³⁶

Taken from Niang / Ruppel (2014:1202-1204).

effectively coordinate the range of adaptation initiatives being implemented (high confidence). Progress on national and subnational policies and strategies has initiated the mainstreaming of adaptation into sectoral planning. However, incomplete, under-resourced, and fragmented institutional frameworks and overall low levels of adaptive capacity, especially competency at local Government levels, to manage complex socio-ecological change translate into a largely ad hoc and project-level approach, which is often donor driven. Overall adaptive capacity is considered to be low. Disaster risk reduction, social protection, technological and infrastructural adaptation, ecosystem-based approaches, and livelihood diversification are reducing vulnerability, but largely in isolated initiatives. Most adaptations remain autonomous and reactive to short-term motivations.

Growing understanding of the multiple interlinked constraints on increasing adaptive capacity is beginning to indicate potential limits to adaptation in Africa (medium confidence). Climate change combined with other external changes (environmental, social, political, technological) may overwhelm the ability of people to cope and adapt, especially if the root causes of poverty and vulnerability are not addressed.

There is increased evidence of the significant financial resources, technological support, and investment in institutional and capacity development needed to address climate risk, build adaptive capacity, and implement robust adaptation strategies (high confidence). Funding and technology transfer and support is needed to both address Africa's current adaptation deficit and to protect rural and urban livelihoods, societies, and economies from climate change impacts at different local scales. Strengthening institutional capacities and governance mechanisms to enhance the ability of national governments and scientific institutions in Africa to absorb and effectively manage large amounts of funds allocated for adaptation will help to ensure the effectiveness of adaptation initiatives (medium confidence).

Climate change and climate variability have the potential to exacerbate or multiply existing threats to human security including food, health, and economic insecurity, all being of particular concern for Africa (medium confidence). Many of these threats are known drivers of conflict (high confidence). Causality between climate change and violent conflict is difficult to establish owing to the presence of these and other interconnected causes, including country-specific sociopolitical, economic, and cultural factors. For example, the degradation of natural resources as a result of both overexploitation and climate change will contribute to increased conflicts over the distribution of these resources. Many of the interacting social, demographic, and economic drivers of observed urbanization and migration in Africa are sensitive to climate change impacts.

3.2 Impacts of Climate Change

AR5 presents strong evidence that the impacts³⁷ of climate change in Africa are already being felt across various sectors. Climate change poses challenges to economic growth and sustainable development and to the various facets of human security. Although detection of and attribution to climate change are often difficult given the role of drivers other than climate change, there are substantially more impacts in recent decades now attributed to climate

³⁷ Impacts of climate change are the “effects on natural and human systems of extreme weather and climate events and of climate change. Impacts generally refer to effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services, and infrastructure due to the interaction of climate changes or hazardous climate events occurring within a specific time period and the vulnerability of an exposed society or system. Impacts are also referred to as consequences and outcomes. The impacts of climate change on geophysical systems, including floods, droughts, and sea level rise, are a subset of impacts called physical impacts.” IPCC (2014c:5).

change.³⁸ Various examples show, however, that climate change exerts extensive pressure on different ecosystems such as terrestrial, freshwater, and coastal/ocean ecosystems.³⁹ The health, livelihoods and food security of people in Africa are all affected by climate change. And as “Africa as a whole is one of the most vulnerable continents due to its high exposure and low adaptive capacity”,⁴⁰ innovation and technology, smart policy making, high levels of Government attention, effective diplomacy, and international cooperation are required in order to effectively address the current and future challenges related to climate change.

3.3 Future Risks

Climate change will amplify existing risks and create new risks for natural and human systems. Risks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development.⁴¹

Risk is “the potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values.”⁴² Risk results from the interaction of vulnerability, exposure, and hazard. Risks from a changing climate in general come from a lack of preparedness making people vulnerable and the exposure of people or assets to harm, overlapping with triggering climate events (hazards). Key risks are potentially severe impacts of climate change and are considered ‘key’ due to the high intensity of hazard or the high vulnerability of societies and systems exposed, or both. One major finding of AR5 is that the higher the increase in warming is, the higher is the risk.⁴³

Particular challenges for less developed countries and vulnerable communities, given their limited ability to cope are the key risks as identified in AR5 as risks with high confidence, spanning sectors and regions, including but not limited to the following:⁴⁴

- Risk of death, injury, ill-health, or disrupted livelihoods in low-lying coastal zones and small island developing states and other small islands, due to storm surges, coastal flooding, and sea-level rise;
- Risk of severe ill-health and disrupted livelihoods for large urban populations due to inland flooding in some regions;
- Systemic risks due to extreme weather events leading to breakdown of infrastructure networks and critical services such as electricity, water supply, and health and emergency services;
- Risk of mortality and morbidity during periods of extreme heat, particularly for vulnerable urban populations and those working outdoors in urban or rural areas;
- Risk of food insecurity and the breakdown of food systems linked to warming, drought, flooding, and precipitation variability and extremes, particularly for poorer populations in urban and rural settings;

³⁸ IPCC (2014a:7).

³⁹ See Niang / Ruppel (2014:1214).

⁴⁰ Niang / Ruppel (2014:1205).

⁴¹ IPCC (2014c:13).

⁴² Ibid:5.

⁴³ Niang / Ruppel (2014:1238).

⁴⁴ IPCC (2014c:13).

- Risk of loss of rural livelihoods and income due to insufficient access to drinking and irrigation water and reduced agricultural productivity, particularly for farmers and pastoralists with minimal capital in semi-arid regions;
- Risk of loss of marine and coastal ecosystems, biodiversity, and the ecosystem goods, functions, and services they provide for coastal livelihoods, especially for fishing communities in the tropics and the Arctic;
- Risk of loss of terrestrial and inland water ecosystems, biodiversity, and the ecosystem goods, functions, and services they provide for livelihoods.

For Africa in particular, the following key risks have been highlighted:⁴⁵

- Risks of stress on water resources,
- sea level rise and extreme weather events,
- shifts in biome distribution,
- degradation of coral reefs,
- reduced crop productivity,
- adverse effects on livestock,
- vector- and water-borne diseases,
- under nutrition, and
- migration.

4 Opportunities for Effective Action to Reduce the Risks Associated to Climate Change

The risks associated with climate change need to be reduced by limiting the rate and magnitude of climate change. AR5 reveals that risks are reduced substantially under the assessed scenario with the lowest temperature projections. Furthermore, reducing climate change can also reduce the scale of adaptation that might be required.

In order to manage the risks of climate change, various approaches for adaptation come into consideration. Risk reduction strategies used in African countries to offset the impacts of natural hazards on individual households, communities, and the wider economy include early warning systems, emerging risk transfer schemes, social safety nets, disaster risk contingency funds and budgeting, livelihood diversification, and migration. Various adaptation approaches can be overlapping and are often pursued simultaneously. Most national governments in Africa are initiating governance systems for adaptation. Efforts to reduce vulnerability include disaster risk management, adjustments in technologies and infrastructure, ecosystem-based approaches, basic public health measures, or livelihood diversification.

Building more resilient societies is another means to cope with the challenges associated with climate change. Climate change, along with land-use change, degradation of ecosystems, poverty and inequality is one of the stressors that impinge on resilience. Climate resilient pathways have to be identified by decision-makers that lead to a more resilient world, *inter alia* through adaptive learning, increasing scientific knowledge, effective adaptation and mitigation measures, and other choices that reduce risks.

⁴⁵

See Niang / Ruppel (2014:1237).

5 Concluding Remarks

Changes in Africa's climate have been observed during the past decades and impacts are occurring across a variety of sectors such as ecosystems, human health, livelihoods and food security. Climate change will generate new risks and amplify existing risks for society and the environment. Africa must prepare for future changes in climate as even under low-emission scenarios, warming will continue at least until around the middle of this century. The impacts of climate change can be reduced through adaptation actions moderating the harm of climate risks and exploring new opportunities. Risk management must be in the focus of decision-making in order to cope with the impacts and risks related to climate change. On the positive side it should be noted that the experience of adaptation measures on the African continent is growing as governments are increasingly developing National Adaptation Plans of Action and other national adaptation policies. Furthermore, opportunities for low-carbon, climate-resilient development are increasingly being explored and realised.

Africa is most vulnerable to climate change due to the existence and interaction of multiple stresses – endemic poverty, complex governance and institutional dimensions, limited access to capital, markets, infrastructure and technology, ecosystem degradation, complex disasters and conflicts and low adaptive capacity. Yet, as a global problem, climate change calls for multilateral solutions as opposed to unilateral approaches, in particular if these are confrontational. Differentiation through emissions targets and additional multilateral obligations under policies and other measures in the climate sector is key to addressing leakage and competitiveness concerns. A scientific consensus is emerging that a substantial reduction in greenhouse gas emissions will be required to prevent an extreme increase in average temperature. It is also acknowledged that a business-as-usual scenario would have disastrous consequences for future generations. Although the on-going international negotiations around climate change-related initiatives centre largely on which countries will reduce their emissions, consensus is emerging that it is primarily the responsibility of developed countries to reduce their greenhouse gas emissions first, while – in line with the principle of common but differentiated responsibility – developing countries make specific policy commitments.

At the same time, it is clear that required global emissions reductions cannot be achieved in developed countries alone. Developing countries will have to reduce emissions as well, especially China and India. As a consequence, developed and developing countries will have to transform themselves into low-carbon economies over the long run. This will require efforts at various levels, including substantial changes in lifestyle, in particular in industrialised countries. Equally important is major investment in low carbon technology and modern technology transfer to and capacity building in Africa.⁴⁶ Robust scientific knowledge about climate change plays an overarching role. By means of effectively and objectively assessing such scientific knowledge and prevailing uncertainty, the IPCC can provide the world with the best possible and much-needed evidence of climate change-related impacts.

⁴⁶

Ohlendorf / Gerstetter (2009).

II. INTERNATIONAL CLIMATE CHANGE POLICY: WHERE DO WE STAND?

Nadia von Bassewitz

1 Introduction

The article begins with a description of the major legal instruments of international climate change policy in the first section, followed by an analysis of the developments leading up to the failed COP 2010 in Denmark in the second section and beyond until the COP 2014 in Lima in the third section, before undertaking a forecast for the up-coming COP 2015 in France in the fourth section, outlining possible elements for a new international climate deal. The last section we investigate which policy instruments individual countries use to address global warming especially in terms of mitigation and funding. For this exercise we will assess three countries which together account for more than 65% of global GHG emissions, two of which are developed countries namely the EU, which is a Kyoto Annex I party (and third largest emitter); and the US, which has never ratified Kyoto (and the second largest emitter) and one developing country, a member of the BASIC group, namely China, as a Non-Annex I party (and the highest current emitter of GHGs).

2 Key Legal Framework Documents

From its inception, international climate change policy and legislation was firmly rooted in the United Nations (UN) system. During the mid- to late 1980s, for the first time ever, research was able to demonstrate that man-made global warming was indeed happening.

Against this background, the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) set up an Intergovernmental Panel on Climate Change (IPCC) in 1988 to gather the scientific evidence for (or against) human-induced global warming.

The IPCC's first Assessment Report, which appeared in 1990, indicates for the first time that global warming was a reality, triggering worldwide concern:

- This first report outlined that, for a thousand years prior to the industrial revolution, the concentration of greenhouse gas (GHG) emissions was relatively constant and that however since the beginning of the industrialisation in the 18th century the concentration of several GHG, in particular CO₂, methane, N₂O and CFCs, have been increasing primarily due to human activities.¹
- As a consequence of the enhanced GHG effect, the earth's atmosphere is warming up. The report warns that in a Business-as-Usual scenario future human-made emissions will result in a likely increase in global average temperature of about 1°C above the present value, i.e. about 2°C above that in the pre-industrial period by 2025 and 3°C above today's, ie. about 4°C above pre-industrial before the end of the 21st century.²

2.1 United Nations Framework Convention on Climate Change, 1992

Based on the findings of the 1990 IPCC Assessment Report, the UN Framework Convention on Climate Change (UNFCCC) was signed during the Rio Earth Summit in June 1992, and

¹ OECD (2006:15-16).

² Ibid:22.

entered into force on 21 March 1994. The major accomplishment of the UNFCCC was that it recognised, for the first time, that there was indeed a man-made problem of climate change at a moment when there was still considerable doubt regarding the causes of global warming, its extent and impact.³

The ultimate objective of the UNFCCC is to stabilise greenhouse gas (GHG) concentrations “at a level that would prevent dangerous anthropogenic interference with the climate”.⁴ According to the UNFCCC, this level should be reached within a time frame which allows ecosystems to adapt naturally to global warming, while making sure that food production is not at risk and that development occurs in a sustainable manner.

The UNFCCC is a framework document which introduces two main policy approaches which are intrinsically linked in order to address global warming, namely mitigation and adaptation:

- *Climate mitigation* refers to any action taken to eliminate or decrease the long-term impact of global warming on human life or property.⁵ According to the UNFCCC Glossary, mitigation is understood as “human intervention to decrease the sources of GHG or enhance their reabsorption”.⁶
- *Climate adaptation* involves initiatives or measures to reduce the vulnerability of individuals, groups and natural systems to the negative effects of climate change.⁷ According to the UNFCCC Glossary, the term involves the adaption of natural or human systems in response to climatic stimuli or their impact, which moderates damages or exploits beneficial opportunities.⁸

Any country can become a party to the UNFCCC,⁹ thus making it a global instrument. At the same time, the UNFCCC notes that –

- the largest share of accumulated GHG emissions has originated in developed countries, as opposed to developing countries, and
- per capita GHG emissions in developed countries are much higher than in developing countries.

As a consequence, the UNFCCC introduces the principle of “common but differentiated responsibilities and respective capabilities” (CBDR principle) for its member states.¹⁰ The CBDR principle has its foundation in the equity principles of international law and includes two elements: while all states together have a common responsibility for the protection of the environment, there are nonetheless differences between the states in terms of their historical contribution to global warming and their ability to fight it, which is why states need to bear

³ Bothe (2003:240).

⁴ UNFCCC (2012a:1).

⁵ UNFCCC (2009a).

⁶ UNFCCC (2012b).

⁷ UNFCCC (2009b).

⁸ UNFCCC (2012b).

⁹ Article 22.1 UNFCCC.

¹⁰ Article 3.1 UNFCCC.

different responsibilities.¹¹ In light of this, the UNFCCC foresees asymmetrical obligations for its members and places the heaviest burden on the wealthier industrialised states.¹²

In line with the CBDR principle, the UNFCCC divides Parties as follows:

- *Annex I parties* include the 41 industrialised countries, covering members of the Organisation for Economic Co-operation and Development (OECD) in 1990 and the former Soviet Bloc (so-called economies in transition),¹³ and
- *Non-Annex I parties*, which are mostly developing countries.

However, it is important to understand that the CBDR principle is not deemed absolute under the UNFCCC and that the UNFCCC provides, to a certain degree, for a transition from the Non-Annex I group to the Annex I group.

Based on the CBDR principle, the UNFCCC imposes voluntary mitigation targets for Annex I parties, according to which they were supposed to reduce their GHG emissions to 1990 levels by the year 2000. As economic development is vital for the world's poorest countries, the UNFCCC accepts that GHG emissions originating in those countries would grow in the near future, as a result of which Non-Annex I parties were not subject to mitigation targets. The UNFCCC aims at helping the developing countries limit emissions in ways that will not restrict their development.

The UNFCCC obliges OECD members (the Annex II parties) to support developing countries in the elaboration of national adaptation plans.¹⁴ Moreover, industrialised members agreed to share adaptive know-how and technology to offer urgently needed capacity-building for Non-Annex I parties.¹⁵

2.2 The Kyoto Protocol, 1997

The publication of the Second IPCC Assessment Report in 1995 showed that the measures taken up to that point under the UNFCCC to fight global warming were insufficient. As a consequence, on 11 December 1997, the UNFCCC Parties signed the Kyoto Protocol to the UNFCCC,¹⁶ which came into operation on 16 February 2005. At that time, more than 55 countries had ratified Kyoto, accounting for more than 55% of global carbon dioxide emission in 1990. This included all OECD countries but the United States of America (USA/US): the biggest emitter in 1990, the US signed but has never ratified the Protocol. As at the time of writing, 190 countries and the European Union (EU) have ratified Kyoto, while Canada withdrew in December 2011.

In brief, the Protocol operationalises the UNFCCC:¹⁷

It shares the objectives, instruments and the institutions of the UNFCCC. Even more importantly, Kyoto replicates the CBDR doctrine formulated in the UNFCCC. However, as opposed to the UNFCCC, Kyoto excludes a transition from the Non-Annex I category to the

¹¹ CISDL (2002:1-2).

¹² Boisson de Chazourne (2008:2).

¹³ There is a sub-category of so-called Annex II parties, which consist of the OECD members of Annex I but not the economies in transition. Only these Annex II states parties are obliged to make funding available for Non-Annex I parties.

¹⁴ Article 4.3 UNFCCC.

¹⁵ Boisson de Chazourne (2008:4).

¹⁶ Hereinafter also 'Kyoto' or 'the Protocol'.

¹⁷ UNFCCC (2012d).

Annex I category, hence introducing a so-called firewall between these two groups of countries.

The major distinction between the UNFCCC and Kyoto is that, for the first time ever, a UN instrument imposes legally binding mitigation targets as opposed to the non-binding goals under the UNFCCC. In line with the CBDR principle, only Annex I parties take on binding mitigation objectives, while the Non-Annex I parties are expected to carry out voluntary mitigation actions.

2.2.1 Mitigation

Kyoto introduces binding quantified emission reduction targets for the industrialised countries. Under the Protocol, 41 industrialised countries – including EITs and the EU – are obliged to reduce their GHG emissions by 5.2% compared with 1990 levels over the first commitment period from 2008 to 2012.¹⁸ The individual national targets include, from the 1990 base year, an 8% decrease for the EU,¹⁹ 6% each for Canada and Japan, no decrease for Russia, and an 8% increase for Australia.²⁰

The Kyoto Protocol allows for more flexibility as to how to meet binding GHG emission reduction targets by designing three innovative instruments. Under the Clean Development Mechanism (CDM), countries with Kyoto targets may implement an emission reduction project in developing countries, based on which they obtain certified emission reduction (CER) units, which count towards fulfilling their Kyoto obligations.²¹ A CDM project is obliged to confer measurable and verifiable emission reductions that are additional to what would otherwise have occurred without the CDM.²² Joint implementation is a mechanism similar to the CDM, but the emission reduction project has to be implemented in industrialised countries.²³ CDM and joint implementation are the first global investment tools of their kind, stimulating foreign investment and knowledge transfer in the host country, while offering industrialised countries flexible and cost-effective ways of meeting a part of their Kyoto obligations.²⁴ Emissions trading is based on the idea that the mitigation targets under Kyoto are formulated as levels of permitted GHG emissions over the 2008–2012 commitment period. As laid down in Article 17 of Kyoto, emissions trading permits countries with CER units to spare to trade such units with other countries that have exceeded their CER allowance.²⁵

Under Kyoto, Parties are obliged to monitor their GHG emissions and to keep a national register of trades carried out under Kyoto.²⁶ The UNFCCC Secretariat keeps an independent transaction log to verify that operations are consistent with the Kyoto Protocol. Furthermore, a compliance mechanism has been established to verify the implementation of the Protocol by its members.

¹⁸ Article 3.1 Kyoto Protocol.

¹⁹ This value includes reduction targets of 21% for Germany, 12.5% for the United Kingdom, and 0% for France, while Spain may increase its emissions by 15%.

²⁰ Cf. http://unfccc.int/kyoto_protocol/items/3145.php; accessed 8 October 2012.

²¹ Article 12 Kyoto Protocol.

²² Hepburn (2009:412).

²³ Article 6 Kyoto Protocol.

²⁴ UNFCCC (2012g).

²⁵ UNFCCC (2012f).

²⁶ UNFCCC (2012e).

2.2.2 Adaptation

Under the adaptation objective, the Kyoto Protocol, like the UNFCCC, is designed to support developing countries, especially LDCs and SIDSs, in adapting to the inevitable impacts of climate change and in facilitating the development of know-how and technologies that could help increase resilience to climate change impacts.²⁷ A range of funds has been created through the UNFCCC, which are managed by the Global Environment Facility.

3 Developments up until Copenhagen, Denmark 2009

3.1 Taking Stock of the Kyoto Protocol

When evaluating Kyoto, we have to recall the logic behind the agreement. Kyoto was always deemed an initial step towards a low-carbon future,²⁸ introducing humble reduction targets of 5% for industrialised countries over a short period of five years only, until 2012. After 2012, Kyoto was to be followed by a chain of other agreements to impose ever wider and deeper reductions for Annex I parties. Developing countries were expected to follow suit in time, so that at last, all countries would have binding GHG emission reduction goals.

In defence of Kyoto, it must be said that the problem of global warming does not easily lend itself to a binding international agreement. To name but a few issues, the allocation of responsibility for the existing level of GHGs is complex; the measurement of emissions is at best weak; GHG emissions per capita are low in those nations most rapidly increasing their overall emissions; and the impact of global warming varies between countries.²⁹ Additionally, the complexity of global warming is increasing all the time and is having a severe impact on international negotiations,³⁰ which is why each negotiation round becomes more demanding.

However, the results of Kyoto are mixed, to say the least. Economists agree that the Protocol imposes relatively high costs and generates negligible benefits, while failing to provide a real solution.³¹ Additionally, most climate researchers warn that the Protocol has failed to decrease GHG emissions to the extent necessary.³² Progress towards the mitigation targets under Kyoto has also not been satisfying. According to the Netherlands Environmental Assessment Agency (NEAA), industrialised countries will, as a group, probably meet the GHG emission reduction goals imposed under Kyoto.³³ When extrapolating the trend of the years 2000-2007 to the period 2008-2012, NEAA forecasts an average emission reduction of almost 16% for this group of countries in the first Kyoto commitment period.³⁴ However, the NEAA also indicates that the expected decrease of 16% is mainly attributable to large GHG emission reductions of about 40% in Germany and the EITs after the fall of the Berlin Wall.³⁵ The World Bank reports that there are significant differences in performance across individual countries.³⁶ If

²⁷ The IPCC defines ‘resilience’ as the ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organisation, and the capacity to adapt to stress and change.

²⁸ UNFCCC (2012e).

²⁹ Helm (2009b:19).

³⁰ Depledge / Yamin (2009:446).

³¹ Olmstead / Stavins (2006:1).

³² Helm (2009b:16).

³³ NEAA (2012).

³⁴ Ibid.

³⁵ Ibid.

³⁶ World Bank (2008:6).

one looks at the individual state level, the compliance gap for many of them is quite noteworthy.³⁷

Various factors have contributed to this underachievement. Some are linked to the Kyoto Protocol itself, others go beyond the scope of Kyoto, as follows:

An important deficiency of the Kyoto regime itself is the lack of broad participation, i.e. the number of countries willing to take real action via obligatory mitigation objectives has always been quite small.³⁸ The world's largest GHG emitter at the time, the US, has never ratified Kyoto. Canada, an Annex 1 state party, left Kyoto in December 2011. Moreover, the largest increase in GHG emissions today originates from six newly industrialised countries (NICs), i.e. including the BASIC group made up of Brazil, China, India and South Africa, as well as Indonesia and Mexico. These six countries ratified Kyoto as Non-Annex I parties. As a consequence, nowadays, Kyoto addresses only 14% of GHG emissions in the world.³⁹

Another great – if not the greatest – weakness of Kyoto is its inflexible partition of countries into two groups in line with the CBDR dogma, building the so-called firewall between Annex I and Non-Annex I members, which has reinforced the existing ideological North-South divide.⁴⁰ Kyoto has no graduation process by which to verify whether some of the NICs such as the BASIC group are ready to join the Annex 1 group.⁴¹ This split between richer and poorer nations under Kyoto is clearly outdated and inaccurate, with 50 Non-Annex I countries now having a larger per capita income than some of the Annex I countries.⁴² But, more importantly, the partition means that today's biggest GHG emitter, China, remains unconstrained in its emissions output, implying that half of all worldwide emissions will in the near future be generated in a country without binding mitigation targets.⁴³

Another important shortcoming of Kyoto relates to the lack of compliance incentives and enforcement mechanisms to deter non-participation and non-compliance.⁴⁴ The UNFCCC, like Kyoto, includes rules for monitoring compliance, in particular for the GHG emission reduction targets of Annex I countries. But monitoring is still inadequate, both in terms of linking it to effective implementation and including issues of importance for developing countries.⁴⁵

In light of the above, it was recognised as early as 2005 that Kyoto on its own was insufficient to fight global warming and, beginning with the 2005 COP in Montreal, the international community launched a discussion about the way forward.

3.2 COP12, Montreal, Canada, 2005

The 2005 COP in Montreal adopted a set of decisions which laid the foundation for an innovative dual-track climate negotiation process:⁴⁶

The first track, the so-called Kyoto track, is about negotiating obligatory emission reduction targets for Annex I parties for a second commitment period (CP2) of Kyoto beyond 2012. This negotiation path is only open for Annex I parties. The negotiation track is supervised by the Ad

³⁷ Barrett (2009:62).

³⁸ Ibid:61.

³⁹ Gao (2007:7).

⁴⁰ Gosh / Woods (2009:454).

⁴¹ Depledge / Yamin (2009:443).

⁴² Olmstead / Stavins (2010:2).

⁴³ Ibid.

⁴⁴ Barrett (2009:63); Aldy / Stavins (2009:8).

⁴⁵ Gosh / Woods (2009:463).

⁴⁶ UNFCCC (2005).

Hoc Working Group on Further Commitments for Annex I parties under the Kyoto Protocol (AWG-KP).

The second track, the so-called UNFCCC track, involves the negotiation of emission reduction goals for industrialised countries that have not ratified Kyoto, i.e. first and foremost the US. This track also covers negotiations for nationally appropriate mitigation actions (NAMAs) to be undertaken by developing countries. This track is open to all UNFCCC Parties. The negotiation path is overseen by the Ad Hoc Working Group for Long-term Cooperative Action under the UNFCCC (AWG-LCA).

3.3 COP13, Nusa Dua, Bali, Indonesia, 2007

In 2007 the IPCC's Fourth Assessment Report substantially increased the pressure on the international community to urgently address global warming.

3.3.1 Outcome

The COP13 in Bali in 2007 decided to uphold the dual negotiations path under both the UNFCCC and Kyoto, with the expectation that the two tracks should be unified in Copenhagen in 2009.

The COP adopted the Bali Road Map, which is an overarching term to include all the decisions made in Bali, identifying the challenges under the two negotiation streams.⁴⁷ The main objective of the Road Map was to achieve a legally binding, inclusive climate agreement in Denmark 2009, which was to replace Kyoto after 2012 and would ideally include all major GHG emitters.

The Bali Road Map includes the Bali Action Plan (BAP) which lays down the mandate of the AWG-LCA to supervise the UNFCCC negotiation track.⁴⁸ The BAP is built on five pillars, i.e. a shared long-term vision as well as enhanced action on mitigation, adaptation, technology and funding, which has determined the agenda of any COP ever since. Some of the BAP's highlights are as follows:

- The BAP calls for a “shared vision of long-term action” on global warming recognises the need for an overall long-term mitigation objective beyond 2012.⁴⁹
- As to the mitigation pillar, the BAP urges that national mitigation commitments/actions by all states have to be “measureable, reportable and verifiable” (MRV).⁵⁰ For the first time, developing countries pronounced their willingness to consider taking national appropriate mitigation action, hence softening the rigid CBDR viewpoint they had held before.⁵¹
- Vis-à-vis the adaptation pillar, the BAP recognises the need for enhanced international cooperation to support urgent implementation of adaptation measures, taking into account the immediate needs of vulnerable developing countries.⁵²

⁴⁷ CCES (2007c:2).

⁴⁸ UNFCCC (2012i).

⁴⁹ Initial proposals for the BAP supported by the EU foresaw that developed countries would have to reduce GHG emissions by 25-40% below 1990 levels by 2020. Due to strong opposition from the US, but also Canada and Japan, the final decision only asks for “deep cuts in global emission”. See also TWN (2007).

⁵⁰ BAP, clause 1(b)(i) and (ii).

⁵¹ UN-NGLS (2008:2).

⁵² BAP, clause 1(c)(i).

For the first time, the COP managed to put deforestation on the international climate agenda, which accounts for 20% of all GHG emissions. The Parties agreed to study the issue, especially on how to measure GHG emissions from deforestation with a view to launch a UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD) initiative.

3.3.2 Assessment

When the COP13 in Bali was evaluated, its outcomes were considered a leap forward in many respects. The BAP was notable in being the first international climate decision after Kyoto which the US joined, despite vigorous earlier opposition. This gave hope that the US could be re-engaged in the post-2012 climate negotiations.

Yet, many vital issues remained open in Bali:⁵³

- The AWG-LCA of the UNFCCC track did not succeed in determining what kind of procedure – i.e. formal negotiations, informal dialogues, or both – would be adopted in the working group. The objectives to be achieved under the BAP are not quantified, especially with respect to (i) the long-term mitigation objective under the UNFCCC, and (ii) the funding by industrial countries of the adaptation and mitigation efforts by developing countries.
- Even more significantly, COP13 was unable to reach an understanding on a question which has dominated the international climate negotiations since then, i.e. the terms of a post-Kyoto climate agreement after the expiry of the first commitment period in 2012.

3.4 COP15, Copenhagen, Denmark, 2009

The COP15 in Denmark in 2009 was meant to finalise two years of intense negotiations which had been launched with the 2007 Bali Road Map and, more importantly, consolidate the two negotiation tracks under the UNFCCC and Kyoto.

3.4.1 Outcome

With the negotiations on the verge of collapsing, all the COP15 managed to deliver was the informal Copenhagen Accord,⁵⁴ a three-page document with two empty annexes addressing the following:

- Under the UNFCCC negotiation track, the Accord recognises the scientific view as outlined in the IPCC's Fourth Assessment Report that global warming has to be limited to 2°C in order to prevent the most damaging impacts.⁵⁵ Copenhagen introduced a new instrument in the form of “national pledges”, which every UNFCCC member had to submit by the end of January 2010.⁵⁶ The Accord is labelled a *portfolio of national commitments*, under which each state commits and enrols to observe its domestic GHG mitigation targets, whether those are in the form of laws, regulations or multi-year action plans.⁵⁷

⁵³

UN-NGLS (2008:3).

⁵⁴

Hereinafter ‘Copenhagen’ or ‘Accord’.

⁵⁵

Egenhofer / Giorgiev (2009:3).

⁵⁶

Ibid.

⁵⁷

Stavins / Stowe (2010:2).

- The Accord also highlights the need for scaled-up and predictable funding to developing countries. It called for US\$30 billion over a three-year period from 2010 to 2012, to be split equally between mitigation and adaption, and identified a “goal” of US\$100 billion per year as from 2020.⁵⁸
- Copenhagen endorsed the maintenance of the two negotiating tracks by prolonging the Kyoto as well as the AWG-LCA. While some Parties had hoped these negotiating forums could be used to operationalise the new Accord, no formal link between the working groups and the Accord was established.

3.4.2 Assessment

Initially, most observers showed profound frustration, because for them the three-page Copenhagen Accord represented all that was wrong with international climate negotiations.⁵⁹

It was felt that the COP had covered no ground whatsoever towards a binding post-2012 climate agreement, as neither of the two working groups, i.e. the AWG-KP and AWG-LCA, had been able to reach a formal decision. Instead, the Copenhagen Accord is a non-binding informal decision, which was not even supported by all UNFCCC members. Due to opposition by a handful of states at the 11th hour, the COP only “took note” of the decision.⁶⁰

The Accord does not impose a long-term binding mitigation goal on all industrialised countries; nor does it foresee mitigation commitments for the NICs. Instead, the Accord introduces an “open enrolment” framework under which states can register their voluntary domestic mitigation pledges.⁶¹ From the onset, experts have been wary about the quality of the voluntary mitigation pledges. Indeed, today, experts are unanimously of the view that the pledges do not suffice to keep global warming at 2°C below pre-industrial level; instead, the pledges would reflect a target of approximately 3°C.⁶² Highlighting the gap between the pledged and the necessary GHG emission reductions (the so-called ambition gap), experts since have called for increased reduction targets. Moreover, most of the pledges that are deemed insufficient are listed with conditions.⁶³

What is more, like no other COP before it, Copenhagen revealed the dividing lines on the terms of a post-2020 climate agreement:

- While the developing world insists that the CBDR principle be continued as formulated in Kyoto, i.e. excluding mitigation targets – be they voluntary or otherwise – for developing countries,⁶⁴ industrial countries argue that the CBDR principle needs to be revised, given that emissions levels are increasing quickly in some developing countries.⁶⁵
- Annex I parties are unwilling to go any further without noteworthy commitments from the US and the large developing countries.⁶⁶ They want Kyoto replaced by a new binding agreement, ideally covering all large GHG emitters, including the US and

⁵⁸ Egenhofer / Giorgiev (2009:2).

⁵⁹ Falkner *et al.* (2010:252).

⁶⁰ Anderson (2009:2).

⁶¹ Cao (2010:3).

⁶² UBA (2010:5).

⁶³ Diringer (2010a:1).

⁶⁴ Sterk *et al.* (2011a:4).

⁶⁵ Ibid.

⁶⁶ Sterk *et al.* (2011b:5).

China. For its part, the US indicated that any new climate agreement should be very different from the obligatory top-down Kyoto model and called for a voluntary bottom-up model instead, including all large GHG emitters.⁶⁷ On the other hand, the Group of 77/China insist on the extension of Kyoto in its present form, together with a separate agreement under the AWG-LCA.⁶⁸

However, observers soon realised that, with the Copenhagen Accord, a total breakdown of the climate negotiations had been prevented.⁶⁹ By the end of 2010, the Accord had become the first-ever vehicle to include explicit, albeit not unconditional, mitigation pledges from all the world's major economies, including China, India and other large developing states.⁷⁰

Experts now believe that the Accord is a compromise of what was realistically possible, given the political impasse.⁷¹ Other observers go as far as implying that Denmark could have seen the emergence of a new climate architecture – moving away from the top-down model of Kyoto with its internationally agreed obligatory emission limits and designated instruments, towards a bottom-up model relying on voluntary national pledges and using flexible instruments.⁷²

4 Developments Beyond Copenhagen 2009 until Lima 2014

4.1 Taking Stock of the Copenhagen Accord

Undoubtedly, the weak outcome in Denmark raised important questions about the future of the international climate negotiations.

The first question was how to incorporate Copenhagen, which is an informal political decision reached outside the UNFCCC process, into the UN legal framework.⁷³ After Copenhagen, three possible scenarios were discussed:

- Using Copenhagen as an alternative negotiation path – a route favoured by the US
- Ignoring Copenhagen and moving on with the UNFCCC/Kyoto tracks only, and
- Integrating successful elements of Copenhagen into the UNFCCC/Kyoto tracks, which was the EU view.⁷⁴ For most observers, this third option appeared to be the most realistic for COP18 in Cancun, Mexico, in 2010.

An even more important question concerned the form of a post-2012 climate treaty and how best to reach it. In view of the weak COP outcome in Copenhagen, quite a few observers argued that the EU's "global climate deal" strategy⁷⁵ was obsolete, and that a new approach to formulating a climate treaty was necessary.⁷⁶

67 Ibid:6.

68 Sterk *et al.* (2012:5).

69 Falkner *et al.* (2011:252).

70 Ibid:253.

71 Ibid.

72 Egenhofer / Giorgiev (2009:3).

73 Diringer (2010b:2).

74 Ibid.

75 A 'global climate deal strategy' entails deriving a package deal with legally binding quantified targets on all the key issues – mitigation, adaptation and funding – and is universal in its application; see Falkner *et al.*

Indeed, Denmark had exposed major hurdles on the way to a new legally binding global climate agreement:⁷⁷

Of the major GHG emitters that account for two thirds of carbon dioxide emissions (China, the EU, India, Russia and the US), only the EU unequivocally supports the idea of a new global legally binding treaty. The EU was, however, unable to exercise leadership at Copenhagen, and instead, the negotiations were overshadowed by the political impasse between the US and China: Washington made its ratification of a new binding treaty contingent on obligatory GHG emission reduction goals for key developing countries, such as those of the BASIC group. On the other hand, China remained opposed to any kind of binding objectives unless the US took the initiative in limiting its GHG emissions.⁷⁸

Experts have, before and after Copenhagen, investigated various other options for a post-2012 climate treaty. There is unfortunately only room to discuss three pertinent aspects here:⁷⁹

Top-down v bottom-up model: The EU and developing countries, particularly LDCs and SIDSs, insist that a top-down model à la Kyoto, with internationally agreed obligatory emission reduction goals, is the only way to meet the long-term 2°C objective under the UNFCCC. In contrast, the US and others are of the view that a bottom-up approach of the UNFCCC or the Copenhagen with voluntary pledges is likely to be more effective, as countries will submit only what they can actually realise. A growing number of observers postulate that what is really needed is something in-between: an international legal instrument that is flexible enough to guarantee wide participation, and binding enough so that Parties can be reasonably confident that others will fulfil their obligations.⁸⁰ Although dispensing with the idea of a legally binding climate deal, this option maintains the need for a strong international climate framework by embedding national pledges in a wider international regime.⁸¹

All-inclusive treaty v issue specific agreements: Instead of waiting for a comprehensive post-2012 climate deal, which includes all pillars of the Bali Road Map, many observers today suggest a fragmentation of the climate negotiations.⁸² They want to disaggregate the key issues into components that can be developed in a more flexible way through parallel agreements using various sets of instruments, institutions and methods which are only integrated and linked over time.⁸³ They favour negotiating (i) issue-specific agreements or (ii) agreements which target specific industries or specific policies, or (iii) agreements involving only a few like-minded countries.⁸⁴ Specifically, considering the logjam between the US and China, there is a growing number of experts who recommend that a ‘coalition of the willing’ including the EU, Japan and Russia and progressive developing countries such as Indonesia, Korea and Mexico should continue with Kyoto beyond 2012.⁸⁵

(2010:256). This strategy was first used when the 1985 Vienna Convention on Ozone Layer Protection was negotiated, and it dominated international climate-related policy until Kyoto.

⁷⁶ Falkner *et al.* (2010:256).

⁷⁷ Bodansky *et al.* (2010:3).

⁷⁸ Barriaux (2010).

⁷⁹ For an overview, see Kuik *et al.* (2008).

⁸⁰ Diringer (2010b:1).

⁸¹ Falkner *et al.* (2010:259).

⁸² Falkner (2011:258); Bodansky / Day O’Connor (2011:10).

⁸³ Bodansky *et al.* (2010:10).

⁸⁴ Kuik *et al.* (2008:327).

⁸⁵ Falkner *et al.* (2010:259).

UN negotiation framework: The last major question that needed to be looked at after Denmark involved the obvious weaknesses of the UN negotiation framework. Observers agreed that there was an urgent need for more effective decision-making rules, which simultaneously guaranteed participation and inclusiveness.⁸⁶ After Copenhagen, various options were discussed. Under the first main option, negotiations would continue under the UN umbrella, but the decision-making procedure would be overhauled by (i) introducing majority rule, or (ii) keeping voting rules as they were, but using more exclusive negotiation groups.⁸⁷ Other experts looked beyond the UN as a negotiation platform and suggested using other forums.⁸⁸ Alternatives included specialist institutions, i.e. the International Maritime Organization, the International Civil Aviation Organization or other broader international institutions, like the G8, the G20,⁸⁹ or the Major Economies Forum on Energy and Climate.⁹⁰

4.2 COP16, Cancun, Mexico, 2010

4.2.1 Outcome

The Cancun Agreements did extremely well to integrate the key elements of the Copenhagen Accord into the UNFCCC.

Cancun includes, for the first time in an official UN document, the objective to limit the temperature increase below 2°C. Unlike the year before, in Cancun the Parties formally agreed to the goal instead of only taking note of it.

By incorporating the mitigation targets and actions pledged under Copenhagen into the UNFCCC, the new agreements set GHG emission reduction goals for some 80 countries.⁹¹ As a consequence, for the first time, all the large GHG emitters – including Brazil, China, the EU, India and the US – have signed up under the UNFCCC for targets and actions to reduce GHG emissions by 2020.⁹²

Under the UNFCCC track, the COP inaugurated the Cancun Adaptation Framework in order to improve adaptation efforts and instituted an Adaptation Committee to provide technical support to LDCs on adaptation-related matters.⁹³ While the emphasis of Kyoto was on mitigation, Cancun put adaptation firmly on the table in line with the IPCC's Fourth Assessment Report. The funding goals set in the Copenhagen Accord were reiterated.⁹⁴ A Green Climate Fund was established and designated as an operating entity of the financial mechanisms of the UNFCCC, and will be operated under the guidance of the COP with the World Bank as its interim trustee.⁹⁵

⁸⁶ UBA (2010:28).

⁸⁷ Falkner *et al.* (2010:258).

⁸⁸ Bodansky / Day O'Connor (2011:3-10).

⁸⁹ Group of 20 major economies.

⁹⁰ Bodansky *et al.* (2010:19).

⁹¹ Stavins (2010:1).

⁹² CCES (2010b:1).

⁹³ Ibid:3.

⁹⁴ Copenhagen foresaw the joint commitment by developed countries to provide US\$30 billion in start-up finance for developing countries in 2010-2012, and their willingness to try to mobilise US\$100 billion a year as from 2020.

⁹⁵ UNFCCC (2012i).

On the Kyoto track, while the decision about extending Kyoto beyond 2012 was once again referred to the next COP, progress was made on other issues,⁹⁶ such as the agreement to use 1990 as a base year and to continue emissions trading and other market-based instruments inaugurated by Kyoto.

4.2.2 Assessment

Despite very gloomy predictions ahead of the Cancun COP, the participants achieved unprecedented consensus on a range of issues going forward.

Observers suggest that much of the progress reached could be linked to a somewhat changed negotiation approach. Importantly, Cancun knocked a hole in the firewall between Annex I and Non-Annex I parties – a key step in overcoming the rich-poor gulf which has hobbled climate negotiations for many years.⁹⁷ The Cancun Agreements formulate two principles on which all countries are⁹⁸ (i) obliged to recognise their historic GHG emissions, i.e. the industrialised world, and (ii) liable for their future GHG emissions, i.e. the industrialised and the larger developing countries.

Moreover, the Parties seem to have recognised, at least implicitly, that moving forward in incremental steps is going to be more effective than holding out for an all-inclusive global climate deal.⁹⁹

Similarly, after the hostile recriminations between the US and China which deadlocked the COP in Copenhagen, these countries adopted a more productive tone in Mexico, with India as a key broker.¹⁰⁰

4.3 COP17, Durban, South Africa, 2011

4.3.1 Outcome

In spite of the doom and gloom at COP17's opening, the Parties adopted the Durban Agreements on a range of issues that may lead to a historic breakthrough in international climate negotiations. What was sure was that COP17 kept the discussion of global climate efforts from breaking down and instead moved it in the right direction.¹⁰¹

Thirty hours after the scheduled end of the Durban COP, on the Kyoto track, the Parties agreed to a prolongation of Kyoto beginning in 2013. However, the details of the new reduction targets including the length of the new commitment period would be established at COP18. The BASIC group (and other NICs) remained Non-Annex I parties without binding targets.¹⁰² Parties to the second commitment period of Kyoto would have to submit their quantified reduction targets by May 2012. However, Canada, Japan and Russia indicated that they would not participate in Kyoto 2.¹⁰³

The extension of Kyoto beyond 2012 was combined with the launch of new road map for the negotiation of a post-2020 climate agreement by way of “a protocol, another legal instrument

⁹⁶ CCES (2010b:6).

⁹⁷ Stavins (2011a:1).

⁹⁸ Stavins (2010:3).

⁹⁹ Ibid:2.

¹⁰⁰ CCES (2010b:1).

¹⁰¹ Diringer (2011b:1).

¹⁰² Boyle (2011:4).

¹⁰³ Ibid.

or an outcome with legal force".¹⁰⁴ Negotiations are supervised by a newly formed Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), and are to finish no later than 2015.¹⁰⁵ The new climate deal is to come into effect only from 2020 onwards. Negotiations within the AWG-LCA stream were to continue for at least another year, until the COP in Doha.¹⁰⁶

On the UNFCCC track, the COP took various significant steps to further the implementation of the Cancun Agreements:

A major outcome was the operationalisation of the Green Climate Fund to serve as a key vehicle for climate funding.¹⁰⁷ For years, funding has been an issue of ongoing conflict between developing countries and their more industrialised counterparts. Though the UNFCCC includes funding mechanisms, it has a very weak role, and sums pledged to the three financing tools – the Least Developed Countries Fund, the Special Climate Change Fund, and the Adaptation Fund – are notoriously low.¹⁰⁸ However, while Parties were able to decide on the institutional structure of the Green Climate Fund, the decision does not indicate where the money for the Fund will actually come from beyond 2012.¹⁰⁹

Importantly, in order to further improve monitoring under the UNFCCC, Durban's COP17 introduced –¹¹⁰ (i) a voluntary international assessment and review mechanism for developed countries, and (ii) a non-binding international consultation instrument for developing countries. Finally, Parties agreed on various other operational actions including, for example, –¹¹¹ (i) the upcoming inauguration of the new technology instrument in 2012, and (ii) funding and technical aspects of the REDD+ initiative.

4.3.2 Assessment

Observers believe that Durban kept the international climate negotiations intact and moving in the right direction, thus increasing the likelihood of meaningful long-term climate action.¹¹² South Africa reopened the door to legally binding GHG reduction targets for all major emitters – a door which seemed to have been closed after Denmark.¹¹³ For China, India and the US to even consider an inclusive and robust legal agreement beyond 2012 was certainly an important move.¹¹⁴

Durban was a step forward in more than one respect:

The key importance of the innovative ADP was not so much that a further negotiation stream had been launched: it would have been sufficient to prolong the UNFCCC track beyond 2012. It was more that, for the first time, Durban offered Parties the option of a more symmetrical future climate agreement.¹¹⁵ Thus, while the UNFCCC track is obliged to adhere to the CBDR

¹⁰⁴ CCES (2011:1).

¹⁰⁵ Sterk *et al.* (2011b:8).

¹⁰⁶ Boyle (2011:1).

¹⁰⁷ Ibid:7.

¹⁰⁸ Sterk *et al.* (2011b:23).

¹⁰⁹ Ibid:25.

¹¹⁰ CCES (2011:3).

¹¹¹ Boyle (2009:10-12).

¹¹² Diringer (2011b:1); Stavins (2011c:1).

¹¹³ Climatico (2011:1).

¹¹⁴ Boyle (2011:1).

¹¹⁵ Diringer (2011:1).

principle, the ADP does not necessarily have to do so.¹¹⁶ This is because the mandate to launch the Durban track does not include a reference to the CBDR principle of the UNFCCC or Kyoto, in spite of the insistence by Non-Annex I parties to do so.¹¹⁷

That Kyoto will live to see yet another day has been hailed as a major realpolitik victory for progressive countries, including the EU.¹¹⁸ Despite tough opposition, the EU managed to form a “green coalition” with the most vulnerable nations, LCDs and two of the BASICs (Brazil and South Africa) in order to obtain a road map for a new universal climate treaty.¹¹⁹ In doing so, the EU’s interventions were vital in avoiding another Copenhagen outcome, which, at times, was a very real possibility in Durban.¹²⁰ According to observers, had there been no agreement on a road map, the EU would not have agreed to commit to a Kyoto 2; this, in turn, would have led to developing countries blocking any headway to be made along the AWG-LCA stream, with potentially devastating consequences for the overall international climate negotiations.¹²¹

What is also significant is the fact that old alliances were crumbling. In the past, developing countries used to negotiate as one G77 bloc, but were often hijacked by the larger developing countries. In Durban, for example, the LDCs and SIDSs formed a coalition with the EU.¹²² Similarly, the BASIC group fractured in Durban: first South Africa and then, later, Brazil insisted on a road map for a new universal treaty, while China indicated its willingness to ponder adopting binding goals after 2020.¹²³

Yet again, observers raised various concerns.

For one, great ambiguity remains over the legal form of the post-2020 climate deal, particularly the binding nature of the emission targets. The Durban Platform does not indicate as to whether the new agreement should include legally binding mitigation targets. It can be expected that the US and others will continue to fight tooth and nail against having quantified binding goals in a 2020 agreement.¹²⁴

Observers also warned that the new emission reduction targets under a Kyoto 2 would be much weaker than the ones under the first commitment period of Kyoto (Kyoto 1) because, for many countries, they would consist of voluntary national pledges which are not linked to an overall emission reduction objective.¹²⁵ The large developing countries are still without binding targets, Russia and Japan will not participate in Kyoto 2, and Canada withdrew from Kyoto for good just after COP17 in Durban in 2011.

4.4 COP18, Doha, Qatar, 2012

4.4.1 Outcome

The Doha Climate Gateway successfully managed to end two long-standing negotiation streams, i.e. Kyoto and the UNFCCC track, and to progress to a unified track – the ADP – with the objective of an inclusive legal climate agreement by 2015.

¹¹⁶ Stavins (2011c:2).

¹¹⁷ Rajamani (2011:1).

¹¹⁸ Sterk *et al.* (2011b:4).

¹¹⁹ Ibid:31.

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² Ibid:33.

¹²³ Ibid.

¹²⁴ Sterk *et al.* (2011b:33).

¹²⁵ Boyle (2011:2).

First and foremost, the COP agreed on the revision of the Kyoto Protocol to formally establish Kyoto 2.¹²⁶ Having been launched in 2005, the AWG-KP thus terminated its work in Doha. Parties also decided that Kyoto 2 would run for eight years, i.e. from 2013 through 2020.¹²⁷ In addition, the extended Kyoto features an ambition trigger, requiring that Parties verify and increase their emission reduction targets by 2014 in line with the IPCC's Fourth Assessment Report.¹²⁸ In the face of strong Russian objections, as the main benefactor of hot air targets under Kyoto 1, Parties decided to restrict the use of the surplus emission allowance gained under Kyoto 1.¹²⁹ For Non-Kyoto 2 parties such as Canada, Japan, New Zealand and Russia, COP18 agreed to restrict their eligibility to market-based instruments, including the CDM and emissions trading.¹³⁰

Furthermore, the Parties agreed to terminate the Convention track under the AWG-LCA. As expected, the COP simply took note of the pledges already listed under Copenhagen, while launching a one-year work programme to verify those pledges.

A major outcome of the UNFCCC track was the agreement to look towards establishing some kind of ‘loss and damage’ mechanism in favour of the most vulnerable countries at COP19 in 2013.¹³¹ On the other hand, industrial countries refused any new funding commitment, and only agreed to maintain through 2015 the average finance levels provided during 2010-2012 – roughly US\$10 billion a year.¹³² At least a few European countries, i.e. Denmark, France, Germany, Sweden, and the UK, pledged to somewhat augment their funding post-2012.

Under the ADP track, China, India and other developing countries again tried to introduce the CBDR principle explicitly into the ADP framing, which the US and others had objected to include in the mandate.¹³³ The COP decided to establish a one-year work programme to think through the application of the UNFCCC principles.¹³⁴ The COP also stated that the ADP should consider “elements for a draft text” for the new agreement no later than COP20, “with a view to making available a negotiating text before May 2015”.¹³⁵

4.4.2 Assessment

Despite President Barack Obama’s re-election, the US was once again less than helpful in moving ahead, declining any proposal to increase their emission reduction targets or to commit to new funding.¹³⁶ The EU is similarly to blame for a lack of progress on this score, since the traditional frontrunner arrived at Doha with a reduction objective it had basically already met, with no joint funding commitment, and with divergent positions among the EU member states on various issues.¹³⁷ With the industrialised world unwilling to increase their targets or to

¹²⁶ Marcu (2012:1).

¹²⁷ CCES (2012:2).

¹²⁸ WRI (2012).

¹²⁹ CCES (2012:2).

¹³⁰ WRI (2012).

¹³¹ The Climate Group (2012a:20).

¹³² WRI (2012).

¹³³ CCES (2012:3).

¹³⁴ WRI (2012).

¹³⁵ CCES (2012:4).

¹³⁶ Sterk *et al.* (2012:39).

¹³⁷ The Climate Group (2012a:2).

improve on funding, there was no incentive for the likes of China or India to better their voluntary emission reduction goals.¹³⁸

Observers warn that the outcome of COP18 was even more modest than would have been necessary. Kyoto 2 will be a far cry from Kyoto 1 in terms to emission reductions: under the original Kyoto, all industrialised countries (39 at the time) – representing more than 55% of all global emissions – committed to reducing those emissions. With Canada having withdrawn from the treaty entirely, and Japan and Russia declining to sign up to Kyoto 2, this left the EU27, plus Australia (subject to conditions), Belarus, Iceland, Kazakhstan, New Zealand (possibly), Norway, and the Ukraine as members¹³⁹ – representing only 14% of global emissions. Also noteworthy is that, the 2020 target of the largest party (the EU) had almost already been met.¹⁴⁰ Moreover, the overall emission reduction to be achieved under Kyoto 2 will be approximately 18% by 2020 from 1990 levels and, hence, significantly less than the 25–40% range recommended by the IPCC.¹⁴¹ The net result is that Doha left the world firmly on track to 4°C or more of warming by 2100.¹⁴²

In terms of the UNFCCC track, mitigation ambitions remained low. As expected, funding proved to be the most difficult issue to resolve in Doha. There was no joint commitment by Annex I parties in terms of mid-term funding from 2013 to 2020. The relevant decision simply “urges”, “invites” and “encourages” Annex I parties to increase their funding, but when their “financial circumstance permit”.¹⁴³

Yet again, Doha also produced some positive results, as follows:

Its main objective was to streamline the complex, multi-track negotiating process. The achievement in reducing the overall negotiations down to one unique track from 2013 onwards should not be underestimated:¹⁴⁴ it allows Parties to concentrate on the discussions at hand, and frees up time and resources for Parties to the UNFCCC.¹⁴⁵ As for the level-of-ambition discussion, there remains hope. Workstream 2 under the ADP, which was instituted to increase pre-2020 ambitions of the Parties, and the review of the CP2 states parties’ targets envisaged between 2013 and 2015, provide the tools for jump-starting mitigation efforts.¹⁴⁶

The idea to prepare for setting up a kind of ‘loss and damage’ instrument at the COP19 in 2013 is a major achievement for LDCs, particularly for those most vulnerable to the long-term impacts of global warming.¹⁴⁷ Where mitigation and adaptation fail, people may suffer damages to their assets and health due to global warming. Yet, industrialised countries, notably the US, remain extremely wary of such a legal mechanism, fearing that, as traditionally high emitters, they may be held liable for damages of potentially unlimited economic value whose attribution to global warming may still be unclear.¹⁴⁸

¹³⁸ Sterk *et al.* (2012:38).

¹³⁹ The Climate Group (2012b).

¹⁴⁰ The Climate Group (2012a:2).

¹⁴¹ Sterk *et al.* (2012:6).

¹⁴² WRI (2012).

¹⁴³ The Climate Group (2012a:3).

¹⁴⁴ The Climate Group (2012b); CCES (2012:1).

¹⁴⁵ Marcu (2012:1).

¹⁴⁶ The Climate Group (2012a:1).

¹⁴⁷ Ibid:3.

¹⁴⁸ Morgan (2013).

4.5 COP19, Warsaw, Poland, 2013

4.5.1 Outcome

The COP 19 presented the midpoint in the round of negotiations initiated in Durban in 2011. Accordingly, the key objective of this COP was to identify a path for the remaining two years of the so-called Durban Platform.

The Warsaw COP Decisions invite the Parties to submit intended nationally determined contributions (INDC) to the 2015 agreement toward achieving the 2°C goal of the UNFCCC. In doing so, Parties carefully evaded any statement as to the legal nature of these contributions. The INDCs ought to be submitted well in advance of the Paris conference by “the first quarter of 2015 for the Parties who are ready to do so” in a manner that facilitates the transparency and the understanding of these INDCs. However, the Parties were unable to decide on what to include in their INDCs.

Furthermore, the Parties agreed in Warsaw to “further elaborate... elements for a draft negotiating text” beginning at their first meeting in 2014.¹⁴⁹ These elements include the usual list of issues, non-exhaustive though, including mitigation, adaptation, finance, technology and capacity building. A draft text should be ready by May 2015, so substantive progress will be essential in 2014 and ideally before COP20 in Peru.

With a view to the Green Climate Fund and the underlying pledge to mobilise USD 100 billion yearly by 2020, developing countries had requested to identify an intermediate goal of \$70 billion by 2016, but failed to obtain an agreement in Warsaw. Developed countries only concurred to new biennial reports outlining their ideas for ramping up their adaptation finance.

SIS and other particular vulnerable nations were insisting ever louder on a reimbursement for unavoidable loss and damages from global warming. However, in light of the vigorous opposition in particular by the US to any form of compensation, Parties could only agree on a new tool (Warsaw International Mechanism for Loss and Damages) in order to share information and best practice and explore ideas on how best to help those countries in question.

The Parties did however make some progress with regard to MRV (by agreeing on the composition, modalities and procedure of the technical experts tasked with looking at the new biennial reports) as well as concerning REDD+.

4.5.2 Assessment

The COP19 took place in a rather emotional atmosphere overshadowed by the Typhoon Haiyan creating havoc in the Philippines. The declaration from Japan to reduce its emission target from 25% to just 3.5% due to Fukushima, and wearisome negotiating strategies from Australia created further tension during the meeting.¹⁵⁰

Observers concur that substantively the Warsaw Conference was the least fruitful in years, in particular when compared to Cancun, Durban and Doha; the progress achieved in Poland was mainly procedural.¹⁵¹ While Parties managed to define a pre-Paris process by setting a loose timeframe for proposing the INDC ahead of the Paris meeting, they carefully evaded prejudging the ultimate form of the new agreement.

¹⁴⁹ The Climate Group (2013:3).

¹⁵⁰ The Climate Group (2013:1).

¹⁵¹ CCES (2013:1).

Mostly, the COP 19 illustrated the enormous gap still to be covered on key issues, i.e. the legal form of a new agreement and the differentiation between Annex I and Non-Annex country obligations. Then again, the meeting did expose shifts in countries historic positioning: The US and the EU appeared to work more closely together than in the past, while G77 and China exhibited a growing rift, with some of the developing countries showing greater flexibility than many of the BASIC group countries.¹⁵²

Climate funding was and is one of the key issues of the fight against global warming. The best that could perhaps be said about the funding discussion during the meeting is that Parties have kept the talks alive for next year.¹⁵³ Notwithstanding new funding commitments for REDD+ and increased funding for the Kyoto Protocol's Adaptation Fund (US\$100 million), countries remain as alienated as ever on the topic of funding. Regarding the damage and loss issue, failure was not an option for either side which is why the outcome from Warsaw is one of compromise. Although the Parties managed to establish a new loss and damage tool there is no mentioning of any form of monetary compensation.¹⁵⁴

4.6 COP20, Lima, Peru, 2014

4.6.1 Outcome

After the usual delay, the Parties agreed on the Lima Call for Action.

The discussion within the Durban Platform centred around two documents, i.e. a paper summarizing “elements for a draft negotiating text” of the Paris agreement as well as a decision describing the pre-Paris process.

The core issue of the elements paper which grew up to 39 pages during the conference was its legal status: As many Parties were opposed to the idea of its exclusive character, the paper now includes a footnote according to which the elements reflect work in progress and do not preclude new proposals from 2015.¹⁵⁵

It was the second documents that proved much more contentious: e.g. Parties were unable to agree on the precise scope of their INDGs owing to which the decision only invites Parties to consider including adaptation elements. While the Parties agreed on upfront information which they have to submit on their INDGs, including quantifiable information on the timeline, range and coverage, this information no longer “shall” be provide but “may”, thus rendering it voluntary. A major controversy related once again to the question of differentiation between Annex I countries and Non-Annex 1 countries. In the end, the decision simply repeated the CBDR principle with a reference to “different national circumstances”, echoing the joint declaration of the US/China.

During Lima, pledges for the Green Climate Fund reached the very important informal target of more than USD 10 billion while China together with other developing countries launched a new South-South Fund.¹⁵⁶ Developing countries again failed to secure a commitment by developing countries for intermediary goal toward the USD 100 billion a year to be mobilised as from 2020. Regarding the newly create “Loss and Damage” tool, the Parties agreed at least on an initial two year work plan.

¹⁵² CCES (2013:2).

¹⁵³ The Climate Group (2013-4).

¹⁵⁴ Besides, the new devise is organised under the existing ‘Cancun Adaptation Framework’, and not as a separate instrument as hoped for by the developing world, see The Climate Group (2013:3).

¹⁵⁵ CCES (2014a:2).

¹⁵⁶ Ibid:3.

4.6.2 Assessment

Many observers of the UN climate process expected that Lima would benefit from the momentum built up over the year in particular the ground-shifting announcement of the US and China.¹⁵⁷ Yet, Lima did only just enough to keep the process alive and failed more or less to resolve the tasks it was supposed to do in order to prepare the COP21 in Paris 2015.¹⁵⁸ A great deal of work lays ahead for the negotiators, requiring early high-level intervention by Government leaders, a joint understanding of how to define success as well as some pragmatism from outside.¹⁵⁹

Regarding the draft negotiation text, there are two alternatives for every substantive point, and in some cases many more options. The objective for negotiators between Lima and Paris is to reduce, ideally eliminate these options in order to present a draft text which is NOT a Copenhagen-style text of 200 pages.¹⁶⁰ Eliminating the options, however, will be a monumental task although there are strong majorities on certain issues, e.g. a ‘net-zero’ emissions target by 2050.

Concerning the INDCs, the Lima meeting was tasked with providing guidance on its scope, what kind of information countries would have to include to enable a review of the INDCs, whether there would be an international review of the INDCs prior to the COP21 and what this assessment would look like. Negotiators did complete only very few of those tasks because the usual north-south quarrel between industrialised and developing countries came once again to the fore: ultimately, the Lima decisions only “invite” Parties to consider including adaptation in their INDCs. Worse, the decisions contains no more than an optional list of very basic up-front information which countries “may” include in their INDCs thus failing to define a minimum level of common information to be provided.¹⁶¹ Despite this lacuna, the UNFCCC secretariat was mandated with the daunting mission to combine all INDCs into an aggregate target by October 2015. More importantly, the Parties could not agree on a formal *ex-ante* review of INDCs prior to the COP21 which disappointed many observers.¹⁶² Then again, the Parties agreed to outlaw backsliding of countries, i.e. their INDCs to the Paris agreement need to mark a progression beyond their current undertakings which is an important leap forward for the upcoming negotiations.¹⁶³

5 Ahead of COP 21, Paris, France, 2015

The objective of the 2015 climate deal is to create the prerequisites for an effective international response to address global warming over the long term. All observers underline that for the new climate deal to be effective broad participation as well as a high level of ambition is required.¹⁶⁴

The Durban Platform under which the negotiations are taking place since 2011 is mandated to come up with a new global climate agreement on the basis of the UNFCCC. Apart from timing issues, i.e. that the negotiations are to terminate in 2015 and that the outcome is to be implemented by 2020 the ADP formulates only very general parameters for the negotiations:

¹⁵⁷ Ibid:1.

¹⁵⁸ Ott *et al.* (2014:1).

¹⁵⁹ The Climate Group (2014:1).

¹⁶⁰ Ibid:2.

¹⁶¹ Ott *et al.* (2014:4).

¹⁶² The Climate Group (2014:5).

¹⁶³ Ott *et al.* (2014:12).

¹⁶⁴ Briner (2014:8).

(i) in terms of legal form, it is clear that the ADP does not necessarily require a binding legal agreement such as an international treaty or a protocol.¹⁶⁵ The third possible outcome under the ADP – an agreed outcome of legal force - remains less clear and open to interpretation. (ii) The ADP is entirely quiet about whether the Paris agreement should consist of one agreement or a package deal.¹⁶⁶ Nor does the ADP describes the legal relationship of the new instrument to Kyoto; (iii) With regard to substance, the ADP underlines the need to include all the familiar issues, i.e. mitigation, adaptation, funding, capacity-building while leaving it wholly up to the Parties to decide how they want to tackle these issues. Very important however, in contrast to Kyoto the ADP calls for the new instrument to be applicable to all Parties by deliberately omitting any reference to equity or the CBRD principle.¹⁶⁷ (iv) At last the ADP is mute as to whether Parties ought to follow a Kyoto like top-down approach with internationally negotiated emission targets or a UNFCCC/Copenhagen like bottom up approach with nationally set voluntary contributions.

The following elements are being discussed:

- **Hybrid agreement**

In light of the Warsaw COP 19/Lima COP 20 decisions, today many observers argue in favour of a more hybrid form of climate governance, mixing top-down and bottom-up elements in order to secure wider participation and higher ambition.¹⁶⁸ There is growing consensus that in order to come up with a robust long-term new instrument, flexibility needs to be introduced at party level, i.e. the way in which the mitigation contributions by the Parties are established, accounted for and tracked down. Moreover, including flexibility at the structural level will ensure that the new instrument remains ambitious over its life-time, e.g. by establishing a process to regularly update mitigation contributions.¹⁶⁹ A hybrid agreement would give Parties the flexibility in defining and/or updating their mitigation contributions while on the other hand limiting this flexibility through internationally agreed rules on accounting and transparency.¹⁷⁰ Ideally this new agreement could built on the success of the Copenhagen Accord in terms of participation (covering 80% of global emissions as compared to 14% under Kyoto) while overcoming its key weakness in terms of ambition, i.e. the lack of consistency of the mitigation contributions with the below 2°C range of emissions pathways. Observers believe that a hybrid agreement with mitigation contributions which are determined at national (instead of international) level should allow the US and China to participate in the new agreement.

- **Long-term goal**

As an agreement based on the UNFCCC, the new climate instrument would need to be consistent with the ultimate goal of the latter, which is the prevention of the dangerous anthropogenic interference with the climate system. This ultimate goal of the UNFCCC has been further elaborated at the COP 16 in Mexico, where Parties agreed to limit GHG emissions so as to hold the increase in temperature below 2°C above pre-industrial levels. Various experts recommend that the 2°C temperature goal agreed in Cancun should be supplemented

¹⁶⁵ Besides, the question of legal form of an instrument is distinct from the issue of whether a specific rule of an instrument is mandatory or not. A treaty might include hortatory rules while a mere political agreement contains obligatory stipulations. See Bodansky (2012:3).

¹⁶⁶ Bodansky (2012:6).

¹⁶⁷ Haines *et al.* (2013:13).

¹⁶⁸ Haines *et al.* (2013:6); Morgan *et al.* (2014:1); Briner (2013:6); Green (2014:22); Bodansky (2014:1).

¹⁶⁹ Briner (2013:12).

¹⁷⁰ Bodansky (2014:3).

by a net zero emission objective. With a net zero emission objective, Parties commit to reduce net global GHG emissions by 2050 or, at the latest, in the 2nd half of this century.¹⁷¹ The zero net emission goal is technically achievable would provide a clear signal that unprecedented levels of investment will be required.¹⁷² Yet, a zero net objective is sufficiently flexible to accommodate nationally defined mitigation contributions because it does not impose specific targets/instruments for individual Parties.¹⁷³

- **Mitigation**

- *Intended Nationally Determined Contributions (INDCs)*

The Warsaw COP 19 decisions invites all Parties to submit nationally determined mitigation contribution (INDCs) in order to ultimately reach the 2°C temperature/the net zero emission goals without identifying the legal character of those INDCs yet. There is a growing consensus among observers that those INDCs themselves should not be internationally legally binding, which would in particular allow the US to participate in the new climate deal but Parties have yet to take a formal decision.¹⁷⁴ This invitation to put forward INDCs mirrors the Cancun Agreement and introduces a strong bottom-up element. In line with the hybrid character of the new agreement, Parties would be free to define the type of their mitigation contributions, be it GHG mitigation goals¹⁷⁵ or policy interventions¹⁷⁶, as well as their scope (economy-wide or not).

- *Up-front information*

The same decision however introduces a top-down element by requesting the ADP to identify up-front information that Parties should offer in order to facilitate clarity, transparency and understanding between the Parties. Observers highlight that, without specific information, it will be impossible to understand the ambition and the equity of the individual INDC.¹⁷⁷ With no detailed information at hand INDCs cannot be compared between Parties and as a result thereof, the global ambition cannot be measured.¹⁷⁸ It is hoped that information provides for much needed transparency which ideally leads to higher ambitions and might re-build faith between the countries. Yet, according to the Lima COP 20 decisions, Parties are no longer obliged to give the information but may do so. Worse, the reporting is limited to basic parameters, similar to those used by Annex I parties to explain their mitigation targets under Cancun including, *inter alia*, the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, and methodologies. For now, Parties do not have to justify the level of ambition of their INDC nor show how the contribution is equitable¹⁷⁹; reporting obligations which many experts however want to see in the final text.

¹⁷¹ Green (2014:26).

¹⁷² Haites (2013:10).

¹⁷³ Ibid:11.

¹⁷⁴ Green (2014:23).

¹⁷⁵ A GHG mitigation goal is a commitment to reduce or limit GHG emissions (or emission intensity) by a certain amount and by or over a certain time. They include for instances fixed level goals, base year goals, intensity goals, baseline scenario goals. See Levin (2014:4).

¹⁷⁶ Policies are interventions such as (i) laws and regulations; (ii) economic instruments such as taxes and charges; (iii) information instruments; and (iv) Government financing mechanisms and investment. See Levin (2014:4).

¹⁷⁷ Levin (2014:3).

¹⁷⁸ Morgan *et al.* (2014:3).

¹⁷⁹ Ibid:7.

- *Timeframe*

Parties have yet to decide about a common timeframe for the INDCs. Timeframes have been used before in Kyoto, where Parties agreed to commitment periods; this differs from the Cancun Agreement which gave instead an end date (2020) as a result of which some emission offers covered one year only (e.g. 2020) while others covered multiple years, which rendered their evaluation unnecessary difficult. Observers are discussing various timeframes ranging from 4-5 to 10 or more years but suggest a minimum of 4 years.¹⁸⁰ Mitigation offers should be upheld at all times with no gaps between the timeframes. Some experts have put forward the idea as to whether the agreement could oblige the Parties to increase the level of ambition the INDCs at the expiry of a given timeframe until the long-term goals are realised.¹⁸¹ This would prevent the gap issue of Kyoto where after the first contribution period new targets had to be re-negotiated *ab initio* which undermined the sustainability of the international mitigation efforts as Parties were able to lower their ambition from the first to the next contribution period.¹⁸²

- *Update*

Observers underline that a Party should be entitled to increase the ambition of its INDC at any time through a simplified procedure without the need for formal ratification, thus implying that upgrades are deemed to be the norm, and encouraging Parties to take on ambitious goals.¹⁸³ In the opposite case, i.e. when a Party is thinking of downgrading its ambition a formal consultation process would have to be undertaken, obliging the Party to explain the basis and rational for this downward update.¹⁸⁴ However, letting Parties to downgrade their INDCs could incentivise participation and hedge the risk of Parties withdrawing from the agreement.¹⁸⁵ Besides, observers urge to include a trigger mechanism allowing a Party to reconsider its INDCs in the case of natural disasters, political upheaval or sudden economic crises.¹⁸⁶

- **Differentiation**

The issue of differentiation has overshadowed the COP negotiations from the very beginning in 1992 and is again of key importance for the new climate deal. While the ADP mandate omits any reference to equity or the CBDR principle, it is clear that this question must be tackled due to the fact that the new agreement should be consistent with the UNFCCC. The Lima COP decisions do again contain a reference to the CBDR but evade mentioning the traditional categorisation of the Parties in two annexes.¹⁸⁷ What is more, based on the Lima decision the CBDR now speaks about taking into account individual capabilities of the Parties, which leaves the door open for differentiated responsibilities of the most vulnerable countries (ie LDCs) but could imply that rapidly industrialising countries such as the BASIC group might no longer be able to vindicate CBDR principle.

Quite many experts today oppose the idea of categorisation of the Parties in different annexes as it was done under the UNFCCC or Kyoto because it no longer mirrors the reality on the ground which has substantially evolved over the last years: some of the rapidly industrialising

¹⁸⁰ Morgan (2013:15); Haites (2013:15).

¹⁸¹ Green (2014:25); Bodansky (2014:14); EU (2015:12).

¹⁸² Bodansky (2014:15).

¹⁸³ Haites (2013:15); Bodansky (2014:15); EU (2015:12).

¹⁸⁴ Briner (2014:14).

¹⁸⁵ Bodansky (2014:13); Briner (2014:18).

¹⁸⁶ Briner (2014:16); Bodansky (2014:13).

¹⁸⁷ Davide (2014:3).

countries are today emitting such high levels of GHG (in absolute terms) that their mitigation contributions are deemed indispensable for the success of the 2015 agreement. A new “firewall” between Parties as it was imposed under Kyoto is quickly obsolete and a transition from Non-Annex I party to Annex I party is impossible to obtain under the existing UNFCCC decision-making rules. More importantly the very idea of a hybrid agreement under which every Party is free to set its own tailor-made mitigation contributions, should render groups of Parties unnecessary.¹⁸⁸ Of course the CBDR principles will continue to have an important role to play for other topics of the 2015 agreement such as adaptation and climate finance. Moreover, in order to underline the importance of equity in the 2015 agreement, observers want each party to come forward with information on how their mitigation offer takes equity into consideration by describing the benchmarks it used in assessing equity.¹⁸⁹ Ideally Parties would have to report against international benchmarks covering for instances emission responsibilities, capabilities, vulnerability, development need etc.

- **Review**

As outlined before, a balance will have to be struck in the 2015 agreement between flexible INDCs and the need for international oversight concerning their implementation. Based on the Warsaw COP 19 decision which demands that Parties submit their INDCs well ahead of the Paris meeting, observers distinguish between up to three different kind of reviews¹⁹⁰:

- During 2015: once the INDCs and the necessary information have been communicated, a first ex-ante review could be launched aiming to ensure transparency and identify opportunities to increase the overall ambition level. Once incorporated in the Paris agreement, all INDCs would be submitted into the UNFCCC emission inventory.
- 2015-2020: once the INDCs have been included into the agreement, there could be a review before the new agreement enters into force, allowing the Parties to update their INDCs in light of the Paris COP21.
- After 2020: once the 2015 agreement has entered into force, there should be reviews on a periodic basis. As to the important question of frequency of these reviews experts discuss various options ranging from 2 years over 4 years to 5-8 years.¹⁹¹ Depending on the timeframe of the INDCs there could one or more reviews per timeframe. Performing reviews during a mitigation contribution frame could help solving the issue that extended timeframes for INDCS could lock-in low mitigation ambitions.

The objective of these reviews is always the same, i.e. to provide all Parties with comprehensible information about the ambition level of the individual INDC and the national circumstances that have guided the offer so as to enable the required comparison between Parties in order to verify whether the offers are in line with 2°C temperature goal.¹⁹²

The agreement would have to deal with various organisational questions including¹⁹³: (i) As to the parties that have to undergo these reviews, only LDC and SIS should be excepted from the review obligation; (ii) As to stakeholder in the review, observers discuss combining independent technical reviews with a party-driven consultation, while granting wider

¹⁸⁸ Haites (2013:13).

¹⁸⁹ Morgan (2013:4); Haites (2013:13).

¹⁹⁰ Briner (2014:13).

¹⁹¹ See overview at Briner (2014:15).

¹⁹² Morgan (2013:12).

¹⁹³ See overview at Briner (2014:17).

stakeholder such as NGOs, IGO or business the opportunity to be heard¹⁹⁴; (iii) As to the format, the 2015 agreement could build on one of the existing procedures (such as the ICA/IAR under the UNFCCC, the clarification workshops of the 2020 mitigation offers or the 2013-2015 long term goal review) or institute a new procedure.¹⁹⁵

- **Compliance**

Observers highlight that the 2015 agreement must include some kind of compliance mechanism to evaluate whether the Parties have indeed satisfied their INDCs and impose fines if they have not. As strong compliance mechanism could play an important role in assuring that Parties implement their INDCs independent of whether these INDCs are legally binding or not.¹⁹⁶ Observers agree that the 2015 agreement should build on the Kyoto compliance instruments by retaining the two existing tracks of enforcement and facilitation, but adjust the mandate by for instances transferring the compliance body of the CMP into the COP.¹⁹⁷ Besides, the new agreement ought to identify the scope of the compliance tool, i.e. as to whether the instrument in question applies to all Parties (or only to a few larger emitters) and to the whole text of the agreement or just some rules.¹⁹⁸

- **Adaptation**

Traditionally, adaptation has drawn much less political interest and fewer institutional resources under the UNFCCC framework. Yet, according to the latest findings of the IPCC, without urgent action, global warming will bring severe and irreversible impact on all people. The 2015 agreement must hence deliver the clear message that adaptation is as important as emission reduction and must be treated with equal seriousness.

Based on the Geneva negotiation text issued in 2015, observers discuss the introduction of adaptation goals (at international or national level), which could be seen as a way to emulate the mitigation-related text on INDCs.¹⁹⁹ As there is no objective quantitative unit yet to meaningful present adaptation, most experts favour qualitative goals, while recognising that there could be significant challenges in implementing even these latter goals.²⁰⁰

To strengthen adaptation efforts, the Lima COP 19 decisions urge the Parties to include an adaptation component in their INDCs and outlined various features of this component. The idea is to overcome existing barriers to successful adaptation by improving on institutional, planning, finance, and reporting issues: (i) Vis-à-vis the institutional framework, observer indicate that the new agreement has a key role to play in ensuring that the various adaptation institutions that have been established over time under Nairobi Work Programme / CAF have a robust mandate and are better coordinated.²⁰¹ New institutional options could include a subsidiary body for adaptation, an adaptation registry or an international clearing house.²⁰² (ii) On the subject of planning, experts discuss as to whether the 2015 agreement could foresee that all Parties must come up with NAPs by a target date and update them in regular interval of 4 to 8 year, thus establishing the NAP as main adaptation vehicle. By doing so one should

¹⁹⁴ Bodansky (2014:13).

¹⁹⁵ Morgan (2013:13).

¹⁹⁶ Bodansky (2014:15).

¹⁹⁷ Haites (2013:19).

¹⁹⁸ Bodansky (2014:15).

¹⁹⁹ Helgeson (2015:24); Morgan *et al.* (2014:13).

²⁰⁰ See for an overview Helgeson (2015:27).

²⁰¹ Morgan *et al.* (2014:19).

²⁰² Helgeson (2015:35).

however keep in mind that the NAP process was originally launched to reduce the documentation burden and to introduce greater levels of flexibility based on the NAPA experience.²⁰³ (iii) Adaptation finance is key to every round of negotiation: Experts recommend that the 2015 agreement should upgrade the newly created Warsaw International Mechanism for Loss and Damage to become the main platform for the international cooperation in this field beyond 2016.²⁰⁴

- **Funding**

Funding has been and always will be an essential issue of the international climate negotiations and it will again take centre stage at the Paris meeting.

At COP15 in Copenhagen in 2009, industrialised countries vowed to grant new and additional resources of US\$30 billion for the period of 2010 to 2012, and to mobilise long-term funding together with developing countries of US\$100 billion a year by 2020. The informal assurance was later incorporated into the decisions of Mexico COP16 in 2010 where the Parties reaffirmed that funding for adaptation would be prioritised for the most vulnerable developing countries, namely LDCs, SIDSs and Africa. The COP17 in Durban in 2011 saw the effective launch of the Green Climate Fund as a new operating entity of the UNFCCC's financial mechanism which could be operationalised just before the Lima COP20. Unfortunately though, Parties at the Warsaw COP19 in 2013 and the Lima COP 20 in 2014 were unable to make much headway, except for the creation of the Warsaw Loss and Damage Mechanism, with the consequence the question of medium- and long-term funding remains unresolved and needs urgent attention in the 2015 climate deal.

The challenges are numerous:²⁰⁵

- Funding gap: Observers highlight that the funding that is presently offered under the UNFCCC and the Kyoto Protocol is minimal compared with the scale of the adaptation and mitigation costs identified. The 5th Assessment Report by the IPCC says that existing global estimates of the costs of adaptation in developing countries range between US\$70 billion and US\$100 billion a year globally by 2050.²⁰⁶ The First UNEP Adaptation Gap Report of 2014 indicates that the amount of public finance committed to activities with explicit adaptation objectives ranged only between US\$23 billion and US\$26 billion in 2012-2013, of which 90% was invested in developing countries.²⁰⁷ (the so-called funding gap).
- Sustainability and ownership: Recipients have voiced worries that the funding is not in line their national climate priorities as much as those of the international implementing institutions and the donors that fund them. Their capacity to access the existing funding tools varies greatly.
- Non-governmental funding: The existing climate funds have struggled to engage the private sector and mobilise investment.
- Procedural issues: such as lack of an agreed definition of climate funding; the wide range of instruments used for climate funding; the lack of adequate information on climate funding.

²⁰³

Ibid:39.

²⁰⁴

Morgan *et al.* (2014:21).

²⁰⁵

Nakhooda (2014:6).

²⁰⁶

UNEP (2014:2).

²⁰⁷

Ibid.

Observers discuss various objectives and means for reach these objectives for the new climate such as: (i) to boost existing finance-related commitments by including “Parties that are able to do so” (next to Annex I countries) and by agreeing on quantified levels of finance as percentage of GPD; (ii) to increase available resources by mobilising non-Government funding and promoting South-South funding; (iii) to improve existing funding institutions and the coordination/harmonisation among them; (iv) to simplify the access to funding in particular for the most vulnerable countries by improving the transparency of the UNFCCC funding tools through periodical reviews and better guidance.²⁰⁸

6 Global Warming and Individual Countries

For the remainder of this paper we will investigate what types of instruments individual countries use to address in particular the question of mitigation and funding. For this exercise we will assess three countries which together account for more than 65% of global GHG emissions, two of which are developed countries namely the EU, which is a Kyoto Annex I party (and third largest emitter); and the US, which has never ratified Kyoto and one developing country, a member of the BASIC group of NICs, namely China, as a Non-Annex I party (and the highest current emitter of GHGs).

First we will look into what kind of GHG mitigation reduction targets (if any) are being applied. As for mitigation goals, observers usually distinguish the following types of goals:

- Commitments expressed in terms of GHG metrics
 - Base year goals; i.e. obligation to reduce emission or emission intensity by a specified level relative to a historical base year: e.g. EU QERL under Kyoto of 8% reduction compared to 1990 levels
 - Baseline goals: same but relative to a projected baseline scenario: e.g. Business-As-Usual goal
 - Fixed level goals: obligation to reduce emissions to an absolute level in a target year which does not include a reference to a base year/baseline: e.g. zero net emission goal for 2050
- Commitments expressed in terms of non-GHG metrics: fixed level goals with reference to energy savings, renewables, deforestation etc.

While describing past mitigations goals, our assessment will focus on the INDC to be submitted ahead of the Paris COP 21.

Secondly, we will briefly enquire what kinds of climate policy instruments are being used next to mitigation goals: in line with Kuik et al.²⁰⁹, we will illustrate as to whether the country in question prefers:

- The “Front Door” over The “Back Door” method or vice versa, i.e. direct climate policy or indirect climate policy as a side benefit of other policies such as those on energy, air quality, technology and security (the back door);
- The “stick” over the “carrot” approach or vice versa, i.e. command & control (laws, regulations and standards) or market-based instruments (CO taxes, cap and trade mechanism or financial incentives);

²⁰⁸ Mansell (2015:5).

²⁰⁹ Kuik et al. (2008).

6.1 The European Union

The EU, representing 28 member states, with a combined output of 4,050 Mt of carbon dioxide in 2010, is the world's third largest GHG emitter after China and the US, accounting for 12.3% of global carbon dioxide emissions, and having shown an increase of 3% from 2009 (and a decrease of 5% from 1990).²¹⁰

The EU is a party to the UNFCCC since 1993 and the Kyoto Protocol since 2002. Unlike the US, the EU follows mainly a regulatory climate policy approach. This top-down approach is increasingly complemented by market-based instruments.

6.1.1 Mitigation Policy

6.1.1.1 GHG Mitigation Goals

For the first commitment period under Kyoto between 2008 and 2012, the 15 old EU member states (EU-15) adopted an emission reduction goal of 8%, compared with its 1990 emission levels²¹¹, which is a typical base year mitigation goal, expressed in GHG metrics. As this goal was negotiated within the framework of Kyoto, this QERL is legally binding upon the EU and its members.

Vis-à-vis the second commitment period of Kyoto from 2013 until 2020, the EU took the decision to reduce its GHG emissions by at least 20% by 2020 compared with its 1990 levels²¹², again a base year goal. Apart from this mitigation goal, the EU adopted two further goals, which are expressed in non GHG metrics, according to which EU members are obliged (i) to generate 20% of their energy from renewables and (ii) to increase by 20% the energy efficiency in the EU, both by 2020. With regard to the long-term ambition of keeping the global temperature increase to below 2°C, the Climate and Energy Package contains an EU objective of reducing domestic GHG emissions by 80-95% below 1990 levels by 2050.²¹³

In order to prepare for INDCs in view of the new climate deal, the EU adopted on 23 October 2014 the 2030 Climate and Energy Framework which sets the following goals for 2030:

- An obligatory base year goal to reduce at least 40% of GHG emission by 2030 from 1990 levels
- Two further non-GHG metric goals, i.e. one obligatory objective to generate at least 27% of the energy from renewables and one indicative target to improve the energy efficiency by at least 27%.

The INDC submitted by the EU in March 2015 confirms the mitigation goals of the 2030 Climate and Energy Package.

²¹⁰ NEAA (2011:11, 14).

²¹¹ EC (2011c).

²¹² In order to implement this obligation, in June 2009 the EU adopted a Climate and Energy Package in which it reiterated the overall target of a 20% GHG emission reduction, with an additional commitment to push this up to 30% if a satisfactory international agreement involving all big GHG emitters is reached.

²¹³ In March 2011, the Commission adopted a Roadmap for Moving to a Competitive Low Carbon Economy in 2050 outlining scenarios on how to achieve this target. See EC (2011b).

6.1.1.2 Policy Instruments

The EU mainly uses legal instruments, which directly address climate issues and hence pursues a ‘front door’ method: the Climate and Energy Package which was launched in 2000 serves as an overarching EU climate policy tool and is now running in its 3rd phase (2015-2030).

In order to achieve its mitigation goals, the EU uses as a whole variety of command & control instruments including, *inter alia*:²¹⁴

- Energy Efficiency Directive of 2012: while not introducing national binding efficiency targets, the Directive imposes a variety of obligatory policy measures e.g.²¹⁵. Energy distributors and retailers are obliged to lower energy sales by 1.5% every year among their customers via for instances better heating systems or insulating roofs. Energy audits and management plans are required for large undertakings. The public sector must renovate 3% of public buildings each year. EU countries had to come up with national plans on how to foster investment to renovate the whole buildings sector by 2050. What is more, each EU member ought to set national indicative efficiency targets by 2013;
- Energy Performance of Buildings Directive of 2010: obliges EU countries to set minimum energy performance requirements for new buildings. More importantly all new buildings must be nearly zero energy buildings by 31 December 2020;²¹⁶
- Ecodesign Directive Energy of 2009: imposes minimum obligatory efficiency requirements for all energy-related products. It sets a framework for performance criteria which manufacturers must meet in order to legally bring their product to the market;²¹⁷
- Regulation for Emission Standards for Passenger Cars of 2009: setting emission performance standards for light duty vehicles;²¹⁸
- Effort Sharing Decision: imposes binding annual targets (for each year from 2013 to 2020) to reduce GHG emissions from the sectors not covered by the EU ETS, such as housing, agriculture, waste and transport (excluding aviation);²¹⁹
- CCS Directive of 2009: establishes a mandatory legal framework for the environmentally safe geological storage of CO₂ captured;²²⁰
- Non-CO₂ GHG emissions: F-Gas Regulations of 2014 and the Nitrates Directive of 1991 which are dealing with the containment, prevention and reduction of other GHGs than CO₂.

This regulatory toolkit is accompanied by market based instruments central to which is the trade in GHG emission permits, i.e. the EU Emissions Trading System (EU ETS) launched in 2005, which now in its third trading phase, running till 2020.²²¹

²¹⁴ For a detailed description see Drummond (2013).

²¹⁵ See <http://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive>; accessed 20 November 2015.

²¹⁶ See <http://ec.europa.eu/energy/en/topics/energy-efficiency/buildings>; accessed 20 November 2015.

²¹⁷ See <http://ec.europa.eu/growth/industry/sustainability/ecodesign/>; accessed 20 November 2015.

²¹⁸ See http://ec.europa.eu/clima/policies/transport/vehicles/cars/index_en.htm; accessed 20 November 2015.

²¹⁹ See http://ec.europa.eu/clima/policies/effort/index_en.htm; accessed 20 November 2015.

²²⁰ See http://ec.europa.eu/clima/policies/lccs/directive/index_en.htm; accessed 20 November 2015.

The 2005 Directive introduced a mandatory ‘cap and trade’ regime. According to this regime, a GHG emission limit for the whole ETS is fixed, and for each year a certain quantity (a ‘cap’) of GHG emission allowances is granted to EU members, who in turn distribute (“trade”) these via public sale to the 10,800 installations throughout the bloc participating in the scheme.²²² If an installation emits more than the allowances it has obtained, it has to buy unused allowances from other installations under the ETS.²²³ In 2009, a revised ETS directive was adopted²²⁴ to further improve the EU scheme for a third phase running from 2013 to 2020. While the EU ETS is to be commended for its pioneering role, being the first carbon trading scheme ever and the largest until today, observers outline a number of flaws:

At a very fundamental level, the discussion is still-ongoing as to whether a carbon trading scheme is indeed more effective than carbon taxes in terms of reducing GHG emissions.²²⁵ Many handicaps of the EU-ETS have to do with procedural questions: The initial EU-ETS Directive of 2005 failed to include harmonised rules on the distribution of allowances throughout the EU, strict compliance instruments, and any kind of linkage between the EU ETS and other carbon trading regimes in third countries.²²⁶ One major weakness related to the scope owing to the fact that the EU-ETS, in phase II, only covered 40% of all EU GHG emissions, notably excluding the transport sector, which was an important omission.²²⁷ Some of these shortcomings have been corrected when the UE-ETS entered phase III in 2009: e.g. the coverage of the ETS was broadened in order to include carbon dioxide emissions from the chemical industry and the aviation sector as well as certain other GHGs such as nitrous oxide. Moreover, caps are to be set at EU level and allocation rules harmonised across the EU.

In spite of these amendments in 2009 the EU-ETS has been facing its most important challenge to date over the past five years: The possibility for EU Members of transferring unused allowances from phase II into phase III together with the global economic crisis signifies that the regime is now flooded with allowances (equivalent to emissions of around 2,000 million tons CO₂) due to which the price of allowances drop markedly from EUR 63 in January 2008 to a record-low EUR 4.50 in July 2013 with the consequence that the EU-ETS, for now, is having virtually no impact whatsoever on GHG emissions reductions.²²⁸ In order to improve the functioning and to restore the credibility of the EU-ETS, the EU adopted a number of measures at in 2014 including the back-loading of the auctioning of 900 million tons of emission allowances within phase III to 2019/2020 or the launch of a market stability reserve (MSR) in the trading phase IV after 2020 (which now is meant to be moved the MSR forward to the 1st January 2019),²²⁹ yet it remains to be seen if those measures have a significant impact on the CO₂ price.²³⁰

²²¹ Directive 2003/87/EC of the European Parliament and the Council of 13 October 2003 Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community, Official Journal L 275, 25 October 2003: 32-46.

²²² EC (2009a:84-86).

²²³ Ibid.

²²⁴ Directive 2009/29/EC of the European Parliament and the Council of 23 April 2009 Amending Directive 2003/87/EC to Improve and Extend the Greenhouse Gas Emission Allowance Trading Scheme of the Community, Official Journal 140, 5 June 2009: 63-87.

²²⁵ Helm (2009a:229).

²²⁶ Massai (2007:21).

²²⁷ Farnsworth (2007:29).

²²⁸ Taschini (2014:9).

²²⁹ See http://ec.europa.eu/clima/policies/ets/reform/index_en.htm; accessed 20 November 2015.

²³⁰ Henningsen (2015:2).

As to the other key market-based instrument usually discussed by observers, namely carbon taxes, notably, quite a few EU members have introduced some form of eco-taxation;²³¹ however, there is no EU-wide carbon tax as yet. However, proposals for a carbon taxation dispensation have been floated since 1999, prompting the Commission in 2010 to propose the amendment of the Energy Taxation Directive of 2003 which lays down common rules for the taxation of energy products.²³² The proposal aimed to introduce a carbon tax mainly for those sectors not yet included in the ETS²³³ but failed to reach the necessary majority in the EU Council.

The EU-ETS is accompanied by technology support and other financial incentives which are based on the following measures: The Energy Review of 2008, which stress that the EU's climate goals for 2020 will necessitate an overhaul of EU energy arrangements, looks at the challenges facing the bloc between 2020 and 2050 and formulates an EU Strategic Energy Plan.²³⁴ This Plan tries to speed up the development of innovative, inexpensive, low-carbon technologies, and is built on a wide-ranging research and development scheme.²³⁵ The initiative is complemented by the European Energy Programme for Recovery, which allocated €1 billion for carbon capture and storage installations and €50 million for offshore wind installations.²³⁶ In 2011, the Commission proposed its *Roadmap for 2050*, which is based on the view that innovative ideas are needed to scale up investments in energy, transport, industry and information technologies and that more focus is necessary to combat energy inefficiency.²³⁷

6.1.2 Funding for Developing Countries

As an Annex I party under the UNFCCC, the EU is obliged to assist developing countries to tackle global warming, both in respect of reducing GHG emissions and in adapting to the unavoidable impacts of climate change.

Before COP15 in Denmark in 2009, the Commission adopted a communication *Stepping Up International Climate Finance: A European Blueprint* for the Copenhagen deal, recognising that supporting developing countries was vital to reaching an ambitious outcome at COP15. The blueprint identified that, by 2020, developing countries would incur yearly costs of €100 billion to finance their mitigation and adaption activities, and proposed that industrialised nations and larger developing countries grant them funding to the tune of some €22-50 billion a year, with the remaining €50 billion coming from national sources and expanded international carbon dioxide markets.²³⁸

At COP15 in Denmark in 2009 and COP16 in Mexico in 2010, the EU and other industrialised countries pledged to jointly grant nearly US\$30 billion from 2010 to 2012 to kick-start the scheme, and offered to mobilise US\$100 billion a year by 2020. Despite budgetary constraints, the EU did, in fact, manage to award €2.34 billion in 2010 as well as in 2011, bringing its

²³¹ Finland and The Netherlands (1990), Norway and Sweden (1991), the UK (1993), Germany (1999), Denmark (2002) and Ireland (2010) have a carbon dioxide tax in place; Austria, Belgium and Slovenia have some kind of carbon elements in their tax regime; in 2010 Spain was investigating the options for introducing carbon taxations; see Wilkinson (2012).

²³² EC (2009a:109).

²³³ FSB (2010:2).

²³⁴ EC (2012b).

²³⁵ EC (2010).

²³⁶ EC (2012c).

²³⁷ EC (2011a:3).

²³⁸ EC (2009a:244).

contribution to €4.68 billion, or 65% of the overall pledge for 2010-2012, most of which was deployed through existing instruments.²³⁹

With the assistance of the EU, COP17 in Durban in 2011 launched the Green Climate Fund, the new funding instrument intended to serve as the key long-term financing vehicle. However, Parties were unable to reach consensus on where the money for the Fund would come from, in either the medium (beyond the fast-start resources) or long term.²⁴⁰

In recent years, three funding mechanisms have been set up by the Commission, i.e. the Global Climate Change Alliance, the Global Energy Efficiency and Renewable Energy Fund, and the Climate Change Windows, pooling more than €1.5 billion in grants from the EU budget and EU members' national budgets. These tools are estimated to leverage around €14 billion in climate finance by 2013.²⁴¹

6.2 The United States of America

The US, with its output of 5,250 Mt of carbon dioxide in 2010 alone, is the world's second largest GHG emitter after China and ahead of the EU in third position. The US accounts for 15.9% of global carbon dioxide emissions, showing an increase of 4% from 2009 (and an increase of 5% from 1990).²⁴²

While the US became a Party to the UNFCCC in 1992, it refused to ratify Kyoto in 2003, making it the only major industrialised country – and the world's largest GHG emitter at the time – to do so.

6.2.1 Mitigation Policy

6.2.1.1 Mitigation Targets?

Since the US decided again ratifying Kyoto, it has never committed to internationally binding mitigation targets, as opposed to the EU. Under the Copenhagen Accord of 2009, the US took on the voluntary goal of reducing its GHG emissions by 17% below 2005 levels, a base year goal. With regard to the long-term vision of keeping global warming at 2°C, at COP15 the US Government indicated that it sought to voluntarily reduce its GHG emissions by 85% by 2050, compared with its 2005 levels. In order to address the lack of binding mitigation targets, individual US states have however introduced obligatory GHG reduction objectives over the past years.²⁴³

Concerning the INDCs to be provided for the COP21, in November 2014, the US together with China made a joint announcement in which both countries reaffirmed the UNFCCC goal of limiting total global warming to 2°C, underlined their intention to reach a new climate deal and to work together to increase ambition over time. The US indicated that it intends to achieve a target of reducing its GHG emissions by 26-28% below its 2005 level in 2025 and to make best efforts to reduce its emissions by 28%. As before this is a base year goal. On 31 March 2015, the US submitted its INDC, confirming the public announcement of November 2014.

²³⁹ EC (2012d).

²⁴⁰ Boyle (2011:2).

²⁴¹ EC (2012d).

²⁴² NEAA (2011:11, 14).

²⁴³ Since November 2009, 23 of the 50 states had adopted a binding GHG emission reduction targets, although these vary in stringency, timing, and enforceability.

6.2.1.2 Policy Instruments

Unlike the EU, the US rather pursues a back-door approach by striving to attain its emission reductions goals through indirect means based upon as the Clean Air Act (CAA).

At national level, the US has been so far unable (or unwilling) to adopt legal instruments which directly address climate issues. In contrast to the earlier Bush Administration, the Obama Administration made an all-inclusive obligatory Climate Bill one of its legislative priorities during its first term. However, while the so-called American Clean Energy and Security (ACES) Bill did pass the House of Representatives in June 2009,²⁴⁴ it was defeated in the Senate in June 2010.²⁴⁵ Since the failure of the ACES Bill, the Clean Air Act has become the main legal instruments for an emerging national climate policy.²⁴⁶ On 25 June 2013, President Obama announced a Climate Action Plan, outlining 75 goals in mainly three fields, including the reduction of GHG emissions, adaptation to the impacts of global warming and negotiations of a new international climate deal.²⁴⁷ As Congress is unlikely to adopt any climate legislation soon, the Climate Action Plan depends first and foremost on executive powers of the Obama Administration under existing laws such as the CAA.

The national climate policy in the US is essentially market-driven by using financial support tools to improve on low-carbon technology and renewables. The main policy instrument is the American Recovery and Reinvestment Act (ARRA) of 2009, through which the US Government offers subsidies and tax incentives of more than US\$90 billion for investment in green energy technologies, including:²⁴⁸

- Appropriating funding for numerous grant programs and tax incentives for clean energy technologies;
- A 30% tax credit for residential energy investments, as well as mandates for improved energy standards for heating facilities;
- Increasing the investments allocated to new clean renewable energy bonds and qualified energy conservation bonds;
- Investing in critical energy infrastructure by providing loan guarantees for new or upgraded electric power transmission projects, and by providing funding for the Smart Grid and new Smart Grid technologies;
- Asserting an energy efficiency leadership role for the federal Government, investing in the “green” conversion of federal facilities, and purchasing vehicles for Government use with higher fuel economy, including hybrid and electric vehicles.

Another very important incentive scheme is the Energy Improvement and Extension Act adopted in 2008, which offers a set of incentives for renewable energy production, clean coal and carbon sequestration, as well as energy-efficient transportation.²⁴⁹

Regarding the other incentive-based instrument such as cap and trade, while there is no national legislation in place, states and region have enacted legal instruments and policy measures in this field. In 2013, California launched a cap-and-trade programme, which second

²⁴⁴ CCES (2009b).

²⁴⁵ Zusman *et al.* (2012:3).

²⁴⁶ Burtraw (2011:1).

²⁴⁷ CCES (2015:1).

²⁴⁸ For more information, see US (2010:40).

²⁴⁹ Ibid:43.

in size only to the EU-ETS in terms of emissions covered, applies to large electricity generators and industrial plants and encompasses around 85% of the state's total GHG.²⁵⁰ It is the first multi-sector cap & trade instrument in North America building on lessons drawn from the northeast Regional Greenhouse Gas Initiative (RGGI) and the EU-ETS. The scheme will reduce GHG emission from plants by more than 16% between 2013 and 2020, thus making it a key element of the state's obligatory emission objective to reduce emissions to 1990 level by 2020.²⁵¹ The RGGI which was launched in 2009 as the first-ever obligatory cap-and-trade programme in the US involves 10 north-east US states.²⁵² Between 2009 and 2013, GHG emissions from power plants in the RGGI regions went down by 45% as a consequence of fuel switching to natural gas, improved use of renewables and a consumption reduction.²⁵³

With regard to carbon taxes, there is a myriad of levies on fossil fuels and other environmental taxes both at national as well as at state level including motor fuel excise taxes or excise taxes on coal as well as a variety of pollution fees, hazardous waste charges, tire disposal fees, and other assorted charges²⁵⁴; yet, while a broad carbon tax covering CO₂ and other GHGs as it is used in other countries and regions such as Australia, Sweden as well as British Columbia (Canada) is being discussed by various US economists in the past years, these discussions have thus far not led to a concrete proposal by EPA.²⁵⁵

This market-based toolkit has been complemented over the past five years by some command & control instruments which are designed and implemented by the Environmental Protection Agency (EPA), based on the Clean Air Act (CAA). The CAA formulates the broad authority of the EPA to develop regulations to mitigate harm from air pollution.²⁵⁶ Regulatory instrument issued (or at least proposed to be issued) by EPA include, *inter alia*:²⁵⁷

- National Program for GHG emissions and fuel economy standards: initially issued in 2010, imposes CO₂ and fuels efficiency standards for passenger cars and light duty trucks as from model year 2012 and covers two phases (2012-2016, 2017-2025);
- Heavy Duty National Program: initially issued in 2011, imposes fuels standard for medium to heavy duty trucks for model years 2014-2018 (phase I), whose extension to a phase II beyond 2018 has just been proposed by the EPA in June 2015;
- Other GHGs (HFS, methane): At latest as Mai 2015 EPA issued a regulation on HFC. In 2015 EPA also proposed emission standards for the oil and gas industry, agriculture, new and existing landfills and coal mines.

One of the keystones of the Climate Action Plan is the Clean Power Plan of EPA which was launched on 3 August 2015 covers GHG emission from fossil fuel and natural gas power plants.²⁵⁸ That same day EPA also issued intermediary and final emission performance standards for new, modified or existing power plants. The idea behind is to impose performance standard (in terms of rate- or mass-based goals) for each state while the latter are

²⁵⁰ CCES (2014b:1).

²⁵¹ Ibid:2.

²⁵² Burraw (2011:1).

²⁵³ Tubman (2015).

²⁵⁴ Morris (2014:13).

²⁵⁵ Ibid:11.

²⁵⁶ US (2010:44).

²⁵⁷ For more details see Tubman (2015:5).

²⁵⁸ Tubman (2015:1).

free to choose the instruments in order to implement these standards.²⁵⁹ For this, the states must develop and submit implementation plans by 2016, ensuring that the power plants in their state achieve these performance standards between 2022 and 2030.

6.2.2 Funding for Developing Countries

As with the EU, the US is committed to helping developing countries in their mitigation and adaptation efforts. Since 1991, the US Agency for International Development (USAID) has included climate change funding mechanisms in its development funding, spending approximately US\$2.6 billion on climate-related development programmes.²⁶⁰ However, in its evaluation of the Fourth US National Communication in 2009, the UNFCCC noted that US resources, which expressly target developing countries, in particular LCDs and SIDSs were modest.²⁶¹ This is mainly due to the US's 'back door' approach according to which climate goals are embedded in a wider development agenda.

Against this background, the Obama Administration passed the Consolidated Appropriations Act of 2010, which nearly tripled climate-related foreign assistance to over US\$1 billion in 2010, including a first-ever US contribution of US\$50 million to the Least Developed Country Fund and Special Climate Change Fund; a contribution of US\$375 million to the World Bank-managed Climate Investment Funds; and substantially increased funding for the USAID climate programmes.²⁶² At COP16 in Mexico in 2010, the US pledged to contribute US\$1 billion between 2010 and 2012 in aid to reduce GHG emissions from deforestation, land degradation, and other activities.²⁶³

Furthermore, in 2004, the US's Millennium Challenge Account (MCA) was launched. To date, agreements with 20 countries totalling nearly US\$7.2 billion have been signed under the MCA.²⁶⁴

6.3 BASIC Group: China

China, with its output of 8,950 Mt of carbon dioxide in 2010 alone, is the world's largest GHG emitter, accounting for 27.1% of global carbon dioxide emissions, showing an increase of 10% from 2009 (and of 257% from 1990).²⁶⁵ Coal constitutes 70% of China's primary energy – more than twice the international average.²⁶⁶

China employs mainly a 'stick' climate policy approach through a permit and tax system using various direct regulations, supplemented by some market-based instruments. Like many other developing countries, China tries to achieve its climate goals indirectly, as side effects of a general development policy (the 'back door' approach).²⁶⁷

6.3.1 Mitigation Targets?

China has participated actively in the international climate negotiations since the beginning and has ratified the UNFCCC as well as the Kyoto Protocol. However, it is important to

²⁵⁹ EPA (2015).

²⁶⁰ US (2010:77).

²⁶¹ UNFCCC (2009b:30).

²⁶² US (2010:98).

²⁶³ Ibid:99.

²⁶⁴ Ibid:102.

²⁶⁵ NEAA (2011:11, 14).

²⁶⁶ CELP (2012:1).

²⁶⁷ Lewis (2007:1).

remember that China, as a Non-Annex 1 (developing) country, did not have to take on binding mitigation targets under Kyoto.²⁶⁸

For many years, China, together with India, followed a very rigid negotiation strategy at the various COPs, rejecting each and every attempt by other Parties to commit them to setting any kind of GHG emission reduction goal, while underlining the historical liability of the industrialised nations and its own development needs.²⁶⁹ It is only since the COP13 in Bali in 2007 that China is willing to take on a more proactive role in international climate negotiations.²⁷⁰ In November 2009, China announced its intention to voluntarily reduce the intensity of CO₂ emissions per unit of GDP by 40-45% by 2020, compared with 2005 levels.²⁷¹ In January 2010, for the first time ever, China took on a mitigation goal under the Copenhagen Accord to voluntarily reduce its GHG emissions intensity by up to 45% by 2020. As opposed to the EU or the US, China hence favours an emission intensity goal (as do most developing countries) which is however perceived by many observers as less stringent than mere emission goals.

While at the COP17 in Durban in 2011, China went as far as indicating its general willingness to reflect on adopting legally binding mitigation objectives²⁷², it somewhat backpedalled in the next COPs where it led the “Coalition of Like Minded Developing Countries” which once again insist on having a strong differentiation between industrialised and developing countries in terms of their mitigation contributions. Let’s hence not forget that even though China has become the world’s largest emitter (and second largest economy in the world), it remains a developing country whose priorities focus on raising the standard of living and expanding infrastructure.

Just before the COP 20 in Lima, in November 2014, China together with the US made a joint announcement in which both countries reaffirmed the UNFCCC goal of limiting total global warming to 2°C, underlined their intention to reach a new climate deal and to work together to increase ambition over time.²⁷³ On top of its intensity goal under the Copenhagen Accord, China announced non-GHG metrics mitigation objectives:

- it intends to let its CO₂ emissions peak around 2030 and will make its best efforts to “peak early”,²⁷⁴ and
- it wants to expand the use of renewables in the energy mix to approximately 20%.

When submitting its INDC on June 2015, China confirmed the above statement but improved on the original carbon intensity goal:

- it will lower the CO₂ emission intensity by 60% to 65% from 2005 levels. To achieve this by 2030, China must reduce its carbon intensity by about 3.6% to 4.1% every year,²⁷⁵

²⁶⁸ China, an active participant in the CDM, is by far the largest source of CDM credits, accounting for over 40% of those generated to date.

²⁶⁹ Gupta (2007:167).

²⁷⁰ Oberheitmann / Sternfeld (2009:141).

²⁷¹ Xinhuanet (2009).

²⁷² Hsu (2011:2).

²⁷³ Marcu (2014:2).

²⁷⁴ Developed countries, on average, peaked at between 10 and 22 tons of GHGs per capita, when their GDP per capita was between US\$20,000 and US\$25,000 in 2010 dollars. China’s objective is to peak emissions at 8 tons GHG per capita, and US\$14,000 GDP per capita. See The Climate Group (2015:1).

- it intends to increase the forest volume by around 4.5 billion cubic meters above the 2005 level.

6.3.2 Policy Instruments

With growing political attention focused on the impacts of global warming, China's first National Report on Climate Change was issued in late 2006. In June 2007, China adopted a National Climate Change Programme, outlining a list of key measures until 2010.²⁷⁶ With this step, China became the first developing country to have an overarching climate policy strategy, hence employing a front-door policy approach.²⁷⁷

As it was to be expected China focuses on command & control instruments when dealing with climate issues: In order to achieve this voluntary mitigation goal, in March 2011, the current Twelfth Five-Year Plan (FYP12) was enacted which covers the years 2011-2015. FYP12 formulated, *inter alia*, three nationally binding goals for 2015 including:²⁷⁸

- To reduce its energy intensity (total energy consumption per unit of GDP) by 16% compared to 2010 levels;
- To lower the carbon intensity (CO₂ emissions per unit of GDP) by 2017 compared to 2010 levels;
- To increase renewables to 11.4% of total energy mix.

In order to implement the targets set out in FYP12, in July 2011 the Chinese Government issued a work plan under which the three national emission reduction targets were broken down by assigning obligatory overall energy consumption and specific CO₂ emission reduction targets to the 28 Chinese provinces, with reductions ranging from 10% to 18%.²⁷⁹ Regulatory measures to achieve these provincial targets include *inter alia*:

- Multi-sector energy efficiency standards: with the so-called “Top 1000 Enterprises Programme” of 2006 NDRC launched its regulatory flagship to increase energy efficiency in China’s 1,000 largest firms, which together consume one-third of China’s primary energy.²⁸⁰ The group includes the largest energy users in the coal, electricity, oil as well as iron and steel industry. Under the program, each enterprise will agree to an energy efficiency improvement plan and have its energy use monitored. Based upon the Energy Conservation Law of 2008 which intends to improve on multi-sector energy efficiency the NDRC adopted in 2010 regulations that oblige utilities to realize electricity savings of 0.3 percent per year, and lower peak demand by the same percentage;
- Sectoral energy efficiency standards; e.g. new commercial buildings must comply with building codes on energy use; there are also efficiency standards for household appliances;

²⁷⁵ The Climate Group (2015:1).

²⁷⁶ CCES (2007c).

²⁷⁷ CELP (2012:1).

²⁷⁸ Seligsohn / Hsu (2011:1).

²⁷⁹ Finamore (2011:1-2).

²⁸⁰ PEW (2007:2).

- Fuel standards: In 2012 China adopted a development plan for energy saving from the transport industry up to 2020, aiming at speeding up the development and roll out of more fuel-efficient vehicles.²⁸¹

Yet, over these last years China is increasingly showing an interest as to whether these command and control instruments can be supplemented with market-based instruments:

Under the FYP12, China announced its intention to gradually introduce provincial and regional voluntary carbon-trading schemes until 2015, by drawing on the experiences of international carbon-trading markets.²⁸² In July 2011, the Chinese Government announced that it would launch pilot trading schemes in six provinces by 2013. By the end of April 2015, the overall trading volume of China's pilot carbon markets amounted to 22.9 million tons CO₂ with an individual price of RMB 34.3 per ton.²⁸³ China is now intending to inaugurate a nation-wide carbon trading system in 2017 to further the deployment of clean energy and raise income to invest in low carbon transformation at a national level.

Besides launching national carbon-trading scheme, China is discussing implementing a nationwide carbon tax since the release of the FYP12²⁸⁴ but notwithstanding various public announcements, it has not done so yet. Like the US China has adopted a number of environmental taxes however: starting in 2006, the China increased export taxes on energy intensive industries by limiting export tax discounts. Other tax measures discourage the use of fossil fuels and polluting vehicles.²⁸⁵ A national natural resource tax was introduced on crude oil and gas late in 2011.

Apart from carbon trading and carbon taxes, China has also increased its financial incentives over the last years in particular for the development of green energy technology.²⁸⁶ *Inter alia*, the renewable energy law provides direct Government subsidies, e.g. the national fund to foster renewable energy development, discounted lending and tax preferences for renewable energy projects while also guaranteeing feed-in-tariffs for certain types of renewable energy.²⁸⁷ More incentives have been offered to manufacturers aiming at encouraging the production of vehicles with low-fuel consumption, hybrid and electric vehicles.²⁸⁸ Other measures include the development and accelerated use of clean coal technology and unconventional gas-oil resources such as coal-bed gas and shale gas.

7 Concluding Remarks

Regardless of the new window of opportunity stemming from the idea of a hybrid agreement thus finally overcoming the top-down vs bottom up saga of past negotiations, the success of the Paris COP 2015 is far from certain, given the existing differences between the major GHG emitters – the BASIC group, the EU, and the US. Hence, some observers argue that the issue is not the format of the international negotiations process but the on-going lack of national

²⁸¹ For manufacturers, China imposed target fuel economy standards for new cars by 2020. Consumers were offered a reduction in the vehicle tax paid on energy saving vehicles by 50%, while the vehicle tax on electric cars was abolished. See CCES (Factsheet China 2015).

²⁸² *Xinhuanet* (2011:VIII).

²⁸³ The Climate Group (2015:3).

²⁸⁴ Gera (2012:1).

²⁸⁵ Since 2008 a tax focusing on oil product consumption has been levied on refiners and importers or since 2006, an excise tax rate adjustments is used to discourage purchase of larger cars that consume more fuel.

²⁸⁶ Seligsohn / Hsu (2011:3).

²⁸⁷ PEW (2007:3).

²⁸⁸ Moarif (2012).

political will in some countries to address global warming and climate change.²⁸⁹ In addition, when looking into the INDCs submitted so far ahead of Paris, experts point out that the mitigation contributions, to date, are in fact not enough to limit the temperature increase to 1.5°C or 2°C over the course of the 21st century.

²⁸⁹

Sterk *et al.* (2011b:35).

III. AFRICA IN THE INTERNATIONAL CLIMATE NEGOTIATIONS

Nicole Bogott and Lesley-Anne van Wyk

1 Introduction

The purpose of this sub-chapter¹ is to shed light on Africa's participation in the international climate negotiations. Some of the challenges and asymmetries are noted regarding African climate policy-making within a complex and constantly changing global climate change political system.

Climate change is considered as one of the major challenges of the 21st century, posing threats to humankind, and undermining efforts to achieve key development goals including poverty reduction. It is one of the severe impediments to the attainment of the Millennium Development Goals (MDGs) and sustainable development aspirations globally, regionally and nationally for many countries. There is now sufficient scientific evidence and consensus that climate change is caused and particularly exacerbated by human activities. This is mainly through the burning of fossil fuels and changes in land use patterns due to rapid economic growth, related changes in lifestyles, rapid increases in human population, and the growing fuel and resource needs to meet these development imperatives. In addition, these may also be compounded by natural climate variability.

Climate change has and will have profound impacts on peoples' livelihoods, economic growth, and ecosystems. However, the effects and impacts of climate change on economies and societies will vary greatly over the world, and each country's circumstances, such as initial climate, socio-economic situation, and growth prospects, will define and shape the extent of climate change effects on societies, both in economic and environmental terms.² The global average (land and ocean) surface temperature shows a warming of 0.85 [0.65 to 1.06] °C in the period 1880 to 2012, based on multiple independently produced datasets.³ The global average temperature increase exceeded 0.7°C in eleven of the last twelve years (1995-2006) ranking among the 12 warmest years of global surface temperature since 1850.⁴

Developing countries are most vulnerable, particularly those in Africa, largely because of their geographic exposure, relatively small economies (meaning low adaptive capacity to climate change impacts), prevailing low levels of household incomes, and greater reliance on climate sensitive sectors such as rain-fed agriculture and ecosystem or nature based production activities (e.g. tourism).

The African continent is particularly exposed and vulnerable to adverse shifts in climatic patterns, with a dry climate in many areas and populations highly dependent on agriculture and natural resources. Africa is one of the most vulnerable continents to climate variability and change because of multiple existing stresses and low adaptive capacity. Existing stresses include poverty, political conflicts, and ecosystem degradation. Some effects are already felt in

¹ A shorter version of this sub-chapter was originally published in AMEZ / Arguments and Materials for Development Cooperation No. 16, Climate Change – Political Implications And Social Distortions.

² Stern (2006).

³ IPCC (2013:5)

⁴ Ibid.

some countries (reduced and irregular rainfall, soil degradation and degradation of other environmental assets).

The risks and the vulnerabilities of populations to climate change impacts vary across regions of the continent. Considering the generally high levels of vulnerability of many African countries (notably with regards to agriculture, food security, water security and social cohesion), Africa has a major interest in an international regime that curbs Greenhouse Gas (GHG) emissions.

The first section of this paper will provide a background on international climate negotiations. The section thereafter will summarise how the African continent has positioned itself in these deliberations in the recent past and the asymmetries of power that characterise the climate change negotiation floor. Section four of this paper offers insight into how a vast continent with diverse countries facing a variety of different challenges are making progress to unite and speak with one voice on the international climate change negotiation floor.

2 Background

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty (also known as a multilateral environmental agreement) that was opened for signature at the Earth Summit held in Rio de Janeiro in 1992 and came into force in 1994.

The ultimate objective of the Convention is to stabilise greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system. It states that such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner. To date, the UNFCCC counts 196 parties “showing near universal agreement that there is a problem and that action is required against climate change”.⁵

Countries normally negotiate as blocks of countries to strengthen their positions. It is challenging, however, to obtain a single view among the developing nations given the vast differences in circumstance, resources and potential impacts of climate change. All decisions resulting from the negotiation process, such as the Kyoto Protocol, are consensual decisions. In other words, every single word, sentence and table in the documents that constitute the Convention has been agreed by all parties. This goes some way to explaining why these decisions take years to negotiate as each country pushes its national interests.

The climate negotiations are a superb example of the way international relations are at work. Many aspects of the negotiations highlight how power is distributed and negotiated in the world. By analysing the way the international discussions were conducted in the past it becomes quite clear what kind of interests and alliances different participating parties have. At times it appears that economic and political self-interests that go beyond the issue of a clean climate are at the forefront of negotiations pushing aside the common global goal of reaching consensus for the sake of a clean environment that would benefit everyone. Numerous climate policy analysts think that more than three decades of climate negotiations show that narratives of present costs and future benefits of climate policy simply do not produce the political-will for serious emissions reductions.⁶

The world is split. On the one hand there are countries that are industrialised. The regions referred to are mainly Western nations such as European countries, the US as well as Australia.

⁵ See https://www.wmo.int/pages/themes/climate/international_unfccc.php; accessed 27 October 2015.

⁶ Jaeger (2014:6).

These have been and still are heavily polluting the planet in the course of their industrialisation. Their advantage is that it is easy for them to adapt to changes in the atmosphere. On the other hand there are industrialising countries of the global South. Some of them have the means to adapt to climate change, while others are particularly vulnerable. African countries contribute marginally towards climate change while at the same time carrying the biggest burden. This is why African negotiators emphasise their right to industrialise in negotiations. They do not want the issue of climate change to hamper their own economies to emerge.⁷ This points to one of the fundamental issues within the negotiations which is that political tensions persist between economic growth and development on the one hand, and environmental sustainability on the other.⁸

As these tensions show, more than technical solutions are required. Reaching an effective international agreement requires trade-offs between competing policy objectives.⁹ In formulating climate policies, countries face trade-offs between short-term economic objectives and long-term social and environmental sustainability goals. Developing countries in particular face such trade-offs, although in their case economic development and poverty reduction remain paramount objectives. The international community faces trade-offs between investing in mitigation and adaptation. On the basis of historical responsibilities for GHG emissions and current capabilities, countries have to determine their respective contributions to climate change mitigation, the amount of resources transferred from developed to developing countries, and the role that emerging economies should play in reducing GHG emissions and assisting poorer countries. In other words, international climate policy hinges on trade-offs and has distributional consequences that have to be negotiated.

Rapidly evolving geopolitical and economic circumstances pose challenges to the negotiating parties. The steady rebalancing of economic activity from the West to Asia and the financial and economic crises that have affected the United States (US) and European Union (EU) economies have altered the landscape of the international climate negotiations and somewhat diminished the capabilities of many developed countries to lead a global green growth policy agenda. In these circumstances, to make ambitious commitments to reduce GHG emissions, parties have to be confident that other nations will act upon their commitments and assume their fair shares of the burden. Strong, consensus-based institutions are needed to establish mutual confidence.

3 Parallels and Asymmetries: Africa in the Global Climate Change Arena

An important aspect to consider when assessing the African position in the international climate negotiations is the international framework itself the different states are operating in. The internal makeup of the negotiations can have an effect on the way the negotiations take place and what impact negotiations may have. Often the negotiations process has been completely ignored, as well as "...significant characteristics like information asymmetry, countries heterogeneity, or even the possibilities of renegotiation."¹⁰ International negotiations, especially climate change negotiations, take a great deal of time to conclude and these delays

⁷ Hoste / Anderson (2011).

⁸ De Coninck / Sagar (2014:3).

⁹ Tondel *et al.* (2015).

¹⁰ Caparros *et al.* (2004:4).

in negotiations have often been used to take advantage and to gain better knowledge of the characteristics of the opponent.¹¹

The initial situation many African countries find themselves in is an asymmetrical one. One such asymmetry pointed out by Caparros *et al.* that characterises the negotiations is the presence of asymmetry of information about the capacities of the South to reduce their emissions.¹² While many African countries are still industrialising, their contribution to climate change is as a matter of fact marginal compared to industrialised countries. At the same time, African nations carry the biggest burden when it comes to climate change because African nations are particularly vulnerable to rising temperatures.

An unanswered question for many African nations is the one of financial compensation for natural, economic and social resources that have been lost and the historical responsibility of developed countries with regard to climate change has been of emphasis by the African Union (AU) in particular.¹³ According to Caparros *et al.*, it is fortunate that the Global North, led by the European Union, “has recognized its historical responsibility … and should be ready to compensate the South in some way for accepting limitations to their urgently needed development.”¹⁴ According to Klinsky, fairness is essential in climate policy, as “parties’ ideas of fairness are likely to be rooted in geopolitical and economic desires and concerns, historical narratives, and experiences of both interdependence with and independence from others.”¹⁵

Another important factor depicting asymmetries and parallels is the way negotiating delegations from African countries are composed. According to Deressa, Africa needs to invest in increasing the number and capacity of its delegates involved in the negotiations to effectively address and represent African priorities. He suggests that African governments should organise a training and capacity-building forum for the current and potential future delegates / negotiators of the Africa Group of Negotiators (AGN).¹⁶

At the negotiations, African nations are often prone to international pressures on them that are tied to foreign aid. These tensions between domestic and collective interests at international climate negotiations are not only common to African parties but are especially reflected in African nations that focus on their own national and regional political and economic agendas rather than on the content of negotiations themselves. Hoste and Anderson exposed that “leaked diplomatic documents show American and European political and financial pressure on Africa.”¹⁷ The way in which this is done is by linking the official agreement or treaty to come of that year’s negotiation process to development efforts. As a response to international pressures, the African position at COP15 was to make sure that funds would be made available for Africa to deal with the consequences of climate change largely caused by Western nations.¹⁸ Furthermore, it has been shown that in general, Africa’s voice in international negotiations has been very limited.¹⁹ The continent has struggled to actually influence global policies to tackle challenges particular to the continent.²⁰ One of the main reasons for that is an

¹¹ Ibid:3.

¹² Ibid:19.

¹³ Hoste / Anderson (2011).

¹⁴ Caparros *et al.* (2004:2).

¹⁵ Klinsky (2014:11).

¹⁶ Deressa (2014).

¹⁷ Hoste / Anderson (2011:2).

¹⁸ Ibid.

¹⁹ Tondel *et al.* (2015).

²⁰ Deressa (2014).

internal fragmentation that becomes visible at the negotiations. Due to differentiated implications of climate change within the continent consolidation becomes more difficult. Fragmentation can be dealt with in various ways. The principle of subsidiarity could be a way forward in that all programmes and activities are undertaken at levels where they can be best handled as well as ensuring regional or transboundary initiatives add value to member states' individual interventions and actions. In this way tackling the challenge to allocate environmental issues towards the correct level of governance, as these issues are inherently complex and overlap ecological, geopolitical and sectoral boundaries.

There is a direct link between poverty and the ability to respond to climate change. When populations are extremely poor they lack the capacities to shield themselves from powerful effects of climate change such as extreme drought and flooding. The groups of people that are generally most marginalised in all societies are children, the elderly and women. Social safety nets and a greater empowerment of the poor could serve as a basis for these members of society to reduce vulnerability to climate change. One way forward as proposed by Deressa, is the integration of the poor into national or regional commodity value chains.²¹

In addition to the crippling impact of poverty on the continent, there is a strong link between addressing climate change and having existing economic development and innovation to do so. That is why the other great need for Africa is to strengthen adaptation efforts by the Convention. Madziwa calls for Africa to lobby much stronger for "enhanced support for adaptation finance, technology support and including the issue of establishing mechanisms to address the current loss and damage from extreme climatic events."²² It is therefore imperative for African countries to turn available economic pathways into sustainable ones with the assistance of developed countries.

4 Consolidating the 'African Voice'

The Africa Group of Negotiators (AGN), also known as the 'Africa Group', is a coalition of African states that works through the G77²³ in order to negotiate the best possible decisions for the continent. It is the only active regional group that participates in international environmental negotiations. It has been highlighted by experts that developing country negotiators often enter meetings and forums without clear political directives from their relevant governments.²⁴ This was a challenge until recently, when the continent strengthened its climate change architecture with positive results for the Africa group.²⁵ So typically in the current set up, countries first develop their national positions through cross-sectoral consultations and these positions are what feed up into the AGN who then consolidate positions from African parties to all Multilateral Environmental Agreements.

²¹ Deressa (2014).

²² Madziwa (undated:2).

²³ Negotiations take place among 196 parties making it impossible for countries to negotiate individually. Coalitions come together in various ways. They can be power-based such as the G77+China, which is actually 130 countries, issue-specific such as the Alliance of Small Island States (AOSIS), institutionalised or formal such as the European Union (EU), or constructed. There is no formal process for establishing these groups. Parties decide to form them, and inform the Conference of Parties (COP) Bureau, the Subsidiary Bodies (SBs) or the secretariat. They meet informally during sessions of the COP or the SBs. Their purpose is to exchange information on common issues and in some instances develop and agree on common positions.

²⁴ Richards (2001).

²⁵ Makina (2013).

The African Ministerial Conference on the Environment (AMCEN) is the current structure that guides the group and is a permanent forum where African Ministers of Environment discuss matters of relevance to the environmental affairs of the continent. The conference is convened every second year and the mandate and priorities of AMCEN are translated into a continental position which is presented to international environmental meetings by the AGN.²⁶ This group of people is tasked with representing their own country positions, the continental position, and of course that of the G77. The position known as the African Common Position on Environment and Development (Common Position) was initially adopted in 1989 and focused on poverty eradication and environment as two intertwined issues but more recently, the Committee of African Heads of State and Government on Climate Change (CAHOSCC) was formed. It is important to note that 2009 was the first time the African union (AU) presented a clear signal to the continent and the world that it had reached an African consensus on the issues of climate change, an important step given that the mandate to all representatives was now clear.²⁷

To deal with a wide range of technical matters, the Chair of the AGN (which rotates every two years) relies on ‘lead coordinators’ who represent the AGN in the various work streams of the UNFCCC (mitigation, adaptation, climate finance, technology, and so forth).²⁸ These coordinators provide guidance to the country delegations and try to harmonise their views so as to reach clear, common positions, which is a challenging task given the diversity of African countries in terms of exposure to climate change, vulnerability, culture, achieving developmental objectives.²⁹ The task of reviewing the many submissions of parties in all work streams and obtaining input from AGN members is particularly burdensome for the Chair and the lead coordinators. High staff turnover in country delegations, the lack of available experts, and language barriers further complicate the work of the AGN.³⁰

As mentioned, having to reach consensus with all the stakeholders present can pose a serious challenge in the speed and efficiency of the negotiations themselves. It can be very difficult to get consensus from all 196 parties. This leads to further fragmentation in negotiation groups, in which certain states again gain a greater leverage by being part of many sub-negotiations. Abusing the notion of reaching consensus is luckily not the case for African nations, who have not exploited these diplomatic opportunities as other nation-states have. Yet African nations are also impacted by the behaviours of other nations.

Another challenge towards successful negotiations is the absence of an international enforcement body. “The absence of an international enforcement body has left promises made in most of these international agreements largely unfulfilled.”³¹ Equally, the absence of binding targets for developing countries was one of the main arguments used by President Bush to reject the Kyoto Protocol.³² “... The US was not supportive of Ethiopia’s proposal for a panel to monitor financial pledges regarding climate change.”³³

Another issue when it comes to the international framework is that the negotiations are led by states only. Yet there are other transnational polluters such as transnational corporations

²⁶ UNEP (2009).

²⁷ Hoste (2009); AU / AMCEN (2009).

²⁸ Tondel *et al.* (2015:12).

²⁹ Ibid.

³⁰ Makina (2013).

³¹ Madziwa (undated:4).

³² Caparros *et al.* (2004).

³³ Hoste / Anderson (2011:2).

(TNCs), which have to be taken into account in any serious effort towards a cleaner environment. Jaeger suggests the establishment of green growth clubs, which includes a formal status for transnational clusters of heterogeneous agents (governments, businesses, trade unions, NGOs, universities etc.) jointly pursuing a non-climate goals in such a way as to reduce GHG emissions.³⁴

5 Conclusion

Given the complexities of international climate negotiations and the interacting continental dynamics in Africa, a multi-level focus that incorporates national level analysis of the policy context within which climate change responses are enacted is needed.

³⁴

Jaeger (2014).

IV. REVIEW OF THE CLIMATE CHANGE SITUATION IN NAMIBIA: PROJECTED TRENDS, VULNERABILITY AND EFFECTS

Isaac Mapaure

1 Introduction

Climate change is one of the biggest challenges and threats that humanity has ever faced. It has been acknowledged as “one of the greatest challenges of our time” by the United Nations. The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”.¹ This definition slightly differs from the definition of the Intergovernmental Panel on Climate Change (IPCC), which refers to climate change as “a change in the state of the climate that can be identified by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer”.² The IPCC’s definition therefore refers to any change in climate over time, irrespective of the causes, whether due to natural variability or anthropogenic causes.

Climate change has largely resulted from anthropogenic influences on the climate system. In 2014, the IPCC reported that human influence on the climate system is clear, and that recent anthropogenic emissions of greenhouse gases are the highest in history. These influences have had widespread impacts on human and natural systems. These impacts necessitate global actions to mitigate its causes, adapt to, and cope with the impact thereof. These actions are being taken through commitments to international instruments such as the United Nations Framework Convention on Climate Change and the Kyoto Protocol.³ It has been acknowledged that a certain amount of climate change is apparently unavoidable, regardless of reductions in emissions, thus necessitating adaptation.⁴ Human adaptation to a changing environment has been going on for millennia, but the current scenario calls for a sense of urgency.⁵

Namibia ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995 as a Non-Annex I Party. Namibia therefore has an obligation to submit information in accordance with Article 4, paragraph 1 of the UNFCCC. Such Reports include the National inventory of anthropogenic greenhouse gas (GHG) emissions by sources and removals by sinks GHGs, and also National Communications to the Convention. Namibia acceded to the Kyoto Protocol in 2003. The Kyoto Protocol is an international agreement that sets binding targets for industrialised countries (Annex 1 countries) to reduce greenhouse gas emissions to an average of 5% against 1990 levels over a five-year period, between 2008 and 2012. Namibia’s Initial National Communication (INC) to the Conference of Parties of the UNFCCC was submitted in 2002⁶ in accordance with decisions taken at various COPs to the UNFCCC.

¹ UN (1992).

² IPCC (2007a).

³ UN (1998).

⁴ IPCC (2007a).

⁵ Nielsen / Reenberg (2010).

⁶ GRN (2002d).

The Second National Communication (SNC) was submitted in 2011.⁷ The Third National Communication is due to be submitted by the end of 2015. However, with the adoption of the Cancun Agreements at COP16 in 2011 held in Mexico, the reporting by non-Annex I Parties in national communications, including national GHG inventories, should also include information on mitigation actions, their effects and support received. Such Parties should also submit Biennial Update Reports (BURs). Thus, Namibia submitted its first BUR in 2014.⁸ According to the requirements, BURs should contain updates on national GHG inventories, information on mitigation actions, needs and support received and institutional arrangements done by the Party, and should be submitted every two years. The Ministry of Environment and Tourism (MET) through the Directorate of Environmental Affairs (DEA), Division of Multilateral Environmental Agreements, is responsible for overseeing the coordination of climate change issues in Namibia.

Despite its insignificant contributions to greenhouse gas emissions, southern Africa is very susceptible to the impacts of climate change, including sea level rise, increased frequency and intensity of extreme weather events such as floods and droughts. Southern Africa is already a largely water-stressed region, with high frequencies of drought. Climate change is exacerbating this problem, considering that the region's susceptibility in the agricultural sector is rooted in its widespread rain-fed agriculture.⁹ The vulnerability of the region's agricultural sector to climate change has been well documented in, amongst others, the National Communications to the UNFCCC (e.g. Botswana (2001), Mozambique (2003), South Africa (2000) and Zimbabwe (1998)). Moreover, scientific modelling suggests that southern Africa will be hit harder by climate change than most regions of the globe, becoming hotter and drier.¹⁰

In many countries of the region, close to 70% of the population lives in rural areas where their direct dependence on the natural ecosystem with its goods and services is high. The impacts of climate change are more pronounced in these rural communities, who are often poor and marginalised. Their livelihood is largely dependent on agriculture. Studies have identified seven sectors where Namibia is most vulnerable to climate change. These include water resources, marine resources, agriculture, biodiversity and ecosystems, coastal zones and systems, health, and energy. Therefore, Namibia has to take measures and actions designed to mitigate the effects of climate change and to enable communities to cope with and adapt to its effects.

This section of the chapter highlights the projected changes in climate in southern Africa and place Namibia in this context. The vulnerability of Namibia to climate change and its effects on various sectors of the economy and on biodiversity are also highlighted. Measures taken by the Namibian Government and other stakeholders to deal with the challenges of climate change are also summarised.

2 Namibia's Contribution to Greenhouse Gas Emissions

Parties to the United Nations Framework Convention on Climate Change (UNFCCC) are categorised into three main groups according to differing commitments. Thus, certain groups of developing countries are recognised by the UNFCCC as being especially vulnerable to the adverse impacts of climate change, including countries with low-lying coastal areas and those prone to desertification and drought. These are classified as non-Annex 1 countries. Most

⁷ GRN (2001a).

⁸ GRN (2014).

⁹ CEEPA (2006); IPCC (1997); Hulme (1996).

¹⁰ IPCC (2007a); DEAT (2007).

developing countries, including Namibia are categorised as non-Annex 1 countries. According to the UNFCCC process, for countries in this category the baseline values for greenhouse gas (GHG) emissions is pegged at 1994 as the base year. The IPCC Guidelines¹¹ require that emission estimates should be compiled for the sectors of Energy, Industrial Processes and Product Use (IPPU), Agriculture, Forestry, and Other Land Use (AFOLU) and Waste.

The abundant scientific literature on the subject indicates clear evidence that the global climate has changed and will continue to change over the next century, both globally and locally, due to increased concentrations of greenhouse gases in the atmosphere. These increases are mainly due to human activity, most notably the use of fossil fuels. IPCC (2001) reported that Africa's contribution to greenhouse gas emissions is insignificant, being 50-100 times less than Europe's and 100 to 200 times less than America's. Just like many other countries in southern Africa, except South Africa, Namibia's contribution to greenhouse gas emissions is insignificant.¹²

Namibia neither produces fossil fuels of its own, nor refines any fossil fuels though explorations have been taking place. Therefore, only fossil fuel consumed and combusted in the country was used to estimate emissions in the energy sector under Fuel Combustion Activities.¹³ The Namibian economy is not energy-intensive, as it relies primarily on agriculture, fisheries and mining without much secondary processing.¹⁴ Du Plessis¹⁵ did a greenhouse gas emissions inventory for 1994, while Hartz and Smith¹⁶ did a comprehensive review of the greenhouse gas inventory of Namibia for 2000 and compared this with the inventory of 1994. They analysed anthropogenic sources and sinks for greenhouse gases from energy industries, manufacturing industries and construction, the transport sector, the commercial/institutional sector, the residential sector, agriculture, fishing, forestry and other sectors. They compared greenhouse gas emissions of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) for 1994 and 2000 per sector. The recent analysis indicated that Namibia remained a net GHG sink in 2010.¹⁷ In fact, the sink capacity increased despite a widening of the scope of analysis compared to the year 2000 and 1994. The net removal of CO₂ reached 22,895.53 Gg. Total CH₄ emissions was 204.86 Gg, N₂O stood at 6.81 Gg while the indirect GHGs nitrogen oxides (NOx), carbon monoxide (CO), non-methane volatile organic compounds (NMVOCs) and sulphur dioxide (SO₂) were at 35.07, 314.92, 34.05 and 3.76 Gg respectively.¹⁸

The energy sector produced 2200 Gg CO₂-equivalents in 2000 compared to 1905 Gg CO₂-equivalents in 1994.¹⁹ However, in 2010, the Energy sector emitted 2,561.49 Gg, the Industrial Processes and Product Use (IPPU) sector 2,220.98 Gg and the Waste sector 2.47 Gg.²⁰ The transport sector is a significant emitter of CO₂ (about 50% of total national CO₂ emissions in 1994) because of the great distances travelled in order to distribute goods and services within

11 IPCC (2006).

12 GRN (2002d); Hartz / Smith (2008).

13 GRN (2014a).

14 GRN (2002d).

15 Du Plessis (1999).

16 Hartz / Smith (2008).

17 GRN (2014a).

18 Ibid.

19 GRN (2002d).

20 GRN (2014a).

the country. This is quite clear in the energy review for Namibia done by Capôco et al.²¹ The agricultural sector contributed 6,738 Gg CO₂-equivalents in 2000 compared to 3,712 Gg CO₂-equivalents in 1994 while the energy sector contributed 2,200 Gg CO₂-equivalents in 2000 compared to 1,905 Gg CO₂-equivalents in 1994. As Namibia cultivates only a very small amount of rice in flooded fields (which has potential for significant methane production), it means the major sources of methane are domestic livestock (more from enteric fermentation in livestock and less from manure management), burning of the veld, burning of agricultural residues and CH₄ from agricultural soils. Methane accounted for emissions of 4,302.1 Gg CO₂-eq, CO₂ for 4,784.9 and N₂O for 2,109.9 Gg CO₂-eq. The important sink (27,680.46 Gg) of CO₂ that the sector AFOLU represents shifted the net balance to make Namibia a net sink of 16,483.49 Gg CO₂-eq for 2010. Emissions of NO₂ are small and mostly derived from the burning of savannas. Recent analyses now show that the Agriculture, Forest and Other Land Use (AFOLU) sector was a net sink of 27,680.47 Gg CO₂ in 2010.²² Waste contributed 180 Gg CO₂-equivalents in 2000 while the 1994 value stood at 63 Gg CO₂-equivalents. Methane emission by 2010 indicated that in general the AFOLU sector topped the different sectors for CH₄ with 194.79 Gg followed by the Waste sector with 6.89 Gg, the Energy sector with 3.11 Gg and IPPU with 0.07 Gg.²³ The Agriculture, Forestry and Other Land Use sector emitted 95% of the total 204.86 Gg of CH₄ followed by the Waste and Energy Sectors.

It is clear that greenhouse gas emissions in Namibia have increased between 1994 and 2000. However, land-use change and forestry have had the effect of removing CO₂ with values of -10,560 Gg CO₂-equivalents and -5,716 Gg CO₂-equivalents in 2000 and 1994, respectively. Thus, there has been a net effect of -1,442 Gg CO₂-equivalents in 2000. With the data given above for 2010, this means that Namibia has been a net sink of CO₂. Vegetation growth captures CO₂ and increases the rate of transpiration. The clearing of vegetation has the opposite effect. Namibia has a significant land area that is bush encroached by species such as *Acacia mellifera*, *Terminalia sericea*, and *Dichrostachys cinerea*. Bush encroachment results from commercial ranching practices which lead to overgrazing and upsetting the natural balance between woody plants and grasses such that the woody component proliferates. Though agriculturally undesirable, the impact of bush encroachment is highly significant for Namibia's greenhouse gas emissions profile because bush-encroached areas serve as huge sinks for CO₂. It remains to be seen how the on-going de-bushing programmes will impact this situation.

In the final analysis, therefore, it is clear that Namibia contributes little to global greenhouse gas emissions. Instead, Namibia is estimated to be a net sink for CO₂, in 1994, in 2000 and in 2010, mainly due to increasing woody biomass in the rangelands due to bush encroachment. The Table below presents an overall comparison of the aggregated emissions by Sector and by GHG²⁴ and serves to emphasise the fact that Namibia is a net sink.

²¹ Capôco et al. (2007).

²² GRN (2014a).

²³ Ibid.

²⁴ Adopted from GRN (2014a).

**REVIEW OF THE CLIMATE CHANGE SITUATION IN NAMIBIA:
PROJECTED TRENDS, VULNERABILITY AND EFFECTS**

SECTOR	1994	2000	2010
Energy	1,905	2,200	2,667
IPPU	5	Not estimated	2,335
AFOLU (combined with Agriculture)	-2,004	3,829	-21,663
Waste	63	180	177
Total	-31	-1,443	-16,484
GAS			
CO ₂	1,826	2,014	4,785
CH ₄ (in CO ₂ -eq)	3,549	6,758	4,302
N ₂ O (in CO ₂ -eq)	310	341	2,110
Total GHG Emissions	5,685	9,123	11,197
Removals (CO ₂)	-5,716	-10,566	-27,680
Net GHG Emissions	-31	-1,443	-16,484

3 Climate Trends and Predictions

Future trends in climate are predicted using modelling approaches based on past and present patterns. There are several climate models used worldwide but all of them provide the basis for projections of future climate change scenarios, the most used being General Circulation Models (GCMs). The IPCC's Fourth Assessment Report²⁵ discusses and evaluates these models at length while the IPCC Fifth Assessment Report highlights the current situation and future trends in global climate. The heterogeneity in the new generation of climate models and an increasing emphasis on estimates of uncertainty in the projections raise questions about how best to evaluate and combine model results in order to improve the reliability of projections.²⁶ GCMs work on a spatial scale of 200-300km, therefore this limits their projections for changes at a local scale.²⁷ Nevertheless, GCMs remain a fundamental tool used for assessing the causes of past change and projecting changes in the future.

There is undisputed evidence for climate change at global level, much of which is attributed to human activity. However, understanding how global climate change may manifest itself at the local level is still a challenge.²⁸ At a global level, it is widely recognised that there has been a detectable rise in temperature over the last few decades. This rise in temperatures cannot be explained unless human influence is taken into account.²⁹ The regional distribution of temperature increases is not uniform; some regions have experienced greater change than others.³⁰ Globally, the rate of average temperature increase has been quicker during the latter half of the 20th century than before. This increase in the rate of change is expected to continue, potentially resulting in more rapid changes of climate in the future.³¹ Surface temperature is projected to rise over the 21st century under all assessed emission scenarios in GCMs.³² This will result in more frequent heat waves which will last longer, and that extreme precipitation

²⁵ IPCC (2007a).

²⁶ IPCC (2010).

²⁷ DRFN / CSAG (2010).

²⁸ Ibid.

²⁹ IPCC (2001).

³⁰ DRFN / CSAG (2010).

³¹ Ibid.

³² IPCC (2014a).

events will become more intense and frequent in many regions. The ocean will continue to warm and acidify, and global mean sea level to rise. In fact, the IPCC warns that continued anthropogenic emissions of GHGs will cause further warming and long-lasting changes in all components of the climate system which would increase the likelihood of severe and irreversible impacts for people and ecosystems.³³

There is greater variability in global rainfall, therefore changes in rainfall are harder to detect, both spatially and temporally. Changes in global rainfall patterns have been detected in many parts of the globe. In southern Africa, there have been moderate decreases in annual rainfall and there have also been detectable increases in the number of heavy rainfall events in the region.³⁴ Trends also indicate an increase in the length of the dry season and increases in average rainfall intensity,³⁵ suggesting a shorter but more intense rainfall season. Other aspects of global change are increases in intensity and spatial extent of droughts since the mid-1970s; increases in the duration of heat waves during the latter half of the 20th century; shrinking of arctic ice caps since 1978; widespread shrinking of glaciers, especially mountain glaciers in the tropics; increase in upper ocean heat content; increases in sea level at a rate of 1.8mm per year between 1961 and 2003, with a faster rate of 3.1mm per year between 1993 and 2003.³⁶

There is only a limited amount of studies detailing historical climate trends involving Namibia. Due to the arid nature of the country, natural variability is extremely high and is complicated by decadal variability.³⁷ There is evidence that changes in temperatures in Namibia have followed global trends as described above. There has been a tendency for warmer temperatures in the latter half of the 20th century, which is generally 1-1.2°C warmer than at the beginning of that century. However, this magnitude of warming is greater than the global mean temperature change,³⁸ which is worrisome for Namibia. An increase of 1°C generally implies an increase in evaporation of 5%. Some literature put it at a maximum temperature increase of 2-6°C in the interior of the country.³⁹ For a country with already high evaporation rates (reaching more than 2,660mm per annum in some areas) this has serious consequences, as will be discussed in a separate section below.

Meteorological data for 25 years from the Namibia Meteorological Services indicates that there have been consistent increases in daily maximum temperatures at seven stations (Lüderitz, Keetmanshoop, Windhoek, Hosea Kutako International Airport, Sitrusdal, Grootfontein and Okaukuejo).⁴⁰ The frequency of days with maximum temperatures above 25°C has significantly increased over this period. Midgley *et al.*⁴¹ examined long-term temperature and rainfall records from 15 weather stations that had data with durations of between 25 and 60 years in Namibia and the Northern Cape (South Africa), and 53% of the stations showed significant increases in temperature over their recording period, while none showed a significant decline. There has also been a decrease in the frequency of days with minimum temperatures below 5°C.⁴² Modelling changes in temperature in Namibia suggest a

³³ Ibid.

³⁴ IPCC (2007a).

³⁵ New *et al.* (2002).

³⁶ IPCC (2007a).

³⁷ DRFN / CSAG (2010).

³⁸ Midgley *et al.* (2005).

³⁹ GRN (2010d).

⁴⁰ DRFN / CSAG (2010).

⁴¹ Midgley *et al.* (2005).

⁴² DRFN / CSAG (2010).

minimum towards the coast and an increase further inland during all seasons, with minimum expected increases during summer of 1-2°C and maximum changes of 2-3.5°C.⁴³ Generally, it is predicted that Namibia will become hotter with predicted increases in temperatures of between 1°C and 3.5°C in summer and 1°C to 4°C in winter over the period 2046-2065.⁴⁴

Rainfall patterns are a bit difficult to decipher compared to temperatures. The long-term rainfall records for Namibia (1915 to 1997) suggest an overall national mean of 272mm. In the period from 1981 to 1996 only two of the 16 years had rainfall above this mean.⁴⁵ The variation in rainfall year-to-year is extremely high (in excess of 30% everywhere in the country, rising to 70% in southern Namibia and 100% in the Namib Desert). DRFN and CSAG⁴⁶ reported that there are no obvious trends in rainfall patterns over a 100-year period, between 1901 and 2000 in Namibia. However, there have been significant increases in the length of the dry season and decreases in the number of consecutive wet days in some areas. The onset of the rainy season is delayed in the north and the end of the rains is earlier than before.⁴⁷ Using different climate modelling scenarios, for the winter period, the lower estimates of change suggest a drying in the south and wetting in the north, whilst upper estimates of change suggest a wetting over most of the country except in the far southwest where reduced rainfall is projected.⁴⁸ During summer, the lower estimate of change suggests drying over most of the country except for an increase in rainfall over the coastal regions.

Recent experiences by local communities combined with meteorological data confirm real changes in climate patterns over the last few decades in Namibia. Delayed on-set of the rainy season and the shortening of the growing season have been reported. There have been unbearably hot summer temperatures and more frequent droughts. Communities in the northern and north-eastern parts of the country have experienced more severe flooding which has caused significant suffering among local communities. Nunes *et al.*⁴⁹ conducted a study in Ohangwena where communities reported variability in rainfall patterns characterised by high intensity of rainfall over a shorter period of time, late coming of the rain, quick disappearance of surface water, less cold winters than before and much stronger and hotter summer sun. These trends in rainfall and temperature patterns, observed by communities in northern Namibia, were confirmed through trend analysis by Mitchell *et al.*⁵⁰ of the period 1900 to 2000.

4 Potential Impacts of Climate Change

4.1 Projections

Arid environments are areas that receive less than 250mm of rain per annum, semi-arid environments receive between 250mm and 500mm and hyper-arid environments receive less than 100mm per annum. In Namibia, annual rainfall is low and highly variable between years, ranging from an average of 25mm in the southwest to 700mm in the northeast. Thus, the greatest proportion of the Namibian environment is arid to semi-arid. The coefficient of

⁴³ Ibid.

⁴⁴ GRN (2011b).

⁴⁵ GRN (2002d).

⁴⁶ DRFN / CSAG (2010).

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Nunes *et al.* (2010).

⁵⁰ Mitchell *et al.* (2004) in Midgley *et al.* (2005).

variation of rainfall is also very high, ranging from 25% in the northeast to more than 80% along the coast in the west. Not only does Namibia receive little rain, it also experiences high rates of evaporation due to high solar radiation, low humidity and high diurnal temperatures. This makes the arid nature of the country even worse because the availability of water to plants, animals and humans is limited. It is estimated that only about 1% of rainfall ends up replenishing the groundwater aquifers.⁵¹ This makes the Namibian environment harsh for most organisms, including people. This aridness of the country is caused by weather patterns prevailing in regions with oceanic cold currents – the cold Benguela Current that flows north along the west coast – and situated between 20° and 30° North and South, where dry air of the Hadley Cells descends.

Global climate change has resulted in changes to the normal patterns of weather and climate in Namibia, causing significant stress on various economic sectors of the country. The natural conditions described above make Namibia very susceptible to the effects of climate change because it is already a stressed system. In general, most countries in southern Africa are vulnerable to climate change effects but to varying degrees depending on local conditions. The likelihood that an individual or group of people will be exposed to, and will be adversely affected by new climatic circumstances, depends on the characteristics of the individuals or groups in terms of their capacity to anticipate, cope with, resist and recover from the impacts of environmental change.⁵² The capacity to adapt to climate change varies among regions and socio-economic groups in the sense that those with the least capacity to adapt are generally the most vulnerable. This also depends on the resources available for mitigation and adaptation.⁵³ Africa will be negatively affected by climate change, more so because of the poor socio-economic conditions which exacerbate the vulnerability of the continent's population. This is particularly so because vulnerability to environmental change does not only depend on changes in frequency or duration of climatic conditions but also on the capacity to respond adequately to those changes.⁵⁴ Poverty and prevailing levels of income disparity influence the resource base of households and this determines the resilience of households to deal with impacts of climate change. Africa's capacity to respond is severely hampered by lack of resources. Climate change will affect the attainment of the Millennium Development Goals (MDGs), particularly the goals concerning the eradication of extreme poverty and hunger, reducing child mortality, combating disease, and ensuring environmental sustainability.⁵⁵ There is no doubt that climate change will also affect the attainment of the recently adopted United Nations Sustainable Development Goals (SDGs) for the same reasons. Namibia's situation is not very different from neighbouring southern African countries. If anything, the local environmental conditions make Namibia even more vulnerable. Namibia is an upper-middle-income country with US\$4,820 per capita GDP,⁵⁶ with about 19.5% of households living in poverty⁵⁷. There are considerable income disparities as reflected by the Gini-coefficient of 0.5971.⁵⁸ Being a country that is highly dependent on its natural resource base of minerals, fisheries, agriculture

⁵¹ GRN (2002d).

⁵² Galvin *et al.* (2004).

⁵³ DRFN / CSAG (2010).

⁵⁴ Ibid.

⁵⁵ Galvin *et al.* (2004).

⁵⁶ World Bank, Country Brief Namibia at <http://go.worldbank.org/1B6KN88H10>; accessed 15 October 2015.

⁵⁷ NSA (2012:156).

⁵⁸ Ibid:xi.

and wildlife, coupled with variable rainfall, frequent droughts and reliance on subsistence agriculture, Namibia is highly vulnerable to climate change.

DRFN and CSAG⁵⁹ critically reviewed the vulnerability of Namibia to the effects of climate change. They compared mainly the Zambezi and Karas regions, in the northeast and south, respectively. These two regions differ in their average climatic conditions and livelihood systems. Zambezi receives higher rainfall than Karas. Livelihood systems in Zambezi are based on subsistence-oriented maize cultivation, which is combined with a small number of goats and cattle for domestic purposes, approximately supporting 12,000 farming households.⁶⁰ Livelihoods in Zambezi used to be flexibly organised around seasonal movement of water but nowadays the region is considered vulnerable to flooding of wetlands.⁶¹ In Zambezi natural shocks such as floods for those living in low-lying wetlands, droughts and climate change, livestock diseases and pests are factors that make people vulnerable. Alcohol abuse enhances people's vulnerability considerably.⁶² In 2009, close to 700,000 people were either directly or indirectly affected by floods in the north and north-eastern parts of Namibia which cost an estimated N\$1.7 billion (1% of GDP) worth of damages and losses, both public and private.⁶³ On the other hand, natural conditions and livelihood systems in southern Namibia are very different from Zambezi. Rural production is dominated by raising small stock such as goats and sheep. In the Karas Region, vulnerability is related to loss of employment, disability and sickness (including HIV and AIDS), having many dependents and orphans.⁶⁴ Overall, it is predicted that there will be a 10% decrease in rainfall in the northern and southern regions of Namibia, and a 20% decrease in the central regions, by 2050, and that these figures will worsen to 20% and 30% respectively by 2080.⁶⁵

A number of sectors of the Namibian economy were identified as being the most vulnerable to the effects of climate change, namely agriculture, biodiversity and ecosystems, coastal zone, health, marine resources and water. These are discussed below.

4.2 Agriculture

Agricultural production is closely linked to climate, especially precipitation and temperature. The Namibian climate is characterised by semi-arid and hyper-arid conditions and highly variable rainfall (though about 8% of the country is classified as semi-humid or sub-tropical). These conditions alone pose a great challenge to agricultural production in the country. Yet, agriculture is the 6th largest contributor to GDP. The sector contributes 4.5-7% to GDP but supports over 70% of the population.⁶⁶ The Namibia Agronomic Board⁶⁷ reports that the contribution of this sector has been declining in recent years for reasons that may include impacts of climate change. 56.7% of Namibians live in rural areas⁶⁸ and the main basis for their livelihoods is subsistence agriculture⁶⁹. Newsham and Thomas noted that smallholder

⁵⁹ DRFN / CSAG (2010).

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Ibid.

⁶³ GRN (2009b).

⁶⁴ DRFN / CSAG (2010).

⁶⁵ GRN (2010d).

⁶⁶ GRN (2011a:3).

⁶⁷ NAB (2006).

⁶⁸ NSA (2012:22).

⁶⁹ NSA (2012:56).

farming is an important source of livelihood for the majority of Namibians living in rural areas.⁷⁰ However, some urban dwellers are also full-time, part-time or weekend farmers. Crop production plays an important role in household food security, particularly in the northern parts of the country where pearl millet (mahangu) is a subsistence dry-land crop and a major staple food. However, mahangu harvests have been affected by extensive flooding and poor yields in the last few years,⁷¹ an indication of possible impacts of climate change on crop production. Maize, wheat, rice and other grains and horticultural crops are also produced. Livestock production (especially cattle, goats and sheep) is the driver of the agricultural economy, with meat being a major export of Namibia.

There have been attempts to model the potential impacts of climate change on agricultural production,⁷² but such attempts have been constrained by the lack of reliable data (in some cases) as well as the inherent uncertainties within the General Circulation Models (GCMs) themselves when applied to a local scale. A modelling attempt for Rundu, in the Kavango East Region, has indicated that the number of days exceeding 34°C during the six hottest months of the year will increase from 67 to 118 between 2046 and 2065.⁷³ This means that even a hardy crop such as mahangu will struggle to withstand such prolonged dry periods. Current climatic trends suggest a shorter growing season with a late onset of the rains and an early cessation of the rains. This will significantly impact on agricultural production.

During the 2008/9 season, the Agronomic Board of Namibia⁷⁴ observed that “floods and droughts can easily occur simultaneously and even within close geographic proximity, as we have seen for the past few years”. They contend that grain production, especially mahangu surplus production, could seriously be hampered if solutions in terms of crop insurance, production methods, cultivars, alternative crops, and financing schemes are not found. These are not encouraging signs as climate projections indicate that the growing season will start later than usual in the northeast, with onset of rains delayed by about half a day per year (meaning that currently the season starts about 20 days later than during the last century). This indicates early cessation of the growing season and significant negative impacts on the agriculture sector.⁷⁵

The livestock subsector will also be negatively affected by climate change. Grazing rangelands are affected by alterations in precipitation regimes, temperature and atmospheric concentrations of CO₂. All these factors affect net above-ground primary productivity (NPP). There is likely going to be shifts in ratios of C3/C4 species of grasslands, changes in evapotranspiration and run-off and changes in forage quality. If the quantity and quality of NPP is reduced as predicted, then cattle production will also decline. Changes in climate will lead to alterations in the boundaries between rangelands and other biomes such as deserts and forests through shifts in species composition and indirectly through changes in wildfire regimes and opportunistic cultivation. Midgley *et al.*'s⁷⁶ modelling analysis projected significant changes in vegetation structure and function in several areas of Namibia by 2080, where arid vegetation types will increase in cover by almost 20% by 2050, and up to 43% by 2080 in the absence of CO₂ fertilisation effect.

⁷⁰ Newsham / Thomas (2009).

⁷¹ NAB (2006).

⁷² Dirkx *et al.* (2008).

⁷³ Ibid.

⁷⁴ NAB (2009).

⁷⁵ DRFN / CSAG (2010).

⁷⁶ Midgley *et al.* (2005).

Heat and water stress on livestock will lead to decreases in feed intake, milk production and rates of reproduction.⁷⁷ Higher average temperatures have been reported to reduce conception rates in cattle, largely due to the positive correlation between high rectal temperatures and lower fertility rates, and partly as a consequence of appetite-suppressing tendencies of heat stress.⁷⁸ Changes in climate may affect the distribution of livestock diseases as well as the timing of their outbreaks or their intensity. For vector-borne diseases, the distribution patterns of the vectors may be altered by changes in temperature and rainfall, thus influencing potential distribution of diseases. It is reported that climate appears to be more frequently associated with the seasonal occurrence of non-vector borne diseases than their spatial distribution.⁷⁹ The changes that may be necessary in Namibian farming systems to enable adaptation to climate change were discussed by Kuvare *et al.*⁸⁰

4.3 Biodiversity, Ecosystems and Tourism

Despite the harsh arid climatic conditions described above, the Namibian landscape supports a remarkable biodiversity, especially its plant species. More than 4500 plant taxa have been recorded,⁸¹ almost 700 of which are endemic to the country, and a further 275 of which are Namib Desert endemics shared with southern Angola.⁸² The endemism of plant species is concentrated in five centres, namely the Kaokoveld in the northwest, the Otavi highland in the Kalahari basin in the east, the Kavango regions in the northeast, the Auas Mountains on the western edge of the central plateau, and the succulent-rich southern Namib.⁸³ These landscapes and biodiversity are important tourist attractions for the country.

The natural ecosystems of Namibia are also vulnerable to climate change, given that the biodiversity of neighbouring South Africa has been found to be vulnerable to climate change because the two countries share similar bio climates (southern regions of Namibia and north-western South Africa), and they possess similar biome types. Before Midgley *et al.*'s⁸⁴ assessment, there had been no previous quantified assessments of vulnerability of plant biodiversity to climate change in Namibia. Projections for warming and drying are harsh for central and western parts of southern Africa, with extreme warming centred on Botswana.⁸⁵ Terrestrial areas that are particularly vulnerable to climate change are the western escarpment and the south-western succulent Karoo.⁸⁶

Midgley *et al.*⁸⁷ used a dynamic global vegetation model (DGVM) to explore the effects of climate change on ecosystem structure, function and dominance of plant functional types in Namibian ecosystems. The main plant functional types they analysed were broad categories such as C4 grasses, deciduous trees and C3 herbaceous and shrub types. Elevated CO₂ levels that may result from anthropogenic causes potentially increase the water-use and nutrient-use

⁷⁷ DRFN / CSAG (2010).

⁷⁸ Newsham / Thomas (2009).

⁷⁹ Ibid.

⁸⁰ Kuvare *et al.* (2009).

⁸¹ Barnard (1998).

⁸² Maggs *et al.* (1998).

⁸³ Maggs *et al.* (1994).

⁸⁴ Midgley *et al.* (2005).

⁸⁵ IPCC (2001).

⁸⁶ GRN (2010d).

⁸⁷ Midgley *et al.* (2005).

efficiency of plants that use the C3 photosynthetic pathway,⁸⁸ and this will favour woody plants with a high degree of investment in carbon-rich support tissue (such as trees) relative to herbaceous species.⁸⁹ Seven vegetation structural classes are defined as occurring in Namibia under the current and future conditions by the DGVM, namely desert, arid shrub land/grassland, grassy savanna, mixed savanna, woody savanna, mixed shrub land/grassland and C3 shrub land/grassland. Projections of impacts on total vegetation cover were monitored through analyses of changes in bare ground and leaf area index (LAI).

Results of projections of the impacts of climate change on biodiversity indicated a reduction in vegetation cover over the central highlands by 2050, with further reductions to 2080. The greatest absolute cover reductions are projected for the Kaokoveld region in the extreme northwest, and in the Kalahari basin in the southeast, with less significant reductions recorded at higher altitudes in the central highlands. Midgley *et al.*⁹⁰ also showed that direct effects of rising atmospheric CO₂ on total cover were not significant and projected changes in LAI were more diverse, indicating significant reductions in areas of highest decrease in vegetation cover as expected. However, such areas are of limited spatial extent, and much of the country is projected to experience LAI changes of between +10% and -10%. There will be an expansion of the two most arid vegetation types, desert and arid shrub land/grassland, mainly at the expense of grassy savanna and mixed savanna vegetation types. The arid vegetation types are projected to increase by almost 20% by 2050, and up to 43% by 2080, in the absence of a CO₂ fertilisation effect, but with CO₂ amelioration, the expansion of desert in 2080 is reduced from 43% to just less than 30%.⁹¹

The current vegetation is dominated by grassy savanna but this is projected to decline substantially by 2050, with significant cover and biomass reductions in the central highlands and north-eastern plains, a scenario which will be exacerbated by effects of elevated CO₂ by 2080. The effect of elevated CO₂ is by facilitating the increase of currently relatively scarce C3-dominated vegetation types, woody savanna, mixed grassland, and C3 grassland/shrub land. This means that currently uncommon vegetation types will become widespread in the north-eastern part of the country, suggesting a strong potential for bush encroachment in these regions. In addition, the potential fire frequency is predicted to increase somewhat in the northeast region under the elevated CO₂ scenarios only. The distribution of deciduous trees will also decline in extent – they will suffer a reduction in both biomass and cover throughout their current range, showing a general retreat towards the north-eastern Kalahari. Projections also suggest that NPP will be significantly reduced by between 0.5 and 1t/ha in the central-north-western regions and by up to 0.5t/ha in the north-eastern Kalahari.⁹² Overall, the SDGVM projections reveal a significant negative impact of climate change on ecosystem NPP, vegetation structure and cover, and the distribution of dominant plant functional types. These effects are strongest in the central/northwest regions and the north-eastern parts.

Impacts of climate change at species level will lead to high species losses, with mean species loss of between 40 and 50% by 2050 and between 50 and 60% by 2080.⁹³ However, these patterns of species loss and turnover will vary markedly in space. There will also be significant changes in plant community composition resulting from these species losses. Species turnover

⁸⁸ Drake *et al.* (1997).

⁸⁹ Bond / Midgley (2000); Bond *et al.* (2003).

⁹⁰ Midgley *et al.* (2005).

⁹¹ Ibid.

⁹² Ibid.

⁹³ Ibid.

ranges of between 40 and 70% were projected, with much of the change to occur under climate regimes projected for 2050. Projected local extinctions at the pixel scale, assuming that there are no species migrations, are in excess of 80% in the north-eastern and northern Kalahari, dropping to below 20% from the edge of the escarpment into the coastal desert zone.⁹⁴ There will be high species turnover in the north-eastern parts of the country, with an overall trend of a reduction in turnover from northeast to west and south-west. The majority of species will suffer declining range size while a minority will experience significant increases in range size. This finding suggests that future climate change may be an advantage to a small subset of species that might be able to capitalise on the novel climatic conditions in this country, but that this will depend strongly on their migration capacity.⁹⁵ Endemic species will have overall lower susceptibility to climate change (19% and 12% will be classified extinct and critically endangered, respectively by 2080) than non-endemic species. This is largely due to the fact that endemics are both arid-adapted and located in regions of lower projected climate change. The tourism sector contributes significantly to the Namibia economy. In 2006, it contributed 14.2% to the GDP while the estimate for 2008 was 15.6%⁹⁶ and was expected to be 19.9% in 2011 and 22.4% in 2017.⁹⁷ The effects of climate change on ecosystems and biodiversity described above will negatively impact on tourism. Projected declines in vegetation cover in most parts, and significant changes in vegetation structure with associated changes in fauna will impact on tourism. Livelihoods of rural communities will be negatively affected since a significant number rely on tourism ventures within communal conservancies.

4.4 Coastal Zone

Worldwide, coastal areas are very important economic zones which provide many goods and services to humanity. About 38% of the world's population lives within 100km of a coastal area. Yet these areas, too, are under serious threat from the effects of climate change. One of the impacts of climate change is a rising sea level due to melting glaciers and ice caps of the Arctic and Antarctica. Globally, the IPCC⁹⁸ indicated that the sea level rose at a rate of 1.8mm per year between 1961 and 2003, with a faster rate of 3.1mm per year between 1993 and 2003. Sea level is projected to rise by between 30cm and 100cm by the year 2100, relative to the 1990 level. The rate of rise is projected to be relatively steady, accelerating slightly over time, although storm surges are expected to be the main source of damage to coastal infrastructure. Coasts will be exposed to increasing risks of coastal erosion and by 2080 millions more people than today will experience floods every year due to sea level rise. The most affected people will be those in low-lying, densely-populated mega deltas of Asia and Africa.⁹⁹ Namibia will not be spared from some of these effects.

Namibia's coastline stretches some 1 800km long and consists of 78% sandy beaches, 16% rocky shores and 4% mixed sandy and rocky shores, with only 2% of the shore backed by lagoons. The coastline is very important for tourism and recreation activities, which contribute significantly to the Namibian economy. Four major towns are situated along the coast, namely Lüderitz, Walvis Bay, Swakopmund and Henties Bay. Walvis Bay is located between one and three metres above sea level, in a semi-sheltered bay surrounded by an erodible coastline. The

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ GRN (2011b:27).

⁹⁷ GRN (2010c:28 and 2011a:27).

⁹⁸ IPCC (2007a).

⁹⁹ IPCC (2007b).

coastal aquifers which supply water to the town are susceptible to salt intrusion which would be further exacerbated by sea level rise. A sea level rise of 0.3m, now regarded as virtually certain, will flood significant areas, and a one metre rise would inundate most of the town during high tide.¹⁰⁰ The other three towns, Swakopmund, Henties Bay and Lüderitz, are less vulnerable to rising sea levels due to their relatively safe topographic positions. It was reported that in the near future, most of Namibia's coastal towns would be able to deal with impacts of severe weather conditions but in the long-term they need to carefully plan adaptation strategies to deal with the effects of climate change.¹⁰¹ Walvis Bay was cited as particularly vulnerable and should safeguard its continued economic activity by properly planning for future effects.¹⁰² Overall, coastal areas will experience increased incidence of flooding and inundation.¹⁰²

4.5 Energy

There is an intrinsic link between energy and development.¹⁰³ This makes the impact of climate change on the energy sector an important one since a number of economic sectors are dependent on energy. The demand for energy is increasing due, partly, to the increase in human population. Poverty and lack of adaptive capacity and limited coping strategies by most rural communities in Namibia only serve to exacerbate the situation. These communities are very vulnerable to the effects of climate change.

About 78% of Namibia's energy is imported as petroleum products, electricity and coal, while the remaining 22% is made up by biomass fuel (mostly wood).¹⁰⁴ The bulk of this energy is consumed by the transport sector. While contributing between 8 and 16% to the GDP, the mining sector is also a major consumer of energy. Namibia imports most of its electricity but has limited local generation at the Van Eck coal-fired power station in Windhoek, the Paratus diesel-powered station at Walvis Bay and the Ruacana hydro-electric power station on the Kunene River. Recent droughts have severely reduced electricity generation from the Ruacana plant. Given the projected decline in rainfall and more frequent droughts that are likely to result from climate change, regional hydroelectric generation will be severely curtailed. In areas where rainfall is anticipated to increase in the tropical regions of southern Africa including the catchments of the Kunene River in Angola, there may be potential for increased generation of hydroelectricity. Energy consumption is projected to increase and the persistently high fuel prices will directly affect accessibility of transport, price of goods and services and the cost of living in general.

With plenty of sunshine most of the year, Namibia has great potential to develop solar-powered electricity. This is an option which has not been fully utilised, given the current looming energy crisis, not just in Namibia but in the while sub-region. Midgley *et al.*¹⁰⁵ projected that bush encroachment may increase in some parts of the country as a result of climate change. This may provide firewood to local communities. However, care must be taken not to utilise it in a way that will increase greenhouse gas emissions and reduce the carbon sink of the country.

¹⁰⁰ GRN (2002d).

¹⁰¹ Consulting Services Africa *et al.* (2009).

¹⁰² GRN (2010d).

¹⁰³ Bradley-Cook (2008).

¹⁰⁴ GRN (2002d).

¹⁰⁵ Midgley *et al.* (2005).

4.6 Human Health and Well-Being

Human health, well-being and livelihoods are strongly dependent upon the state of global ecological and biophysical systems. Climate change is one of the global change factors which have adverse effects on human health. Changes in temperature, precipitation and other factors may lead to short- and long-term changes in the physical environment, many of which may have direct and indirect impacts on human health.¹⁰⁶ This may be through its impacts on aspects such as water quality and availability, nutrition status of humans, and distribution and abundance of vector organisms due to changing temperature and rainfall patterns. The impact of climate change on human health has increasingly attracted attention after it was highlighted in the IPCC's First¹⁰⁷ and Second¹⁰⁸ Assessment Reports. In its Fourth and Fifth Assessment Reports, the IPCC projects that globally there will be increased malnutrition, diarrhoea, cardio-respiratory and infectious diseases; increased morbidity and mortality from heat waves, floods and droughts; changes in distribution of some vectors and substantial burden on health services.¹⁰⁹ Young *et al.*¹¹⁰ reviewed existing knowledge on the impacts of climate change on health in the SADC region. They noted that there have been no substantial studies assessing the association between climate change and health in the SADC region, and where research has been done it focused only on infectious diseases (particularly malaria). Even then, very little has been done to determine the relationship between climate change and disease.

Namibia's health system is decentralised to enable it to be responsive to the needs of the population. Thus, the public healthcare system is organised into directorates at the national and regional levels. The Government has invested tremendously in the healthcare system since independence. Despite this, general life expectancy has not improved, partly because of the HIV/AIDS pandemic.¹¹¹ Young *et al.*¹¹² reported that the infant mortality rate was 47 per 1,000 in 2007, down from 65 per 1,000 in 1990, and adult mortality (15-60 years old) was 365 per 1000 in 2007. The main causes of adult mortality are HIV and AIDS, tuberculosis and malaria. The maternal mortality rate has been on the increase, from 225 per 100,000 live births in 1992 to 449 per 100,000 live births in 2007.¹¹³ Infant mortality is higher in rural areas and in the wetter north, compared to urban areas and the more arid south, with main causes of death being diarrhoea (42%), malnutrition (40%), malaria (32%) and acute respiratory infections (30%).¹¹⁴ These causes of death have a strong link to environmental influences, especially climatic factors. For instance, drought decreases the nutritional status of humans and reduces availability of clean water rendering the population vulnerable and susceptible to attacks by various infections.

There have been records of recent increases in the incidence of malaria in the country. This is consistent with a predicted increase in the area exposed to malaria where 60% of the population lives. This gives an indication of the magnitude of the impacts of changing temperature on the range of the *Anopheles* mosquito, the vector for the malaria parasite. Indeed, it has been reported that rising temperatures are likely going to lead to increased

106 DRFN (2009).

107 IPCC (1990).

108 IPCC (1995).

109 IPCC (2007a and 2014).

110 Young *et al.* (2010).

111 DRFN (2009).

112 Ibid.

113 DRFN (2009).

114 GRN (2002d).

frequency, greater spread and increased transmission rates of vector borne diseases.¹¹⁵ Sleeping sickness, carried by the tsetse fly (*Glossina morsitans*), is currently not present in Namibia although the cattle version (nagana) occurs in eastern Zambezi.¹¹⁶ Both these forms of disease are projected to decrease under future climate projections because of a reduction in habitat availability for the tsetse fly. Government¹¹⁷ also predicts the possibility of incursion of lymphatic filariasis (elephantiasis), dengue fever and yellow fever from countries to the north with changes in climatic conditions.

Therefore, major impacts of climate change on health will result from decreasing crop yields and food security, increasing water scarcity in some areas, extreme weather events (floods, droughts, heat waves, etc.), and changes in the distribution patterns and abundance of parasites and disease vectors. In the final analysis, the effects of climate change on Namibia will increase the pressure on human health and other health-related aspects of the economy and may lead to an increase in disease burden in communities.

4.7 Fisheries and Marine Resources

Namibia's fisheries sector is dependent upon the highly productive marine ecosystem driven by the upwelling of the cold, nutrient-rich Benguela Current. The upwelling is caused by the interaction of south-easterly winds with the north-flowing current and the topography of the seabed. Currently there are no reliable scientific projections to suggest either an increase or a decrease in the Benguela fisheries yield as a result of climate change.¹¹⁸ Links between environmental variability and fisheries dynamics are also poorly understood and large environmental anomalies or extreme events, such as the Benguela Niño, have negative impacts.¹¹⁹ Marine ecosystems continue to be regarded as vulnerable pending more conclusive studies. Recent studies have shown that sea surface temperatures over the northern Benguela region appear to have become persistently warmer since 1993, consistent with global predictions of rising surface water temperature. It is possible that observed reductions in pilchard stocks since 1993 could be partially explained by warmer seas.¹²⁰

Any changes in the distribution and intensity of winds would affect the fisheries sector as it has direct impact on the upwelling dynamics of the Benguela system. Roux¹²¹ described four possible scenarios that could result from climate change. The first is a possible reduction in coastal upwelling intensity through a slackening of the south Atlantic trade wind circulation. This would reduce the productivity of the ecosystem and the species that characterise the Benguela system could suffer major reductions in stock size and distribution. The second would be an increase in average summer wind stress and coastal upwelling intensity which would enhance enrichment and potential primary production. This could benefit some pelagic species and their predators due to increased productivity. The third is that the frequency and severity of Benguela Niño events would increase, with a direct risk of large-scale population fluctuations, particularly of pelagic species. The fourth is a possible best-case scenario but probably the least possible where there would be low amplitude gradual affects that would lead to a succession of rapid regime shifts between semi-stable states of the system. These regime

¹¹⁵ Husain *et al.* (2008).

¹¹⁶ GRN (2002d).

¹¹⁷ Ibid.

¹¹⁸ GRN (2002d).

¹¹⁹ Reid *et al.* (2007).

¹²⁰ Ibid; Ministry of Fisheries and Marine Resources (2002).

¹²¹ Roux (2003).

shifts would affect primarily the dominant pelagic species, which would in turn, induce large changes in the entire system.¹²²

4.8 Water Resources

The agriculture sector is the major user of water in Namibia, consuming close to 75% of water in the country.¹²³ Several other sectors such as mining (3.3%), services (2.9%) manufacturing (2.4%) and domestic (12.2%) sectors also have significant demands for water. Any changes that result in a decline in water supply will have serious repercussions on human livelihoods and the economy of the country.

Increases in temperature will have a marked increase in evaporation. It is estimated that for every degree of temperature rise, evaporation increases 5%. Therefore, there will be less water available for recharge and storage. The length of inundation of seasonally flooded terrestrial wetlands will therefore decrease due to increased evaporation. In some instances, this may lead to increased salt content of pans and pools and make them less suitable for human and animal consumption. Increased temperatures will also lead to increases in evaporation from plants, which will mean that plants will pump out more ground water, further depleting underground water. All this will lead to a reduction in the size and productivity of many wetlands,¹²⁴ negatively affecting human livelihoods that are critically dependent on these wetlands.

It is predicted that rainfall over the Angolan catchments of the Zambezi, Kavango, Cuvelai and Kunene rivers will decrease by 10-20% for 2045-2065, leading to a 25% reduction in run-off and drainage into these river systems.¹²⁵ Of all the rain that falls in Namibia, less than 1% recharges groundwater and only 2% remains as surface water storage while the rest evaporates.¹²⁶ The whole of Namibia experiences a net water deficit, meaning that evaporation exceeds rainfall throughout Namibia, with average water deficit being highest in the southeast (over 2,300mm/year) and lowest in Zambezi (less than 1,300mm/year).¹²⁷ Water deficit in southern areas ranges between 2,100mm/year to more than 2,500mm/year, resulting in most terrestrial wetlands being ephemeral. Predictions are that southern Africa will receive 10 to 20% less rainfall by 2050. Such reductions in areas with rainfall regimes of 400-1,000mm per annum may lead to a drop in perennial surface drainage of 75% and 25%, respectively by 2050.¹²⁸ The magnitude of surface water shortage may even be higher in drier areas of Namibia, which actually form the bigger proportion of the country.

An estimated 60% of Namibia's population lives near the major wetlands, with the highest population density along the perennial Kavango River.¹²⁹ Most of these communities are largely poor and highly dependent on the river and floodplains for water and other resources. The projections outlined above therefore spell gloomy prospects for these people, who were identified as being extremely vulnerable to environmental change.¹³⁰

122 Reid *et al.* (2007).

123 GRN (2002d).

124 DRFN / CSAG (2010).

125 GRN (2011a).

126 GRN (2002d).

127 DRFN / CSAG (2010).

128 Ibid.

129 Heyns *et al.* (1998).

130 DRFN / CSAG (2010).

5 Mitigation and Adaptation to Climate Change in Namibia: Actions Taken

The above account has highlighted the vulnerability of Namibia to climate change and the effects this may have on the environment, the economy and human livelihoods. The country is experiencing an increase in frequency and severity of disasters. The potential losses due to disasters is set to increase as the impacts of climate change continue to unfold.¹³¹ The IPCC warns that many aspects of climate change and associated impacts will continue for centuries, even after anthropogenic emissions of greenhouse gases have been stopped.¹³²

It is therefore important that the country takes steps to mitigate these effects. Under the UNFCCC, the Kyoto Protocol and other international instruments, national governments that are party to these conventions and treaties have obligations to introduce measures in order to mitigate further environmental deterioration and to reduce the effects these changes have on humanity and the environment. Namibia, being party to the UNFCCC and the Kyoto Protocol, must put in place policies and measures that meet the above objectives.

Available literature highlights why climate change adaptation and mitigation are critical issues not only for Namibia and southern Africa, but the world over. It is conceded though, that a certain amount of climate change is unavoidable, regardless of reductions in greenhouse gas emissions.¹³³ It must be noted that effects of climate change will act in combination with other drivers of ecosystem degradation, for instance, communities in the region already face high levels of vulnerability and numerous stresses due to poverty, HIV/AIDS, food insecurity, and political instability.¹³⁴ Hence measures put in place must take cognisance of these interactive effects and approach them in a holistic manner.

Namibia established the Namibian Climate Change Committee (NCCC) in 2001 with the main function of advising and making recommendations to Government on climate change including how to meet its obligations to the UNFCCC. The NCCC is hosted by the Directorate of Environmental Affairs in the Ministry of Environment and Tourism. Its membership is drawn from representatives of various Government ministries, NGOs, parastatals and the private sector. Thereafter, Cabinet approved the first National Policy on Climate Change (NPCC) in 2011¹³⁵ and the National Climate Change Strategy and Action Plan (NCCSAP) in 2014¹³⁶, which set out the country's direction towards addressing climate change mitigation.

Thus, Namibia has taken several steps in addressing the issue of climate change and other global change challenges. In addition to the formation of the NCCC, other important steps under the obligations of the UNFCCC include (but are not limited to) the following:

- National policies and laws related to global change challenges and environmental management and protection are in place, including the Namibian Constitution, Vision 2030, National Development Plans, Environmental Management Act of 2007, various sector policies and Cabinet directives. These policies are discussed in some of the earlier chapters. This includes the development of the National Policy on Climate Change for Namibia¹³⁷, developed from a Draft Namibia Climate Change Policy,

¹³¹ GRN (2011d).

¹³² IPCC (2014a).

¹³³ IPCC (2007a).

¹³⁴ Shackleton *et al.* (2008); Zervogel *et al.* (2006a).

¹³⁵ GRN (2011b).

¹³⁶ GRN (2014b).

¹³⁷ GRN (2011d).

Strategy and Action Plan¹³⁸ and the final Climate Change Policy Strategy and Action Plan was finally published in 2011.¹³⁹ The objectives of the policy are:

- a) To develop and implement appropriate adaptation strategies and actions that will lower the vulnerability of Namibians and various sectors to the impacts of climate change.
 - b) To develop action and strategies for climate change mitigation.
 - c) To integrate climate change effectively into policies, institutional and development frameworks in recognition of the cross-cutting nature of climate change.
 - d) To enhance capacities and synergies at local, regional and national levels and at individual, institutional and systematic levels to ensure successful implementation of climate change response activities.
 - e) To provide secure and adequate funding resources for effective adaptation and mitigation investments on climate change and associated activities (e.g. capacity building, awareness and dissemination of information, etc.).
- Reports on the greenhouse gas inventory based on 1994, 2000 and 2010 data were completed (1998, 2009, 2014).
 - Preparation and submission of the Initial National Communication to the UNFCCC was done in 2002.
 - Preparation and submission of the Second National Communication to be submitted to the UNFCCC in 2015.¹⁴⁰
 - Assessment of capacity needs required to implement Article 6 of the UNFCCC was completed in 2005.
 - A Directorate of Disaster Risk Management is operational in the Office of the Prime Minister. A National Disaster Risk Management Plan was developed.¹⁴¹
 - A National Drought Policy and Strategy was developed in 1997.
 - Continuous reviews and updates of national circumstances concerning impacts of climate change on various sectors was done.¹⁴²
 - A Technology Needs Assessment was conducted in 2005 to identify financial and research needs.
 - Local-level activities are on-going for communities to adapt to climate change through improvement of traditional crops and livestock farming in several regions; and enhancing the adaptive capacities of farmers, pastoralists and natural resource managers to climate change in agricultural and pastoral systems in the country.
 - Efforts are being made to increase access to climate change information and improved access to alternative resources by local communities, farmers and other stakeholders in the country.

¹³⁸ Mfune *et al.* (2009b).

¹³⁹ GRN (2014b).

¹⁴⁰ Cf. GRN (2011b).

¹⁴¹ GRN (2011d).

¹⁴² DRFN (2009).

- Namibia has integrated climate change issues, including mitigation, in its development plans and has implemented numerous mitigation measures in various economic activities to curb emissions. However, most of these measures have been implemented on a stand-alone basis because the country is yet to develop a mitigation plan.¹⁴³

6 Concluding Remarks

Climate change has emerged as one of the greatest challenges of all time as it is cross-cutting across all sectors of the economy. Namibia is very vulnerable to the effects of climate change due to the arid nature of the country, limited capacity to deal with the effects and inadequate technical and financial capacity for adaptation, given that there is a myriad of other challenges (e.g. poverty, HIV and AIDS, unemployment) that need to be dealt with in addition to climate change. The evidence for impacts of climate change are very clear, manifested by more intense flooding, shortening of the growing season, more frequent droughts, rising average summer and winter temperatures, frequent heat waves, among many other effects. These conform to predictions from General Circulation Models (GCMs) that paint a gloomy picture of rising temperatures and declining rainfall in most areas. There will be an accelerated decrease in biodiversity, increasing evaporation leading to water scarcity, low crop yields leading to food shortages and insecurity, declining marine productivity, flooding of coastal areas and changes in the distribution of disease patterns and their vectors. The economic sectors of Namibia that will be affected most are agriculture, biodiversity and ecosystems, coastal areas, energy, health, marine resources and water. As a signatory to the UNFCCC and other international instruments, Namibia is taking steps to minimise the impacts of climate change on the people and the economy by putting in place relevant policies, structures and institutions for dealing with climate change and enhancing adaptive and mitigation capacity. Namibia's greenhouse gas emissions are insignificant. In fact, Namibia is a net sink for CO₂ as indicated by the two GHG inventories done so far. Hence, efforts should be less on cutting down emissions but more on adaptation, coping strategies, and disaster management.

¹⁴³

GRN (2014a).

V. LEGAL AND REGULATORY ASPECTS OF CLIMATE CHANGE IN NAMIBIA AND SADC

Oliver C. Ruppel

1 Introduction

Owing to the fact that climate change is multi-disciplinary in nature, no definite legal or policy framework related to climate change exists in Namibia. As in the case of all matters generally related to the environment, climate change issues span over a broad framework of national policy, legislation, strategies and action plans. However, developments in the past years reflect that climate change is playing a more dominant role, especially in the field of policy making and national planning. Based on local and national commitment and efforts to deal with the risks and challenges related to climate change and on international cooperation, a broad variety projects in the field of climate change have been and are being initialised and emphasise the importance of climate change mitigation and adaptation. Recent developments in climate change law and governance considered to be most relevant will be outlined in the following.

2 Climate Change Legislation

It can be argued that although Namibian environmental legislation does not explicitly address climate change, many relevant general concepts and principles applicable to climate change are contained in the legal environmental framework. This is true for framework legislation such as the Environmental Management Act No. 7 of 2007, which promotes the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment. One of these principles, which is relevant for climate change is that “renewable resources must be used on a sustainable basis for the benefit of present and future generations”.¹ A further example is the principle that “damage to the environment must be prevented and activities which cause such damage must be reduced, limited or controlled”.² Climate change can thus be considered in various ways in decision-making processes. But also sectoral legislation can be applicable to climate change. The Forest Act No. 12 of 2001, which provides for the protection of the environment and the control and management of forest fires, and the Disaster Risk Management Act No. 10 of 2012, which provides “for an integrated and coordinated disaster management approach that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery” are prominent examples of national legislation pertinent to climate change. However, Government has also recognised that “there is an urgency to review existing legislation, regulations and norms to frame these in accordance with climate change concerns.”³ Several topics have been identified as priority areas of law and/or regulation to be subject to review and update:⁴

- Feed-in tariffs for the general public and other organisations to supply the grid with electricity;

¹ See Section 3(2)(a).

² See Section 3(2)(l).

³ See GRN (2015:17).

⁴ Ibid.

- Finalize Power Purchase Agreements rapidly following the delivery and signature of IPP licences;
- Implement regulations on energy efficiency, particularly energy audits in the industrial sector that are heavy consumers of energy;
- Implement the DSM strategy and set regulations to ensure import of energy efficient appliances;
- Review the taxation policy and legislation to promote the update of cleaner technologies and promote energy savings;
- Strengthen the enforcement of legislation and regulations;
- Review the legislations regulating forest exploitation to fit them to the new agenda; and
- Implement land policy reforms to promote reforestation and afforestation by the different land owner groups.

3 Namibia's Climate Change Policy

The State's mandate to promote the welfare of the people by adopting policies aimed to maintain ecosystems, essential ecological processes and biological diversity of Namibia and to utilise living natural resources on a sustainable basis for the benefit of all Namibians, both present and future as enshrined in Article of the Constitution is the principle foundation for Namibia's commitment to address the challenges related to climate change. To this end, Namibia's National Policy on Climate Change has been prepared and officially launched by the Ministry of Environment and Tourism in October 2011.

The following has been formulated as underlying rationale of the policy:⁵

The policy seeks to outline a coherent, transparent and inclusive framework on climate risk management in accordance with Namibia's national development agenda, legal framework, and in recognition of environmental constraints and vulnerability. Similarly, the policy takes cognizance of Namibia comparative advantages with regard to the abundant potential for renewable energy exploitation.

The goal of the National Policy on Climate Change is to contribute to the attainment of sustainable development in line with Namibia's Vision 2030 through strengthening of national capacities to reduce climate change risk and build resilience for any climate change shocks.

The policy also serves to guide "Government on the development and enactment of climate-specific legislation to establish appropriate legal mechanisms for policy implementation."⁶ To date, no such climate-change specific legislation is on the radar.

Recognising that various Sustainable development and ensuring environmental sustainability stakeholders can contribute significantly to climate change adaptation and mitigation, the policy outlines the roles and responsibilities of stakeholders including the general public; the private sector; NGOs and faith and community based organisations; training and research institutions; the media; and international development partners.

The policy identifies five objectives, sets out a set of guiding principles and proposes a framework for sectoral strategies to address the impacts of climate change. The table below summarises the objectives of the policy and the methods by which these objectives are to be achieved:

⁵

See GRN (2011b:iii).

⁶

Ibid:iv.

Objectives of the National Climate Change Policy	
OBJECTIVE	TO BE ACHIEVED THROUGH
To develop and implement appropriate adaptation strategies and actions that will lower the vulnerability of Namibians and various sectors to the impacts of climate change.	Adoption and successful implementation of appropriate and effective climate change adaptation measures.
To develop action and strategies for climate change mitigation.	Development and implementation of renewable energy and energy use efficiency, Clean Development Mechanism (CDM) and enhanced carbon sinks.
To integrate climate change effectively into policies, institutional and development frameworks in recognition of the cross-cutting nature of climate change.	Harmonisation of policies and laws to reflect an integrated approach in planning, decision-making and implementation with respect to climate change.
To enhance capacities and synergies at local, regional and national levels and at individual, institutional and systemic levels to ensure successful implementation of climate change response activities.	Increase awareness and knowledge about climate change, as well to empower people to participate in the planning, development and implementation of appropriate responses to climate change.
To provide secure and adequate funding resources for effective adaptation and mitigation investments on climate change and associated activities.	Namibia's treasury budgetary allocation using set procedures. Access funding through international bodies like the UNFCCC.

The guiding principles of the policy relate to the following:

- Mainstreaming climate change into policies, legal framework and development planning;
- Sustainable development and ensuring environmental sustainability;
- Stakeholder participation in climate change policy implementation;
- Awareness generation, education, training and capacity building;
- Human rights-based development;
- Promote and address ‘adaptation’ and ‘mitigation’ as key approaches;
- Public, Private Partnership.

The policy paves the way for a framework of strategies to deal with the impacts of climate change in Namibia. Strategies are to be developed in a range of sectors. As these envisaged strategies are of utmost relevance, they are summarised in the following table.

Sector	Selected Envisaged Strategies
Sustainable access to water	<ul style="list-style-type: none"> • Formulate and implement a strategy for harvesting and capturing water during the rainy season. • Provide guidelines for more efficient water use by sectors, households and individuals. • Promote and encourage integrated water resources management • Prevention of water pollution.
Food security and sustainable resource base	<ul style="list-style-type: none"> • Encourage the integration of landscape ecology into land use planning. • Integrate poverty-climate change issues into economic policies and plans across sectors. • Promote diversification of the food base. • Promote systems in the agricultural sector that are climate resilient.

Sector	Selected Envisaged Strategies
Agriculture	<ul style="list-style-type: none"> • Make provision and installation of water treatment plants as an integral component of all irrigation water supply schemes. • Promote and encourage conservation agriculture and ecologically compatible cropping systems. • Promote and encourage highly adaptive and productive breeds of live stock in both communal and commercial areas. • Promote and encourage highly adaptive and productive crop cultivars in dry-land or rain-fed crop farming system. • Promote sustainable management of rangelands and pastures through preparation and implementation of integrated rangeland management plans to avoid land degradation and deforestation.
Forestry	<ul style="list-style-type: none"> • Strengthen the existing National Forestry Policy to avoid illegal logging that can lead to deforestation and land degradation. • Strengthen existing forestry research and encourage the conservation and restoration of ecosystems critically threatened by climate change. • Promote and encourage reforestation and forestry preservation carbon offset projects which are in line with global warming solutions.
Biodiversity and ecosystem services	<ul style="list-style-type: none"> • Encourage involvement of local communities in the conservation and sustainable use of biodiversity through provision of conservancies. • Ensure that any mining activity within and in the vicinity of National parks does not compromise the wellbeing of the ecosystem. • Identify biodiversity hotspots where no development should be allowed.
Human health and wellbeing	<ul style="list-style-type: none"> • Make the provision of safe water and sanitation facilities mandatory for the public in affected areas and other public facilities such as hospitals and schools. • Provide medical assistance to the citizens of Namibia affected by climate change-induced diseases as well as malnutrition.
Fisheries and marine resources	<ul style="list-style-type: none"> • Promote integrated fisheries and marine resources management. • Encourage any other approach that leads to sustainable management and utilisation of fisheries and marine resources. • Strengthen and encourage integrated coastal zone management plans for the protection of marine life.
Infrastructure	<ul style="list-style-type: none"> • Establish and enforce standards for infrastructure development such as roads, housing, and water infrastructure etc. through monitoring and reporting systems. • Encourage the integration of climate change issues into development planning strategies. • Develop a national strategy for infrastructural developments that take into account the risks related to climate change and that are environmentally friendly. • Encourage the adoption of town planning standards and principles to make cities and towns more climates resilient.
Sustainable energy and low carbon development	<ul style="list-style-type: none"> • Promote renewable forms of energy (wind, solar, bio-gas etc.) at all levels to reduce Green House Gases (GHG). • Formulate and enact energy conservation legislation and audit standards. • Promote Green technology, practices and standards. • Ensure reduction and control of harmful emissions through regulatory programs.
Education, training, capacity building and institutional strengthening	<ul style="list-style-type: none"> • Mainstream climate change into the formal education system, at all levels (primary to tertiary) and support educational institutions. Link to ETSIP and relevant educational policies and education through the media. • Support specialised post graduate training of Namibians to address climate change science, impacts, vulnerabilities, adaptation and mitigation. • Strengthen institutional capacity of institutions of higher learning and Government ministries through provision of equipment, infrastructure and financial resources to enable them effectively implement the policy. • Foster collaboration and international partnerships.

Sector	Selected Envisaged Strategies
Research and information needs	<ul style="list-style-type: none"> • Identify national research priorities of climate change across sectors. • Provide adequate funds for research to undertake needs-based research in priority areas of climate change. • Strengthen and encourage relevant research and technological development at institutions of higher learning. • Establish observation posts around the country in each region to monitor and evaluate climate change effects in Namibia over time. • Research on indigenous knowledge and adaptation strategies. • Create mechanisms to collect, manage and disseminate information to all community levels in Namibia. • Foster international collaboration with regard to climate change research. • Coordinate, manage and encourage research and information sharing; capacity building for knowledge production on climate change.
Public awareness, participation and access to information	<ul style="list-style-type: none"> • Develop and implement a national strategy for raising climate change awareness of the general public as well as targeted groups. • Mainstreaming of public awareness, participation and access to information as a key issue of concern and importance to climate change. • Establish a climate change management information system to provide accurate and timely information for informed decision-making as well as to ensure public access to climate change information.
Disaster reduction and risk management	<ul style="list-style-type: none"> • Develop and implement a climate change induced disaster management strategy. • Establish and strengthen climate change induced disaster management institutions at regional and national levels to reduce causality and ensure preparedness. • Provide basic needs to the victims of climate change induced disaster either in the form of financial assistance or donations of food, goods and services as the need arises in terms of economic losses.
Financial resource allocation, mobilisation and management	<ul style="list-style-type: none"> • Develop a strategy to finance mitigation and adaptation activities. • Establish a sustainable development fund for climate change emergencies at regional and national levels to support the affected sectors and people of Namibia. • Make provision of financial resources for climate change induced disasters at the regional and national levels. • Allocate financial resources based on needs assessment to the institutions of higher learning to enhance the capacity of regional Government and affected ministries or sectors.
International cooperation and networking	<ul style="list-style-type: none"> • Make provision for regional and international cooperation, collaboration and networking in order to tap into the existing wealth of information, data, expertise, and financial resources. • Effectively participate in regional and international platforms to enhance cooperation in dealing with the climate change. • Make provision for regional cooperation in order to deal properly with transboundary issues related to climate change. • Develop and implement national strategies and action plans for all bilateral or multilateral global warming frameworks.
Technology development and transfer	<ul style="list-style-type: none"> • Identify technology development and knowledge transfer to be a key issue for which strategies and action plans may be developed. • Promote and encourage new and clean energy technologies to be developed in order to reduce greenhouse gas emissions. • Encourage technological development to address climate change issues related to water shortages for agricultural production, drought resistant crop varieties and livestock breeds and food security. • Ensure that technological development goes hand in hand with afford ability, transfer of skills and is sustainability.

Sector	Selected Envisaged Strategies
Policy and legislative development	<ul style="list-style-type: none"> Integrate climate change policy into the existing policies based on specific sectors. Identify issues of climate change commonality amongst sector policies in order to enhance synergies, facilitate cost effectiveness and avoid duplications of effort. Encourage that all climate change activities are in line with internationally accepted scientific findings. Review the climate change policy as the need arises.
Gender issues and child welfare	<ul style="list-style-type: none"> Ensure that communities are empowered and both men and women participate meaningfully in the planning, testing and roll out of adaptation and mitigation activities in both rural and urban areas. Ensure that climate change response activities are gender sensitive. Include gender and climate change in the curriculum of education and training programs.
Vulnerable groups	<ul style="list-style-type: none"> Make provision to ensure that the vulnerable groups are empowered to effectively and adequately adapt to the impacts of climate change. Encourage and support vulnerable groups to engage in sustainable adaptation mechanisms to cope with climate change effects. Integrate climate change poverty related issues into economic policies and actions plans.

Summarising it can be stated that – although the Policy has been criticised for being “in conflict with existing sectoral policy instruments and even sectoral national development aspirations”⁷ – it is an important instrument to further Namibia’s commitment to addressing the multi-faceted challenges related to climate change. It is founded in the multidisciplinary nature of climate change that conflicts or overlaps with other policy instruments and strategies arise.

This also applies to the question of institutional responsibility for issued related to climate change. Although it could be argued that virtually every ministry is somehow concerned with issues related to climate change, the Ministry of Environment and Tourism is the key responsible line ministry for climate change.⁸

To implement the Climate Change Policy, a Climate Change Strategy and Action Plan (NCCSAP) for the period 2013 to 2020 has been developed and approved by Parliament in 2014. The NCCSAP contains guiding principles relating to climate change, identifies priority action areas for adaptation and mitigation and pinpoints various funding mechanisms.

4 Namibia and the United Nations Convention on Climate Change (UNFCCC)

Namibia is a Non-Annex I Party (group of Parties mostly developing countries) to the UNFCCC. To date, Namibia has submitted two national communications under the UNFCCC, in 2002⁹ and in 2011¹⁰ respectively. Namibia’s first Nationally Appropriate Mitigation Action (NAMA) and National Adaptation Plan (NAP) are in the process of being developed with the objective to “better guide the country on its way to mitigate and adapt to climate change.”¹¹ Furthermore, Namibia has submitted its Intended Nationally Determined Contribution (INDC)

⁷ Zeidler *et al.* (2014:23).

⁸ Ibid:22.

⁹ GRN (2002d).

¹⁰ GRN (2011a).

¹¹ GRN (2015:5).

in September 2015.¹² Within the INDC, Namibia has stated that it “aims at a reduction of about 89% of its GHG emissions at the 2030 time horizon compared to the BAU scenario.”¹³ The INDC covers four sectors, namely energy; industrial production and product use; agriculture forestry and other land use (AFOLU) changes; and waste. Identified measures contributing to climate change mitigation with the highest amount of GHG include: to reduce the deforestation rate by 75 %; to reforest 20,000 ha per year; to restore 15 M ha of grassland; and to increase the share of renewables in electricity production from 33% to 70%.

In the INDC it is stated that considering the following facts, namely

- Percentage contribution in Global emissions – 0.059% in 2010;
- Per capita emissions decreased from 0.0146 Gg CO₂-eq to 0.0130 Gg CO₂-eq from 2000 to 2010; and
- GDP production increased from about US\$ 200 to 300 per unit emission.

Namibia’s INDC is “fair, equitable, ambitious and adequate”, given Namibia’s development status and national circumstances.¹⁴

Namibia has committed itself in the INDC to ensure political stability, good governance, an independent efficient judicial system, appropriate legislation, provision of incentives, and implementation of robust awareness campaigns as prerequisites for a successful and quick implementation of the INDC.

5 Climate Change Governance in the Southern African Development Community (SADC)

The SADC region is home to a large number of poor people; and although poverty in proportionate terms has been declining in most SADC countries, food insecurity, poverty and malnutrition remain major challenges to socioeconomic development.¹⁵ Climate change can be considered to be one of the drivers in this regard.

The SADC has embarked on new policy pathways to accommodate climate change more effectively in future. These pathways and recent developments are reflected on as they are not only deemed to become more and more relevant in a changing climate, but at the same time promise to enfold potential and new opportunities for economic and sustainable development for Africa on regional and sub-regional levels.

Despite Africa’s relatively low contribution to the world’s total greenhouse gas (GHG) emissions, it is one of the most vulnerable continents to climate change.¹⁶ In the same light, Africa is particularly vulnerable due to a combination of stresses, and especially due to poverty. The complexity of climate change involves a diverse range of institutions and regimes.¹⁷ It is expected that climate change will generate a significant impact on national, regional and global economies, and it is also not unlikely that this will result in increased local and international conflict.¹⁸

¹² GRN (2015).

¹³ See GRN (2015:2); BAU is the abbreviation for Business As Usual.

¹⁴ See GRN (2015:4).

¹⁵ SADC (2011b:iii).

¹⁶ Boko *et al.* (2007).

¹⁷ Keohane / Victor (2010:9).

¹⁸ Scholtz (2010).

For Africa, climate change continues to prompt significant challenges.¹⁹ In this context, the draft decision, the so-called Durban Platform for Enhanced Action by the Conference of the Parties, recognises that²⁰

... climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires to be urgently addressed by all Parties, and acknowledging that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response

SADC does not have a specific agenda on climate change *per se*, though several of its provisions address climate change either directly or indirectly, and the current institutional structure supports climate change related action to a certain extent.²¹ Interrelating issues pertaining to climate change include water stress, land degradation, food security, health security and environmentally induced migration, amongst many others. As such, the negative effects of climate change, and thus climate change adaptation and mitigation, must be analysed against the backdrop of SADC environmental law in its entirety.²² Although the number of climate change related programmes and initiatives²³ is increasing in SADC, much still needs to be done in SADC when it comes to the implementation and enforcement of policy and law.²⁴

The SADC Treaty as amended by the SADC Amendment Treaty is the constitutive document from which all subsequent instruments are derived. In its preamble, the SADC Treaty determines, *inter alia*, to ensure, through common action, the progress and well-being of the people of southern Africa, and recognises the need to involve the people of the SADC region centrally in the process of development and integration. Ensuing legal instruments are the SADC protocols²⁵ and legally non-binding instruments such as memoranda of understanding,²⁶ other agreements,²⁷ charters²⁸ and pacts.²⁹ Among others, the SADC's objectives include the achievement of development and economic growth, the alleviation of poverty, the enhancement of the standard and quality of life, support of the socially disadvantaged through regional integration, the evolution of common political values, systems and institutions, the promotion and defence of peace and security, and the achievement of the sustainable utilisation of natural resources and the effective protection of the environment.³⁰ Food security; land and

¹⁹ Ruppel / van Wyk (2011).

²⁰ Cf. http://unfccc.int/files/meetings/durban_nov_2011/decisions/application/pdf/cop17_durbanplatform.pdf; accessed 23 December 2011.

²¹ See Ruppel / Ruppel-Schlichting (2012).

²² See the Chapter 7 in this volume.

²³ An overview of sub-regional climate change programmes in Southern Africa can be found in Chishakwe (2010).

²⁴ Also see Ruppel / Ruppel-Schlichting (2012).

²⁵ SADC protocols are legal instruments of implementation of the SADC Treaty and it is required that two-thirds of member states ratify a protocol before it becomes legally binding.

²⁶ A Memorandum of Understanding (MoU) is a preliminary legal document describing an agreement between parties.

²⁷ An agreement is a less formal document dealing with a more specific subject, or narrower range of issues, than a protocol. It is generally used for outlining technical or administrative areas of cooperation. One such example is the Agreement on the Establishment of the Zambezi Watercourse Commission.

²⁸ A charter is a document incorporating an institution and specifying its rights, privileges and responsibilities. It usually includes the set of principles that form the constitution of the organisation.

²⁹ A pact is similar to an agreement, although its contents are usually defence or security related.

³⁰ Article 5 of the SADC Treaty.

agriculture and natural resources; and the environment have been identified as areas of cooperation by the SADC Treaty (Article 21.3).

The SADC Protocols are instruments through which the SADC Treaty is implemented. They have the same legal force as the Treaty itself. A protocol legally binds its signatories after ratification.

One climate change relevant instrument is the SADC Protocol on Energy, which outlines ways of cooperation in the development of energy to ensure the security and reliability of energy supply and energy cost reduction. The Protocol emphasises that the development and use of energy are to be environmentally sound.³¹ To achieve this objective, the Protocol provides for, among other things, cooperation in the development and utilisation of energy in the sub-sectors of wood fuel, petroleum and natural gas, electricity, coal, new and renewable energy sources, and energy efficiency and conservation. The Protocol formulates SADC states' intention to promote the increased production of new and renewable sources of energy in an economically and socially acceptable manner. On the basis of the SADC Treaty and the Protocol on Energy, the SADC Energy Corporation Policy and Strategy (1996), Energy Action Plan (1997), and the Energy Sector Activity Plan (2000) have been drafted to position the energy sector in such a way that the region can derive maximum benefit from a rationalisation of resources and facilities within it, and to develop initiatives that contribute to building the capacity of the region's energy institutions so that they can participate effectively in the future liberalisation of the energy sector as well as in the regional economy.³²

Energy, which is a crucial policy defining issue, is closely linked to key contemporary global challenges in the SADC region, including social development and poverty alleviation, environmental degradation, climate change, and food security. Energy efficiency plays an important role in sustainable growth and development. Better energy efficiency can produce substantial benefits both for global economic growth and poverty reduction as well as for mitigating climate change. In the household energy consumption sector, improved energy efficiency can directly reduce household expenditure on energy services and, therefore, directly help to reduce poverty. Laws governing sustainable energy development and supply cut across many sectors, including agriculture, electricity, environment, forestry, industry, mining, petroleum and water, and, hence, require coordination – a complex challenge that is not easily overcome. The energy sector and the provision of electricity for southern Africa's population and industries constitute a complex issue without including the spectre of climate change to the equation. If SADC intends reducing its GHG emissions, a transition to sustainable energy is inevitable. This requires redefining SADC's competitive advantage from attracting energy intensive sectors on the back of non-renewable energy sources, such as coal, to constructing a new advantage around climate-friendly technology and energy. Something that remains a challenge and needs to be researched more intensely is how emerging regional and national legislation can harmonise and coordinate the work around the myriad issues surrounding sustainable energy. Cross-sectoral coordination and responsibilities need to be streamlined in order to ensure decisions are made to promote future energy security in the region through more effective energy trade mechanisms. In the same context, policymakers and bureaucrats need to be capacitated to translate international policy to national and local levels, and vice versa. Further research needs to emphasise linking national, regional and

³¹ Article 2.8.

³² SADC (2009).

international policymaking, especially in relation to all emerging climate change related issues, such as the Green Climate Fund.³³

SADC states acknowledge that they are members of the World Meteorological Organisation (WMO) and, through their national meteorological services, constitute an integral part of the regional and global system or network of the WMO's programmes and structures, particularly the World Weather Watch Programme (Article 12.1). Within the WMO's regional and international cooperative system, states are encouraged to provide adequate legal frameworks and appropriate financial support to national meteorological services to establish an integrated network of observation, data processing and communications systems; and enhance the provision of meteorological services for general and specialised applications in the region and internationally (Article 12.2). This cooperation framework obliges states to, amongst other things:

- strengthen their weather and climate monitoring systems;
- improve public and specialised weather services;
- promote sustainable development with the emphasis on climate change and protection of the environment; and
- strengthen the meteorological research capacity in the region.

The SADC Protocol on Transport, Communications and Meteorology underlines that sustainable development is to be promoted with an emphasis on climate change and protection of the environment. In terms of Article 12.6 (4), these aims are to be achieved by means of:

- strengthening the capabilities of national meteorological centres in climate applications and advice;
- enhancing existing environmental monitoring activities;
- optimising the use of regional structures; and
- fostering an awareness of the contributions which can be made by national meteorological centres to planning sustainable development in agriculture forestry and related areas.

In the forest sector, SADC states have resolved to participate in a process to develop a programme that addresses the common problems of deforestation and degradation in the region, and to formulate joint climate change mitigation measures in order to contribute to the sustainable management of the forests within SADC and, thus, to promote poverty reduction and sustainable development. To this end, SADC ministers responsible for environment and natural resource management approved the SADC Support Programme on Reducing Emission from Deforestation and Forest Degradation (REDD+)³⁴ during the SADC Ministerial Meeting in Windhoek, Namibia, on 26 May 2011. REDD+ supports states in their efforts to combat climate change and achieve their development goals through reduced emissions in the forestry sector. A comprehensive framework for the region to actively participate in and benefit from

³³ Decision -/CP.17, the so-called Durban Platform for Enhanced Action by the Conference of the Parties, moved the new Green Climate Fund forward as the financial mechanism under the UNFCCC in regard to mitigation and adaptation in developing countries. Several European countries together pledged more than US\$50 billion in seed money to establish the Fund. This amount is expected to rise to US\$100 billion a year by 2020.

³⁴ Cf. <http://www.sadc.int/REDD/index.php/document-bank/documents/>; accessed 18 October 2011.

the carbon market is also provided, in a bid to contribute to member states' social and economic development. Draft Decision -/CP.17 by COP 17 also produced several agreements that could eventually be helpful in implementing a more comprehensive international solution to climate change in respect of technology transfer, reference standards to be used, and sources of funding for REDD+.³⁵

Aside from the sector specific institutions that are established by the various SADC protocols, one important cross-sectoral entity with regard to climate change within the SADC institutional framework is the Food, Agriculture and Natural Resources (FANR) Directorate under the umbrella of the SADC Secretariat. Its functions include the coordination and harmonisation of agricultural policies and programmes in the SADC region, in line with priorities in the RISDP. Focus areas of the FANR are agricultural research and development; environment and sustainable development; food security; and natural resources management.

Furthermore, the SADC Climate Services Centre (CSC), which falls under the auspices of the SADC Secretariat in Gaborone, Botswana, has the mandate to contribute to mitigation strategies of adverse impacts of extreme climate variations on socio-economic development.

Among the multiple institutional and financial challenges in SADC, one major weakness within its framework in respect of climate change related issues is the lack of a clear climate change agenda. Although some relevant provisions can be found in various sectoral legal instruments, at this stage, there is no clear road map, such as a consolidated climate change strategy or action plan charting the course on how to deal with climate change. Some important topics related to the effects of climate change, such as environmentally induced migration, are not covered by any SADC Protocol, and SADC institutions seem to be poorly funded and, thus, not as responsive as they need to be.

One further challenge, namely implementation and enforcement is closely related to the lack of financial and human resources. National forest assessments, for example, as encouraged by Article 9 of the Protocol on Forestry, which would be supportive in terms of climate change adaptation and mitigation, are subject to the availability of funds and human resources. This unfortunately makes it rather unlikely that such measures will ever be taken. The non-binding character of legal instruments, other than the SADC Treaty and the protocols, is a further obstacle. With regard to climate change, this is particularly true for the provisions contained in the RISDP and the Declaration on Food Security.

³⁵

Cf. "Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action, Draft decision -/CP.17", available at http://unfccc.int/files/meetings/durban_nov_2011/decisions/application/pdf/cop17_durbanplatform.pdf; "Green Climate Fund – Report of the Transitional Committee, Draft decision -CP.17", available at http://unfccc.int/files/meetings/durban_nov_2011/decisions/application/pdf/cop17_gcf.pdf; "Durban decisions", available at <http://unfccc.int/2860.php/>; all accessed 28 December 2011.

CHAPTER 15

DISASTER RISK MANAGEMENT LAW AND POLICY

Mary Picard and Ewan Powrie

1 Introduction

Disaster risk management (DRM) is a field of law and governance that intersects with environmental management in many ways, including managing the effects of climate change. DRM refers to systematic efforts to prevent or modify hazards where possible, and to reduce the risk that unpreventable hazards will become disasters for the people affected by them. Such hazards may be natural, human-made or mixed, including: floods, droughts, storms, wild fires, earthquakes, volcanic eruptions, crop infestations, environmental pollution, building collapse, deforestation and soil erosion.

The underlying premise of DRM is that hazards do not necessarily cause disasters if the risk is recognised and acted upon in advance, or if, when necessary, an emergency response to a hazardous event is rapid and effective so that lives and property are saved. Thus, there is a distinction made between a phenomenon that could potentially cause death, injury, displacement, loss of assets and livelihoods, and the way in which the risk of it, or the hazard itself, can be managed to ensure it does not cause a disaster for the affected population. The preventive aspects of DRM are also often described as disaster risk reduction (DRR) or ‘risk governance’ as a way of highlighting the difference between emergency response to hazardous phenomena, and the management of disaster risk. The term ‘disaster resilience’ is also used to describe the capacity of societies and communities to prevent, respond to, and bounce back from disastrous shocks.¹

DRM activities cover a wide spectrum, including risk reduction, prevention, mitigation, preparedness, early warning, emergency response and reconstruction. These may take the form of social interventions, such as education and training, or physical structures such as riverside levies, or legal regulation, such as the enforcement of appropriate land zoning or safety standards in constructing new developments. DRM activities are aimed at reducing people’s exposure, removing or modifying hazards, or responding to and recovering from hazardous events when they occur; that is, managing the risk of disaster. Many aspects of DRM lie outside the realm of law and regulation, but legislation and policy is often central to establishing governmental priorities, accountabilities, specialist institutions, and resource allocation for DRM. Legislation also has a wider role in risk governance through sectoral laws that impact underlying risk, such as whether the population is more exposed to hazards through the location and planning of new settlements.

DRM as a specific form of legal regulation is primarily found in domestic law. Within countries, the main laws commonly recognised as relating to DRM are those that establish priorities, processes and institutions to prevent, manage and respond to disasters caused by natural phenomena or other hazards. Namibia’s Disaster Risk Management Act No. 10 of 2012 is an example of such a national law. However, the concept of DRM law in its broadest sense includes a number of sectors concerned with development planning. It includes building codes,

¹

This discussion is based on a broad consensus on definitions captured in UNISDR (2009).

land use and physical planning and general environmental management laws, because these are often the key to preventing people's exposure to hazards, as well as social welfare laws that reduce people's vulnerability. Too often, risk of disaster is increased through development, when either approved or informal settlements are established on high-risk land such as flood plains and beaches, unstable hillsides or contaminated sites, or when buildings are not constructed according to safe engineering standards for local risks. Laws on management of natural resources, such as water and forestry, are also central to such risk governance, as they have a role in environmental management and defining priorities for the competing uses of these resources, including questions of sustainability in the face of predicted climate change.

DRM is also part of international and regional frameworks, primarily in the form of soft law agreements,² standards and guidelines, but some aspects of DRM are also incidentally included in binding international or regional instruments that have other primary purposes.

Part 2 of this chapter outlines the main international frameworks relevant to DRM, followed by a discussion of regional instruments from the African Union (AU) in Part 3, and the Southern African Development Community (SADC) in Part 4. It then focuses in Part 5 on the specific DRM regime in place in Namibia, both in terms of Namibia's Disaster Risk Management Act 2012 (DRMA) and key sectoral laws.

2 International Frameworks

There is no binding international treaty regulating DRM, nor yet any clear rules of customary law specific to DRM, except to the extent that it overlaps with international environmental law concerning transboundary hazards or is included in international or regional instruments that have other primary objectives, including both human rights and customs treaties. In disasters caused by armed conflict, or in complex emergencies that include armed conflict, international humanitarian law also applies. However, as this is a substantive field of law in its own right, situations of armed conflict and the rules applicable to them are not discussed in this volume.

Although non-binding, the risk reduction aspect of DRM has been the subject of international soft law strategies and agreements since 1994,³ while the international assistance aspect of DRM has been served by state-approved guidelines since 2007, and could yet be the subject of a specific treaty in the future.⁴

2.1 International Response to Disasters

A range of international law rules and norms are of tangential relevance to international disaster response, including agreements on telecommunications, health, privileges and immunities, transport and weapons control, in addition to environmental law, noted above.⁵

² The term 'soft law' describes international agreements or declarations that are negotiated and agreed by states as instruments that establish norms and/or principles, but which do not include binding obligations on state signatories. It is distinguished from 'hard law', which refers to binding obligations found in treaties or customary international law.

³ Yokohama Strategy and Plan of Action for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation, ("Yokohama Strategy"), World Conference on Natural Disaster Reduction, Yokohama, Japan, 23 to 27 May, 1994.

⁴ Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance ("IDRL Guidelines") (IFRC 2007). Unanimously adopted 30 November 2007, at the 30th International Conference of the Red Cross Red Crescent Movement, consisting of state parties to the Geneva Conventions and the components of the International Red Cross Red Crescent Movement. Available at <http://www.ifrc.org/what-we-do/disaster-law/about-disaster-law/international-disaster-response-laws-rules-and-principles/idrl-guidelines/>; accessed 30 September 2015.

⁵ IFRC (2007a:33-60).

However, one of the most recognised barriers to the entry of international assistance during disasters, is customs regulation. Customs procedures designed for regulatory compliance and taxation of goods entering a country are generally not well suited to humanitarian assistance in emergency situations, and have often delayed essential relief goods.⁶ Accordingly, the World Customs Organization (WCO) has included in the Revised International Convention on the Simplification and Harmonization of Customs Procedures (“Revised Kyoto Convention”), a set of binding rules on expedited management of relief consignments.⁷

A wider range of legal and policy aspects of international disaster response is also the subject of the non-binding 2007 Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance (also known as the “IDRL Guidelines”).⁸ These have been recognised by the United Nations as a normative framework of domestic legal preparedness for states to facilitate and coordinate international assistance during major disasters.⁹ They include early warning and domestic institutional preparedness, the process of calling for international assistance and coordination of international actors, expedited customs and immigration procedures, as well the legal capacity for humanitarian organisations to operate within the country during a disaster. The guidelines are now supported by additional tools, including a model law, which a number of states have used while developing new DRM laws and policies.¹⁰

2.2 Disaster Risk Reduction

2.2.1 Hyogo Framework for Action

The most comprehensive international DRM agreement, both for its breadth of content and level of state participation, has been a non-binding agreement, the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (HFA).¹¹ The HFA was adopted by 168 UN member states in January 2005, at the World Conference on Disaster Reduction, held in Kobe, Japan. It built upon the 1994 Yokohama Strategy.¹² Under HFA states took a range of measures to support the reduction of disaster losses. It has now been replaced by a successor agreement, the Sendai Framework for Disaster Risk Reduction 2015-2030, adopted at the World Conference on Disaster Risk Reduction (WCDRR) in Sendai,

⁶ Ibid:122-124.

⁷ Specific Annex J, Chapter 5, Relief Consignments: 71-72; available at https://docs.unocha.org/sites/dms/Documents/Model_en_2011.pdf; accessed 30 September 2015.

⁸ IFRC (2007b).

⁹ Many UN General Assembly resolutions encouraging states to make use of the IDRL Guidelines have been passed since Resolution 63/141 and Resolution 63/137, both 11 December 2008. The most recent was Resolution 68/102 of 12 February 2014.

¹⁰ The 2013 Model Act for the Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance – a tool for states wishing to implement the IDRL Guidelines – drafted by the International Federation of Red Cross Red Crescent Societies (IFRC), the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) and the Inter-Parliamentary Union (IPU) is available at <http://www.ifrc.org/what-we-do/disaster-law/about-disaster-law/international-disaster-response-laws-rules-and-principles/model-act-on-idrl/>; accessed 30 September 2015.

¹¹ Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (“HFA”). 2005. Adopted at the World Conference on Disaster Reduction, 18 -22 January 2005, Kobe, Hyogo, Japan. Subsequently endorsed by UN General Assembly Resolution A/RES/60/195. Available at www.unisdr.org/wcdr; accessed 30 September 2015.

¹² Yokohama Strategy and Plan of Action for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation, (“Yokohama Strategy”). 1994. World Conference on Natural Disaster Reduction, Yokohama, Japan, 23 to 27 May, 1994.

Japan, in March 2015.¹³ Although agreed at an international level, and including commitments to international cooperation, these frameworks are primarily focused on action by states within their own territories to reduce the risk of disaster.

The HFA's three strategic goals were to support the reduction of disaster losses through the integration of disaster risk into development planning, the development and strengthening of institutions, mechanisms and capacities for building resilience, and the incorporation of DRR into emergency management and recovery programmes. Of its five priority areas for action the first priority, to make DRR "a national and a local priority with a strong institutional basis for implementation", was the most relevant to law and regulation.

During the term of the HFA, a significant amount of new legislation was adopted in countries around the world aimed at strengthening the focus on risk reduction, but significant gaps remained.¹⁴ For most countries, reform of law and policy to support DRR has occurred over a number of years. Many are still engaged in this process, and some countries – especially in Africa – have only recently begun to establish specific DRM laws and institutions to manage the risk of multiple hazards. The DRMA has undoubtedly been influenced by the HFA, as well as national factors such as recurring drought and the 2009 floods. However, during the HFA implementation process, in general less attention was given to the other legal frameworks that would also help to reduce underlying risk, such as development planning and environmental management laws.¹⁵

Extensive reviews and consultations during the HFA's term saw a general consensus emerge that there should be a successor agreement, that should largely continue the work of the HFA, rather than taking a radically different approach.¹⁶ The final assessment report in 2015 also highlighted evidence that sustainable development cannot actually be achieved unless disaster risk is reduced, that climate change will increase expected future losses, and that these losses will not be evenly spread, as there is evidence of growing 'risk inequality'.¹⁷ It highlighted that DRR still needs to be better understood, that there is a need to think about managing risks rather than managing disasters, and that risk is currently being under-priced in decisions about development investment, meaning that new risks are being created faster than countries can keep up with them.

2.2.2 Sendai Framework for Disaster Risk Reduction 2015-2030

In March 2015, the HFA was replaced by the Sendai Framework for Disaster Risk Reduction 2015-2030 ("the Sendai Framework"), at the Third United Nations World Conference on Disaster Risk Reduction, held in Sendai, Miyagi, Japan.

¹³ Sendai Framework for Disaster Risk Reduction 2015-2030 ("the Sendai Framework"). 2015. Adopted at the Third United Nations World Conference on Disaster Risk Reduction, 14-18 March, 2015, Sendai, Miyagi, Japan. Subsequently endorsed by UN General Assembly Resolution A/RES/69/315, 3 June 2015. Available at the WCDRR website at http://www.wcdrr.org/uploads/Sendai_Framework_for_Disaster_Risk_Reduction_2015-2030.pdf; accessed 30 September 2015.

¹⁴ Most recently IFRC / UNDP (2014).

¹⁵ Highlighted in IFRC / UNDP (2014:45-69).

¹⁶ UNISDR (2011); GNDR (2009 and 2011); Chair's Summary, Fourth Session of the Global Platform for Disaster Risk Reduction, Geneva, 21-23 May 2013; and Preparatory Committee of the Third United Nations World Conference on Disaster Risk Reduction. Proceedings available at <http://www.wcdrr.org/preparatory>; accessed 30 September 2015.

¹⁷ UNISDR (2015).

The Sendai Framework is more clearly aligned with international development goals, recognising disaster risk as a major threat to sustainable development. Its principal goal is to:

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.¹⁸

However, it then recognises that this will require enhanced implementation capacity in the least developed countries, and more generally in African countries.

The Sendai Framework lists broad global targets to substantially reduce the impact of disaster mortality, the number of people affected, economic losses, and damage to critical infrastructure. Other targets are to increase the number of countries with DRR strategies, to enhance international cooperation and to increase the availability of early warnings and risk information.¹⁹ These provide guidance for the type of targets and monitoring state signatories should establish at national level, rather than a set of measurable targets at the global level.

The Sendai Framework establishes four priority areas for “focused action within and across sectors by States at local, national, regional and global levels.”²⁰ These are:

1. Understanding disaster risk;
2. Strengthening disaster risk governance to manage disaster risk;
3. Investing in disaster risk reduction for resilience;
4. Enhancing disaster preparedness for effective response, and to “Build Back Better” in recovery, rehabilitation and reconstruction.²¹

Law and regulation is central to both Priority 2 and Priority 4. However, while the fourth priority relates more to the traditional understanding of DRM law, guidance on the second priority focuses on the need to “mainstream and integrate disaster risk reduction within and across all sectors”, entailing a review of the coherence of “national and local frameworks of laws, regulations and public policies...”²² Part of this effort is also to establish mechanisms and encourage compliance with existing safety provisions in sectoral laws and regulations, including those related to “land use and urban planning, building codes, environmental and resource management and health and safety standards”, as well as updating these codes and laws.²³ This aspect is particularly relevant to Namibia, as discussed below, where for example building regulations are reportedly well enforced in Windhoek, but less so in other urban settings.

2.3 State DRM Obligations under Human Rights Law

Binding international treaties of relevance to DRM include the key human rights instruments, particularly those on race and sex discrimination, civil and political rights, economic, social

¹⁸ Sendai Framework para. 17.

¹⁹ Sendai Framework para. 18.

²⁰ Sendai Framework para. 20.

²¹ Sendai Framework para. 20.

²² Sendai Framework paras. 26, 27(a).

²³ Sendai Framework para. 27(d).

and cultural rights, refugees, and the rights of children and people with disabilities.²⁴ Namibia has acceded to all of the key human rights treaties, and they are thus part of Namibian law in accordance with the Constitution.²⁵ These treaties and customary international human rights law are especially relevant to states' duties to protect people's lives and health, livelihoods and assets, based on need and without unlawful discrimination on the grounds of status such as gender, ethnicity, age or disability. The state's human rights obligation to protect encompasses positive obligations to prevent, as well as respond to, disasters in their territory within the resources and capacity available to them.²⁶

So far, the treaty bodies associated with the international human rights treaties have not considered cases involving claims of injury from disasters. However, a line of case law from the European Court of Human Rights (ECtHR) since 2004 – considering similar provisions in the European Convention on Human Rights – may indicate the likely direction such decisions could take in either international or other regional human rights tribunals.²⁷ These are of relevance because the African Human and Peoples' Rights Commission (and Court) have tended to take a universalist approach to the interpretation of human rights treaties, frequently citing UN treaty bodies and also ECtHR decisions.²⁸

The ECtHR has clearly held that deaths and property destruction caused by a human made hazard controlled by Government authorities occurred in violation of the European Human Rights Convention rights to life and enjoyment of property.²⁹ However, it has gone further and held in *Budayeva v Russia* that death and destruction from a natural hazard – in this case mudslides – was also a violation in a situation where the authorities had the requisite knowledge of the risk, and the time and capacity to act, but failed to do so.³⁰ The Government "failed to discharge its positive obligation to protect the right to life" even though the original hazard was a natural phenomenon.³¹ This principle was reaffirmed in the 2012 case of *Kolyadenko & Ors v Russia*, in a situation where both flooding and exposure of residents could have been avoided with appropriate and timely action.³² In this case there was a mix of human made and natural hazard, concerning the urgent release of large quantities of water from a dam in response to exceptionally heavy rains beyond forecast levels. The avoidable aspects were the Government's failure to maintain the riverbed channel, which it knew was overgrown and cluttered with debris, and failure to warn residents and manage evacuations to prevent loss of life and property. By contrast, the Court held inadmissible a subsequent action where there

²⁴ 1965 International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), 1966 International Covenant on Civil and Political Rights (ICCPR), 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR), 1979 Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1990 Convention on the Rights of the Child (CRC), 2006 Convention on the Rights of Persons with Disabilities (CRPD) and the 1951 Convention Relating to the Status of Refugees. OHCHR Core Human Rights Instruments available at <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CoreInstruments.aspx>; accessed 30 September 2015.

Namibia has acceded to all of the treaties mentioned.

²⁵ Accessions listed in <https://treaties.un.org>, accessed 13 March 2015; Namibian Constitution Article 144 incorporates international law as the law of the land.

²⁶ See Harper (2009); IFRC / UNDP (2014:72-74).

²⁷ Based on Renold (2012).

²⁸ Killander (2011:163).

²⁹ *Öneryildiz v Turkey* (30 November 2004) app no 48939/99, § 18 ECHR 2004-XII.

³⁰ *Budayeva and others v Russia* (29 September 2008) app no 15339/02, § 267 ECHR 2008-II.

³¹ Ibid:Reasons for judgment.

³² *Kolyadenko and others v Russia* (28 February 2012) app no 17423/05.

was no causal link between the action (or inaction) of the authorities and property damage caused by floods.³³

The ECtHR has applied a higher standard of care for states concerning the right to life, as a fundamental right, compared with the right to enjoyment of property, which is a qualified right.³⁴ It has also been clear that human caused hazards are more likely to result in violations of state positive obligations to protect residents, but that natural hazards can also lead to a violation if a Government knew of the risk and had the time and means to reduce it. However, it may well prove difficult to sustain a distinction between human caused hazards, and entirely natural events, especially for situations such as flooding in urban areas where homes have been authorised without adequate flood risk assessment, or else corruptly, in defiance of such assessments. For example, in 2009 Tempest Cynthia caused drowning deaths due to flooding in two seaside towns in France. The low-lying location and type of dwellings had been approved by the local authorities, but a 2013 judicial investigation concluded the deaths could, and should, have been prevented.³⁵ The mayor and two others were later convicted of negligent manslaughter because, for motivations of personal profit, they had deliberately concealed the flood risks and thereby breached their “duty to protect and safeguard the population.”³⁶

State human rights obligations concerning disasters have also been the subject of a major initiative by the UN’s International Law Commission (ILC), which is not yet complete.³⁷ The ILC has so far approved twenty-one draft articles, including a proposed state obligation to accept international disaster assistance when a disaster exceeds national capacity, and a duty to take action to prevent disasters.³⁸ The draft articles are currently being circulated for state and expert comment until 1 January 2016, and could eventually form the basis for a treaty or some other type of guidance on human rights in disasters.³⁹ In the meantime, the draft articles represent a consensus view of a key group of UN international law experts, and states may find them useful as normative statements of their likely international human rights obligations concerning disasters.

3 Disaster Risk Management Law and Policy in the African Union

3.1 Africa Regional Strategy for Disaster Risk Reduction

The Africa Regional Strategy for Disaster Risk Reduction was formulated in 2004 by the African Union and its economic development programme, the New Partnership for Africa’s Development (NEPAD).⁴⁰ It predates the Hyogo Framework, but has many of the same

³³ *Hadzhisyska v Bulgaria* (15 May 2012) app no 20701/09, para. 16.

³⁴ Discussion based on Renold (2012) and Kälin / Haeni Dale (2008).

³⁵ *Le Monde* 27 August 2013.

³⁶ Cour d’appel de Poitiers, Tribunal de grande instance des Sables-d’Olonne, *Jugement Correctionnel du 12 décembre 2014*, at 180 (“Pour des mobiles personnels inacceptables, les prévenus ont violé leur obligation de protection et de sauvegarde de la population, ont mis des vies en danger”), cited in Wentz (2015).

³⁷ See <http://legal.un.org/ilc/>; accessed 30 September 2015.

³⁸ ILC Protection of persons in the event of disasters. Texts and titles of the draft articles adopted by the Drafting Committee on first reading. UN Doc. A/CN.4/L.831, 14 May 2014.

³⁹ Any draft treaty from the ILC normally requires approval and recommendation from the UN General Assembly’s Legal Committee (the Sixth Committee), a period of a year or more for state consultations, and then approval by states in the UN General Assembly. An advocate state could also take the initiative on a treaty, either using the UN organs or establishing its own process.

⁴⁰ Africa Regional Strategy for Disaster Risk Reduction: Disaster Risk Reduction for Sustainable Development in Africa (African Union, July 2004), available at http://www.unisdr.org/files/4038_africaregionalstrategy1.pdf; accessed 30 September 2015.

objectives, with an overall focus on DRR in sustainable development. Its main aims are to increase political commitment to DRR, and to improve identification and assessment of disaster risks, DRR knowledge management, public awareness, and risk governance and institutions for disaster risk reduction, as well as integrating DRR into emergency response.

3.2 Human Rights and Internal Displacement

The 1986 African Charter on Human and Peoples' Rights (also known as the Banjul Charter) – includes the rights to life and property, but in addition includes the right of peoples to development, and to an environment that is favourable to their development, which is of relevance to DRM.⁴¹ For example, in a case concerning oil pollution in Ogoniland, Nigeria, the African Commission on Human and Peoples' Rights stated that this right “to a general satisfactory environment” requires the State to take measures to prevent pollution and ecological degradation, to promote conservation, and to secure an ecologically sustainable development and use of natural resources.⁴² The Commission said that such measures included: risk and environment monitoring, environmental and social impact studies, monitoring and information provided to exposed communities, as well as including locals in the decision-making.⁴³

Some aspects of DRM are also included in the 2012 African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (“the Kampala Convention”).⁴⁴ The Kampala Convention applies to displacement, whether due to armed conflict, human made or natural hazards, including climate change. Unlike the African Convention on Refugees, which is focused entirely on international refugees (defined by reasonable fear of persecution), the Kampala Convention includes state obligations to protect people from internal displacement from a range of causes.⁴⁵ It includes state obligations to take measures such as early warning, disaster risk reduction, disaster preparedness and management, and immediate protection and assistance to internally displaced persons, and to seek international cooperation when it is required.⁴⁶ It also clarifies that states have the primary obligation to provide protection and assistance, without unlawful discrimination, but notes that international and regional cooperation are often required, in which case the state should also ensure other actors provide humanitarian assistance that is impartial and neutral.⁴⁷ These are in fact the first legally binding rules on disaster response for the African region.⁴⁸ The African

⁴¹ African Commission on Human and Peoples' Rights Articles 20, 22 and 24. Ratified by Namibia in 1992. See also Article 1 of the UN Declaration on the Right to Development (4 December 1986) UNGA Res. 41/128.

⁴² *African Commission on Human and Peoples' Rights, The Social and Economic Rights Action Center and the Center for Economic and Social Rights v Nigeria* (27 May 2002) Communication No. 155/96, § 52-3; cited in Renold (2012).

⁴³ Renold (2012).

⁴⁴ Endorsed at the AU Special Summit in Kampala, Uganda 2009 and as of 30 September 2015 signed by 40 of the 53 member states of the African Union. Entered into force on 6 December 2012 after 16 ratifications.

⁴⁵ Convention Governing the Specific Aspects of Refugee Problems in Africa; signed in Addis Ababa 1969; entry into force 20 June 1974. Available at http://www.au.int/en/sites/default/files/Convention_En_Refugee_Problems_in_Africa_AddisAbaba_10September1969_0.pdf; accessed 30 September 2015.

⁴⁶ Articles 4(2) and (3).

⁴⁷ Articles 5 and 6.

⁴⁸ Boswijk (2012).

Union has also developed a Model Act to assist states parties in implementation of the Kampala Convention.⁴⁹

4 Disaster Risk Management Law and Policy in the SADC Region

SADC does not have any specific regional treaty or protocol concerning disasters, although based on its Disaster Risk Reduction (DRR) Strategic Plan 2006-2010, it established a Disaster Risk Reduction Unit in 2009, responsible for coordinating regional preparedness and response programmes for transboundary hazards and disasters.⁵⁰ In 2011 it also established a SADC Regional Platform for Disaster Risk Reduction, which at its November 2013 meeting emphasised the importance of integrating risk reduction into development.⁵¹ SADC's Regional Indicative Strategic Development Plan also emphasises that co-operation on food security policies has led to an effective disaster preparedness and management mechanism by implementing programmes and projects aimed at early detection, early warning and mitigation of disaster effects.⁵² These include programmes on drought monitoring, natural resource management, agriculture, early warning (Remote Sensor Unit) and assessment of vulnerability. The objectives of the SADC Treaty include aiming for regional development and cooperation in a range of areas, including *inter alia*: food security, land and agriculture; infrastructure and services; and natural resources and environment.⁵³ All of these are highly relevant to regional disaster risk reduction, considering the impact of drought on food security in the region, and the long-term importance of cross-border management of waterways and the environment.

Some relevant protocols under the SADC treaty include: the Protocol on Politics, Defence and Security Cooperation, Article 2 of which states that a specific objective is to “enhance regional capacity in respect of disaster management and co-ordination of international humanitarian assistance;” the Protocol on Forestry (2002); the Revised Protocol on Shared Watercourses (2000); and, especially with regard to disease and epidemics, the Protocol on Health (1999). The Protocol on Gender and Development (2008) should also now be influencing SADC institutions and member states’ approaches to DRM since its entry into force in 2013, as it is a set of cross-cutting principles on gender equity in development, with specific targets on participation of women in relevant institutions.

SADC therefore has binding protocols, policy and institutional mechanisms in place that have the potential to enhance regional disaster risk reduction and management, although there is room for a stronger legal and policy basis, and also for these issues to be made a higher priority in practice. In particular, SADC has not yet addressed specifically, two key elements of the changing risk profile of Southern Africa - urbanisation and climate change. In addition to well-documented risk from drought and floods, there is increasing evidence of more extreme weather events, and the likely increase of these due to climate change.⁵⁴ But there are also risks emerging from a steady population increase, and especially redistribution to urban areas within the region. It is estimated that 73.7 million southern Africans lived in urban areas in 2010, but

⁴⁹ Ibid.

⁵⁰ Geographic Information System (GIS) Portal: <http://gisportal.sadc.int/drru/?q=node/2>; accessed 30 September 2015.

⁵¹ UNISDR website: <http://www.unisdr.org/archive/23244>; SADC (2013).

⁵² Formulated in March 2001, adopted and approved by the SADC Summit in August 2003. SADC website: <http://www.sadc.int/about-sadc/overview/strategic-pl/regional-indicative-strategic-development-plan/>; accessed 30 September 2015.

⁵³ Articles 4 and 5 of the SADC Treaty.

⁵⁴ Tadross *et al.* (2011).

that by 2025 this will be 110.4 million, or 52% of residents living in cities or towns.⁵⁵ Already this trend is reflected in the growth of large, informal settlements whose residents face numerous livelihood, health and security risks, as these areas do not have adequate services and many are located on high-risk land.⁵⁶

5 Disaster Risk Management Law and Policy in Namibia

Historically, Namibia's efforts to combat the impact of disasters have been focused almost exclusively on relief efforts for flooding and drought. This strategy was governed by a legal framework – the Civil Defense Act and the Civil Defense Ordinances –⁵⁷ that was inherited from the South African colonial administration. Namibia now has a relatively new national framework for DRM and DRR, which includes the Disaster Risk Management Act of 2012, the Disaster Risk Management Regulations of 2013, the National Disaster Risk Management Plan of 2011 and the National Disaster Risk Management Policy of 2009. This framework is representative of the wider global paradigm shift away from a disaster response approach to one of comprehensive DRM that takes account of a wide range of hazards and stakeholders. The framework is aligned with relevant international agreements such as the Hyogo Framework for Action 2005-15, the Kyoto Protocol, and the Africa Regional Strategy for Disaster Risk Reduction. This section provides an overview of this framework, as well as some examples of Namibian sectoral laws and policies that support DRM.

5.1 Disaster Risk Management Act No. 10 of 2012

The Disaster Risk Management Act of 2012 is the main legal instrument governing disaster risk management in Namibia.⁵⁸ It has four main objectives: firstly, to provide for the establishment of DRM institutions in Namibia; secondly, to provide for an integrated and coordinated DRM approach that focuses on (among other things) preventing or reducing risks, emergency preparedness, response and recovery; thirdly, to provide for declarations of disasters; and fourthly, to establish the National Disaster Risk Management Fund.⁵⁹

The Disaster Risk Management Act is notable for its progressive drafting and its relatively full integration of the concept of DRR: it is a clearly defined term⁶⁰ that corresponds to the internationally accepted definition of the term used by UNISDR.⁶¹ As a further example, the National Disaster Risk Management Committee's functions and powers include: ensuring that the core concepts of disaster risk reduction are integrated into the activities of relevant Government institutions; that DRR is integrated into all development policies, strategies and programs at national, regional, constituency and local levels; promoting and strengthening scientific, research and technical capacity for DRR; and supporting the integration of DRR into tertiary and school education curricula.⁶² The Directorate of Disaster Risk Management, meanwhile, is mandated to, among other things, facilitate and coordinate specific DRR

⁵⁵ Holloway *et al.* (2013) Table 4.2.1.1, p. 64, citing UN-Habitat (2010).

⁵⁶ Ibid.

⁵⁷ Civil Defence Act No. 39 of 1966, Civil Defence Proclamation AG 54 of 1978, and Civil Defence Ordinance No. 3 of 1979.

⁵⁸ The Disaster Risk Management Act came into operation on 31 December 2013; see Government Notice No. 348 on the Commencement of Disaster Risk Management Act, 2012, Government Gazette No. 5380 (2013).

⁵⁹ Preamble of the Disaster Risk Management Act No. 10 of 2012.

⁶⁰ Article 1.

⁶¹ UNISDR (2009).

⁶² Article 5(n), Disaster Risk Management Act No. 10 of 2012.

strategies,⁶³ whilst National Focal Persons (officials of Government institutions designated as DRM focal points) are charged with facilitating the training of national and regional staff in DRR.⁶⁴ Regional, Local Authority and Settlement DRM Committees are mandated with similar responsibilities.

Current institutional responsibility for DRM in Namibia rests with the Office of the Prime Minister (OPM).⁶⁵ The Disaster Risk Management Act also creates a number of specific institutions that are to be responsible for DRM in Namibia, namely:

- the National Disaster Risk Management Committee;
- the Directorate of Disaster Risk Management;
- the Namibia Vulnerability Assessment Committee;
- the Regional Disaster Risk Management Committees;
- the Constituency Disaster Risk Management Committees;
- the Local Authorities Disaster Risk Management Committees; and
- the Settlement Disaster Risk Management Committees.⁶⁶

Figure 1: Institutional Framework for DRM in Namibia⁶⁷



⁶³ Article 11(4)(d)(i).

⁶⁴ Article 12(4)(i).

⁶⁵ Article 2.

⁶⁶ Article 3.

⁶⁷ Source: UNDP (2014:26).

Perhaps the most strategically important of these institutions is the Directorate of Disaster Risk Management, which is responsible for coordinating DRM activities and executing the decisions of the National DRM Committee. Its main function is the coordination of stakeholders and to that end, at least at national level; it has an effective system in place. Whilst the National DRM Committee is the highest-level body that drives policy and decision-making, the Directorate of Disaster Risk Management coordinates with both the Namibia Vulnerability Assessment Committee as well as the National Focal Persons Forum. Although not specified within law or policy, the Directorate also oversees several sector-specific working groups that feed into its decision-making processes and focus on areas such as health, education, water and sanitation. Largely consisting of Government representatives, the working groups also contain representatives from NGOs and civil society.

At the regional level, the Disaster Risk Management Act requires each Regional Council to establish a Regional DRM Committee, which is responsible for coordinating DRM among institutions in various sectors, local authorities, communities and other stakeholders in the region.⁶⁸ Regional DRM Committees have been established in each region within Namibia. However, the establishment of the required DRM Committees at constituency, local authority and settlement levels is currently a work in progress.

A number of provisions in the Disaster Risk Management Act focus on the requirement for DRM plans, at national, regional and local levels, as well as requiring various bodies (including Government ministries) to develop their own DRM and contingency plans. At the national level both a National DRM Framework⁶⁹ and a National DRM Plan⁷⁰ are required. A detailed National DRM Plan was developed in 2011, in parallel to the development process for the Disaster Risk Management Act: please see section 5.3.2 below for further analysis of the Plan.

Commitments made in both the National DRM Policy of 2009 and the National DRM Plan of 2011 regarding funding and budgeting for DRM and emergency response were given a legal basis in the Disaster Risk Management Act, which establishes a National Disaster Fund.⁷¹ The Constitution gives the Government the right to establish funds designated for such special purposes.⁷² The Fund is administered by the National DRM Committee, and draws its income from various sources. Its objective is to serve as a contingency fund for the development and promotion of DRM in Namibia.⁷³ The Fund may be used, amongst other things, to fund research, capacity building and training programs, acquiring relief, recovery and rehabilitation assistance, as well as land, materials and equipment.⁷⁴

5.2 Disaster Risk Management Regulations 2013

The Disaster Risk Management Regulations entered into force in December 2013 and are intended not only to expand upon the provisions of the Disaster Risk Management Act, but also to regulate new areas relevant to DRM, including customs exemptions, codes of practice, the establishment of training institutions, and administrative penalties for officials who contravene provisions of the Act or Regulations. The Regulations set out in greater detail what

⁶⁸ Article 14.

⁶⁹ Article 20.

⁷⁰ Article 21.

⁷¹ Article 45.

⁷² Article 125(3) of the Constitution of the Republic of Namibia.

⁷³ Article 48 of the Disaster Risk Management Act No. 10 of 2012.

⁷⁴ Article 49.

is to be included in the DRM Plans required under the Act, including content detailing an inclusive and participatory approach to ensure the involvement of all stakeholders involved in DRM, development of forecasting and early warning systems, establishment of coordination mechanisms and the promotion of partnerships with relevant stakeholders (including media, meteorological and hydrology services), and more general requirements for disaster prevention and mitigation activities.⁷⁵

The Regulations require both Regional Councils and other institutions involved in DRM to budget specifically for DRM activities,⁷⁶ a measure designed to ensure that monies in the national disaster fund should only be used as a measure of last resort.⁷⁷ The Regulations also set out provisions relating to the establishment of training institutions for DRM,⁷⁸ the exemption of relief goods from custom excise duty and the granting of work permits for international relief personnel,⁷⁹ and relatively detailed requirements for the establishment of volunteer DRM units.⁸⁰

The Regulations are however most notable for dealing with issues of accountability and liability for DRM in Namibia. This places Namibia in a relatively small group of states that have enacted legislation covering these issues. The Regulations establish a code of practice for DRM, whereby anyone involved in DRM in Namibia is required to, among other things: perform his or her duties with due care, skills, diligence and professionalism; act fairly and unbiased in dealing with people affected by a disaster; be familiar with and abide by the Disaster Risk Management Act; and promote accountability, efficiency, effectiveness and transparency in implementing disaster risk management programmes.⁸¹ The code of practice also prohibits those involved in DRM to seek or obtain financial or other advantages, and requiring them to share disaster related information in a transparent way in order to promote co-ordination and more coherent disaster response.⁸²

Importantly, the Regulations cover personal and institutional liability in a section on administrative penalties and offences. The Prime Minister is empowered to impose administrative penalties on persons “responsible for disaster risk management”, disaster institutions, or governmental institutions, for contravening, or for delaying compliance with, the provisions of the Disaster Risk Management Act or with the provision of a general or specific policy directive issued under the Act.⁸³ The Regulations also set out a number of offences that carry the penalty of a fine not exceeding N\$10,000 or two years imprisonment, or both.⁸⁴ There are fourteen separate offences listed, and these include: action or omission that endangers life, property or environment; misrepresentation for the purposes of acquiring disaster funds or disaster relief items; theft of disaster relief items; and refusing relocation or preventing any other person to be relocated from an area where disaster occurs or is about to

⁷⁵ Article 2(1) of the Disaster Risk Management Regulations, 2013.

⁷⁶ Part 4.

⁷⁷ Article 9(1).

⁷⁸ Part 5.

⁷⁹ Part 6.

⁸⁰ Part 9.

⁸¹ Article 17(1).

⁸² Article 17(3).

⁸³ Article 31(1).

⁸⁴ Article 30(1).

occur.⁸⁵ The last offence is notable as many local authorities in Namibia are regularly faced with the challenge of relocating families and communities due to flooding.

5.3 Relevant Policy Framework for DRM in Namibia

5.3.1 National Disaster Risk Management Policy 2009

The National DRM Policy of 2009 provided the policy basis for the development of the DRMA. The National DRM Policy started the practical transformation of Namibia's former National Emergency Management System into the National Disaster Risk Management System.⁸⁶ Prior to the new framework being given legislative effect under the Disaster Risk Management Act, this was achieved through a Cabinet Action Letter that effectively restructured the institutional provisions for DRM and DRR.⁸⁷ The Policy also sets out the proposed legal and regulatory framework that served as the basis for the Act and the Regulations. Overall, the 2009 Policy was an important milestone, symbolising a shift in official thinking away from disaster response, and engaging with longer-term issues of preparation, risk management and reduction.

5.3.2 National Disaster Risk Management Plan 2011

The National DRM Plan is an extremely detailed document that is concerned with two major themes: providing an ‘all hazard framework’ for DRM planning, and setting out the Emergency Management Operational Procedures to guide stakeholders in disaster response activities. It is issued primarily under the auspices of the National DRM Policy, which requires the development and dissemination of a National DRM planning framework and guidelines to facilitate the development and integration of disaster risk management planning into the development plans and programs of all sectors.⁸⁸

Although the National DRM Plan was developed in 2011, in parallel with the development process for the DRM Act, the link between this document and the requirements of the Act are not entirely clear. Whilst the National DRM Plan states that it provides “a framework for sectoral and regional disaster risk management”, it does not appear to meet all the specific requirements of the Act. Taking one specific example, the Act requires the introduction of mechanisms for setting and implementing minimum building standards⁸⁹ and the National DRM Plan makes reference to the need to employ sufficient building standards. However the references are general (e.g. to “develop and enforce building codes and regulations for health and safety”⁹⁰) and no specific mechanisms are mentioned. Neither does the National DRM Plan technically meet the very wide requirement under the Act that it must comprise “all the disaster risk management plans developed for Namibia”⁹¹; although exactly what is meant by this requirement remains unclear. There appears to be a need to properly harmonise the overarching legislation with the underlying plans and programs.

⁸⁵ Article 32(1).

⁸⁶ The National Emergency Management System was a structure created by a Cabinet Memorandum issued by the President of Namibia in 1994.

⁸⁷ Cabinet Action Letter 5TH/15.02.94/006.

⁸⁸ Section 8.3.1 of the National Disaster Risk Management Policy, 2009.

⁸⁹ Article 20(2)(f) of the National Disaster Risk Management Plan, 2011.

⁹⁰ Table 2 of the National Disaster Risk Management Plan.

⁹¹ Article 21(1)(b) of the Disaster Risk Management Act No. 10 of 2012.

The National DRM Plan is notable for promoting and utilising disaster risk reduction (DRR) as a key concept. DRR is a guiding principle for the Plan.⁹² it intends to make DRR a priority at all levels in Namibia through establishing sound, integrated and functional legal and institutional capacity within the National DRM system.⁹³ Further provisions break down the responsibilities of various sectors and it is clear that, at least at policy level, DRR has been actively considered and attempts made to provide for the mainstreaming of DRR at various levels – for example, in the section on the health and nutrition sector’s roles and responsibilities, a local and national gap analysis of capacities in health is to be initiated, with a focus on risk reduction,⁹⁴ whilst for the environmental sector, DRR should be integrated into climate change adaptation.⁹⁵

5.3.3 National Development Plan and Vision 2030

Whilst the impact of disasters on Namibia’s population and economy is often noted in policies and Government documents, DRM and/or DRR is not prioritised as an objective in its own right in either of the two major national policies which guide Namibian development; the Fourth National Development Plan 2012/13 to 2016/17 (NDP4), and the Vision 2030 Policy.

NDP4 focuses on four ‘foundation issues’; logistics, tourism, manufacturing, and agriculture. There is no explicit acknowledgement that effective DRR practices and legislation can contribute to the growth of these sectors. Some relevant references are included, for example responsibility is assigned to the Ministry of Agriculture, Water and Forestry for the high-level strategy of developing drought-resistant crops and livestock. Namibia’s Third National Development Plan (NDP3), covering the period 2007/8 to 2011/12, was more explicit in its promotion of the need to develop DRR and DRM capacities, noting that “disasters, both man-made and natural, undermine the country’s development efforts and place communities at risk of displacement, hunger and poverty”.⁹⁶ It is curious that the emphasis on DRR and DRM activities has been largely omitted from NDP4.

Vision 2030, originally published in 2004, sets out a wider policy framework for Namibia’s long-term development and makes several references to the challenges of disasters as well as the need, for example, to “identify cost-effective, flexible and adaptable management approaches and national disaster response strategies to the potential impacts of climate change”⁹⁷. NDP4 was developed within the broader vision of Vision 2030, so arguably the disaster management and response language used in Vision 2030 continues to guide Namibia’s development, even if this is not explicitly acknowledged in the latest NDP.

5.4 Disaster Risk Reduction in Key Sectoral Laws in Namibia

The following section sets out a brief overview of some of the most relevant sectoral laws and policies that help to reduce the risk of disasters by reducing the creation of new risks through development in Namibia. It is notable that several of these laws and policies prioritise community participation in resource management and development, highlighting a positive trend in the Namibian legal framework that could (given appropriate support and

⁹² Section 1.4.2 of the National Disaster Risk Management Plan, 2011.

⁹³ Section 3.2.

⁹⁴ Table 3.

⁹⁵ Table 9.

⁹⁶ NPC (2008:284).

⁹⁷ GRN (2004a:146, 161 and 172).

implementation) contribute significantly to reducing the risks communities face from natural hazards.

5.4.1 Building Codes

Namibia's National Building Regulations of 1991, combined with the Local Authorities Act of 1992, establish a relatively comprehensive framework for building safety. Implementation is a local Government responsibility, with different levels of oversight from the Ministry of Regional and Local Government, Housing and Rural Development, depending on the type of local Government. Large urban municipalities have greater autonomy, and at least in the case of the capital city Windhoek this has resulted in a relatively robust and well-enforced permitting scheme. Outside of Windhoek levels of effective implementation and enforcement are notably weaker, however, as a lack of trained staff and funding for building control means that the national laws are often applied inconsistently, and in many remote areas not at all.

5.4.2 Environmental Resource Management

Under the overall obligation to adopt policies aimed at the “maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future” set out in Article 95 of the Namibian Constitution, the Government has developed a number of laws and policies that are relevant for the purposes of DRM. The Environmental Management Act of 2007 not only sets out a new institutional structure for the sector in Namibia, but it also gave legislative effect to the Environmental Assessment Policy of 1994, therefore placing the environmental assessment process on a formal, legal footing. Community involvement in natural resource management and the sharing of benefits arising from the use of resources are listed as some of the key principles of environmental management.⁹⁸ However, the system suffers from gaps in capacity and funding: the Government openly acknowledges that it possesses limited capacity to enforce Environmental Management Plans (part of the wider Namibian environmental impact assessment regime), for example.⁹⁹ Gaps in capacity extend from national to regional level, and outside of Windhoek it is difficult to uphold official procedures.

Namibia's National Policy on Climate Change 2011 specifically addresses the issue of disaster reduction and risk management, including a commitment to international risk reduction initiatives such as the Hyogo Framework for Action and the Africa Regional Strategy for Disaster Risk Reduction, and recognising DRR as “a frontline defence in adapting to the impacts of climate change”.¹⁰⁰ The Government has committed to developing and implementing a ‘climate change induced DRM strategy’, establishing and strengthening climate change induced disaster management institutions at regional and national levels, as well as providing relief to the victims of climate change induced disaster.¹⁰¹

5.4.3 Forestry

Forest management and exploitation in Namibia is primarily governed by the Forest Act No. 12 of 2001, which replaced the Preservation of Trees and Forests Ordinance No. 37 of 1952 and the Forest Act No. 72 of 1968, and built upon the content of the Forest Policy Statement of

⁹⁸ Article 3(2), Environmental Management Act No. 7 of 2007.

⁹⁹ GRN (2012:Section 4.1).

¹⁰⁰ Section 4.13 of the National Policy on Climate Change, 2011.

¹⁰¹ Section 4.13.

1992. The Forest Act establishes a regime for authorisation of the harvesting of trees¹⁰² in order to combat deforestation and thereby prevent the exacerbation of related natural hazards such as flooding. Illegal harvesting is a major problem throughout Namibia, especially in the north-eastern regions where forest cover is thicker. The recent Forest Regulations of 2015 now provide a more detailed legal framework for the prevention of illegal harvesting. The Regulations expand on the foundations laid by the Forest Act, and regulate matters including the marking of forest produce, measures to be taken for forest protection, and the permits, licences and other documents required for the harvesting, transportation, processing, sale, importation, transit, and exportation of forest produce. The Regulations also set out a detailed list of protected plant species.¹⁰³

The Development Forestry Policy of 2001 acknowledges the shortcomings in Namibia's framework for forest management, by concluding that the implementation of effective property rights, a more supportive regulatory framework, the strengthening of extension services and the promotion of community forest management, is critical to sustainable forest management in Namibia. To some extent, the implementation of the Forest Act 2001 and an increasing uptake of community forests have helped to change this situation.

5.4.4 Water

The Water Resources Management Act No. 11 of 2013 has repealed the previous Water Resources Management Act No. 24 of 2004, although the latter never technically entered into force. The 2013 Act is also not in force as the Minister has not yet set a date for the Act to come into operation, and therefore strictly speaking the Water Act of 1956 (as amended) is still in operation. Part 17 of the 2013 Act (Dams, Dam Safety and Flood Management) is of particular importance for DRM in Namibia. This section prohibits construction work or other activity that causes, or is likely to cause, the natural flow conditions of water in, to or from a watercourse to be modified without the Minister's written approval.¹⁰⁴ Safety measures for dams also come under scrutiny, requiring professional engineers' reports regarding the safety of dams and creating a duty of care on the part of the engineer towards the public and the State,¹⁰⁵ and requiring the owners of dams with potential safety risks to register them with the Minister.¹⁰⁶ The Minister also has relatively extensive powers aimed at the prevention of flood risk.¹⁰⁷

The Act is also notable for its emphasis on community and stakeholder involvement in, and management of, water resources, in particular through the establishment of basin management committees,¹⁰⁸ several of which were operative for some time prior even to the development of the Water Resources Management Act of 2004. For example, the committee for the Kuiseb River Basin was formed in 2003, with its own water resources management plan being developed in 2007. Included in a long list of duties of committees are obligations to promote community participation in the protection, use, development, conservation, management and control of water resources, to promote community self-reliance including the recovery of costs

¹⁰² Article 27 of the Forest Act No. 12 of 2001.

¹⁰³ See Annexure 2 of the Forest Regulations: Forest Act 2001, Government Notice No. 170 on the Forest Regulations: Forest Act 2001, Government Gazette No. 5801 (2015).

¹⁰⁴ Article 92 of the Water Resources Management Act No. 11 of 2013.

¹⁰⁵ Articles 79 and 80.

¹⁰⁶ Article 97.

¹⁰⁷ Article 100.

¹⁰⁸ Part 5.

for the operation and maintenance of waterworks, and to prepare an integrated water resources management plan which will feed into an overall Integrated Water Resources Management Plan.¹⁰⁹ The establishment of basin management committees is representative of a wider impetus for the decentralisation of Government functions in Namibia, especially relating to water resources management. However the majority of river basins in Namibia currently have no committee in place and only the Kuiseb committee appears to have a management plan in place.¹¹⁰ Namibia's Integrated Water Resources Management Plan of 2011 notes the need to increase the number and capacity of committees in order to improve equitable access to water.

¹⁰⁹ Article 23.

¹¹⁰ Section 4.2 of the Integrated Water Resources Management Plan for Namibia, 2011.

CHAPTER 16

TRADE, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

Oliver C. Ruppel

1 Introducing the International Trade, Environment and Development Debate

Issues related to international trade and the environment undoubtedly are of significance to developing countries because they argue that developed countries have depleted resources and indulged in environmentally harmful practices during the past century, in order to achieve unprecedented high standards of living.¹ The developing countries therefore demand a general but differentiated responsibility, seeking open trade and compensation for adopting environmentally restraining policies.² Upon further reflection on the link between economic growth activities, environmental protection and social development, the triangular debate on these topics will be highlighted briefly, by introducing the various perspectives.³

1.1 The Trade Perspective

Trade creates the wealth, which increases human well-being. Trade can be good for the environment because it creates wealth that can be used for environmental improvement, and the efficiency gains from trade can mean fewer resources used and less waste produced. Increased economic growth leads to more environmental protection and a higher standard of living. The exchange of goods introduces new technologies, which reduce emissions and save raw materials and natural resources.

1.2 The Environmental Perspective

The environment actually represents a higher order than trade and the *status quo* seriously threatens the earth's eco-systems. Developing countries try to protect themselves against costly environmental demands. In contrast, the wealth created by trade will not necessarily result in environmental improvements. Trade liberalisation is deemed to cause greater harm, leading to exports of natural resource allocation to other countries and thereby causing increased environmental degradation.⁴

1.3 The Development Perspective

Developing countries' top priority should be to reduce poverty. Openness to trade (market liberalisation) and investment may be a key to doing so by increasing exports, even though the link between market liberalisation and economic growth does not happen automatically. Developed countries protect their industries with subsidies, special trade rules and tariff

¹ Ruppel (2009c; 2010g, l).

² Goyal (2006:11).

³ For further reading see Goyal (2006) and UNEP (2005d).

⁴ For a detailed discussion see UNEP (2005d:3ff.).

systems which place at a disadvantage exporters in developing countries. Demands that developing countries comply with the environmental standards of developed countries are unfair, particularly if they are not accompanied by technical or financial assistance. Priorities differ; in Africa, for example, clean water is paramount and, historically, developed countries caused most of the environmental damage in the first place.

1.4 Sustainable Development: The Answer to the Dilemma?

Principle 11 of the 1972 Stockholm Declaration states that

[t]he environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organisations with view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

In its 1987 report *Our Common Future*, the Brundtland Commission defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.⁵ Since the 1992 UN Conference on Environment and Development in Rio de Janeiro, the principle of sustainable development has influenced a broad number of international instruments, both of legal and non-legal in nature. It aims at embracing and balancing ecology, economy, conservation and utilisation and has become a worldwide governing political *Leitmotiv* for environment and development. It can be broadly understood as a concept that is characterised by (i) the link between the policy goals of economic and social development and environmental protection; (ii) the qualification of environmental protection as an integral part of any developmental measure, and vice versa; and (iii) the long term perspective of both policy goals, that is the States’ inter-generational responsibility.⁶

Apart from the question, whether the principle of sustainable development actually enfolds normative quality,⁷ the concept reflects the idea of distributive justice and can play an important role in the process of bridging the North-South divide in international and developmental relations.⁸ Sands formulated an “integration approach”, where economic and social development must be an integral part of environmental protection, and vice versa.⁹

Although many African countries are classified as least-developed countries, the southern African region is endowed with numerous natural resources, fisheries, and minerals. In turn, environmental challenges include among other things, land degradation, poor land use and land management, exploitation of natural resources, water scarcity, bio-diversity loss and climate change. In this regard poverty and challenges of governance often collide with different interests in society and political pressures.¹⁰

The former executive Director of the United Nations Environmental Programme (UNEP), Klaus Töpfer, stated that “sustainable development cannot be achieved unless laws governing society, the economy, and our relationship with the Earth connect with our deepest values and are put into practice internationally and domestically.” The problem continues to lie, however,

⁵ The World Commission on Environment and Development.

⁶ Beyerlin (1996).

⁷ Cf. Sands (2003:254).

⁸ Beyerlin (1996) with further references.

⁹ Sands (2003:263).

¹⁰ Kameri-Mbote / Odote (2009:37).

in that such laws “must be enforced and complied with by all of society, and all of society must share this obligation”.¹¹ But how can the law work for everyone equitably (developing and developed countries), reduce poverty, retain wealth and at the same time protect the environment?

The Commission on Legal Empowerment of the Poor came up with an analysis and a few reasonable suggestions in its 2008 report:

Though many have shared in this prosperity, far too many of the world’s people have been left behind, still living in deprivation, taking talent unused to the grave. Sub-Saharan Africa is not on track to achieve any of the Millennium Development Goals and extreme poverty on every continent. ... The Commission argues that four billion people around the world are robbed of the chance to better their lives and climb out of poverty, because they are excluded. ... The Commission believes poverty is manmade, by action and inaction, and a failure of public policies and of markets. The Commission sees that in rich countries people are more likely to enjoy access to justice and other rights – as workers, businesspeople, and owners of property. The recent, and vast, creation of wealth rests upon various legal protections, norms, and instruments governing such things as business organisations, corporations, tradable assets, labour contracts, workers associations, venture capital, insurance, and intellectual property. While the same protections and instruments exist in many developing countries, the overwhelming majority has no way to access them. ... Because the poor lack recognised rights, they are vulnerable to abuse by authorities that discriminate, seek bribes, or take the side of powerful interests who may wish to prevent the poor from competing economically or seek to evict them from their land. ... The majority of humanity is on the outside looking in, unable to count on the law’s protection and unable to enter national, let alone global markets. ... Transforming a society to include the poor requires comprehensive legal, political, social, and economic reforms. In the short term, reform is unlikely to seem an easy option. ... Legal empowerment is not a substitute for other important development initiatives, such as investing more in education, public services, and infrastructure, enhancing participation in trade, and mitigating and adapting to climate change: instead, it complements such initiatives, multiplying their impact by creating the conditions for success. ... While the Government is the key responsible actor, the ‘duty bearer’ in human rights terms ... the United Nations and the broader multilateral system can help by lending their full support. The international non-governmental community can do the same. More specifically global multilateral agencies such as the World Bank, UNDP, ILO, FAO and UN-HABITAT; regional political organisations, regional banks, and regional UN institutions; civil society and community-based organisations; the business community; religious communities and indigenous spiritual traditions; and various professional associations The world as a whole will benefit as more and more states undertake the reforms needed to empower the poor. Such initiatives will help to reduce the pressures created by refugee migrations, under-development, famines, environmental neglect, health emergencies, and strife. In an interdependent world, we will all do better if our neighbours are both able to count on the protections of law and expected to live up to their responsibilities under it. After all, our era is one of seismic shifts, not only in the economic order but also in the creation of a global public domain. Myriad ungoverned interactions flow between states, from the obvious to the near invisible, from the malign to the beneficent. Some must be curbed, some controlled, some eased and encouraged. Yet, as at the national level, our global institutions remain blind to much of reality, equipped rather for yesterday than today, hampering our attempts to grapple with each new problem we face. Who can deny that we all share a responsibility to protect: one which we are far from meeting? Whether for climate change, trade, migration, or security, the world will expect fair rules for the 21

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Klaus Töpfer in the Preface to Zaelke *et al.* (2005).

century, rules offering protection and opportunity for all in accordance with shared human rights obligations.¹²

It is also important to acknowledge that not only rests the responsibility on national governments and international organisations but also on corporate businesses to enter into a new era of sustainable development. At the unveiling of the world's first Integrated Reporting Guidance document in Johannesburg, South Africa on 25 January 2011, the Chairman of the South African Integrated Reporting Committee, Judge and Professor Mervyn King, rightfully stated as follows:

Companies don't operate in a vacuum, they operate in the society we find ourselves in, and the situation we find ourselves in. And the one situation is the planet which is in crisis. We have used the natural assets of the planet faster than nature can regenerate them, so the great companies in the world ... by means of integrated reporting need to tell their stakeholders in future more transparently how they had worked out a long-term strategy on sustainability issues.¹³

The importance of a harmonised interplay between trade and sustainable development is well reflected in the universally applicable (applicable to all countries, not just developing nations and emerging economies) sustainable development goals (SDGs) that have been proposed by the UN Open Working Group¹⁴ and which are universally applicable (to all countries, not just developing nations and emerging economies).

At the United Nations Sustainable Development Summit on 25 September 2015, world leaders adopted the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030. The Sustainable Development Goals, otherwise known as the Global Goals, build on the Millennium Development Goals (MDGs), eight anti-poverty targets that the world committed to achieving by 2015. The MDGs, adopted in 2000, aimed at an array of issues that included slashing poverty, hunger, disease, gender inequality, and access to water and sanitation. Enormous progress has been made on the MDGs, showing the value of a unifying agenda underpinned by goals and targets. Despite this success, the indignity of poverty has not been ended for all.¹⁵

The new SDGs, and the broader sustainability agenda, go much further than the MDGs, addressing the root causes of poverty and the universal need for development that works for all people. All 17 Sustainable Development Goals are relevant to Namibia. SDG Number 1 on poverty and Number 10 on inequality are particularly central.

2 The Role of Trade for Sustainable Development and the Reduction of Poverty in Africa¹⁶

Human rights and good governance have an impact on the domestic investment climate, which contributes to growth, productivity and the creation of jobs, all factors essential for economic

¹² Commission on Legal Empowerment of the Poor (2008:1ff.).

¹³ Interview available at
<http://www.moneyweb.co.za/mw/view/mw/en/page295799?oid=526093&sn=2009+Detail&pid=295799>; accessed 30 January 2011.

¹⁴ UN Open Working Group Proposal for Sustainable Development Goals
<https://sustainabledevelopment.un.org/content/documents/1579SDGs%20Proposal.pdf>; accessed 17 February 2015.

¹⁵ See <http://www.undp.org/content/undp/en/home/mdgoverview/post-2015-development-agenda.html>; accessed 9 November 2015.

¹⁶ The following passages are largely based on Ruppel (2010f, g).

growth and sustainable reductions in poverty. The furtherance of economic development, reduction of poverty and the promotion of human rights in fact go hand in hand. The aforementioned relationship has grown closer over the past few years due to increasing discussions in the world community on related matters and issues. The connection can be seen as a two-way relationship insofar as economic development is obliged to respect human rights in a democratic society. Conversely, human rights can be given more effect through economic growth, as a possible outcome of economic growth is the increasing availability of resources, resulting in the reduction of poverty and a higher standard of living.¹⁷

States have committed themselves to respecting human rights by acceding to specific human rights treaties, conventions or declarations on the international, regional and sub-regional level; including the International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights and the African Charter on Human and Peoples' Rights.¹⁸ On 10 December 2008, on the 60th Anniversary of the Universal Declaration of Human Rights, the United Nations adopted the Optional Protocol to the International Covenant on Economic, Social and Cultural Rights (ICESCR) bringing the possibility of international justice one step closer for millions of excluded people, groups, communities and peoples worldwide. The Optional Protocol is important because it promises to provide victims of economic, social and cultural rights violations that are not able to get an effective remedy in their respective domestic legal systems with an avenue for redress. Both human rights and good governance have an impact on the investment climate, which again contributes to productivity and the creation of jobs, all essential for economic growth, sustainable development and the reduction of poverty.¹⁹

The Committee on Economic, Social and Cultural Rights (CESCR) has stated that poverty has always been one of the central concerns of the Committee.²⁰ Given the magnitude of the problem, it is often unrealistic for governments to tackle this daunting task without assistance. To achieve sustainable development a holistic approach must be adopted to deal with the concerns of the poor.²¹ A need exists for African governments to accelerate the process of creating enabling environments for the private sector to play an effective role in reducing poverty. To create such environments, countries and regions must ensure the efficient functioning of their markets, facilitate sufficient access of the poor to such markets and create the best possible conditions for competitiveness of their firms.²² In particular, enterprises in the informal sector are to be considered as part of the enterprise entity, which contributes to the development process.²³

The evidence of African poverty and growth rates leaves little room for doubt about the need for financial assistance and an improved trade climate. China, for example, is providing substantial funds for investment and development in many African countries. China follows a 'purely capitalist' approach, not attempting to assist in the facilitation of social or political change through the pursuit of wealth and although this approach seems appealing to many

¹⁷ Cf. Ruppel (2009a; 2010b); Ruppel / Bangamwabo (2008).

¹⁸ Cf. Pillay (2009).

¹⁹ Ruppel (2009c).

²⁰ See <http://www.acpp.org/>; accessed 20 August 2010.

²¹ Yahie (2000).

²² Cf. Asche / Engel (2008:11ff.).

²³ Ruppel / De Klerk (2009).

African leaders,²⁴ it is questionable because it does not attempt to improve social welfare in the targeted countries.²⁵

Far more than any unconditional investment and development aid, trade can prove to be the catalyst, given favourable conditions, to uplift millions of people from poverty. African countries could gain disproportionately from further global trade reform but it is widely acknowledged that a level playing field does not yet exist in the current world trade system, at least not to the required extent. Developing countries still face numerous hurdles, including high tariffs against their exports and subsidised competition. Nevertheless, the participation of developing countries in the global trading system is the most effective way of encouraging development and helping to alleviate poverty. A key objective of the on-going round of WTO negotiations, the Doha Development Round, is to assist developing countries more fully to reap the benefits of international trade. The liberalisation of agriculture in particular is hoped to provide significant benefits to developing countries in Africa.²⁶ Countries in Southern Africa are more or less in a permanent food security crisis, and policy formulation and response must be geared toward this reality on a continuing basis.²⁷ When addressing the World Economic Forum in Cape Town on 10 June 2009 South African President Jacob Zuma had the following to say:

African agriculture has suffered for decades from the huge subsidies provided to developed country agriculture. The continent is rich in natural resources, including agricultural land. The continent has the opportunity to diversify markets and products, including building the requisite infrastructure and systems for intra-Africa trade.

In the aforementioned spirit, free trade agreements (FTAs) can also bring about economic benefits by reducing barriers to trade and investment between participating parties. They can open markets faster than would otherwise be possible through the WTO and build on the commitments already agreed in the WTO.²⁸ Over two-thirds of WTO members are developing and least-developed countries. Members could gain access to a range of special provisions and assistance contained in the rules of the WTO. The WTO's Committee on Trade and Development and its Sub-Committee on Least-Developed Countries monitor the implementation of provisions designed to assist developing and least-developed countries. The committees also monitor the substantial amount of training and technical assistance provided to developing countries by the WTO.²⁹ Yet, the design of the multilateral trade regime needs to shift from one which overemphasises a market access perspective to one which prioritises enabling (or at least not disabling) the domestic policy space available to developing countries to make a range of diverse, including unorthodox, policy choices and pursue the concomitant strategies. It should also not be evaluated on the basis of whether it maximises the flow of goods and services, but on whether trade arrangements, current and future, maximise possibilities for human development, especially in developing countries. An implication is that multilateral trade rules will need to adjust 'one-size-fits-all' solutions that really only suit a few powerful members. The global trade governance framework requires additional asymmetric rules in favour of the weakest members. In the long run, such rules will be beneficial for both

²⁴ Politicians often receive so-called 'signature bonuses' for approving resource or other investment deals.

²⁵ Keenan (2009:125f.).

²⁶ Khor / Hormeku (2006); Ruppel (2010k).

²⁷ Zunkel (2010:v).

²⁸ AusAID (2007).

²⁹ Ibid.

developed and developing countries.³⁰ Trade rules therefore have to allow for diversity in national institutions and standards. Countries should have the right to protect their own institutions and development priorities where necessary, and no country has the right to impose its institutional preferences on others. In order to create a trade regime friendly to poverty reduction and human development, governments must have the space to design appropriate policies.³¹

Article 11 of the International Covenant on Economic, Social and Cultural Rights, is concerned with the right to food and advocates “taking into account the problems of both food importing and food exporting countries, to ensure an equitable distribution of world food supplies in relation to need. Between the weak and the strong, poor and the rich, liberty is the oppressor and the law is freedom.”³² Negotiating and implementing such rules is the WTO’s basic mission, and its primary vocation in so doing is to regulate, and not to deregulate, as is often thought. It also presupposes the existence of social policies, whether to secure redistribution or provide safeguards for the men and women whose living conditions are disrupted by changes in the international division of labour. It does not suffice unless it is accompanied by policies designed to correct the imbalances between winners and losers; and the greater the vulnerability of economies, societies or individuals, the more dangerous the imbalances. It does not suffice unless it goes hand in hand with a sustained international effort to assist developing countries to build the capacity required to take advantage of open markets.³³ Lamy further pinpoints the importance of coherence, which he sees as:

... the political commitment of citizens, of civil society, of trade unions, between the local and the global. Today the world needs more coherence in the organisation of governments between national and global, more coherence between the different islands making up the archipelago of international governance.³⁴

In his remarks to the Trade Negotiations Committee on 19 October 2010 Lamy said that:

... the foremost challenge facing us all ... is to take the Doha negotiations to a higher gear by going deeper and wider in the discussions, as a prelude for the give and takes that will be required to build a final package.³⁵

This final package will hopefully reflect the beneficial role world trade could potentially play in sustainable development and the reduction of poverty in Africa. Trade can be a powerful source of economic growth. Trade liberalisation is not automatically or always associated with economic growth, let alone poverty reduction or sustainable development. Signing up to unbalanced agreements has the potential to lead to violations of economic and social rights of people.³⁶ Recent Economic Partnership Agreements (EPA) negotiations between various states in Africa and the EU have proven that trade and investment liberalisation is not always linked with development strategies,³⁷ let alone with mechanisms which guarantee labour and other human rights. Moreover, regional integration

³⁰ Cf. Malhotra (2004).

³¹ Cf. Ruppel (2012d).

³² Lamy (2009).

³³ Ibid.

³⁴ Such stated by Lamy (2010a).

³⁵ Lamy (2010b).

³⁶ Cf. Dessande (2010); Ruppel (2010g).

³⁷ Ruppel (2012d:156).

... can only be meaningful if it facilitates the integration of existing economic blocs in Africa by promoting intra-regional trade and encouraging diversification and the establishment of linkages between production units across the continent, thus effectively creating a larger regional market. The resulting increased productivity and product competitiveness will place Africa on a better footing to participate gainfully in reciprocal inter-regional trade. To the extent that the current EPA process undermines Africa's regional integration initiatives, it will not further the integration of African countries into world trade.³⁸

3 Regional Integration and Natural Resources in Southern Africa

The wealth of natural resources in southern Africa can only promote sustainable economic growth and contribute to poverty alleviation if there is an effective legal framework for environmental protection in place.³⁹ The spirit of the Chapter is eloquently captured in the following message of United Nations Secretary-General, Ban Ki-moon (May 2011):

For most of the last century, economic growth was fuelled by what seemed a certain truth: the abundance of natural resources. The world mined its way to growth and burned its way to prosperity. Those days are gone. In the twenty-first century, supplies are running short and the global thermostat is running high. Climate change is showing us that the old model is more than obsolete. It is in fact extremely dangerous. How do we lay the foundation for future growth? How do we lift people out of poverty while protecting the planet and ecosystems that support economic growth? How do we regain the balance? All of this requires rethinking. We have to be prepared to make major changes – in our lifestyles, our economic models, our social organisation, and our political life. We have to connect the dots between climate change and issues such as water, energy and food. The challenge is great – but, so too, is the opportunity. The sustainable development agenda is the growth agenda for the twenty-first century.⁴⁰

The United Nations General Assembly specifically proclaimed ‘poverty eradication as an overriding theme of sustainable development for the coming years.’⁴¹ Poverty is a major factor to consider when formulating workable legal frameworks. Thus far, Africa remains poor regardless of its high concentration of natural resources. Susswein identifies “ineffective and inefficient, as well as narrowly focused, economic and environmental policies” as the culprits in increasing poverty and environmental degradation.⁴²

³⁸ Ukpé (2010:231).

³⁹ Ruppel / Ruppel-Schlichting (2012).

⁴⁰ Ban Ki-moon speech (delivered by Jean Christophe Bouvier) at the Fourth Nevsky International Ecological Congress, Saint Petersburg, Russian Federation (May 2011) at <http://www.un.org/News/Press/docs/2011/sgsm13576.doc.htm>; accessed 12 June 2011.

⁴¹ Resolution on Programme for the Further Implementation of Agenda 21 GA Res 19/2, UN Doc S-19/2 (1997) para. 27.

⁴² Susswein (2003:303).

Endowment of SADC Countries with Natural Resources	
Angola	petroleum, diamonds, iron ore, phosphates, copper, feldspar, gold, bauxite, uranium
Botswana	diamonds, copper, nickel, salt, soda ash, potash, coal, iron ore, silver
Congo, DR	cobalt, copper, niobium, tantalum, petroleum, industrial and gem diamonds, gold, silver, zinc, manganese, tin, uranium, coal, hydropower, timber
Lesotho	water, agricultural and grazing land, diamonds, sand, clay, building stone
Madagascar	graphite, chromite, coal, bauxite, salt, quartz, tar sands, semiprecious stones, mica, fish, hydropower
Malawi	limestone, arable land, hydropower, unexploited deposits of uranium, coal, and bauxite
Mauritius	arable land, fish
Mozambique	coal, titanium, natural gas, hydropower, tantalum, graphite
Namibia	diamonds, copper, uranium, gold, silver, lead, tin, lithium, cadmium, tungsten, zinc, salt, hydropower, fish; note: suspected deposits of oil, coal, and iron ore
Seychelles	fish, copra, cinnamon trees
South Africa	gold, chromium, antimony, coal, iron ore, manganese, nickel, phosphates, tin, uranium, gem diamonds, platinum, copper, vanadium, salt, natural gas
Swaziland	asbestos, coal, clay, cassiterite, hydropower, forests, small gold and diamond deposits, quarry stone, and talc
Tanzania	hydropower, tin, phosphates, iron ore, coal, diamonds, gemstones, gold, natural gas, nickel
Zambia	copper, cobalt, zinc, lead, coal, emeralds, gold, silver, uranium, hydropower
Zimbabwe	coal, chromium ore, asbestos, gold, nickel, copper, iron ore, vanadium, lithium, tin, platinum group metals
<i>Source: Compiled by author based on CIA World Fact Book at https://www.cia.gov/library/publications/the-world-factbook/fields/2111.html</i>	

A sound legal framework can play a vital role in regulating sustainable poverty alleviation strategies across the region, but utmost success seems unattainable without national governments' dedication to achieving the same goal. Regional integration is an essential precondition for more effective regional environmental policy because the environment knows no national boundaries. Regional integration is a path towards gradually liberalising the trade of developing countries and integrating them into the world economy.⁴³ At first glance it appears that the promotion and protection of the environment is not within the focal range of a regional economic community (REC). However, environment related matters play a vital role. The relationship between environmental protection and economic development has become closer over the past few years due to increasing discussions in the world community on the issue.⁴⁴ This connection can be seen as a two-way relationship insofar as economic development is obliged to respect the environment in a democratic society. Conversely,

⁴³ Andresen *et al.* (2001:3).

⁴⁴ Ruppel (2008a:116).

environmental protection can be given more effect through economic growth, as one outcome of economic growth is the increasing availability of resources, resulting in the reduction of poverty and a higher standard of living. Here the principle of sustainable development comes into play. On the one hand, Africa is endowed with natural resources, fisheries, and minerals.⁴⁵ On the other, its environmental challenges include *inter alia*, climate change, land degradation, poor land use and land management, and over-exploitation of natural resources, water scarcity and loss of bio-diversity. In this regard poverty and challenges of governance often collide with different interests in society and political pressures.⁴⁶

The role regional integration can for example play with regards to the impact of climate change is as multifaceted as the concept itself. With reference to the Cotonou Partnership Agreement it was proposed to define regional integration as “the process of overcoming, by common accord, political, physical, economic and social barriers that divide countries from their neighbours, and of collaborating in the management of shared resources and regional commons.”⁴⁷ The process of regional integration is thus characterised by arrangements for enhancing cooperation through regional rules and institutions entered into by states of the same region.

The stimulation of growth and income levels, for example, potentially enable nations to have opportunities to generate additional resources to address environmental issues more effectively.⁴⁸ Increasing awareness about the negative effects of climate change and ongoing communication among international institutions, as well as public dialogue, necessarily leads to revision of and amendment to traditional frameworks. These also lead to fruitful discussions, for example, on new trade and climate change related measures such as carbon labelling or similar standards or regulations or on the imposition of border carbon adjustments, a measure to impose border taxes on the embodied carbon of imported goods, set at the level of equivalent domestic taxes.

Regional integration furthermore provides an opportunity to enhance political stability by establishing regional organisations which play an increasing role in defusing conflicts within and between countries and in promoting human rights. In terms of climate change related matters, such organisations are of the utmost relevance, especially when it comes to climate change related disaster management and environmentally induced migration. In this context, regional integration may serve as a tool to maintain political stability by building trust, enhancing understanding between groups and deepening interdependence.

Regional cooperation in environmental related matters including knowledge and technology transfer is another important link between regional integration and environmental protection. Such cooperation can address further interrelated challenges of a trans-national dimension such as food security, biodiversity, natural resources, and disease and pest control. One example in this regard is the considerable hydroelectric, solar and wind energy potential that exists in Southern Africa. Since many African countries share relevant resources, such as cross-border river basins, a regional approach is best suited to attract respective investment.

In the light of the fact that the global village with international trade as one foundation has become a reality, it is commendable, that the ‘trade versus environment’ debate has shifted to one of mutual support between trade and environment, even though it might, at a first glance, appear to be a forced marriage.

⁴⁵ Sands (2003:263).

⁴⁶ Kameri-Mbote / Odote (2009:37).

⁴⁷ CEC (2008:3).

⁴⁸ This and the following two paragraphs are largely based on Ruppel / Ruppel-Schlichting (2012).

4 The WTO and the Environment

In the first place, the WTO is concerned with reducing trade barriers and eliminating discriminatory treatment in international trade. However, nowadays world trade law is also framed by the concept of sustainable development. Although environmental issues have not been negotiated as a separate topic during the Uruguay Round, the agreement establishing the WTO (unlike the GATT) has anchored the objective of sustainable development and the need to protect and preserve the environment within its Preamble:

Recognizing that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development.

Although this statement in the Preamble is more of a policy goal than a binding principle, it has significant weight in decision-making and dispute resolution and can make an important difference to the agreement's operation in practice. The importance of the citation of sustainable development in the Preamble has, for example, been highlighted by the WTO's Appellate Body in the so-called Shrimp – Turtle Case.⁴⁹ Nowadays, world trade order is *de facto* closely related to international environmental policy and its institutions. Environmental degradation and pollution are largely induced by economic activities and international trade flows.

But what is the WTO's relationship to the environment? At first glance, the WTO provides a forum for negotiating agreements aimed at reducing obstacles to international trade and ensuring a level playing field for all, thus contributing to economic growth and development.⁵⁰ The WTO is not an environmental protection agency. So far, its competence in the field of trade and environment is limited to trade policies and to the trade-related aspects of environmental policies that have a significant effect on trade. However, in addressing the link between trade and environment, the two fields can complement each other. Overall, the GATT/WTO rules already provide significant scope for members to adopt national environmental protection policies. The right of governments to protect the environment is confirmed by WTO agreements under certain conditions. This is regulated by way of exceptions that allow governments under certain conditions to implement policies to protect the environment but which affect trade. Trade liberalisation for developing country exports, along with financial incentives and technology transfers, are necessary to help developing countries generate the necessary resources to protect the environment and work towards sustainable development. Improved co-ordination on trade- and environment-related issues at the national level between trade and environmental officials, as well as increased co-ordination at the international level, could enhance mutual support between the trade and environmental regimes.

⁴⁹ WT/DS58 Appellate Body Report, adopted on 21 November 2001. Available at http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds58_e.htm; accessed 28 April 2015. This case will be sketched below in the subsection on relevant WTO disputes.

⁵⁰ WTO (2015:9); VanGrasstek (2013:3); Van den Bossche / Zdouc (2013:84).

4.1 The Primary Objectives of the WTO

Today, the WTO with its 161 members⁵¹ sees itself primarily as a forum for governments where international trade agreements are negotiated. The WTO provides a system of trade rules covering goods, services and intellectual property, as well as a legal and institutional framework for the implementation and monitoring of these agreements, and a venue for settling disputes arising from the interpretation and application of WTO agreements. Administering WTO trade agreements, monitoring national trade policies, providing technical assistance and training for developing countries and co-operating with other international organisations are further functions of the WTO.⁵² More specifically, the WTO's main activities are:

- Negotiating the reduction or elimination of obstacles to trade (import tariffs, other barriers to trade) and agreeing on rules governing the conduct of international trade (e.g. anti-dumping, subsidies, product standards, etc.);
- administering and monitoring the application of the WTO's agreed rules for trade in goods, trade in services, and trade-related intellectual property rights;
- monitoring and reviewing the trade policies of members, as well as ensuring transparency of regional and bilateral trade agreements;
- settling disputes among members regarding the interpretation and application of the agreements;
- building capacity of developing country Government officials in international trade matters;
- assisting the process of accession of some 30 countries who are not yet members of the organisation;
- conducting economic research and collecting and disseminating trade data in support of the WTO's other main activities;
- educating the public about the WTO, its mission and its activities.⁵³

The WTO's founding and guiding principles remain the pursuit of open borders, the guarantee of the most-favoured-nation principle and non-discriminatory treatment by and among members, and a commitment to transparency in the conduct of its activities. The opening of national markets to international trade, with justifiable exceptions or with adequate flexibilities, will encourage and contribute to sustainable development, raise people's welfare, reduce poverty, and foster peace and stability. At the same time, the liberalisation of markets must be accompanied by sound domestic and international policies which contribute to economic growth and development according to each member's needs and aspirations.⁵⁴

Again, the WTO is not an environmental protection agency. However the fields of trade and environment can complement each other. Trade liberalisation for developing country exports, along with financial and technology transfers, are necessary in helping developing countries generate the necessary resources to protect the environment and work towards sustainable development; coordinating trade and environment issues should be emphasised. An improved

⁵¹ As at April 2015.

⁵² See Article III of the Agreement Establishing the WTO.

⁵³ See http://www.wto.org/english/thewto_e/whatis_e/what_we_do_e.htm; accessed 30 January 2014.

⁵⁴ Ibid.

coordination at the national level between trade and environmental officials, as well as increased coordination at the international level could contribute to enhancing mutual supportiveness between the trade and environment regimes. The WTO's primary mandate is not to protect the environment but to promote trade. Although the first paragraph of the WTO agreement explicitly refers to the objective of sustainable development, aspiring:

... both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development.⁵⁵

However, WTO members should not operate on the assumption that the WTO itself has the answers to environmental problems. Trade regulations are not, and cannot be, a substitute for environmental regulations.

4.2 The 2001 Doha Declaration and the Environment

The 2001 Doha Declaration envisages trade, the environment and sustainable development to be mutually supportive. The declaration was adopted at the Doha Ministerial Conference in 2001 emphasising the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs). The negotiations shall be limited in scope to the applicability of such existing WTO rules as among parties to the MEA in question. The negotiations shall not prejudice the WTO rights of any member that is not a party to the MEA in question; procedures for regular information exchange between MEA Secretariats and the relevant WTO committees, and the criteria for the granting of observer status; the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services. The Committee on Trade and Environment was instructed, in pursuing work on all items on its agenda within its current terms of reference, to give particular attention to the effect of environmental measures on market access, especially in relation to developing countries, in particular the least-developed among them, and those situations in which the elimination or reduction of trade restrictions and distortions would benefit trade, the environment and development; the relevant provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights; and labelling requirements for environmental purposes. The importance of technical assistance and capacity building in the field of trade and environment to developing countries, in particular the least-developed among them was stressed.⁵⁶

Agenda 21 promulgated that international trade and environmental laws should be mutually supportive. In this context, the relationship of the WTO rules and MEAs is not always clear.⁵⁷ Of the many MEAs currently in existence, over 20 incorporate trade measures to achieve their

⁵⁵ Text on the Agreement Establishing the World Trade Organisation at http://www.wto.org/english/docs_e/legal_e/04-wto.pdf; accessed 10 November 2015.

⁵⁶ The Doha Ministerial Declaration is available at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm; accessed 10 November 2015.

⁵⁷ E.g. the 1998 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; the 2001 Stockholm Convention on Persistent Organic Pollutants (POPs); the 1989 Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal; the 1985 Vienna Convention for the Protection of the Ozone Layer; the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer; the 1992 Bonn United Nations Framework Convention on Climate Change and its 1997 Kyoto Protocol; and the 1992 Rio Convention on Biological Diversity, to name but a few of the most prominent MEAs.

goals. Such trade-restricting measures may conflict with WTO rules (this problem is reflected in the Chile – Swordfish case).⁵⁸

The relationship is monitored by the Committee on Trade and Environment (CTE), which was established in April 1994. The CTE has the mandate to identify the relationship between trade measures and environmental measures in order to promote sustainable development, and making appropriate recommendations on whether any modifications of the provisions of the multilateral trading system are required. The CTE is composed of all WTO members and a number of observers from inter-governmental organisations. It reports to the WTO's General Council. In November 2001, at the Doha Ministerial Conference, it was agreed to launch negotiations on certain issues related to trade and environment. These negotiations are conducted in a Committee established for this purpose, the Committee on Trade and Environment Special Session (CTESS).⁵⁹

The relationship between MEAs and WTO regulation is mostly not so problematic in cases, where all WTO members concerned are at the same time parties to the specific MEA in question. Then the case can be dealt with under the general obligations of public international law. WTO regulations will in general terms not hinder Members, which are parties to an MEA to apply it accordingly. More problematic are cases in which one of the parties concerned is not a WTO member, respectively not a party to the MEA in question.⁶⁰

4.3 The Committee on Trade and Environment

The WTO's Committee on Trade and Environment (CTE) was established in 1994 by the Marrakesh Ministerial Decision on Trade and Environment.⁶¹ As subsidiary body of the General Council of the WTO, the CTE is responsible for implementing the mandate the council was given by the Decision on Trade and Environment. The CTE meets several times a year and membership is open to all WTO Members. Observer governments and observers from inter-governmental organisations are invited to participate in CTE meetings. Originally, the CTE was endowed with broad mandates “to identify the relationship between trade measures and environmental measures in order to promote sustainable development”, to

to make appropriate recommendations on whether any modifications of the provisions of the multilateral trading system are required, compatible with the open, equitable and non-discriminatory nature of the system....⁶²

The CTE was *inter alia* mandated to discuss:

- the links between the multilateral trading system and MEAs; relations between the WTO and taxes applied for environmental protection;
- relations between the WTO system and prescriptions established for environmental purposes with regard to products, norms, technical regulations and prescriptions on packaging, labelling and recycling;
- provisions of the WTO relating to the transparency of trade measures applied to the environment and environmental measures that have an impact on trade;

⁵⁸ Discussed below under 4.6.5.

⁵⁹ Cf. http://www.wto.org/english/tratop_e/envir_e/envir_wto2004_e.pdf; accessed 10 November 2015.

⁶⁰ Stoll / Schorkopf (2006:258f.).

⁶¹ See http://www.wto.org/english/docs_e/legal_e/56-dtenv_e.htm; accessed 10 November 2015.

⁶² See 1994 Marrakesh Ministerial Decision on Trade and Environment at http://www.wto.org/english/docs_e/legal_e/56-dtenv_e.htm; accessed 10 November 2015.

- the interrelationship between dispute settlement mechanisms established by MEAs and those provided by the multilateral trading system;
- the effects of environmental measures on market access;
- services;
- intellectual property; and,
- the export of prohibited products.

Some of the items contained in the original ten items programme are being negotiated in the course of the Doha negotiations.⁶³ Considering its mandates and the items of its work programme, the CTE is an important institution to find a balance between trade and environment in general, and more particularly between legal implications of the trading system and multilateral environmental agreements.

4.4 WTO Agreements and their Environmentally Relevant Provisions

4.4.1 The General Agreement on Tariffs and Trade (GATT)

The General Agreement on Tariffs and Trade (GATT) covers international trade in goods. The workings of the GATT agreement are the responsibility of the Council for Trade in Goods (Goods Council) which is made up of representatives from all WTO member countries. GATT 1994, Articles I and III deal with non-discrimination. One component of the principles of non-discrimination is the Most-Favoured-Nation (MFN) clause (Article I). It regulates that WTO members are bound to treat the products of other members not less favourable than accorded to the products of any other country. No country may give special trading advantages to another or to discriminate against it. This means that all members are on an equal footing, and all share the benefits of any move towards lower trade barriers. The MFN principle ensures that developing countries and others with little economic leverage are able to benefit freely from the best trading conditions, whenever and wherever they are negotiated. Another principle of non-discrimination is the National-Treatment (NT) Principle (Article III); it regulates that once goods have entered a market they must be treated no less favourably than equivalent domestically-produced goods. Non-discrimination in terms of environmental concerns ensures to prevent the abuse of environmental policies and of their usage as disguised restrictions on international trade.

Moreover GATT Article XI provides for an elimination of quantitative restrictions. Article XI has been violated in the context of a number of environmental disputes in which countries have imposed bans on the importation of certain products; it therefore has relevance for trade and environment discussions. Most importantly, Article XX grants general exceptions from the aforementioned GATT rules. Article XX(b) lists measures necessary to protect human, animal or plant life and health; Article XX(g) lists measures relating to the conservation of exhaustible natural resources. WTO members may be exempted from GATT rules in specific instances. However, measures must be necessary (necessity-test). If the conditions set by Article XX are fulfilled, they must still pass the test of the introductory clause (Chapeau) of Article XX. According to the Chapeau measures may not be pronounced as arbitrary and unjustifiable discrimination between countries where the same conditions prevail and they may not constitute a disguised restriction on international trade. GATT rules provide significant scope for members to adopt national environmental protection policies. GATT rules impose only one

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See http://www.wto.org/english/tratop_e/envir_e/cte00_e.htm for further information; accessed 10 November 2015.

requirement in this respect, that of non-discrimination. WTO members are free to adopt national environmental protection policies provided that they do not discriminate between imported and domestically produced like products (NT principle), or between like products imported from different trading partners (MFN clause). Non-discrimination is one of the main principles on which the multilateral trading system is founded. It shall secure predictable access to markets, protect the economically weak from the more powerful, and guarantee consumer choice.⁶⁴

4.4.2 The General Agreement on Trade in Services (GATS)

The General Agreement on Trade in Services (GATS) is among the World Trade Organisation's most important agreements. The agreement, which came into force in January 1995, is the first and only set of multilateral rules covering international trade in services. It has been negotiated by the member governments, and sets the framework within which firms and individuals can operate. The GATS has two parts: the framework agreement containing the general rules and disciplines; and the national schedules which list individual countries' specific commitments on access to their domestic markets by foreign suppliers.⁶⁵ GATS contains a general exceptions clause in Article XIV, similar to that of GATT Article XX. In addressing environmental concerns, GATS Article XIV(b) allows WTO members to maintain policy measures inconsistent with GATS if this is necessary to protect human, animal or plant life or health. This must not result in arbitrary or unjustifiable discrimination and may not constitute disguised restriction on international trade. GATS Article XIV Chapeau is identical to that of GATT Article XX.

4.4.3 The Agreement on Technical Barriers to Trade (TBT)

The Agreement on Technical Barriers to Trade (TBT) attempts to ensure that regulations, standards, testing and certification procedures do not create unnecessary obstacles. Technical regulations and product standards may vary from country to country. Many differing regulations and standards make life difficult for producers and exporters. If regulations are set arbitrarily, they could be used as an excuse for protectionism.⁶⁶ The TBT aims to avoid unnecessary obstacles to trade. Product specifications, whether mandatory or voluntary (known as technical regulations and standards), as well as procedures to assess compliance with those specifications (known as conformity assessment procedures), should not create unnecessary obstacles to trade. Article 2.2 provides for legitimate objectives for countries to pursue protection of human health or safety; protection of animal or plant life; and protection of the environment.

4.4.4 The Agreement on Sanitary and Phyto-sanitary Measures (SPS)

The Agreement on Sanitary and Phyto-sanitary Measures (SPS) deals with the following problem: How do we ensure that our country's consumers are supplied with food that is safe to eat and safe by the standards considered appropriate? And at the same time, how can we ensure that strict health and safety regulations are not being used as an excuse for protecting domestic producers?⁶⁷ The SPS Agreement is very similar to the TBT Agreement, but covers a narrower range of measures. It covers measures taken by countries to ensure the safety of foods,

⁶⁴ On the trade and environment negotiations see https://www.wto.org/english/tratop_e/envir_e/envir_negotiations_e.htm; accessed 10 November 2015.

⁶⁵ See http://www.wto.org/english/tratop_e/serv_e/gats_factfiction1_e.htm; accessed 10 November 2015.

⁶⁶ See http://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm; accessed 10 November 2015.

⁶⁷ See http://www.wto.org/english/tratop_e/spc_e/spc_e.htm; accessed 10 November 2015.

beverages and feedstuffs from additives, toxins or contaminants, or for the protection of countries from the spread of pests or diseases. It recognises the right of members to adopt SPS measures but stipulates that they must be based on a risk assessment, should be applied only to the extent necessary to protect human, animal or plant life or health, and should not arbitrarily or unjustifiably discriminate between countries where similar conditions prevail. The SPS objectives aim to protect human or animal life from risks arising from additives, contaminants, toxins or disease-causing organisms in their food, beverages and foodstuffs.

4.4.5 The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) introduced intellectual property rules into the multilateral trading system for the first time. Ideas and knowledge are an increasingly important part of trade. Most of the value of new medicines and other high-technology products are contained in the amount of invention, innovation, research, design and testing involved. Films, music recordings, books, computer software and on-line services are bought and sold because of the information and creativity they contain, not because of the plastic, metal or paper used to make them. In the past, products were traded as low-technology commodities now contain a higher proportion of invention and design in their value; for example, branded clothing or new varieties of plants. Creators can be given the right to prevent others from using their inventions, designs or other creations and to use that right to negotiate payment in return for others using them. These are intellectual property rights. They take a number of forms. For example books, paintings and films are protected under copyright; inventions can be patented; brand names and product logos can be registered as trademarks; and so on. Governments and parliaments have given creators these rights as incentive to produce ideas that will benefit society as a whole. The extent of protection and enforcement of these rights varies around the world; as intellectual property became more important in trade, these differences became a source of tension in international economic relations. New internationally agreed upon trade rules for intellectual property rights were seen as a way to introduce more order and predictability, and for disputes to be settled more systematically.⁶⁸ TRIPS stipulates patents are available for inventions in all fields of technology. It however also regulates the permissible exceptions thereto in Section 5, Article 27.⁶⁹

4.4.6 The Agreement on Subsidies and Countervailing Measures (SCM)

The Agreement on Subsidies and Countervailing Measures (SCM) disciplines the use of subsidies, and it regulates the actions countries can take to counter the effects of subsidies. Under the agreement, a country can use the WTO's dispute-settlement procedure to seek the withdrawal of the subsidy or the removal of its adverse effects. Alternatively, a country can launch its own investigation and ultimately charge extra duty (countervailing duty) on subsidised imports found to be detrimental to domestic producers.⁷⁰ The Agreement on Subsidies and Countervailing Measures applies to non-agricultural products and is designed to regulate the use of subsidies. Certain subsidies referred to as 'non-actionable' are generally allowed. Under Article 8 of the Agreement on non-actionable subsidies, direct reference had been made to the environment. Amongst the non-actionable subsidies that had been provided for under that Article were subsidies used to promote the adaptation of existing facilities to

⁶⁸ From http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm; accessed 10 November 2015.

⁶⁹ See also the Chapter 18 in this book.

⁷⁰ See http://www.wto.org/english/tratop_e/scm_e/scm_e.htm; accessed 10 November 2015.

new environmental requirements (Article 8.2(c)). However, this provision expired in its entirety at the end of 1999. It was intended to allow members to capture positive environmental external factors when they arise.

4.4.7 The Agreement on Agriculture

The Agreement on Agriculture was negotiated in the Uruguay Round (1986-1994) and is a significant first step towards fairer competition and a less distorted sector. WTO Member governments agreed to improve market access and reduce trade-distorting subsidies in agriculture. It seeks to reform trade in agricultural products and provides the basis for market-oriented policies. In its Preamble, the Agreement reiterates the commitment of Members to reform agriculture in a manner which protects the environment. Under the Agreement, domestic support measures with minimal impact on trade (known as green box policies) are excluded from reduction commitments (contained in Annex 2 of the Agreement). These include expenditures under environmental programmes, provided they meet certain conditions. The exemption also enables members to capture positive environmental external factors.

4.4.8 The Environmental Goods Agreement

In 2014, various WTO members launched plurilateral negotiations for an Environmental Goods Agreement. The negotiations relate to promoting trade and investment that is needed to protect the environment, and to developing and disseminating relevant technologies.

The first phase of the negotiations aims to eliminate tariffs or customs duties on a range of environmental goods. The next phase could address the bureaucratic or legal issues that could cause hindrances to trade and environmental services.⁷¹ The talks aim at securing a tariff-cutting deal on selected environmental goods, and they build on a list⁷² of specific environmental goods put together by countries of the Asia-Pacific Economic Cooperation forum. Included are goods such as wind turbines, air quality monitors and solar panels. Meanwhile, several participating countries have presented indicative lists of product nominations related to cleaner and renewable energy, as well as energy efficiency, among others. The talks on an Agreement on Environmental Goods are ongoing and the outcomes remain to be seen. In any event, the talks will contribute to the movement of sustainable development and environmental concerns towards the centre of discourse among WTO members.

4.5 The WTO's Dispute Settlement Body

The Dispute Settlement Body (DSB) is the WTO's judicial body. The dispute settlement mechanism of the WTO, one of the pillars of the multilateral trading system, is governed by Articles XXII and XXIII of GATT, and the Dispute Settlement Understanding (DSU). In simplified terms, the full dispute settlement process can be subdivided in four phases:⁷³ The process begins with consultations between the countries in dispute. If consultations fail, the process enters the second stage, the panel. Panels consist of three or five experts from different countries who examine the evidence and issue a report. The report becomes the Dispute Settlement Body's (DSB) ruling or recommendation unless a consensus rejects it. The third stage of the dispute settlement process is an appeal to the Appellate Body, if so requested by one or both parties to the dispute. The respective appeals report has to be accepted or rejected

⁷¹ See https://www.wto.org/english/news_e/news14_e/envir_08jul14_e.htm; accessed 14 April 2015.

⁷² List available at http://www.apec.org/Meeting-Papers/Leaders-Declarations/2012/2012_aelm/2012_aelm_annexC.aspx; accessed 14 April 2015.

⁷³ For more details see Delich (2002:71ff.).

by the DSB. The final stage is that of adoption and implementation of the DSB's rulings and recommendations. The number of cases that went for dispute settlement has amounted to 500 as of 11 November 2015 with "just over half have reached the litigation stage, suggesting that the system's requirement for the members concerned to try to find a solution by consulting with each other helps to avoid many cases entering the litigation phase."⁷⁴ The majority of cases relate to the European Union and the United States.

Historically, Africa's involvement in the dispute settlement process of the WTO is rather small. Although the involvement of developing countries in WTO related cases has increased significantly and account for over 40% of the cases, it is mostly the large Asian and Latin American countries which are making use of the dispute settlement process. While African countries have been respondents in nine cases (Egypt in four cases and South Africa in five cases), no African country has so far initiated proceedings under the DSU.⁷⁵ The participation as third party is slightly higher, as 18 African countries have participated in proceedings as third parties.⁷⁶

The reasons for Africa's minor role in the proceedings under the DSU are manifold.⁷⁷ Although Africa's share in world trade is growing,⁷⁸ its share (2.8% of world exports and 2.5% of world imports in the decade from 2000 to 2010)⁷⁹ is still small compared to that of other regions. With a narrow range of primary export products (mainly fuels and mining products),⁸⁰ it is understandable that the participation of African countries in the dispute settlement system is currently limited.⁸¹

Further reasons for Africa's limited participation through litigation under the DSU are the agreements granting preferential access to key trade markets, such as the Lomé Conventions and the Cotonou Agreement, European Partnership Agreements (EPAs) or the United States' African Growth and Opportunity Act (AGOA). Moreover, African priorities at this stage are focused on market access negotiations rather than on taking disputes to the WTO's judicial body. However, it is predictable that the African share of world trade will increase, and as such, there may be need to resolve disputes that arise. With increasing economic development and regional integration strengthening the position of African economies, combined with a growing base of legal expertise in trade related issues, the participation of African countries in the dispute settlement system will undoubtedly improve.

4.6 Some Environmental Case References

A few of the environment-related cases that have been brought before the GATT/WTO dispute settlement mechanism are listed below in brief.

⁷⁴ See https://www.wto.org/english/news_e/news15_e/ds500rfc_10nov15_e.htm; accessed 11 November 2015.

⁷⁵ See https://www.wto.org/english/tratop_e/dispu_e/dispu_maps_e.htm; accessed 11 November 2015.

⁷⁶ African countries which have participated as third parties are Benin, Cameroon, Chad, the Ivory Coast, Egypt, Ghana, Kenya, Madagascar, Malawi, Mauritius, Namibia, Nigeria, Senegal, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. See http://www.wto.org/english/tratop_e/dispu_e/dispu_by_country_e.htm#respondent; accessed 1 November 2015.

⁷⁷ Horlick / Fennell (2013:164); Zunckel / Botha (2012:3); Alavi (2007:25-42).

⁷⁸ UNCTAD (2014a:9).

⁷⁹ See UNCTAD (2013a:11).

⁸⁰ See WTO Database on International Trade and Market Access Data; Profile for Africa at http://webservices.wto.org/resources/profiles/MT/TO/2012/AFR_e.pdf; accessed 30 January 2014.

⁸¹ See World Bank (2011:xiii); Rugwabiza (2012).

4.6.1 United States – Canadian Tuna (1982)⁸²

An import prohibition was introduced by the United States after Canada seized nineteen fishing vessels and arrested US-fishermen for harvesting Albacore tuna, without authorisation from the Canadian Government, in waters considered by Canada to be under its jurisdiction. The United States did not recognise this jurisdiction and introduced an import prohibition to retaliate against Canada under the Fishery Conservation and Management Act.

The Panel found that the import prohibition was contrary to GATT Article XI:1, and was not justifiable under Articles XI:2 and Article XX(g).⁸³

4.6.2 Canada – Salmon and Herring (1988)⁸⁴

Under the 1970 Canadian Fisheries Act, Canada maintained regulations prohibiting the exportation or sale for export of certain unprocessed herring and salmon. The United States complained that these measures were inconsistent with GATT Article XI. Canada argued that these export restrictions were part of a system of fishery resource management aimed at preserving fish stocks, and therefore were justified under Article XX(g).

The panel found that the measures maintained by Canada were contrary to GATT Article XI:1 and were justified neither by Article XI:2(b), nor by Article XX(g).⁸⁵

4.6.3 United States – Tuna (Mexico) (1991, not adopted)⁸⁶

The US Marine Mammal Protection Act (MMPA) required a general prohibition of the “taking” and importation into the United States of marine mammals, except when explicitly authorised. The Act governed, in particular, the taking of marine mammals incidental to harvesting, yellow fin tuna in the Eastern Tropical Pacific Ocean (ETP), an area where dolphins are known to swim above schools of tuna. Under the MMPA, the importation of commercial fish or products from fish which were caught using commercial fishing technology which results in the incidental killing or injury of ocean mammals in excess of US standards, were prohibited. In particular, the importation of yellow fin tuna harvested with purse-seine nets in the ETP was prohibited (primary nation embargo), unless the competent US-authorities established that the Government of the harvesting country had a programme regulating the taking of marine mammals, comparable to that of the United States, and the average rate of incidental taking of marine mammals by vessels of the harvesting nation was comparable to the average rate of such taking by US vessels. The average incidental taking rate (in terms of dolphins killed each time in the purse-seine nets) for that country's tuna fleet were not to exceed 1.25 times the average taking rate of US vessels in the same period.

Imports of tuna from countries purchasing tuna from a country subject to the primary nation embargo were also prohibited (intermediary nation embargo). Mexico claimed that the import prohibition on yellow fin tuna and tuna products was inconsistent with Articles XI, XIII and III. The United States requested the panel to find direct embargo was consistent with Article III and, the alternative, was covered by Article XX(b) and (g). The United States also argued that the intermediary nation embargo was consistent with Article III and, the alternative, was

⁸² See http://www.wto.org/english/tratop_e/envir_e/edis01_e.htm; accessed 10 November 2015.

⁸³ United States – Prohibition of Imports of Tuna and Tuna Products from Canada, adopted on 22 February 1982.

⁸⁴ See http://www.wto.org/english/tratop_e/envir_e/edis02_e.htm; accessed 10 November 2015.

⁸⁵ Canada – Measures Affecting Exports of Unprocessed Herring and Salmon, adopted on 22 March 1988.

⁸⁶ See http://www.wto.org/english/tratop_e/envir_e/edis04_e.htm; accessed 10 November 2015.

justified by Article XX(b), (d) and (g) because the tuna was caught in a manner harmful to dolphins.

The panel found that the import prohibition under the direct and the intermediary embargoes did not constitute internal regulations within the meaning of Article III, were inconsistent with Article XI:1 and were not justified by Article XX(b) and (g). Moreover, the intermediary embargo was not justified under Article XX(d). Allowing the American import measures, the import prohibition, would undermine the multilateral trading system.⁸⁷

4.6.4 United States – Gasoline (1996)⁸⁸

Following the 1990 amendment to the Clean Air Act, the US Environmental Protection Agency (EPA) promulgated the Gasoline Rule on the composition and emissions effects of gasoline, in order to reduce air pollution in the United States. The Gasoline Rule permitted only gasoline of a specified cleanliness (“reformulated gasoline”) to be sold to consumers in the most polluted areas of the country. In the rest of the country, only gasoline no dirtier than that sold in the base year of 1990 (“conventional gasoline”) could be sold. The Gasoline Rule applied to all US refiners, blenders and importers of gasoline. It required any domestic refiner which was in operation for at least six months in 1990 to establish an individual refinery baseline, which represented the quality of gasoline produced by that refiner in 1990. EPA also established a statutory baseline, intended to reflect average US 1990 gasoline quality. The statutory baseline was assigned to those refiners who were not in operation for at least six months in 1990, and to importers and blenders of gasoline. Compliance with the baselines was measured on an average annual basis.

Venezuela and Brazil claimed that the Gasoline Rule was inconsistent, *inter alia*, with GATT Article III, and was not covered by Article XX. The United States argued that the Gasoline Rule was consistent with Article III, and, in any event, was justified under the exceptions contained in Article XX(b), (g) and (d).

The panel found that the Gasoline Rule was inconsistent with Article III, and could not be justified under paragraphs (b), (d) or (g). The appeal on the panel’s findings on Article XX(g), the Appellate Body found that the baseline establishment rules contained in the Gasoline Rule fell within the terms of Article XX(g), but failed to meet the requirements of the Chapeau of Article XX.⁸⁹

4.6.5 Chile – Swordfish (WTO/ITLOS, 2000)⁹⁰

Swordfish migrate through the waters of the Pacific Ocean. During their extensive journeys, swordfish cross jurisdictional boundaries. For ten years, the European Community and Chile were engaged in controversy over swordfish fisheries in the South Pacific Ocean, resorting to different international law regimes to support their positions. However, the European Community decided in April 2000 to bring the case before the WTO, and Chile before the International Tribunal for the Law of the Sea (ITLOS) in December 2000.

With regard to the proceedings at the WTO on 19 April 2000, the European Community requested consultations with Chile regarding the prohibition on the unloading of swordfish in

⁸⁷ United States – Restrictions on Imports of Tuna, circulated on 3 September 1991, not adopted.

⁸⁸ See http://www.wto.org/english/tratop_e/envir_e/edis07_e.htm; accessed 10 November 2015.

⁸⁹ United States – Standards for Reformulated and Conventional Gasoline, Appellate Body Report and Panel Report, adopted on 20 May 1996.

⁹⁰ See http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds193_e.htm and http://www.wto.org/english/tratop_e/envir_e/envir_wto2004_e.pdf; accessed 10 November 2015.

Chilean ports established on the basis of the Chilean Fishery Law. The European Community asserted that its fishing vessels operating in the South East Pacific were not allowed, under Chilean legislation, to unload their swordfish in Chilean ports. The European Community considered that, as a result, Chile made transit through its ports impossible for swordfish. The European Community claimed that the above-mentioned measures were inconsistent with GATT 1994, and in particular Articles V and XI. On 12 December 2000, the Dispute Settlement Body (DSB) established a panel further to the request of the European Community. In March 2001, the European Community and Chile agreed to suspend the process for the constitution of the panel (this agreement was confirmed in November 2003).

Proceedings started on 19 December 2000 at the ITLOS by Chile and the European Community. Chile requested, *inter alia*, the ITLOS to declare whether the European Community had fulfilled its obligations under UNCLOS:

- Article 64 - calling for cooperation in ensuring conservation of highly migratory species;
- Articles 116-119 - relating to conservation of the living resources of the high seas;
- Article 297 - concerning dispute settlement; and
- Article 300 - calling for good faith and no abuse of right.

The European Community requested, *inter alia*, the Tribunal to declare whether Chile had violated:

- Articles 64, 116-119 and 300 of UNCLOS, as well as
- Article 87 - freedom of the high seas including freedom of fishing, subject to conservation obligations; and
- Article 89 - prohibiting any State from subjecting any part of the high seas to its sovereignty.

On 9 March 2001, the parties informed the ITLOS that they had reached a provisional arrangement concerning the dispute and requested that the proceedings before the ITLOS be suspended. This suspension was recently confirmed. The case therefore remains on the docket of the Tribunal.

4.6.6 United States – Shrimp: Initial Phase (1998)

To date, seven species of sea turtles have been identified worldwide. They spend their lives at sea, where they migrate between their foraging and their nesting grounds. Sea turtles have been adversely affected by human activity, either directly (exploitation of their meat, shells and eggs), or indirectly (incidental capture in fisheries, destruction of their habitats, pollution of the oceans). In early 1997, India, Malaysia, Pakistan and Thailand brought a joint complaint against a ban imposed by the United States on the importation of certain shrimp and shrimp products. The US Endangered Species Act of 1973 (ESA) listed as endangered or threatened the five species of sea turtles that occur in US waters and prohibited their take within the United States, in its territorial sea and the high seas. Pursuant to ESA, the United States required that US shrimp trawlers use ‘turtle excluder devices’ (TEDs) in their nets when fishing in areas where there is a significant likelihood of encountering sea turtles. Section 609 of Public law 101-102, enacted in 1989 by the United States, provided, *inter alia*, that shrimp harvested with technology that may adversely affect certain sea turtles may not be imported

into the United States, unless the harvesting nation was certified to have a regulatory programme and an incidental take-rate comparable to that of the United States, or that the particular fishing environment of the harvesting nation did not pose a threat to sea turtles. In practice, countries having any of the five species of sea turtles within their jurisdiction and harvesting shrimp with mechanical means had to impose on their fishermen requirements comparable to those borne by US shrimpers, essentially the use of TEDs at all times, if they wanted to be certified and to export shrimp products to the United States.

The Panel considered that the ban imposed by the United States was inconsistent with Article XI and could not be justified under Article XX. The Appellate Body found that the measure at stake qualified for provisional justification under Article XX(g), but failed to meet the requirements of the Chapeau of Article XX, and, therefore, was not justified under Article XX of GATT 1994.⁹¹

4.6.7 United States – Shrimp: Implementation Phase (2001)

Malaysia introduced an action pursuant to Article 21.5 of the Dispute Settlement Understanding (DSU), arguing that the United States had not properly implemented the findings of the Appellate Body in the Shrimp – Turtle dispute. The implementation dispute revolved around a difference of interpretation between Malaysia and the United States on the findings of the Appellate Body. In Malaysia's view, a proper implementation of the findings would be a complete lifting of the US ban on shrimps. The United States disagreed, arguing that it had not been requested to do so, but simply had to revisit its application of the ban. In order to implement the recommendations and rulings of the Appellate Body, the United States had issued Revised Guidelines for the Implementation of Section 609 of Public Law 101-162 Relating to the Protection of Sea Turtles in Shrimp Trawl Fishing Operations (the Revised Guidelines). These Guidelines replaced the ones issued in April 1996 that were part of the original measure in dispute. The Revised Guidelines set forth new criteria for certification of shrimp exporters. Malaysia claimed that Section 609, as applied, continued to violate Article XI:1 and that the United States was not entitled to impose any prohibition in the absence of an international agreement allowing it to do so. The United States did not contest that the implementing measure was incompatible with Article XI:1, but argued that it was justified under Article XX(g). It argued that the Revised Guidelines remedied all the inconsistencies that had been identified by the Appellate Body under the Chapeau of Article XX.

The implementation panel concluded that the protection of migratory species was best achieved through international cooperation. However, it found that the Appellate Body had instructed the United States to negotiate (not necessarily to conclude) an international agreement for the protection of sea turtles with the parties to the dispute. The panel found that the United States had indeed made serious *bona fide* efforts to negotiate such an agreement and ruled in favour of the United States. Malaysia subsequently appealed against the findings of the implementation Panel. It argued that the panel erred in concluding that the measure no longer constituted a means of “arbitrary or unjustifiable discrimination” under Article XX. Malaysia asserted that the United States should have “negotiated and concluded” an international agreement on the protection and conservation of sea turtles before imposing the import prohibition. The Appellate Body upheld the implementation panel’s finding and

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United States – Import Prohibition of Certain Shrimp and Shrimp Products, Appellate Body Report and Panel Report, adopted on 6 November 1998.

rejected Malaysia's contention that avoiding "arbitrary and unjustifiable discrimination" under the Chapeau of Article XX.⁹²

4.6.8 Brazil – Measures Affecting Imports of Re-treaded Tyres (2007)⁹³

On 20 June 2005, the European Community (EC) requested consultations with Brazil on the imposition of measures that adversely affect exports of re-treaded tyres from the EC to the Brazilian market. The EC would like to address the following measures:

- Brazil's imposition of an import ban on re-treaded tyres;
- Brazil's adoption of a set of measures banning the importation of used tyres, which are sometimes applied against imports of re-treaded tyres, despite the fact that these are not used tyres;
- Brazil's imposition of a fine of 400 BRL per unit on the importation, as well as the marketing, transportation, storage, keeping or keeping in deposit or warehouses of imported, but not for domestically re-treaded tyres; and
- Brazil's exemption of re-treaded tyres imported from other MERCOSUR⁹⁴ countries from the import ban and from the above-mentioned financial penalties, in response to the ruling of a MERCOSUR panel established at the request of Uruguay.

The EC considers that the foregoing measures are inconsistent with Brazil's obligations under Articles I:1, III:4, XI:1 and XIII:1 GATT 1994.

- Brazil justifies its foregoing by Articles XX(b) and (d), XXIV GATT 1994.
- Upon Brazil's acceptance Argentina joined the consultations on 20 July 2005.
- Brazil justifies its foregoing by Articles XX(b) and (d), XXIV GATT 1994.
- On 6 March 2006, the European Communities requested the Director-General to compile the panel.

Did Brazil impose an import prohibition on re-treaded tyres inconsistent with Article XI:1 GATT 1994? The Panel found that the prohibition on granting of import licences is an import prohibition inconsistent with the requirements under Article XI:1 GATT 1994.

Was Brazil's import prohibition justified under Article XX(b) GATT 1994 to protect human, animal or plant life or health? Risks are posed to human life or health by the accumulation of waste tyres. The accumulation of waste tyres cause mosquito-borne diseases and tyre fires cause toxic emissions. The Panel finds that risks posed by mosquito-borne diseases such as dengue, yellow fever and malaria to human health and life exist in Brazil in relation to the accumulation as well as transportation of waste tyres. The existence of risks to human life and health fall within the meaning of Article XX(b) GATT. The Panel found that Brazil's policy of reducing exposure to the risks to human, animal or plant life or health arising from the accumulation of waste tyres – the import ban – falls within the range of policies covered by Article XX(b).

⁹² United States – Import Prohibition of Certain Shrimp and Shrimp Products, Recourse to Article 21.5 by Malaysia, Appellate Body Report and Panel Report, adopted on 21 November 2001.

⁹³ See http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds332_e.htm; accessed 10 November 2015.

⁹⁴ MERCOSUR (Spanish: Mercado Común del Sur; Portuguese: Mercado Comum do Sul; English: Southern Common Market) is an economic and political agreement between Argentina, Brazil, Paraguay and Uruguay.

Was the measure ‘necessary’ within the meaning of Article XX(b)? The necessity of a measure should be determined through “a process of weighing and balancing a series of factors”:

- the relative importance of the interests or values furthered by the challenged measure;
- the contribution of the measure to the realisation of the ends pursued by it;
- restrictions on international commerce.

Comparison is to be undertaken between the challenged measure and possible alternatives. The Panel’s decisions on necessity are affirmative. The prohibition on the importation of re-treaded tyres contributes to the objective pursued by Brazil, as it can lead to a reduction in the overall number of waste tyres generated in Brazil because re-treaded tyres have a shorter lifespan than new tyres. This can in turn reduce the potential for exposure to the specific risks to human, animal, plant life and health. The Panel is of the view that alternative measures to the import ban (measures to reduce the number of waste tyres; measures to improve the management of waste tyres; other disposal methods e.g. land filling; stockpiling) are not reasonably available to Brazil in light of the level of protection Brazil pursues in relation to the health risks concerned. Stockpiled waste tyres pose similar types of risks such as mosquito-borne diseases and tyre fires to those posed by the accumulation of waste tyres in general and thus cannot constitute an alternative to the import ban.

When considering the Chapeau of Article XX, was the import ban on re-treaded tyres applied in a manner that resulted in discrimination? The Panel has determined that discrimination arises in the application of the measure at issue from two sources:

The MERCOSUR exemption can be considered to form part of the manner in which the import ban imposed by Brazil on re-treaded tyres, the measure provisionally justified under Article XX(b), is applied and that it gives rise to discrimination within the meaning of the Chapeau of Article XX, between MERCOSUR and non-MERCOSUR countries.

The importation of used tyres under court injunctions: in the case at hand, re-treaded tyres may be *produced* in Brazil from imported *casings* (while re-treaded tyres using the same casings cannot be imported). Court injunctions permitted imports of *used* tyres. This results in discrimination in favour of tyres re-treaded in Brazil using imported casings, to the detriment of imported re-treaded tyres. Discrimination also arises from the importation of used tyres under court injunctions.

Was the discrimination in the application of the measure arbitrary / unjustifiable under the Chapeau of Article XX? Arbitrary means dependent on will or pleasure, based on mere opinion or preference as opposed to the real nature of things, capricious, unpredictable, inconsistent, unrestrained in the exercise of will or authority; despotic, tyrannical. Unjustifiable means, not justifiable, indefensible. The Panel’s decision on arbitrary or unjustifiable discrimination was as follows:

1. The MERCOSUR exemption did not constitute arbitrary or unjustifiable discrimination. The Panel found, that, as of the time of its ruling, the operation of the MERCOSUR exemption has not resulted in the measure being applied in a manner that would constitute arbitrary or unjustifiable discrimination

2. The importation of used tyres through court injunctions was, however, considered to be unjustifiable. The Panel found that since used tyre imports have been taking place under the court injunctions in such amounts that the achievement of Brazil’s declared objective is being significantly undermined, the measure at issue is being applied in a manner that constitutes a means of unjustifiable discrimination.

Did the discrimination in light of the Chapeau of Article XX occur between countries where the same conditions prevail? The Panel concluded that since used tyre imports have been taking place under court injunctions at such frequencies that the achievement of Brazil's declared objective is being significantly undermined, the measure at issue is applied in a manner that constitutes a means of unjustifiable discrimination where the same conditions prevail.

Was the measure applied in a manner that constituted a disguised restriction on international trade under the Chapeau of Article XX? The imports of used tyres through court injunctions constituted such disguised discrimination. Since imports of used tyres take place in significant amounts under court injunctions to the benefit of the domestic re-treading industry, the import ban on re-treaded tyres is applied in a manner that constitutes a disguised restriction on international trade.

The MERCOSUR exemption did not constitute disguised discrimination. The MERCOSUR exemption, although it also has the potential to similarly undermine the achievement of the stated objective of the measure, has not been shown to date to result in the measure at issue being applied in a manner that would constitute such a disguised restriction on international trade. In conclusion, the Panel found that the importation of used tyres through court injunctions results in the import ban being applied in a manner that constitutes a means of unjustifiable discrimination and a disguised restriction to trade within the meaning of the Chapeau of Article XX. In light of this conclusion, the Panel found that the measure at issue was not justified under Article XX GATT 1994.

4.6.9 China – Measures Related to the Exportation of Various Raw Materials

The case was initiated by a request for consultations by the United States on 23 June 2009,⁹⁵ deals with China's restraints on the export from China of various forms of raw materials. The consultations have been joined by Canada,⁹⁶ the European Communities,⁹⁷ Mexico⁹⁸ and Turkey.⁹⁹ The dispute deals with certain measures imposed by China affecting the exportation of certain forms of bauxite, coke, fluorspar, magnesium, manganese, silicon carbide, silicon metal, yellow phosphorous, and zinc. China is a leading producer of each of the raw materials which are used to produce everyday items as well as technology products. Four types of export restraints imposed on the different raw materials at issue have been challenged, namely export duties, export quotas, minimum export price requirements, and export licensing requirements.

The DSB established a panel and Argentina, Brazil, Canada, Chile, Colombia, Ecuador, the European Union, India, Japan, Korea, Mexico, Norway, Chinese Taipei, Turkey and Saudi Arabia reserved their third-party rights. The United States considered that China was in violation of Articles VIII, X, and XI of the GATT 1994; and several provisions of the Protocol on the Accession of the People's Republic of China (the Accession Protocol) by imposing temporary duties on exports of bauxite, coke, fluorspar, magnesium, manganese, silicon metal, and zinc; and by furthermore subjecting exports of yellow phosphorus to a duty in excess of the *ad valorem* rate listed for item No. 11 in Annex 6 to the *Accession Protocol*. The European Union claimed that China has violated the obligation assumed under the note to Annex 6 to

⁹⁵ WT/DS394/1.

⁹⁶ WT/DS394/4.

⁹⁷ WT/DS394/2.

⁹⁸ WT/DS394/5.

⁹⁹ WT/DS394/3.

consult “with other affected WTO Members prior to the imposition” of the export duties on bauxite, coke, fluorspar, magnesium, manganese, silicon metal, and certain forms of zinc.

Article XX of the GATT 1994 and in particular its provisions relating to environmental matters play a major role in this case. China¹⁰⁰ *inter alia* argued that the export duty applied to fluorspar was justified pursuant to Article XX(g) because it is a measure relating to the conservation of an exhaustible non-renewable mineral resource, and is applied together with restrictions on domestic production and consumption. The export duties applied to coke, magnesium metal, and manganese metal are justified pursuant to Article XX(b) because they are necessary for the protection of human, animal, and plant life or health by virtue of their contribution to the reduction of the polluting and energy-intensive production of coke, magnesium metal, and manganese metal.

On 5 July 2011, the panel¹⁰¹ ruled in favour of the claimants and found that the wording of the Accession Protocol did not allow China to use the general exceptions in Article XX of the GATT 1994 to justify its WTO-inconsistent export duties and that even if China were able to rely on certain exceptions available in the WTO rules to justify its export duties, it had not complied with the requirements of those exceptions. The panel recommended that China bring its export duty and export quota measures into conformity with its WTO obligations such that the series of measures do not operate to bring about a WTO-inconsistent result.

Upon appeal the Appellate Body¹⁰² upheld the Panel's finding that there is no basis in China's Accession Protocol to allow the application of Article XX of the GATT 1994 to China's obligations under Paragraph 11.3 of the Accession Protocol. The Appellate Body report and the panel report, as modified by the Appellate Body report have been adopted by the DSB¹⁰³ and China informed the DSB of its intention to implement the rulings and recommendations and rulings.

4.6.10 China – Measures Related to the Exportation of Rare Earths, Tungsten and Molybdenum¹⁰⁴

On 13 March 2012, the US,¹⁰⁵ Japan¹⁰⁶ and the EU¹⁰⁷ requested consultations with China under the WTO's dispute settlement system. Canada has also requested to join the consultations.¹⁰⁸ The case deals with China's restrictions on the export of various forms of rare earths,¹⁰⁹ as well

¹⁰⁰ In its first written submission see WT/DS394/R/Add.1, WT/DS395/R/Add.1, WT/DS398/R/Add.1. WT/DS394/R; WT/DS395/R; WT/DS398/R.

¹⁰² WT/DS394/AB/R, WT/DS395/AB/R, WT/DS398/AB/R.

¹⁰³ At its meeting on 22 February 2012, see WT/DS394/16, WT/DS395/15, WT/DS398/14 (24 February 2012).

¹⁰⁴ Panel Report at http://www.wto.org/english/tratop_e/dispu_e/431_432_433r_e.pdf; accessed 18 February 2015. On this case, see also Baroncini (2012).

¹⁰⁵ WT/DS431/1; G/L/982, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds431_e.htm; accessed 30 January 2014.

¹⁰⁶ WT/DS433/1; G/L/984, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds433_e.htm; accessed 30 January 2014.

¹⁰⁷ WT/DS432/1; G/L/983, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds432_e.htm; accessed 30 January 2014.

¹⁰⁸ WT/DS431/4; WT/DS432/4; WT/DS433/4.

¹⁰⁹ A set of 17 chemical elements, usually referred to as rare earths. These include 15 lanthanides (lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium and lutetium) as well as scandium and yttrium. The request specifically refers to certain materials falling under but not limited to a vast number of Chinese Customs Commodity Codes.

as tungsten and molybdenum. Rare earths feature unique magnetic, heat-resistant and phosphorescence properties and are used, *inter alia*, to produce highly efficient magnets, phosphors, optical and battery materials. These materials are key components of products such as helicopter blades; wind-power turbines; energy-efficient light bulbs; motors for electric and hybrid vehicles; flat screens and displays; hard drives; medical equipment; and many others. Although reserves of rare earth elements are dispersed throughout the world with China holding only 50% of the world's reserves, China has a near-monopoly position with more than 97% of the world's rare earth production.¹¹⁰ The country has curbed output and exports since 2009 to conserve mining resources and protect the environment. The complaint relates to China's restrictions in the form of export duties; export quotas; minimum export price requirements; export licensing requirements; and additional requirements and procedures in connection with the administration of the quantitative restrictions. The complainants claim that China's measures are inconsistent with articles VII, VIII, X and XI of GATT 1994 and several provisions of China's Protocol of Accession. It is argued that China administers export restrictions on various forms of rare earths, tungsten, and molybdenum, and that the requirements and procedures in connection with these export restrictions are administered in a manner that is not uniform, impartial, reasonable, or transparent.

On 29 August 2014, the DSB adopted the Panel and Appellate Body reports, which found that China's export restrictions on rare earths, tungsten and molybdenum were in breach of China's WTO obligations and were not justified under the GATT exceptions.

4.7 The WTO and the North-South Divide

Helping developing and least-developed countries secure a share in the growth of international trade commensurate with the needs of their economic development has steadily gained importance in recent years. Developing and least-developed country members can gain access to a range of special provisions and assistance contained in the rules of the WTO – in general, referred to as special and differential treatment. The WTO provides no explicit definition as to which country is considered to be a developing country. The status of a member as a developing country is to a large extent based on self-selection and members announce whether they consider themselves developing countries. In some cases, the developing country status is part of the accession negotiations.¹¹¹ Least-developed countries, being those that have been designated as such by the United Nations,¹¹² benefit from additional special and differential treatment.

Altogether, over two-thirds of WTO members are developing and least-developed countries. In recent years, they have participated more actively and efficiently in WTO negotiations and decision-making. In the course of recent negotiations, developing countries, including least-developed countries, have been able to make their voice heard and their concerns considered.¹¹³ Developing countries are represented in several (sometimes overlapping) negotiating groups, such as the African group or the group of least-developed countries. These groups aim to speak with one voice using a single co-ordinator or negotiating team and have gained in influence in WTO negotiations and decision-making. The standard procedure for decision-making in the WTO is based on consensus. Under WTO rules, this means that “the body concerned shall be deemed to have decided by consensus on a matter submitted for its

¹¹⁰ Humphries (2013).

¹¹¹ Van den Bossche / Zdouc (2013:105).

¹¹² Which is currently the case for 48 countries. See UNCTAD (2014b).

¹¹³ Van den Bossche / Zdouc (2013:148).

consideration, if no Member, present at the meeting when the decision is taken, formally objects to the proposed decision.”¹¹⁴ Where consensus is not possible, the WTO agreement allows for taking decisions by voting on the basis of one country, one vote, and with a vote being won with a majority of the votes cast. This, however, is implemented only very exceptionally.

There is a broad variety of provisions granting special and differential treatment to developing countries.¹¹⁵ GATT for example contains a special section on trade and development. In very general terms, the WTO framework includes provisions allowing developed countries to treat developing countries more favourably than other WTO members, and provisions granting extra time for developing countries to fulfil their commitments under certain WTO agreements. Other provisions are designed to increase developing countries’ trading opportunities through greater market access, or require WTO members to safeguard the interests of developing countries when adopting domestic or international legislation. Moreover, provisions on technical assistance for developing countries are part of WTO efforts in favour of developing countries. Legal assistance and training of Government and other officials are special fields of support to developing countries. In sum, it can be stated that the WTO’s legal framework contains numerous provisions for special and differential treatment for developing countries. Technical support forms an important pillar for dealing with the special needs of developing countries.

Concerns have been raised with regard to the effectiveness of the numerous provisions on special and differential treatment for developing countries, which have been considered as best-endeavour provisions that are not enforceable.¹¹⁶ Nevertheless, some of the developing countries do play an increasingly important and active role in the WTO as they become more important in the global economy. Integrating developing economies into the global trading system is an important and controversially discussed issue at multilateral trade negotiations, and remains one of the challenges facing the WTO. As to the challenges between sustainable development and trade, these are notably driven by advanced economies as well as civil society. For the time being, developing countries are wary of potential agreements on trade and the environment. The on-going negotiations on climate change are exemplary in this regard.

A very important factor in the current discussions on development, and on special and differential treatment in the WTO, is the Doha Development Round of negotiations. It was officially launched at the WTO’s Fourth Ministerial Conference in Doha, Qatar, in November 2001 and is currently at a crossroads. One fundamental objective of the Doha Development Agenda is to improve the trading prospects of developing countries. Although its future remains uncertain owing to controversies among members on many items on the agenda, one major step forward was the Bali Package concluded at the Ninth Ministerial Conference of the WTO in December 2013. The main issues of this conference included measures to support least-developed WTO member countries and a review mechanism for the special and differential treatment provisions applicable to least-developed countries and developing countries in all WTO agreements. Part II of the Bali Package relates to the work under the Doha Development Agenda. With regard to development and least-developed country issues, Part II of the Bali Package includes among others preferential rules of origin for least-developed countries; duty-free and quota-free market access for least-developed countries; and

¹¹⁴ See footnote 1 to Article IX of the WTO Agreement.

¹¹⁵ For a comprehensive compilation of the special and differential treatment provisions, and their use, see WTO (2013).

¹¹⁶ Keck / Low (2004).

a monitoring mechanism on special and differential treatment. These are important achievements with regard to the Doha Development Round. However, an enormous amount remains to be accomplished (especially an encompassing agreement on agriculture) and the implementation of decisions remains a major challenge. As it is not unlikely that some issues, and in particular the issue of agriculture, is not going to be resolved in the current round, the focus of attention is shifting to mega-regional trading arrangements.

It is hoped that the outcomes of the on-going Doha negotiations will reflect the beneficial role that world trade could play in sustainable development and the reduction of poverty. A key objective of the on-going round of WTO negotiations is to assist developing countries more fully in reaping the benefits of international trade. The liberalisation of agriculture, in particular, is hoped to provide significant benefits to developing countries. Trade can be a powerful source of economic growth. But trade liberalisation is not automatically or always associated with economic growth – let alone poverty reduction or sustainable development.

In December 2013, WTO members concluded negotiations on a Trade Facilitation Agreement at the Bali Ministerial Conference, as part of a wider ‘Bali Package’. Since then, WTO members have undertaken a legal review of the text. In line with the decision adopted in Bali, WTO members adopted on 27 November 2014 a Protocol of Amendment to insert the new Agreement into Annex 1A of the WTO Agreement. The Trade Facilitation Agreement will enter into force once two-thirds of members have completed their domestic ratification process. The Trade Facilitation Agreement is expected to provide significant advantages for developing countries to couple intra-regional trade with infrastructure development efforts and to boost considerable growth potential that has so far largely remained untapped in Africa.¹¹⁷

4.8 Climate Change and WTO Law¹¹⁸

As a general message from the recently published Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), there is no doubt that we live in a world altered by climate change – one of the greatest challenges of the twenty-first century. Climate change poses risks to human and natural systems and has the potential to impose additional pressures on various aspects of human security.¹¹⁹ The risks and impacts related to climate change can be reduced by improving society in ways that decrease its vulnerability and lower the overall risk level (adaptation), and by reducing the amount of climate change that occurs (mitigation).

Developing global strategies for the sustainability of ecosystems in the face of human-induced impacts will be one of mankind’s greatest tasks, requiring new and intensive research efforts. It will pose many challenges to international law and global governance. A strong legal framework embedded in more effective global institutions will be required in future. International law, politics and social sciences – traditionally viewed as separate academic disciplines – need to become part of a more integrated, coherent, interdisciplinary and holistic interplay if they are to get a grip on climate change, arguably the most significant challenge of our time.

Environmental threats such as climate change have the potential to impose additional pressures on various aspects of human security. Intersecting with each other, these pressures include water stress and threats to land use and food security, health security, and environmentally

¹¹⁷

Cf. WTO website for the latest version of the Agreement (WT/L/931, previously issued under WT/PCTF/W/27).

¹¹⁸

This section is largely based on Ruppel (2013).

¹¹⁹

Adger / Pulhin (2014:760).

induced migration, among others. Adverse climate events not only deepen poverty vulnerability in developing countries,¹²⁰ they impact on all aspects of human security either directly or indirectly.

Ultimately, environmental damage may significantly affect economic growth and hamper sustainable development.¹²¹ For example, climate extremes exert substantial stress on low-income populations in particular. The poor are most vulnerable to multiple dimensions of climate change such as heat waves, sea level rise, the destruction of coastal zones and water shortages due to drought.¹²²

The international trade regime under the WTO is also strongly related to the international climate change regime. In fact, both regimes recognise that climate change may provide opportunities as well as challenges for international development.¹²³ The WTO is a remarkable example of institutional evolution and its dispute settlement system is as effective as it is impartial. However, similar to the international climate change negotiations, the Doha Development Round of multilateral trade negotiations have been complex and without sufficient success so far. Both negotiation processes seem to lack the necessary consensus of the parties involved. The only difference between the two negotiation processes lies in the fact that “the climate doesn’t have time for a Doha-like approach.”¹²⁴

With regard to the persistence of global poverty and socio-economic inequalities, international trade rules often allow affluent countries to continue to protect their markets – with tariffs, quotas, anti-dumping duties, export credits and huge subsidies to domestic producers. This is at the expense of potential agricultural and textile exports from developing countries.¹²⁵ International trade should therefore be considered as a means to an end, but not as the end in itself. An effective international trade regime must first and foremost be friendly to the environment, poverty reduction and sustainable development.¹²⁶ Increasing awareness of the negative effects of climate change, and continuing communication among international institutions, as well as public dialogue, necessarily lead to rethinking and eventually to the adjustment of traditional frameworks. These also lead to fruitful discussions – for example, on new trade and climate-change-related measures, such as carbon labelling or similar standards or regulations on the imposition of border carbon adjustments, which impose border taxes on the embodied carbon of imported goods, set at the level of equivalent domestic taxes.¹²⁷

World trade law “can both constrain and enable climate action”.¹²⁸ It has the potential to promote community goals, namely the enhancement of economic development. However, a closer look at world trade law

sadly shows that accordingly solidarity is poorly implemented. The flaw is not in WTO law itself: WTO law allows developed countries to act in favour of developing countries.

¹²⁰ Ahmed *et al.* (2009).

¹²¹ Lecocq / Shalizi (2007:4315).

¹²² Hope / Kempe (2009).

¹²³ See WTO / UNEP (2009).

¹²⁴ Houser (2010).

¹²⁵ Pogge (2010:534).

¹²⁶ Ruppel / Ruppel-Schlichting (2012a:46).

¹²⁶ See Spier (2012).

¹²⁷ Ruppel / Ruppel-Schlichting (2012a).

¹²⁸ Moncel / van Asselt (2012).

But developed countries can choose not to implement relevant exceptions and too often implement them poorly.¹²⁹

Moreover, both the policy-making and academic communities have been focusing on the role of the WTO.¹³⁰ There has been much discussion on the ways in which the WTO exerts a negative influence on climate law and policy. This includes its potential ‘chilling’ effect on climate treaties, referring to the fact that parties to the climate regime have refrained from adopting multilateral trade measures (for instance, against non-compliers or non-parties).¹³¹ While WTO law may thus seem to constrain climate ambitions, attention has increasingly shifted to ways in which the organisation might contribute to climate change mitigation. One of these options is to pursue the reduction of fossil fuel subsidies,¹³² as called for by the G20 in 2010.¹³³

Aiming to achieve a global agreement on aviation emissions, the European Union (EU) has since the beginning of 2012 included emissions from international aviation in the EU Emission Trading System (EU ETS), which applies to EU and non-EU airlines alike.¹³⁴ The independent action by the EU sought to tackle international aviation emissions by including aviation in the EU ETS from 2012. In that year, an EU-wide cap on aviation emissions was set at 97% of the average annual emissions for the years 2004–2006. 85% of the emissions cap is given to airlines free of charge based on reported payload for 2010. 15% of the emissions cap is available through auctioning while additional allowances to cover growth have to be purchased from other sectors (open trading). With certain exceptions, the aviation ETS concerned all aircraft operators of all origins operating flights to, from and within the EU. The new EU ETS regulation restricting EU ETS to intra-European flights for the period 2013–2016 came into force on 30 April 2014.¹³⁵ It has given rise to a boiling international dispute in which the EU has been accused of using unilateral trade measures, and of exercising extraterritorial jurisdiction in violation of international law,¹³⁶ and of failing to reflect adequately the principle of common but differentiated responsibilities and respective capabilities in the design of its aviation scheme.¹³⁷

Similar opposition is to be expected if the EU applies measures to emissions from international shipping. These are estimated to be responsible for 2.7% of the global CO₂ emissions in 2007.¹³⁸ Since the International Maritime Organisation (IMO) is struggling to agree upon global action on measures such as a levy on CO₂ emissions or a cap-and-trade scheme for curbing emissions from shipping, the European Commission is considering including maritime transport emissions in the EU’s greenhouse gas reduction commitment.¹³⁹ It becomes clear that

¹²⁹ Hestermeyer (2012:57).

¹³⁰ See e.g. Doelle (2004); Hufbauer *et al.* (2009); Zelli / van Asselt (2010).

¹³¹ See Eckersley (2004).

¹³² Green (2006).

¹³³ Paragraph 24 of the Pittsburgh Summit Declaration; at <http://www.g20.utoronto.ca/2009/2009communique0925.html>; accessed 15 April 2015.

¹³⁴ In November 2012, however, the European Commission proposed deferring the application of the scheme to flights into and out of Europe until after the ICAO General Assembly in autumn 2013 as a gesture of goodwill in support of an international solution.

¹³⁵ Kulovesi (2012).

¹³⁶ For an overview of legal arguments in this regard see Kulovesi (2011).

¹³⁷ Scott / Rajamani (2012).

¹³⁸ See <http://www.imo.org/MediaCentre/resources/Pages/Greenhouse%20gas%20emissions.aspx>; accessed 15 April 2015.

¹³⁹ See http://ec.europa.eu/clima/policies/transport/shipping/index_en.htm; accessed 15 April 2015.

powerful states can turn to unilateral action, rather than co-operation, to achieve their foreign policy goals.¹⁴⁰ This in turn reflects that the international system is still characterised “by gross inequalities in power.”¹⁴¹

While the question of response measures remains sensitive in United Nations Framework Convention on Climate Change (UNFCCC) negotiations, the forum could provide for a multilateral dialogue to examine the implications of unilateral climate action designed to promote the ultimate objective of the UNFCCC. In some cases, the WTO dispute settlement mechanism could also enter the scene if the measure in question falls under WTO agreements:

In all cases, however, the focus should shift from the relatively simplistic choice between multilateral action, unilateral action or no action towards exploring ways in which interaction between a plural mix of legal regimes and jurisdictions in a global context can best serve the ultimate objective of the UNFCCC to avoid dangerous anthropogenic climate change.¹⁴²

Thus, more international co-operation in economic areas is necessary to ensure more coherence and global welfare.¹⁴³ As stated by Delbrück:

[I]t is not surprising that given the broad scope of subjects covered by international economic law in general and the law of the WTO in particular – cooperation in these fields show the variety of modes and mechanisms to implement obligations to cooperate.¹⁴⁴

After all, while world trade has, no doubt, contributed significantly to greenhouse gas emissions, it also offers a variety of options in terms of new technologies and services, which will be crucial in mitigating further climate change.

5 Multilateral Environmental Agreements (MEAs) and the Multilateral Trading System

International environmental treaties or Multilateral Environmental Agreements (MEAs) as they are commonly referred to, regulate the relationships between states pertaining to the environment. Generally, the first objective of any MEA is the protection and conservation of the environment. International trade agreements focus on the exchange of goods, services and capital across international borders. That there is *de facto* a close interrelationship between trade and the environment can be taken from the respective legal documents: Environmental agreements contain trade measures and trade agreements provide for measures for environmental protection, as has been sketched in the previous section. This close relationship and a call for mutual supportiveness of trade and environment agreements with a view to achieving sustainable development has been emphasised by Chapter 2 of Agenda 21 and various environmental and trade agreements.

Different trade measures are provided for in MEAs, which are taken to protect the environment and have an impact on international trade flows. The most direct such measure is to prohibit or restrict trade in certain goods or products. Trade measures may be imposed in different forms, such as import or export licences, product standards, labelling, certification systems, notification procedures, taxes or subsidies. By applying trade measures, environmental agreements typically either aim to control and monitor trade activities with regard to the over-

¹⁴⁰ Delbrück (2012:15).

¹⁴¹ Schreuer (2001:177).

¹⁴² Kulovesi (2012).

¹⁴³ Tietje (2001).

¹⁴⁴ Delbrück (2001).

exploitation of natural resources, or to combat trade activities considered being sources of pollution.

The 1973 Convention on International Trade in Endangered Species (CITES) for example contains several trade measures to control the trade of species in danger of extinction or which might become endangered. The species to which the trade measures are applicable are specified in the annexes to CITES. Trade measures here include export and import licenses, quotas and certificates on the country of origin.

The 2000 Cartagena Protocol on Bio-Safety, agreed upon by the Parties to the 1992 Convention on Biological Diversity, is another important example of MEAs that have an impact on international trade flows. The Protocol provides for specific steps states may take to regulate trade in genetically modified organisms (GMOs) in order to ensure safety of international transfers and of the use of any living GMOs resulting from biotechnology as trans-boundary movements of GMOs may have adverse effects on the conservation of biological diversity. The import of living GMOs may thus be restricted as part of a detailed risk management procedure. The Protocol establishes trade control measures based on a compulsory procedure of notification by the exporting country.

The 1985 Vienna Convention for Protection of the Stratosphere was developed as a framework convention establishing general objectives and a basis for cooperation on ozone layer protection. In order to achieve the elimination of the production of ozone depleting substances, the 1987 Montreal Protocol on Substances that Deplete the Stratospheric Ozone Layer, established trade restriction measures. Certain substances are listed as ozone depleting and all trade in those substances is generally banned between parties and non-parties. Bans may also be implemented against parties as part of the Protocol's non-compliance procedure.

Whereas the 1992 United Nations Framework Convention on Climate Change (UNFCCC) does not provide for specific trade measures, the 1997 Kyoto Protocol contains more detailed obligation related to the reduction of greenhouse gases and provides for trade affecting techniques such as tax impositions on carbon dioxide emissions, the adoption of certain treatment or emission rules for greenhouse gas emissions not covered by the Montreal Protocol or the elimination of subsidies adversely affecting the objective of the UNFCCC.

Aiming to protect human health and the environment against the adverse effects which may result from the production and management the 1989 Basel Convention on the Control of Trans-Boundary Movement of Hazardous Wastes and their Disposal contains trade measures establishing a notification and consent procedure for any envisaged trans-boundary movement of hazardous and other wastes. The Convention acknowledges the sovereign right of states to ban the entry of hazardous wastes in their territories and contains obligations concerning transport, disposal, packaging and labelling. Parties may only export a hazardous waste to another party that has not banned its import and that gives written consent to the import. In general, parties may not import from or export to a non-party. Parties are also obliged to prevent the import or export of hazardous wastes if there is an indication that the wastes will not be treated in an environmentally-sound manner at their destination.

The above examples of trade measures in MEAs show that measures generally designed to protect the environment may have a direct impact on the freedom of international trade. Although the provisions in the fields of trade and environment should mutually complement each other according to Agenda 21 and many other international rules, it may occur that MEAs and trade agreements address the same issues differently whereby conflicts between the two fields of international law may arise. In such instances, disputes may be resolved according to the procedures as described in the respective MEA. However, disputes on trade measures in MEAs could also be taken to the WTO's DSB, especially, if the Party affected by the trade

measure is not a party to the MEA, but a member of the WTO. So far, MEAs have not been challenged directly under the WTO's DSU. However, conflicts may arise between WTO rules and trade related measures where trade restrictions provided for in MEAs are used by a party to the MEA against a non-party to the MEA if both parties are members of the WTO. In such cases, the MFN and national-treatment principles, as well as provisions on eliminating quantitative restrictions are potentially infringed.¹⁴⁵ Neither the WTO's legal framework nor the wordings of MEAs claim to be hierarchically superior to the other. On the contrary, the concept of mutual supportiveness of trade and environment agreements is emphasised by both regimes without offering express solutions to solve possible conflicts resulting from the coexistence of trade and environment agreements. Generally, it can be stated that in case of a conflict between MEAs and WTO rules, the rules of treaty interpretation under the Vienna Convention on the Law of the Treaties and general rules of interpretation would have to be applied in order to determine which rules would take precedence over others.¹⁴⁶ So far, trade measures within MEAs have not been in the centre of attention of international trade proceedings. However, WTO members may choose to take a case relating to trade measures in MEAs to the DSB of the WTO. Included in the Doha development agenda, and thus subject to ongoing negotiations, is the task of clarifying the relationship between trade measures in MEAs and WTO rules, the responsibility for which has been given to the WTO's Committee on Trade and Environment.

6 The Trade and Investment Environment in Namibia

Since Independence in 1990, Namibia has been a member of the WTO. As a member of the African Union (AU) African Economic Community, the Southern African Development Community (SADC), and the Southern African Customs Union (SACU), Namibia is committed to a liberal trade regime.

Namibia's economy is closely linked to the economy of South Africa. The Namibia dollar is pegged to the South African rand and some common trade and investment policies make economic trends including inflation closely follow those in South Africa.

Several human development indicators show that Namibia has made considerable progress since Independence in 1990. Within the United Nation's Development Index, for example, Namibia ranks 127 out of 187 states.¹⁴⁷ Furthermore, Namibia has made considerable progress towards the achievement of some of the Millennium Development Goals (MDGs).

Despite the considerable progress made so far, poverty (28.7% of the population live on less than US\$1 a day); the HIV/AIDS pandemic, tuberculosis and malaria; household food insecurity; and unemployment are among the main problems facing Namibia.¹⁴⁸

6.1 Trade Policy Review Namibia 2015

Monitoring national trade policies is one of the WTO's fundamentally important activities. The main surveillance mechanism is the Trade Policy Review Mechanism (TPRM). WTO members are reviewed, the frequency of each country's review varying according to its share of world trade. Namibia was part of the Trade Policy Review of the Southern African Customs Union (SACU, including Namibia, Botswana, Swaziland, South Africa and Lesotho). The fourth review of the trade policies and practices of SACU took place on 4 and 6 November

¹⁴⁵ For more details see UNEP (2005d:65ff.).

¹⁴⁶ For a detailed discussion see Goyal (2006:356ff.).

¹⁴⁷ UNDP (2014:159).

¹⁴⁸ See GRN (2013:15, 20). The current unemployment rate is 28.1%, see NSA (2014:68).

2015. The basis for the review is a report by the WTO Secretariat and a report by the Governments of Namibia, Botswana, Swaziland, South Africa and Lesotho.

**EXCERPTS FROM THE 2015 WTO TRADE POLICY REVIEW: SOUTHERN
AFRICAN CUSTOMS UNION
ANNEX 3 – NAMIBIA¹⁴⁹**

6.1.1 Trade Performance Overview

Namibia's economy is highly dependent on international trade with an average trade to GDP ratio of 95.6% in the period 2011-13. In 2013, Namibia ranked 88th among world merchandise exporters (excluding intra-EU trade), and 85th among importers. In services trade, Namibia ranked 109th among exporters and 120th among importers.¹⁵⁰

Namibia's external current account recorded uninterrupted surpluses from independence till 2009, when the previous year's surplus of 3.2% of GDP turned negative. During 2009-13, Namibia's current account deficit averaged 3.5% and was expected to reach 6.6% in 2014. Namibia has been running a growing merchandise trade deficit, from US\$658 million in 2008 to US\$2,394 million in 2014.

Mining, especially diamonds, dominates exports. Exports of diamonds alone accounted for 21.1% of total exports in 2013, up from 16.5% in 2008. Other exports include metal ores and metals, and fish, beverages and animal products. Namibia's exports were traditionally highly concentrated towards South Africa and Europe, but this changed in 2013 following the relocation of De Beers' London-based rough diamond sales to Gaborone. Exports to Botswana are up from 0.5% of total exports in 2008 to 13.7% in 2013, while those to the United Kingdom fell from 15% to 2.1% over the same period. Exports to EFTA countries, particularly Switzerland, have more than doubled from 4.2% of total exports in 2008 to 9.8% in 2013.¹⁵¹ With the exception of South Africa and Angola, exports to other African countries in the region have increased, albeit from a modest base.

The bulk of Namibia's non-mineral exports benefit from preferential access for beef, fish and grapes to the EU (about 10% of total export earnings).

Namibia's main imports are food, fuel, automotive products and transport equipment. Chemicals, mining ores and non-electrical machinery are also important. Imports are mainly from South Africa: 61.8% of total imports in 2013, down from 67.8% in 2008. Imports from EU (28) almost halved from 2008 to 2013, while those from EFTA countries grew more than six-fold, from 0.9% to 6.2%. Imports from Botswana, Zambia and Tanzania increased over the period, though from a low base.

Balance-of-payments data indicate that, from 2008-13, Namibia was both a net importer and exporter of services (in contrast to the last review period when Namibia was usually a net exporter). In 2013, Namibia recorded a small deficit of US\$54 million, down from a surplus of US\$352 in 2012, reflecting an increasing deficit in transportation services and a declining surplus in other private services.

¹⁴⁹ The following passages highlighted in grey, including footnotes are based on the WTO document WT/TPR/S/324, available at https://www.wto.org/english/tratop_e/tpr_e/tp424_e.htm; accessed 9 November 2015.

¹⁵⁰ WTO statistics database. Viewed at:
<http://stat.wto.org/CountryProfile/WSDBCCountryPFView.aspx?Language=E&Country=NA>.

¹⁵¹ The EFTA-SACU FTA entered into force in 2008.

Investment, as measured by gross fixed capital formation, grew on average by 12% per year during 2008-13. Mining absorbs the bulk of private investment. Total investment flows into Namibia as a proportion of GDP averaged 6-7% per year over 2008-13, which places Namibia ahead of its SACU partners in terms of attracting FDI. According to the authorities, about 80% of the stock of FDI in Namibia comes from South Africa.¹⁵²

6.1.2 Trade-related Legislation (also relevant to the Environment)¹⁵³

Subject	Legislation
Agriculture	Agronomic Industry Act, 1992; Meat Industry Amendment Act, 1992; Karakul Pelts and Wool Act, 1982; Agricultural (Commercial) Land Reform Amendment Act, 2003; Stock Brands Act, 1995; Meat Corporation Act, 2001; Agricultural (Commercial) Land Reform Amendment Act, 2013 and 2014; Tobacco Products Control Act, 2010
SPS	Plant Quarantine Act, 2008 (commenced 2012); Animal Health Act, 2011; Animal Identification Regulations, 2009; Controlled Wildlife Products and Trade Act, 2008
Environment	Flexible Land Tenure Act, 2012; Water Resources Management Act, 2013; Communal Land Reform Amendment Act, 2013
Competition	Trade Practices Act, 1976; Merchandise Act, 1941; Competition Act (No 2), 2003; Companies Act (No 61), 1973; Companies Act, 2004 (entered into force 2010); Companies Administrative Regulations, 2010; Competition Act, 2003 (in force since 2008); Amendment of Tender Board Regulations, 2013
Economic zones	Export Processing Zones Act, 1995
Exports and imports	Customs and Excise Act, 1998; Value-Added Tax Amendment Act, 2002; Imports and Exports Control Act, 1994
Fisheries	Marine Resources Act, 2000; Regulations Relating to the Exploitation of Marine Resources, 2001
Foreign Investment	Foreign Investment Act, 1990 and 1993 amendments
Government Procurement	Tender Board of Namibia Act, 1996; State-owned Enterprises Governance Amendment Act, 2008
Intellectual Property Rights	Copyright and Neighbouring Rights Protection Act, 1994; Patents and Design Act, 1952; Patents Act, 1978; Proclamation No. 17, 1923; Trade Marks in South West Africa Act, 1973; Industrial Property Act, 2012
Mining	Minerals (Prospecting and Mining) Amendment Act, 2008; Diamond Act, 1999; Petroleum Products and Energy Act, 1990; Petroleum Exploration and Production Act, 1991 Petroleum Products and Energy Act, 1999
General	Electricity Act (No. 2), 2000; Electricity Regulations: Administrative Electricity Act, 2000; Air Services Act, 1949 and 1998 amendments;

¹⁵² Namibia does not currently capture FDI data by industry, but the authorities indicate that a project to capture more segregated data is expected to be launched in 2016.

¹⁵³ This compilation is based on the Trade Policy Review SACU 2008 WT/TPR/S/222 and the Trade Policy Review SACU 2015 WT/TPR/S/324.

Subject	Legislation
	Aviation Act, 1962 and 1998 amendments; Telecommunications Policy and Regulatory Framework for Namibia, 1999; Namibian Communications Commission Act (No. 4), 1992, as amended; Post and telecommunications Act (No. 19) 1992, as amended; Namibia Broadcasting Act, 1991; Road Traffic and Transport Act, 1999; Road Traffic and Transport Regulations, 2001; Road Fund Administration Act, 1999; Namibia Ports Authority Act, 1994, as amended; Airports Company Act, 1998; National Transport Services Holding Company Act, 1998; Supervisory Authority Act (No. 3), 2001; Building Societies Act, 1986 (No. 2), 1986; Accommodation Establishments and Tourism Ordinance Act (No. 20), 1973; Casinos and Gambling Houses Act, 1994; Liquor Act (No. 6), 1998 (as far as it applies to accommodation establishments); National Housing Enterprise Act (No. 5), 1993; Pension Funds Act (No. 24), 1956; Electricity Act (No. 2), 2000; Namibia Institute of Public Administration and Management Act, 2010; Statistics Act, 2011; National Planning Commission Act, 2013
Financial	Currency and Exchanges Act, 1933; Prevention of Counterfeiting and Currency Act, 1965; Bank of Namibia Act, 1997; Agriculture Bank of Namibia Act (No. 13), 1994; Banking Institutions Act, 1998; Payment Systems Management Act, 2003; Financial Intelligence Act, 2007; Long-Term Insurance Act (No. 5), 1998; Public Accountants and Auditors Act (No. 51), 1951; Stock Exchanges Control Amendment Act (No. 26), 1992; Banking Institutions Amendment Act, 2010; Financial Intelligence Act, 2012; Financial Intelligence Regulations, 2012; Unit Trusts Control Amendment Act, 2011; Pension Funds Amendment Act, 2011 and 2014; Credit Bureau Regulations, 2014; Long Term Insurance Amendment Act, 2011; Amendment of Long-Term Insurance Regulations, 2013; Amendment of Pension Funds Regulations, 2013; Inspection of Financial Institutions Amendment Act, 2011
Standardisation	Standards Act (No. 18), 2005

6.1.3 Environmentally Relevant Import Practices

The Directorate of Customs and Excise within the Department of Revenue Management of the Ministry of Finance, is responsible for, *inter alia*, facilitating the smooth movement and clearance of legitimate trade, the collection of revenues and preparation of accurate trade statistics, and the detection and interdiction of illicit activities, including cross-border movement of undeclared or under-declared goods and contraband such as controlled substances and drugs.

Namibia operates a system of import permits for a range of products that are managed by a number of different agencies.¹⁵⁴ The Namibian Agronomic Board is responsible for the import permit system under the Agronomic Industry Act, No. 20 of 1992, for the importation of controlled agronomic crops - white maize, wheat, pearl millet, and horticultural products. Permits for white maize and pearl millet are only granted during the open border period once

¹⁵⁴

WTO document G/LIC/N/3/NAM/5, 11 May 2010.

domestic production has been marketed to millers. The Namibian Agronomic Board notifies openings and closings of the border for these cereals. Floor prices for controlled cereals are set by agreement between producers and processors based on a five-year average of the South African Futures Exchange (SAFEX) adjusted to import parity prices from South Africa. A licence fee of N\$36 is payable; permits are valid from one to three months (which may be extended).

Sanitary and phytosanitary provisions apply to animal, plant and dairy imports, such as livestock, meat, fish, and honey. The Animal Health Act, 2011 (Act No. 1 of 2011) replaced the Animal Diseases and Parasites Act (Act No. 13 of 1956). Regulations supporting the new Act are currently under preparation. The Act requires the issuance of a permit prior to the importation of animals, animal products and restricted material, and a health certificate prior to export. The Act also makes provision for animal movement control and traceability and enforcement. Compensation is payable by the Government if an animal, animal product, or restricted material is destroyed for the purpose of controlling a disease. All imports of livestock, semen and embryos require a veterinary import permit and livestock improvement permit issued by the MAWF.

Importers of live animals (such as cattle, sheep, goats and pigs) must be in possession of a veterinary import permit from the MAWF. The OIE Animal Health Code is used as the guideline for setting import requirements.¹⁵⁵ Some imports are subject to the approval of other institutions, e.g. the Ministry of Environment and Tourism in the case of protected species. In the case of breeding material, a livestock improvement permit is also required. An import permit, issued in Windhoek (N\$50 per permit), is required prior to the importation or conveyance in transit of any animal, animal product or restricted material.

Animals may only be imported from countries free from bovine spongiform encephalopathy (BSE) and foot-and-mouth disease (FMD) where vaccination is not practised. In practice, live animals are usually only imported from South Africa or occasionally Botswana. Veterinary staff based at the border are available 24 hours a day to verify compliance with import and export requirements. All shipments of animals or animal products are verified, even if an MRA is in place.¹⁵⁶ Heavy fines (N\$1 million or imprisonment for a term not exceeding 20 years) are levied in the event of contravention or failure to comply, if found guilty in a court of law. In the event of an immediate risk of a disease being introduced or further spread in Namibia from another country, emergency restrictions may be put in place to prohibit imports. A health certificate is required for the exportation of animals, animal products and restricted material. A quarantine regime is operable in Namibia only for pets.

The Plant Quarantine Act 2008 (Act No. 7 of 2008), which repealed the Agricultural Pest Act (No. 3 of 1973), and accompanying Regulations came into operation on 1 July 2012. The Act provides for the prevention, monitoring, control and eradication of plant pests; the movement of plants, plant products and other regulated articles; and the certification of SPS standards for exported plants and plant products.

¹⁵⁵ In the case of animals/animal products from South Africa, a veterinary import permit is only required for the importation of ostriches, elephants, wild pigs, wildebeest and buffalo. Importation of other animals/animal products is subject to a veterinary movement certificate issued by an official veterinarian in South Africa in accordance with the requirements as set out in the Namibian/South African bilateral agreement. Importation of dogs and cats for personal use from South Africa is allowed without a veterinary import permit, but a health certificate/movement permit issued by an official veterinarian in South Africa is required.

¹⁵⁶ Namibia does not have Mutual Recognition Agreements with any other countries.

All imports of plants, plant products and other regulated articles require a permit issued by the MAWF (N\$150, valid for 21 days) and a phytosanitary certificate issued by the plant protection authority of the country of export. The Act makes provision for fines not exceeding N\$20,000 or imprisonment for a period not exceeding 2 years, or both, in the case of contravention of import procedures. The Act also grants the Minister of the MAWF the authority to declare by notice in the Gazette quarantine stations, areas and pests. Compensation is payable by the Government in the event that a plant or plant product is destroyed or harmed as a result of measures taken under the Act to eradicate, contain, or limit the spread of a plant pest. Plants may not be imported from countries with fruit flies.

A phytosanitary certificate is required from the MAWF for the export of any regulated plant material (N\$150).

The Ministry of Environment and Tourism operates an import permit system for the import of wild animals or plants or their parts, derivatives and products. The system is intended as an instrument to control and protect Namibia's fauna and flora as well as for statistical purposes. A certificate from the country of export's CITES Management Authority supporting and verifying the export of the product and a CITES export permit from the country of origin are required for such products. A fee of N\$100 is payable and a permit is valid for six months.

For the import of general medicines a licence is required from the Namibian Medicine Regulatory Council. Licences are only granted to registered wholesalers and distributors. Once a licence is issued, the import of general medicines can be undertaken without an import permit. However, special import permits are required for the import of narcotics and psychotropic substances. A fee of N\$1,000 is payable.

As of December 2014, all grain and primary processed grain products are only allowed to enter Namibia if accompanied by a phytosanitary certificate from the country of origin, a certificate of analysis on key parameters including moisture, foreign matter and aflatoxins, an official grade attestation by the country of origin (where applicable) and a valid plant health import permit and trade import permit.

The Food Safety Bill of 2007 is being considered for further development to become a law. Regulations to support the bill are being drafted to cover abattoir hygiene and meat inspection. In 2014, the Government developed the Namibia Food Safety Policy to protect consumer health while facilitating trade in food. In order to achieve this objective, the policy ensures that control standards are established and adhered to as regards food production safety, food product hygiene, animal health and welfare, plant health, and preventing the risk of contamination from external substances. It also lays down conditions for regulations on appropriate labelling for these foodstuffs and food products. Consequently, a Government notice was issued to all importers of grain, fresh produce and their primary processed products, fertilizers, farm feeds and pest control products,¹⁵⁷ regarding increased inspection controls at designated border posts with effect from 15 December 2014. The authorities indicate that these measures are necessary to ensure food safety and adherence to import permit conditions. Inspections at border posts are carried out by the Agro-Marketing and Trade Agency including collection of levies applicable at the point of termination of the imports.¹⁵⁸

¹⁵⁷ In accordance with the Agronomic Industry Act No. 20 of 1992 and the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No. 36 of 1947.

¹⁵⁸ Gazette Notice No. 247 of 1 August 2014.

6.1.4 Environmentally Relevant Export Practices

Exporters of live animals (cattle, sheep, goats and pigs) and products thereof must obtain a permit from the Meat Board of Namibia. There is no charge for the permit. Exporters of controlled agronomic products (white maize, wheat, pearl millet, and horticultural products) are required to register with the Namibian Agronomic Board. A registration fee is charged depending on milling capacity.

Exports, except to SACU members, of nearly all products are subject to automatic licensing. A non-automatic permit is required for, *inter alia*, medicines; live animals and genetic materials; all ostrich-breeding materials; meat and game products; protected species under CITES; plants and plant products; firearms and explosives; minerals, including diamonds and gold; coins and bank notes; certain works of art and archaeological findings; and oysters.

Exports of sheep are subject to a 6:1 rule, i.e. six sheep must be slaughtered locally for each sheep exported live. In response to drought conditions in 2013, a number of measures were approved to ease export conditions for small stock. These included amending the local slaughter/export ratio restriction from 6:1 to 1:1, for a 90-day period from 15 August 2013 to 15 November 2013. Cabinet approved the amendment in 2014. Government will continue to maintain the 1:1 export ratio until the industry can develop a long-term small stock marketing strategy, to ensure value addition in the whole chain.

Under a five-year agreement between De Beers and the Government of Namibia (signed in 2007), the Namibia Diamond Trading Company (NDTC) was created to sell 16% of cuttable diamonds locally in an attempt to establish a local cutting industry. 10% of cuttable diamond production must be made available to local cutting and polishing companies. The Government is engaged in negotiations to increase this percentage.

Namibia applies the Kimberley Process Certification Scheme through the Namibia Diamond Trading Company of the Ministry of Mines and Energy, to certify that Namibia's rough diamonds are from areas free of conflict. Trade measures necessary to implement the Kimberley Process are covered by a WTO waiver.¹⁵⁹

In November 2010, Namibia imposed a general levy of 0.8% on the export price of cattle, sheep, goats or pigs. As of 1 April 2004, an export levy is charged under the Customs and Excise Act, 1998 on the export of slaughter-ready mature bovine animals (30% *ad valorem*), hides (30%) and goat skins (15%). The 15% levy on pickled sheep skins was withdrawn as of 15 December 2013. The 30% export levy on cattle was temporarily withdrawn as from 15 August 2013 as a result of the drought, but was reintroduced as of 15 November 2014.

Unprocessed diamonds are subject to a 10% export tax. Raw hides and skins (wet- and dry-salted), and goat skins are subject to an export levy of 60% and 15% respectively.

Namibia has announced the introduction of an export levy on primary commodities and natural resources (i.e. diamonds and minerals, and fishery and forestry products) in order to promote domestic value addition and increase revenue. The proposed levy rate is not expected to exceed 2% of the value of the goods exported. Legislation in this regard is expected to be tabled in Parliament during 2015.

6.1.5 Agriculture

Agriculture is Namibia's second largest primary industry after mining (Section 1). Approximately 48% of Namibia's rural households depend on subsistence agriculture. Over the period reviewed, the performance of the agricultural sector was weaker than projected due to

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WTO document WT/L/876, 14 December 2012.

drought, weak links with available markets and high levels of competition with imported products. In the period 2007-12, total agricultural production declined by 2.3% on average annually.¹⁶⁰ Agricultural production per capita declined by 3.7% on average annually between 2007 and 2012, compared to an increase of 2.4% over the preceding six years.¹⁶¹ Namibia continues to import more than 50% of the cereals and horticultural products consumed locally. The Namibia Statistics Agency and the Ministry of Agriculture, Water and Forestry are conducting an agricultural census of both communal and commercial areas, the first since 1994/95.¹⁶²

Cattle, goats, sheep and pigs contribute over 75% of overall agricultural output value. Cereals such as flour maize and millet experienced a decline in production since 2008, particularly in 2013 due to drought conditions.

The agricultural sector is one of four strategic sectors identified by the Government of Namibia in its fourth National Development Plan (NDP4) 2012/13-2015/16 due to its growth and employment generation potential. The stated desired outcome of NDP4 is average real growth in agriculture of 4% per annum over the plan's period. Food self-sufficiency and national food security remain key priorities. Strategies to be deployed to achieve the NDP4 outcome are: the continued promotion of the Green Scheme; initiatives to increase the land's carrying capacity for livestock; the establishment of agricultural fresh produce markets; and the establishment of other agricultural infrastructure such as silos (National Strategic Food Reserve Facilities) and research stations.¹⁶³ According to the NDP4, Government interventions in the sector will continue to be substantial and will include allocations to agriculture in the budget, tax concessions, and increasing exports of Namibian agricultural products, for example through assisting livestock farmers in communal areas in accessing markets.

The focus on agriculture under the NDP4 goes beyond production to include large-scale development of the agribusiness and agro-industrial sectors. The intention is to continue to improve financial and technical support to agricultural activities, including the provision of farming tools and implements; technical expertise and advice; seed and fertilizer; and agriculture-related infrastructure.

The Ministry of Agriculture, Water and Forestry (MAWF) is responsible for implementation of the NDP4 objectives in the agricultural sector. The last white paper on agricultural policy dating from 1995 is being amended. Although the focus is on food security, the policy is multi-dimensional and covers food processing, value addition, increasing food production and maximizing opportunities.

In October 2011, the MAWF formulated an Agricultural Marketing and Trade Policy and Strategy with the aim of contributing to the achievement of the agricultural sector's objectives as reflected in Vision 2030 and NDP4. The main marketing objectives of the strategy include stimulating downstream agro-industries, improving competitiveness of the agricultural industries, increasing local products' share of the domestic market and increasing the contribution of agriculture to the national economy.

The Namibian Agronomic Board (NAB) is the official marketing board for controlled agricultural products (white maize, wheat and pearl millet or mahangu and their milled

¹⁶⁰ FAOSTAT.

¹⁶¹ FAOSTAT.

¹⁶² The results of the 2012 livestock census can be viewed at:

http://www.nammic.com.na/index.php?option=com_jdownloads&Itemid=146&view=viewdownload&catid=2&cid=158.

¹⁶³ Namibia's Fourth National Development Plan (2012), p. 18.

products, and fresh horticultural products). The board is funded by levies payable on the production and processing (milling) of controlled crops. Pearl millet (mahangu), wheat and white maize producers and millers pay a levy of 1.4% plus VAT on the selling price.

In February 2015, the MAWF announced increases in the general levies applicable to imports of pearl millet, wheat and white maize seeds (5% plus VAT on the landed cost, up from the 2012 rate of 0.95%). The general levies applicable to horticultural products were increased as of December 2014. Producers, purchasers and sellers of horticultural products pay a levy of 1.4% on the selling price (up from the 2002 rate of 1.2%), while importers pay a levy of 5% (up from 1.2%). Levies on all such products are to be collected by the Agro-Marketing and Trade Agency appointed by the Namibian Agronomic Board.

In order to expand and promote the commercialization of mahangu, a Mahangu Marketing Plan (MMP) was developed by NAB and the MAWF and implemented as of 2010. The aim of the MMP is to increase surplus mahangu marketing by establishing marketing points closer to mahangu producers and to train farmers in business and production economics. A total of 1,422 farmers have been trained in business and production economics since the MMP's inception. The mahangu producer floor price has been de-linked from that of white maize and is now based on the mahangu production input cost. In 2013, the mahangu producer floor price was N\$3.50 per kg.

In 2011, the MAWF piloted a debushing programme aimed at restoring the environment, improving the condition of rangeland, and increasing the productivity of land for both crops and livestock. The programme has the potential to create jobs either directly, through combating bush encroachment, or indirectly, by increasing productive farmland. In the long run, the debushing programme has the potential to increase economic growth and rural economic development, using labour-intensive methods.

The Water Resources Management Act, 2013 which repeals the Water Act (No. 54 of 1956) provides for the management, protection, development, use and conservation of water resources. It also provides for the regulation and monitoring of water services. The Act establishes a Water Advisory Council to provide advice on water policy development and review; water resources management; and water abstraction and use. The Act establishes a water regulator responsible for setting tariffs for fees and charges that may be levied by water services providers, setting operational targets, and monitoring the performance of water services providers. Tariffs are to be determined by the water regulator on a full cost recovery basis. Under the terms of the Act, an Integrated Water Resources Management Plan is to be prepared. Part 16 of the Act makes provision for water service plans, conservation, demand management and the implementation of efficient water management practices. Regulations to implement the Act are currently under preparation.

Namibia's notifications to the WTO in 2010 indicate that no export subsidies in agriculture were maintained during the years 2002-09.¹⁶⁴ The authorities indicate that no export subsidies on agriculture were granted in the period 2010-14. Namibia reserved its right to use the special safeguard provision of Article 5 of the Agreement on Agriculture, but has indicated that such safeguards were not invoked during the period 2000-09.¹⁶⁵ The authorities indicate that the special safeguard was not used during the period under review. Namibia has notified details of its domestic support commitments in agriculture for the financial years 2000/01 to 2009/10.¹⁶⁶

¹⁶⁴ WTO document G/AG/N/NAM/16, 26 April 2010.

¹⁶⁵ WTO document G/AG/N/NAM/17, 26 April 2010.

¹⁶⁶ WTO documents G/AG/N/NAM18 and G/AG/N/NAM/19, 15 October 2010.

Agricultural research is undertaken by the Directorate of Agricultural Research and Training within the Ministry of Agriculture, Water and Forestry. Efforts are focused on plant production research such as crop improvement, crop diversification and plant-soil nutrient management; vegetation surveys; support to indigenous plants products; and livestock research and development. Agricultural training, especially of emerging commercial, small-scale irrigation, resettled and communal farmers is an important part of the mandate of the Division of Agricultural Training. Other research bodies include the Desert Research Foundation of Namibia, the National Commission on Research Science and Technology, Gobabeb Research Centre, the University of Namibia and the Polytechnic of Namibia. In addition, Cabinet has approved the creation of a National Agricultural Research Institution (NARI), with the flexibility to offer competitive salaries and generate funding through its own activities.

Namibia does not currently have any seed laws or seed certification schemes to regulate or direct activities and quality standards in the seed sector. The Namibia Seed Policy was finalized in 2013. The policy addresses the challenges in the seed industry in respect of research, imports, production and quality control, marketing, distribution and the building up of strategic seed reserves, as well as developing an institutional legal framework.

The tariff is the main policy instrument in the agriculture sector. The SACU common external tariff on products of agriculture, hunting and fishing (ISIC Rev.2 category) averages 3.5% in 2015, and is predominantly *ad valorem*, ranging from zero to 35%. The average CET on fishing is 1.7%, *ad valorem*, ranging from 0% to 30%. Average tariffs on forestry and logging are 2.7%, *ad valorem*, and range from 0% to 25%.

The Directorate of Veterinary Services (DVS) and the Plant Health Division (PHD) are the authorities responsible for sanitary and phytosanitary measures.

6.1.6 Fisheries

Namibia's marine resources are found in one of the most productive fishing grounds in the world. This productivity results from the Benguela Current System, an eastern boundary current upwelling system, which supports rich populations of demersal and pelagic fish. Fisheries continue to provide an important contribution to Namibia's economy. Its contribution to real GDP has fallen over the period reviewed mainly due to poor catches and higher fuel and labour costs. However, despite the decline in landings, Namibia continues to export almost all its annual catch. Exports of fish and fish products accounted for N\$7.1 billion in 2013, making revenue from fisheries the second most important earner of foreign exchange, after mining. The export value in fish and fish products has decreased since 2008 due to fluctuations in fuel, product prices and exchange rates. Over 14,000 people are employed in the fisheries sector.

Namibia's main export markets for fish are as follows: EU and South Africa (hake, monk, and tuna); DR Congo, Mozambique, Zambia, and Zimbabwe (horse mackerel); Japan (rock lobster); China (crab); South Africa (pilchards); Spain, Japan and US (tuna, swordfish and shark); and Turkey, China and South Africa (seals).

The Ministry of Fisheries and Marine Resources (MFMR) manages capture fisheries (marine and freshwater/inland) and aquaculture (mariculture and freshwater). To date, inland capture fisheries and freshwater aquaculture are largely undeveloped and have primarily served as contributors to food security and income generation in rural households. Marine capture fisheries are an important pillar of the Namibian economy and produce fish mainly for export. While horse mackerel fishery has the largest landings by far, it generates less revenue than hake fishery which is exported to the EU and commands better prices.

6.1.7 Forestry

Namibia had a forest area of around 7.3 million ha in 2010 (down from 7.7 million ha in 2005), 8.9% of its total land area; it had about 8.3 million ha of other wooded land (8.5 million ha in 2005). Namibia's forests contain 210 million metric tons of carbon in living forest biomass (221 million metric tons in 2005). Namibia has some 1,066 known species of amphibians, birds, mammals and reptiles, of which 4.5% are endemic and 3.1% are threatened.¹⁶⁷

The MAWF has developed a Forest Research Strategy for Namibia (2011–15) to address issues associated with sustainable forest management (SFM), chiefly the key drivers of deforestation and forest degradation, and core SFM issues such as natural and artificial regeneration (tree planting) of commercially exploited species. Linked to these is also the issue of value addition to forest products, which are currently performing below their potential.¹⁶⁸ The strategy document has identified seven strategic forest research areas: a vegetation (forest and rangeland) monitoring programme; forest products (value added) research; ecological studies; growth and yield studies; silvicultural research; economic, policy and sociological research; and management of information.

The Government has, through the MAWF, introduced a new policy direction to promote bush utilization, tree planting, commercialization of various forest products, and orchard development. Despite the environmental limitations of a dry country such as Namibia, the policy direction gives scope for research to improve the management of trees, woodlots and forests and to add value to already known products and bring new products to market.

Namibia exploits its forestry for a variety of uses. Charcoal is produced from aqueous species (bush-encroachment), primarily for export to the EU. Fire blocks from crushed bush are used for electricity production; 6% of the energy of Namibia's cement production is sourced from these bushes. The roots of the mopane tree that grows in north-western Namibia are used in fishing and construction and exported to the Americas, Japan and the EU. In addition, woodlands harbour fruit and nut bearing tree species of growing commercial importance such as marula, bird plum, and monkey orange. A number of medicinal plants such as devil's claw are found in woodlands and in the adjoining open savannah and desert environments.

In December 2014, tariffs on the export of wood products from Namibia were drastically increased. The tariff for processed wood increased from N\$120 to N\$300 per 30 ton load (last reviewed four years prior), while that for unprocessed wood products increased from N\$120 to N\$900. The Directorate's strategy behind this increase is to discourage exports of raw unprocessed wood products and to encourage value addition and employment creation. Charcoal and braai wood, cut and packed before export, are no longer considered raw products and thus qualify for the lower export tariff.¹⁶⁹

6.1.8 Mining and Energy

Mining and quarrying accounts for about 13% of GDP at current prices and provides about 14,000 jobs. Ores and minerals account for about 35% of Namibia's exports of goods and services and a third of fixed capital formation. Diamonds, fluorspar and uranium are the most significant mineral commodities to Namibia's economy. Namibia is among the world's top ten diamond producers. Diamonds accounted for a declining share (around 50%) of the total value

¹⁶⁷ Mongabay online information, "Namibia".

¹⁶⁸ Ministry of Agriculture, Water and Forestry, 2011.

¹⁶⁹ New Era online information. Viewed at: <http://www.newera.com.na/2015/02/10/wood-products-export-tariffs-increased/>.

of mineral exports during the period under review. In 2013, diamonds accounted for 21% of total merchandise exports. Production of uranium also experienced a decline, following the global economic crisis and the move away from nuclear energy in European countries following the tsunami in Japan, but picked up again in 2013. Namibia has the capacity to provide 10% of the world's current uranium needs.

Namibia has 2.2 trillion cubic feet of natural gas reserves, making it the 60th largest global source but has no petroleum reserves.¹⁷⁰ Namibia continues to rely on imports for much of its energy needs. More than two thirds of electricity and all of Namibia's petroleum are imported. Namibia has great potential in renewables given its supply of wind, solar and biomass resources.

Although petroleum has not been discovered in commercial quantities to date, the off-shore discovery of oil in non-commercially viable quantities in 2013 raised hopes of Namibia becoming a new frontier in oil exploration.

Under the Electricity Act of 2007, NamPower, the state-owned utility company is responsible for generation, transmission, and trade in electricity. NamPower's energy policy goal is to supply 100% of peak demand for electricity (and 75% of total demand) from local sources of power generation. Namibia currently imports over 60% of its electricity needs. NamPower owns five generating assets with a total capacity of 504 MW. These consist of one hydropower plant (Ruacana with a capacity of 338 MW), two liquid fuel plants (Paratus and newly built Anixas with a capacity of 24 MW and 22 MW, respectively) and one coal fired plant (Van Eck with a potential capacity of 120 MW).¹⁷¹ In addition to these, a small pilot plant (250 kW) utilising a widely available domestic biomass fuel, invader bush, is located about 200 km north of the capital. An independent power producer (IPP) solar photo voltaic plant of 4.5MW was scheduled to be commissioned in May 2015.

Peak demand for electricity reached 629 MW in 2014 and is growing annually by around 6%. The interconnector capacity currently stands at 900 MW, consisting of a 600 MW connection to the South African system and the 300 MW Caprivi Link in the northeast linking the Namibian system to the Zambian grid, with an option for a 300 MW increase in capacity when Phase 2 of the project is completed.

Demand for electricity continues to outstrip supply, a situation expected to prevail until the commissioning of the 884 MW Kudu combined cycle gas turbine station, expected in 2018.

6.1.9 Manufacturing

Namibia has a relatively small manufacturing sector, largely based on its resource endowment of fisheries and meat. In constant 2010 prices, manufacturing has registered a steady increase over the period reviewed. Food products and beverages have benefited from improved shares in both local and external markets. Textiles and grain mill products have also experienced growth. Increased meat processing reflects the slaughtering of livestock both for export and local consumption due to the 2012 drought which forced farmers to reduce their herds.

¹⁷⁰ US Energy Information Administration. Viewed at: <http://www.eia.gov/countries/country-data.cfm?fips=wa>.

¹⁷¹ Current capacity of the Van Eck plant is about 50 MW. The plant is currently undergoing refurbishment, scheduled for completion in 2014, after which a capacity of at least 90 MW is guaranteed.

6.1.10 Services

Services account for a growing share of GDP, largely due to increases in the share of wholesale and retail trade, transport, financial intermediation, real estate and business services, education and health services. Trade in services has grown on average by over 6% annually since 2008.

6.1.11 Transport

The Department of Transport is responsible for transport by road, rail, air and sea and is divided into six directorates dealing with civil aviation, aircraft accident investigations, maritime affairs, railway affairs, transportation infrastructure management, and transportation policy and regulation. Government investment in infrastructure development as a percentage of GDP hovers around 5%.

6.1.12 Tourism

Tourism makes a significant contribution to Namibia's GDP and employment. In 2013, travel and tourism directly contributed 3% to GDP and 24,000 jobs (4.5% of total employment). With regard to the long-term growth potential for the period 2014-24, the World Travel and Tourism Council ranks Namibia among the world's fastest growing tourist destinations, with expected annual growth rates of 9.1% in terms of travel and tourism's direct contribution to GDP.¹⁷²

6.2 Foreign Investment¹⁷³

Namibia's Vision 2030, launched in 2004 and aiming to provide long-term policy scenarios on the future course of development in the country at different points in time until 2030. Vision 2030 formulates an target of 10.2% investment growth by 2030.¹⁷⁴

Trade and investment form an integral part of Namibia's overall economic policy as outlined in NDP4. In NDP4, four economic sectors – logistics, tourism, manufacturing and agriculture enjoy priority status. The Government seeks to attract foreign investment and promote exports with the goal of having not less than 70% of total exports made up of processed goods. Trade plays a leading role in achieving NDP4's goals of economic growth, employment creation and reducing inequality. The Government aims to use procurement to stimulate more local business.¹⁷⁵

The fourth National Development Plan (NDP4) for the period 2012/2013-2016/2017 acknowledges that investment "is a key driver of sustainable economic development, and experience from successful emerging economies highlights the importance of a high rate of investment to achieve long-term growth."

NDP4 considers current investment levels to be insufficient to support higher economic growth¹⁷⁶ and has identified "making Namibia the preferred investment location in Africa"¹⁷⁷ as one of the foundation issues without which other efforts are not likely to succeed. A review of performance under the NDP3 (period from 2007/2008 to 2011/2012) has concluded that

¹⁷² World Travel and Tourism Council (2014).

¹⁷³ Partially based on Ruppel / Shifotoka (2015).

¹⁷⁴ GRN (2004a:63).

¹⁷⁵ WTO (2015).

¹⁷⁶ GRN (2012b:xvi).

¹⁷⁷ Ibid:vi.

Private investment, including foreign direct investment, was targeted at N\$50.3 billion, although actual investment was N\$43.7 billion. Private savings in Namibia were substantially higher than private investment over the NDP3 period. Therefore it appears that the reason for below target investment is not a lack of investable funds, but rather a lack of mechanism to channel such funds to domestic investments. This suggests that more needs to be done not only to encourage private sector investment, but also to ensure Government efforts facilitate this. Government investment, including State-owned enterprises (SOEs), was close to the N\$20 billion target at N\$19 billion. However, of concern was the rate of Government savings, which decreased from around 8% of GDP at the start of the NDP3 cycle to an estimated -2% by 2011/12. In order for public investment to remain sustainable, public savings need to increase over the NDP4 cycle.¹⁷⁸

Taking that an average of 3.6% annual economic growth (GDP) was achieved over the NDP3 period, the outlook in terms of the NDP4 sets an ambitious target of an average of 6% annual growth over the NDP4 period. According to NDP4, the prioritisation of investments into power generation is one of the keys to reaching this target.¹⁷⁹ To this end, NDP4 emphasises the urgent requirement for investment:

For the NDP4 goals to be realized fully, there is a need to make a substantial investment in the economy. Based on the currently available data, the investment requirement is estimated at N\$187 billion. Given the size of the required investment, the Government's investment strategy will be guided by the principle of a Government-led economic development, combined with the need to maintain the necessary macro-economic stability. The Government will therefore undertake the required investment in partnership with the private sector, where a mutually beneficial public-private-partnership investment program will be considered and implemented.¹⁸⁰

A foreign investor may decide to invest in Namibia because of, *inter alia*, the liberal investment incentive regime, the sound financial system, the stable foreign exchange reserves, the friendly legal and regulatory framework, and its membership in international agreements. In addition, in 2013, the World Bank ranked Namibia 98th out of 189 countries in the world in terms of doing business, and 80th in terms of protecting foreign investors,¹⁸¹ while it was ranked eighth out of 47 countries in terms of doing business in sub-Saharan Africa, and 12th in investor protection. As a result, Namibia has attracted many foreign investors. As foreign investment is important in Namibia, Article 99 of the Constitution expressly provides for the encouragement of foreign investment, and for the establishment of an investment code. Pursuant to the Article mentioned above, the Foreign Investment Act was passed by Parliament in 1990. Additionally, there is other national legislation and applicable international law in place, both important to foreign investors.

The Foreign Investment Act No. 29 of 1990 is the primary legislation that governs foreign direct investment in Namibia. The Ministry of Trade and Industry (MTI) is the governmental authority which is primarily responsible for carrying out the provisions of the Foreign Investment Act.¹⁸²

¹⁷⁸ Ibid:16.

¹⁷⁹ Ibid:20.

¹⁸⁰ Ibid:29.

¹⁸¹ International Finance Corporation (2013).

¹⁸² Cf. US Department of State (2013).

The Namibian Foreign Investment Act is currently under review.¹⁸³ “The new Investment Act anticipated to come into force in November is expected to bring about fundamental changes to the country's trade and investment arena”.¹⁸⁴

The Namibian Competition Act of 2003, which is currently also under review, is another piece of legislation affecting the activities of foreign investors.

A number of countries have entered into Reciprocal Promotion and Protection of Investment Agreements (RIPPPAs) with Namibia. Such agreements are Bilateral Investment Treaties (BITs) with reciprocal benefits, and foreign investors from the countries concerned are able to be accorded protection under the BITs concerned.¹⁸⁵

With regard to dispute settlement, Namibia's BITs follow the approach taken under customary international law, because they provide for international arbitration as a mechanism for the settling of disputes. In addition, dispute settlement gives an option to a state, or to a foreign investor, to settle its dispute domestically through a competent court or tribunal. What is common to the BITs is the provision of the International Centre for the Settlement of Investment Disputes (ICSID) as an institution by means of which investment disputes can be settled.

In terms of Article 12 of the Namibia-Austria BIT, the investor may choose to submit a dispute to a court, or to an administrative tribunal, in the host state. The disputes are to be resolved by means of the use of amicable and time-efficient methods, such as negotiation and mediation as a possible first option. Only if such methods fail, can the parties concerned submit the matter to litigation or arbitration. Secondly, an investor may choose to submit the dispute in accordance with any agreed dispute procedure. Thirdly, the dispute may be submitted to the ICSID, to a sole arbitrator, or an ad hoc arbitration tribunal that is established in terms of the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL); or to a sole arbitrator, or to an ad hoc tribunal that is established under the Arbitration Rules of the International Chambers of Commerce (ICC).¹⁸⁶

The BIT between Namibia and Spain also gives options to the parties to the dispute. In terms of Article 11 of the agreement, the parties can either submit the dispute to a local court, or make use of the UNCITRAL Arbitration Rules, or the ICSID Convention. The Namibia-Netherlands BIT provides for the ICSID to be used for the settlement of disputes if both parties are members thereof. Alternatively, parties should make use of the ICSID Additional Facilities if one of the parties to the dispute is not a member of the said Convention. The BIT between Germany and Namibia also provides for disputes to be resolved by the ICSID.

7 Concluding Remarks

Natural resources represent a significant and growing share of world trade, and properly managed, provide a variety of products that (continue to) contribute greatly to the quality of human life. They, however, also represent challenges for policy makers. Natural resources are scarce, economically useful, distributed unevenly and exhaustible. Their production, trade and

¹⁸³ MTI (2014).

¹⁸⁴ Cf. *The Namibian* of 17 June 2015. At <http://www.namibian.com.na/index.php?id=138241&page=archive-read>; accessed 9 November 2015.

¹⁸⁵ Existing BITs concluded by Namibia and the following countries: Angola, Austria, China, Cuba, Finland, France, Germany, Italy, Malaysia, Netherlands, Russian Federation, Spain, Switzerland and Vietnam, UNCTAD (2013b).

¹⁸⁶ See Article 12 of Namibia-Austria BIT, Article 9 of the Namibia-Netherlands Agreement, Article 11 of Namibia-Spain BIT and Article 11(2) of the Namibia-Germany BIT.

consumption can have negative externalities¹⁸⁷ on people and the environment. Natural resources are dominated by national economies, they are highly volatile.¹⁸⁸

The ‘curse’ of natural resources, climate change, water stress, food security and the prevalence of poverty *inter alia* remain challenges for Africa. All of these are also linked to international trade and certainly go hand in hand with poverty reduction, self-reliant sustainable development and the rational use of Africa’s natural resources.

With regards to trade, over-exploitation of natural resources, widespread dumping of sub-standard products and services, second-hand and re-conditioned machinery, including of transport goods to increase the share in exports in organically-grown agricultural products to create technical data bases on a wide range of exportable products, implementing and monitoring plans for detection of heavy metals, pesticides, microbiological and contaminants in food items are issues that need to be addressed. Another remaining challenge in terms of the WTO and the environment (e.g. biodiversity) is to control the transfer of genetically modified goods, including when delivered as food aid.¹⁸⁹

The balancing act of bringing the interests of trade, environmental protection and sustainable development in line with each other can only succeed with a joint effort from all relevant stakeholders. On the occasion of the twentieth anniversary of the WTO, Director-General Roberto Azevêdo said:

twenty years ago the founders of the WTO saw clearly that the well-being of habitats, societies, and economies are not separate. Rather, they are inextricably linked. Their vision was of global cooperation in trade as a means to unleash growth, alleviate poverty, raise living standards and ensure full employment, while also protecting the environment...In the 20 years since then, the connections between trade and the environment have grown significantly. We must therefore do more to ensure that trade and environmental policies work better together, both at national and international levels. Today we have taken an important step forward to improve multilateral cooperation and dialogue on these issues.

And UNEP’s Executive Director Achim Steiner reflected as follows:

Trade brings the world closer together — bringing with it many opportunities but also challenges. It will not drive sustainable development by itself, but only if the international community clearly commits itself to trade-related policies and other support measures that are conducive to environmental, social and economic sustainability...International trade governance is evolving quickly. We need to assure that new structures do not come at the cost of the environment, but are drivers of an inclusive Green Economy. UNEP looks forward to continuing collaboration with the WTO as it prepares for its Ministerial Conference in Nairobi and for the decades to come.¹⁹⁰

Scarce natural resources, climate change, water stress, food security and the prevalence of poverty, *inter alia*, remain major challenges. All of these are also linked to international trade and certainly go hand-in-hand with poverty reduction, self-reliant sustainable development and the rational use of natural resources. Although various legal provisions in the framework of the WTO provide a solid foundation for modern-day trade to fully embrace the concept of

¹⁸⁷ An example of such negative externality would be when a production or mining process results in pollution affecting the health of people who live nearby, or that damages the natural environment, animal or plant life or reduces the livelihood of people.

¹⁸⁸ WTO (2010).

¹⁸⁹ See <http://www.uneca.org/>; accessed 22 November 2010.

¹⁹⁰ See https://www.wto.org/english/news_e/pres15_e/pr741_e.htm; accessed 7 May 2015.

sustainable development and preservation of the environment, there is ample scope for state and organisational practice to exploit its full potential in this regard.

In the implementation of pro-poor policies and sustainable development, natural resources management, integrated reporting, environmental planning, environmental impact assessment and the overall policy review remain part of the on-going African working agenda. Moreover, new technologies, environmentally friendly goods and services need to be promoted and the protection and preservation of traditional knowledge, agriculture and species is important, especially in the African context. All of that requires national commitment, international cooperation, adequate technical assistance and capacity building. Let us see what (and when) the ongoing Doha negotiations will bring for Africa. With regard to the forthcoming WTO Ministerial Conference in Nairobi in December 2015, WTO Director-General Roberto Azevêdo

outlined the significance of the WTO's forthcoming ministerial conference in Nairobi in December 2015. He described the state of play in negotiations, the difficulties in advancing the core Doha Development Agenda (DDA) issues, and some of the potential negotiated outcomes which might be achieved in Nairobi. These outcomes (should) include steps on export competition in agriculture. DG Azevêdo said this would be the WTO's most significant negotiated outcome on agriculture to date, which has long been the top priority for developing countries. In addition, he underlined the importance of development and least developed countries (LDC) issues, which should be at the heart of any agreement in Nairobi.¹⁹¹

The 2015 Nairobi meeting is the WTO's first ministerial conference to be held in Africa since the organisation was created in Marrakesh two decades ago. This perhaps underlines the importance of delivering improved outcomes for development.

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Azevêdo: Nairobi ministerial will be a milestone for the future of the WTO, available at <http://allafrica.com/stories/201511041590.html>; accessed 9 November 2015.

CHAPTER 17

CUSTOMARY LAW AND THE ENVIRONMENT

Manfred O. Hinz

1 Introduction

The very special relationship of traditional or indigenous communities to nature, to the use of natural resources in general and to plants and animals in particular has been the subject of many empirical studies and theoretical reflections.¹ Nevertheless, the focus on customary environmental law is a rather recent focus. So far, customary environmental law has not been of much concern to authors of textbooks on environmental law or legal anthropological treatises.²

In Namibia, the interest in customary environmental law developed when, after independence, the Ministry of Environment and Tourism drafted a new conservation policy, which changed the inherited approach to conservation. Instead of focusing on nature alone, i.e. nature minus human beings, the new approach took note of the relationship between nature as such and human beings living in and with nature, and by doing so, also acknowledged that traditional communities had their own ways of dealing with nature. What characterises those ‘own ways’? Were there customary rules and practices that modern conservation policies could utilise?

It was in this context that customary environmental law research began. One first result was the publication of *Without Chiefs, there would be no Game. Customary Law and Nature Conservation*³. Later, the internationally designed and conducted BIOTA project requested legal anthropological research on the potential of customary law for the protection of biodiversity. *Biodiversity and the Ancestors: Challenges to Customary and Environmental Law. Case Studies from Namibia*⁴ a first set of studies was accomplished within the BIOTA project in 2008.⁵ A second set appeared in a subsequent publication *Knowledge Lives in the Lake. Case Studies in Environmental and Customary Law from Southern Africa*.⁶ Certain

¹ Cf. Hinz (2003:16ff.) but also (2013b) with further references.

² An exception is the discourse about the legal protection of traditional knowledge. Cf. on this below.

³ Cf. Hinz (2003).

⁴ Hinz / Ruppel (2008a). *Biodiversity and the Ancestors* is (apart from the introduction by Hinz / Ruppel (2008b) – and a summary by Hinz (2008b) composed of 11 pieces of research which were conducted by students of the Faculty of Law of the University of Namibia under the supervision of this author.

⁵ BIOTA stands for Biodiversity Transect Africa. The aim of the project (it started in 2000 and ended in 2010) was to monitor the state of affairs of biodiversity and to develop strategic options for political interventions in favour of the sustainability of biodiversity. Cf. Hinz / Ruppel (2008b:59ff.); Falk (2008), but in particular the comprehensive account of the project in Jürgens / Schmiedel / Hoffman (2010) and in this: Hinz / Ruppel (2010); Hinz / Mapaure (2010); Pröpper *et al.* (2010).

⁶ *Knowledge Lives in the Lake. Case Studies in Environmental and Customary Law from Southern Africa* is edited by M.O. Hinz / O.C. Ruppel / C. Mapaure, Windhoek. Namibia Scientific Society, 2012. This volume contains 9 pieces of research by students of the Faculty of Law of the University of Namibia under the supervision of Oliver C. Ruppel and this author.

aspects of the research done in the BIOTA project could be pursued further in another internationally conducted project: the TFO project.⁷ This project run from 2010 to 2015.

The three mentioned publications from the BIOTA project and publications from the TFO-project are important sources for this Chapter.⁸ It has been divided into six parts. The first part takes note of the development of the post-independence conservation policy and the implications for customary law in environmental matters. Following this, the place of customary law in the overall legal system of Namibia with special attention on customary environmental law is looked at. The next part offers information on the development of conservancies in Namibia and the role played by customary law in the implementation of the conservancy policy. Then follows an overview of the results of customary law research in the context of the BIOTA and the TFO projects. Traditional conservationism and a section on customary law and the protection of traditional knowledge are dealt with before the concluding remarks.

2 Post-Independence Conservation Policy in Namibia: Gateway for Customary Environmental Law⁹

The history of nature conservation in colonial and post-colonial Africa went through various stages. After exploration and exploitation, preservation was the principle that governed conservation policies for many years. Preservation was defined as the “complete insulation of wildlife and their habitat from human interference”.¹⁰ Reserves were established to which only conservation officials had access, aside from visitors and other, especially permitted persons.

Conflicts between those living inside such nature conservation areas and conservationists have not been resolved and are still a matter of lively debates. In many instances, people were moved from their ancestral lands, without any rights, not even visiting rights to sacred locations. In many cases, their move was facilitated by promises that they would eventually benefit from this change by receiving, e.g. a share in park fees or the sale of licences to hunters.

A particular problem exists with people living close to parks. In some cases, such park borders are borders on paper only, meaning that animals come and go. Instead of promised returns from cooperation with the official conservation policy, people often suffer from so-called ‘problem animals’, which are raiding fields and livestock. The purist approach to nature conservation, which primarily focused on animals, did not develop mechanisms to mediate this kind of conflict between humans and animals. In as much as park borders are not necessarily borders that stop the movements of animals, people very often do not understand that human behaviour and movements are disturbing to animals and cause them to develop into problem animals. How can people who moved into an area known as an area of elephants since time

⁷ TFO stands for The Future Okavango. “The task of the TFO project was to assess important ecosystem functions and services and their valuation within the Okavango basin.” (Juergens (2013:7)). Cf. further Pröpper *et al.* (2015). The sub-unit directed by the author of this paper looked at relevant legal aspects, *inter alia* the customary water law in the Kavango basin. Cf. here Hinz (2013b; 2013d and 2014).

⁸ Part 7, the section on traditional knowledge and customary law extends the relatively short references to traditional knowledge in the introduction to *Biodiversity and the Ancestors*. (Cf. Hinz / Ruppel (2008b:17f). An earlier version of this part on traditional knowledge was published in Vol. 3(1) of the *Namibia Law Journal*; Hinz (2011a).

⁹ Cf. for the following Hinz (2003:2ff.).

¹⁰ Yeager / Miller (1996:34).

immemorial expect to settle without problems? To declare animals that follow or even defend their customs ‘problem animals’ that need to be shot is certainly not the best solution.¹¹

European concepts of nature conservation through preservation were, step by step, replaced with other approaches. Strategies for the ecologically balanced use of natural resources gained ground in the debate. The IVth World Congress on National Parks and Protected Areas resolved that protected areas

cannot co-exist with communities, which are hostile to them, but they can achieve significant social and economic objectives when placed in a proper context. The establishment and management of protected areas and the use of resources in and around them must be socially responsive and just.¹²

This statement is based on the very obvious fact that “communities living in and around protected areas, often have important and long-standing relationships with these areas.”¹³

However, the new approach manifested itself in concepts with implications differing according to the emphasis put on conservation through protection versus sustainable rural development for which conservation is not an end in itself.¹⁴ While the first would still support the existence of protected areas, the second would opt for radical revision of the existing system of conservation through protection and would eventually abandon the concept of human-free protected areas.

This second concept is associated with the policy of creating Integrated Conservation and Development Projects (ICDP) as put forward by US-American conservationists¹⁵ and adopted by the World Wildlife Fund (WWF).¹⁶ The WWF proposes the introduction of ICDPs in Government-operated protected areas, also in conservation projects under the jurisdiction of indigenous people and in specifically designed initiatives on communal or private land in terms of joint management arrangements between the state and the respective communities.

Although the Namibian Ministry of Environment and Tourism was reluctant to introduce the ICDP approach in its entirety, it nevertheless subscribed to its principles outside protected areas.¹⁷ The introduction of conservancies into the Nature Conservation Ordinance is proof of this.¹⁸

After the approval of the Ministry’s Policy on Wildlife Management Utilisation and Tourism in Communal Areas by Cabinet, the Ministry stressed that the new policy intended

To remove discriminatory provisions of the Nature Conservation Ordinance ... by giving conditional and limited rights over wildlife to communal area farmers that were previously only enjoyed by commercial farmers;

To link conservancies to rural development by enabling communal farmers to drive a direct financial income from the sustainable use of wildlife and tourism;

¹¹ Many concerns about problem animals were raised to the author when he did fieldwork for Hinz (2003), Cf. Hinz (2003:2). See also *The Namibian* of 24 November 2010, which reports that the Ministry of Environment and Tourism compensated each conservancy in Namibia with N\$60,000 for losses caused by wild animals.

¹² IUCN, Parks of Life. Report of the IVth World Congress on National Parks and Protected Areas, quoted from Jones (1997:1).

¹³ Ibid.

¹⁴ Cf. Jones (1997:6ff.).

¹⁵ Cf. Wells / Brandon (1992); Brown / Wyckoff-Baird (1992).

¹⁶ WWF (1995:1ff.).

¹⁷ Cf. Jones (1997:10).

¹⁸ Ordinance 4 of 1975 as amended by the Nature Conservation Amendment Act, No. 5 of 1996.

To provide an incentive to rural people to conserve wildlife and other natural resources through shared decision-making and financial benefit.¹⁹

The Ministry's policy document refers to the development to the actual situation, which is characterised by the alienation of rural people from their environment who, in contrast to commercial farmers, have been, denied access to wildlife and game by the legislation in existence at independence,

[r]ural communities in pre-colonial times had a well-established conservation ethic based on religious beliefs, the right of chiefs and other cultural values. However, successive colonial administrations throughout Africa have alienate rural people from their environment by taking away their rights and responsibilities in favour of centralising control over natural resources and making traditional practices illegal.²⁰

The policy document continues:

If Namibia is to successfully conserve the wildlife that still exists on communal land and which migrates annually from reserves into communal land and across international borders into Angola, Botswana and Zambia, then the needs and aspirations of rural people living in these areas still have to be addressed.

Not only will they have to gain some direct benefit from wildlife conservations, but they have to be re-empowered to take responsibility for wildlife management and to take responsibility themselves for managing natural resources sustainably.²¹

These policy considerations eventually led to the amendment of the Nature Conservation Ordinance by the Nature Conservation Amendment Act of 1996.²² The Amendment Act is a very interesting example of the interrelatedness between customary law and the practices and statutory law of the Government. The development and legal implementation of the conservancy policy in Namibia is significant because it took note of the relevance of environmental concerns in customary law and practices.

3 Customary Law and Customary Environmental Law within the General Legal System

Customary law in general terms enjoys a special constitutional status. Article 66 (1) of the Constitution states:

Both the customary law and common law of Namibia in force on the date of independence shall remain valid to the extent to which such customary or common law does not conflict with this Constitution or any other statutory enactment.

This constitutional provision has changed the position of customary law. Under Apartheid, customary law was a set of second-class law – if law at all. With the enactment of the Constitution, customary law received constitutional confirmation and was placed at the same level as the imported Roman-Dutch common law.

What is customary law?²³ The Traditional Authorities Act describes customary law in its Section 1 as the “norms, rules, traditions and usages of a traditional community”.²⁴ This

¹⁹ MET (1995).

²⁰ Ibid:7.

²¹ Ibid:8.

²² No. 5 of 1996.

²³ Cf. for the following Hinz (2003:8ff.).

²⁴ No. 25 of 2000.

definition is a clear indication of the difficulties existing in the jurisprudence of modern (Western) law in determining African customary law. Traditions and usages are usually distinct from legal rules. The statutory definition of customary law does not follow this distinction, thus acknowledging that African customary law operates differently from modern law. This is one of the reasons why colonial rule created, better accepted, a duality of legal systems in most African countries: the system of imported law and the system of inherited African customary law. African customary law was usually only applied subject to the so-called repugnancy clause. This clause implied that where customary law was understood to be against public policy or natural justice, it had to give way to the imported colonial law. This state of affairs led to substantial inroads into and to deformations of customary law, to which remedies had to be found after the African countries gained independence from colonial domination. However, the duality of legal systems survived the move from colonialism to independence. Up to now, most African countries recognise or at least accept legal pluralism as their way of legal order.²⁵

In the case of Namibia, the blueprint for independence was developed under the guidance of the United Nations Institute for Namibia; it provided for the recognition of the importance of customary law, hence its inclusion as a constitutional clause.²⁶ Customary law neglected during the Apartheid era required space and freedom to develop out of the stagnation into which it had been forced by South African jurisprudence, centred, as this jurisprudence was, on Roman-Dutch law. Namibia enacted a number of statutes which provided the necessary space for the development of customary law in line with the country's new constitutional dispensation. Of these, the already quoted Traditional Authorities Act is the most important: a kind of constitution of traditional governance.

The Namibian parliament enacted the first version of the Traditional Authorities Act in 1995.²⁷ The Act was amended in 1997 and a fully revised version was enacted in 2000. In pursuance of the 1995 Act, a process of recognition of traditional authorities began. To date, 50 traditional authorities have been gazetted in the Government Gazette of Namibia. All 50 traditional authorities are represented in the Council of Traditional Leaders, established under the Council of Traditional Leaders Act.²⁸

Section 3 of the Traditional Authorities Act deals with the powers, duties and functions of traditional authorities. The powers and duties have to be seen as part of the overall responsibility of the traditional authority which is to "promote peace and welfare" amongst the members of their community.²⁹

Section 3(2)(c) of the Act is about the environmental responsibility of traditional authorities. The provision stipulates that the members of the traditional authority

shall ensure that the members of his or her traditional authority use the natural resources at their disposal on a sustainable basis and in a manner that conserves the environment and maintain the ecosystem for the benefit of all persons in Namibia.

Although the wording of this provision is reminiscent of the wording of Article 95(l) of the Constitution, the legal status of Section 3(2)(c) of the Traditional Authorities Act reaches beyond the limits of Article 95(l) of the Constitution. Article 95 is part of Chapter 11 of the

²⁵ Cf. here Hinz (2006b).

²⁶ UNIN (1986:963).

²⁷ No. 17 of 1995.

²⁸ No. 13 of 1997.

²⁹ Cf. Section 3(1) of the Traditional Authorities Act.

constitution, titled Principles of State Policy, which, as stipulated in Article 101, are not “of and by themselves enforceable by any Court”. Section 3(2)(c) of the Traditional Authorities Act is fully legally enforceable in a court of law, be it a traditional court (community court in terms of the Community Courts Act³⁰) or a state court.

It is part of the already quoted overall responsibility of traditional authorities to supervise and to ensure the observance and enforcement of customary law.³¹ According to Section 3(3)(c) of the Act, traditional authorities “may make customary law”. It is obvious that the law-making capacity of traditional authorities is of utmost importance for any undertaking that looks at customary environmental law as it confirms the power of local stakeholders to embark on the necessary legislative translations of the rapidly growing concerns with regard to the environment, the protection of biodiversity and the sustainable use of natural resources.

The collection of self-stated customary laws of the various Namibian communities in *Customary Law Ascertained* give an interesting insight into the customary environmental law.³² The following quotes some examples from the first volume of *Customary Law Ascertained*, which contains the customary law of the Owambo, Kavango and Caprivi communities.³³

The Laws of Oukwanyama³⁴ provide for the protection of trees, fruit trees in particular, plants and water. It is an offence to cut fruit trees, and all water has to be kept clean. The Laws of Ondonga³⁵ provide for the protection of trees with specific reference to fruit trees, palm trees and the Marula tree. The use of fishing nets is only allowed when permission is given by the traditional authority. The Laws of Uukwambi³⁶ provide for the protection of water, the protection of trees, wild animals and grass. The Laws of Shambyu³⁷ provide for the protection of water: Anyone who pollutes or contaminates water commits an offence. In the Caprivi Region, the Laws of the Masubia³⁸ prohibits the cutting of fruit trees, causing veld fires and the use of fishing nets to catch small fishes.

It is interesting to note that the more recent versions³⁹ of the self-stated customary laws pay more attention to environmental issues than the earlier noted versions of self-stated customary laws. Obviously, environmental awareness is growing among traditional authorities. This led these to consider the extension and further development of their customary law in terms of the authority conveyed to them by Section 3(3)(c) of the Traditional Authorities Act.

4 Conservancies and Customary Law

Since the enactment of the Nature Conservation Amendment Act of 1996, 64 conservancies have been established on communal land by the end of 2011.⁴⁰ The number of established conservancies shows that the policy of Government to open nature conservation in terms of the

³⁰ No. 10 of 2003.

³¹ See the Chapeau of Section 3(1) of the Traditional Authorities Act.

³² Hinz (2010a; 2013 and 2015a).

³³ The concept of self-stating customary law is explained in Hinz (2010a), but see also Hinz (2015b).

³⁴ Hinz (2010a:169ff.).

³⁵ Ibid:87ff.

³⁶ Ibid:233ff.

³⁷ Ibid:311ff.

³⁸ Ibid:467ff.

³⁹ Self-stated laws of communities, which self-stated their law only recently, i.e. for the publication in *Customary Law Ascertained* or amended older versions of the laws.

⁴⁰ Cf. NASCO (2011).

above-quoted policy was taken up positively. Indeed, there is no doubt that the possibility to establish conservancies, met the aspirations and expectations of many people living on communal land.⁴¹

What does the Nature Conservation Amendment provide for? According to Section 24A(1)

any group of persons residing on communal land and which desires to have the area which they inhabit, or any part thereof, to be declared a conservancy, shall apply therefore to the Minister in the prescribed manner

An application must be supported by the following: a document that lists the names of the persons who are members of the conservancy committee; the constitution of the committee; and a statement that sets out the boundaries of the area to be declared a conservancy. Before approving the application, the Minister must be satisfied that the conservancy committee is representative of the area's community.⁴² It is also necessary that the conservancy constitution contains provisions for the sustainable management and utilisation of game in the proposed conservancy. Further to this, it is required that the committee is able to manage funds accountably, and that it can guarantee the equitable distribution of the benefits derived from the consumptive and non-consumptive use of game in its area. The proposed area has to be sufficiently delimited and the views of the relevant Regional Council have to be accommodated.

The Amendment to the Nature Conservation Ordinance does not make any reference to traditional authority, traditional leaders or other institutions recognised under the Authorities Act.⁴³ What the Amendment Act applied is a civil society approach looking at individuals living in a particular area and by this in a way ignoring the traditional governmental structure that may be relevant to the individuals and the areas in which the individuals live.⁴⁴ However, practice shows that most if not all conservancies established on communal land are clearly related to traditional territories.⁴⁵ Their administrative structure is, in particular, in areas where traditional governance is firmly grounded in the local culture as it is the case in North and North-Eastern Namibia, closely linked to the respective traditional authority by providing the respective traditional authorities with possibilities to influence the process of decision making in the conservancies.⁴⁶

The constitutions of conservancies are a very relevant source of the customary law of the various traditional communities. The constitutions of conservancies are striking examples for the potential of customary law to adopt statutory stipulations and to develop them in a creative manner. While the Nature Conservation Amendment Act provides for conservancies with respect to wildlife, many constitutions of conservancies go beyond wildlife and take note of other natural resources in their areas. Wildlife management, indeed, requires a comprehensive planning that includes the use of grass, water, forests etc.⁴⁷ The conservancy concept reflected

⁴¹ Cf. NASCO (2006) and in particular Anyolo (2012a and b). What is said about the conservancies could be amended by noting the development of Community Forests. (Cf. Forest Act No. 12 of 2001) On community forests see: Muhongo (2008). As of 2011, 13 community forests were established (NASCO 2011).

⁴² Cf. here and for the following Section 24A(2) of the Nature Conservation Amendment Act.

⁴³ See here also Hinz (2011b).

⁴⁴ The submission through the Faculty of Law of the University of Namibia to the Ministry Environment and Tourism, which pleaded for a clause on traditional authorities in the draft Nature Conservation Amendment Act was not accepted.

⁴⁵ This was the result of the research done for Hinz (2003).

⁴⁶ Cf. here again the findings produced in Hinz (2003:88ff.)

⁴⁷ An analysis of the various constitutions of conservancies has not been done yet.

in provisions of this nature is a product of the living customary law: it is an amendment to the Nature Conservation Amendment Act.

The need to draft constitutions for conservancies also contributed to open the collective memory and, by doing so, to develop social visions: In the preparatory stage of the Nyae Nyae in the Otjozondjupa Region (Tsumkwe East) conservancy,⁴⁸ people were asked to rate the importance of animals in their area. The ranking criteria were: healing, meat, household items, photographic safaris, professional hunting and national biodiversity. Seven species of animals were selectable: roan, elephant, buffalo, giraffe, gemsbok, leopard, and wild dog. 25 points could be allocated to those species separately and with one rank. Leaving aside interests only indirectly linked to the community (safaris, professional hunting and national biodiversity), the results show an interesting concentration on some animals.⁴⁹ Eland and giraffe scored 22 marks, gemsbok 15 and roan 9. Eland and giraffe had 8 respectively 7 marks for healing. The same animals do not rate as well in terms of the indirect benefits for the community, i.e. through photographic safaris and professional hunting.⁵⁰ Roan gained the highest number of marks (10) while eland and giraffe received 4 and gemsbok 2 each. An explanation given in the conservancy constitution for the criteria of healing refers to the spirits of animals, which are “used to provide guidance to traditional healer”⁵¹

Social visions were developed and implemented in the Nyae Nyae constitution in the benefit distribution scheme of the conservancy. In view of the sub-divisions of the area into districts and localities (*n!oresi*)⁵² possible income from various sources were allocated in percentages to the whole of the conservancy, the district and the holder of a *n!ore*. 100% of the proceeds from subsistence hunting goes to the *n!ore*, while income from the sale of live game and concessions for trophy hunting goes to the whole community. Fees for the use of resources and the use of tourist camps are shared between the three levels.⁵³ This scheme of income distribution reflects the vicinity principle as it is known on customary law.⁵⁴ Those closest to the income-generating activity are given the bigger share of it or may even have the right to the whole.

5 BIOTA and TFO Research on Customary Law and the Environment⁵⁵

The customary law research within the BIOTA project covered a broad range of topics. The research addressed questions to traditional and modern stakeholders, ordinary villagers and people who spend only part of their time in the village, younger and older people, people with different degrees of formal education, women and men were interviewed.

The overall picture emerging from the research⁵⁶ shows that customary law has mechanisms to protect biodiversity and natural resources, albeit with certain limitations. The same limitations also determine the extent to which these mechanisms are implemented. Traditional communities have knowledge about the value of biodiversity and the need to protect it against

⁴⁸ The Nyae Nyae conservancy was the first conservancy in Namibia.

⁴⁹ Nyae Nyae Constitution (1996:15).

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Ju/'hoan for a “block of land that surrounds each water hole and provides the resources on which the people of the water hole depend”, Lee (1979:334).

⁵³ Ibid:12.

⁵⁴ Cf. Hinz (1998:201).

⁵⁵ Cf. for the following Hinz (2006:211ff. and 2013b).

⁵⁶ As documented in Hinz / Ruppel (2008) and Hinz *et al.* (2012).

non-sustainable external and internal exploitation. Although this knowledge is very often bound by social and economic constraints, it indeed has the potential to be transformed into societally efficient norms.

The law applied in traditional communities certainly has more impact on the sustainable protection of biodiversity than the concurrent norms of the state. Under customary law, traditional communities enjoy more or less full responsibility for the administration of natural resources. However, the examples of difficulties caused by the complex interface between statutory law and customary law need further exploration.

Where traditional communities are reluctant to employ mechanisms of customary law or to develop them further although, even if environmental awareness should suggest such a development, there is need for political intervention. The administration of the allocation of land and grazing rights is a case in point, as is the regulating of the forest resources. Balancing economic interests against those of environmentally sustainable use, the examples explored show that decisions are more likely to surrender to economic interest than to take a stand for biodiversity and sustainability.⁵⁷

The customary law research in the TFO project added important aspects to the understanding of customary environmental law. So far, customary water law was hardly considered in customary law research.⁵⁸ However, the research noted with interest that some Namibian communities found it worthwhile to self-state about the use of water in their customary law.⁵⁹

Research done for a master's dissertation in law⁶⁰ revealed an unexpected picture on the 'ownership' of water:⁶¹ For a good majority of the interviewed people the state, although claiming ownership under general law,⁶² was not seen to be the owner. Owners were the community, God and a mythical entity with the name of *Ekongoro*. The customary law research in the TFO project took note of these findings and enquired in particular the reference

⁵⁷ See, e.g. Rukoro (2008).

⁵⁸ Cf. Hinz / Mapaure (2012). With respect to statutory water law, see Water Act No. 54 of 1956 (as amended) and the Water Resources Management Act No. 11 of 2013.

⁵⁹ See Section 15 of the Laws of Uukwambi in Hinz (2010a:270ff.). This section has seven, quite detailed sub-sections. I quote the first two: "15.1 Water is life. Therefore water shall be conserved because it is important to people, animals and plants for survival. 15.2 The Traditional Authority shall have the responsibility of protecting water, together with other Traditional Authorities. The Traditional Authority shall not allow water to be misused, including fishing with nets ad *iishongo* [Fishing equipment made of buckets or reeds]. Anyone who is found misusing water shall be prosecuted. If the Headman or people from the household misuse water, the matter shall be reported to the Traditional Authority."

⁶⁰ Mapaure (2012).

⁶¹ The question about 'ownership', was not guided by the concept of ownership as it originated from the western traditional jurisprudence and which grants the individual the generally accepted power to deal with the object of ownership as he or she wishes. The general legal order of the country, indeed, knows 'ownership' in the latter sense since the integration of the Roman-Dutch law as the common law of the country (Article 66 of the Constitution) and with this also contributed to the spreading of this concept. However, the customary law research also experienced that a different understanding of 'ownership' existed. Land may be said to be 'owned' although it is clear that this ownership is very different from ownership of land outside communal areas. 'Ownership' of communal land only means that the 'owner' has the right to use the land in a way that excludes or limits the rights of others, including the right of the traditional authority responsible for the administration of communal land and the right of the state which has to respect the customary law rights of the 'owners'. (Cf. Communal Land Reform Act No. 5 of 2002, Sections 17(1) and 20).

⁶² See here Section 4 of the Water Resources Management Act No. 11 of 2013: "The State, in its capacity as owner of the water resources of Namibia by virtue of Article 100 of the Namibian Constitution has the responsibility to ensure that water resources are managed and used to the benefit of all people in furtherance of the objects of this Act."

to *Ekongoro*. Of the interviews conducted within the framework of the TFO Project done between March 2011 and August 2015 in the Kavango Region, the adjacent part of the Caprivi Region and in the Kavango Delta, i.e. in Ngamiland of Botswana, about 70 focused on *Ekongoro*.⁶³ This was done so because, the very first interest of the empirical research was to generate qualitative information on water, i.e. on the general perceptions of the people on water⁶⁴ – water in the Kavango River as the main source of water, but also locally pumped water or water provided, in the case of Namibia, by NamWater⁶⁵.

Who or what is *Ekongoro*? What is the social meaning of *Ekongoro*? Is there any legal relevance of *Ekongoro*? Most probably “yes” when we take note of what stated a 70 years old Thimbukushu-speaking farmer living at the Chobe River in the Caprivi Region in an interview about customary water law: “Makongoro are the Hafumu of water – the Makongoro are the rulers of water - and we respect them”.⁶⁶

So, who or what is *Ekongoro*?

Likongoro⁶⁷ is just another animal, no one can describe it,

was said by one respondent,⁶⁸ while another stated:⁶⁹

Dikongoro is a creature that cannot be classified to anything, no one can tell if Dikongoro is an animal or a reptile.

Where do we find *Ekongoro*?

The place where Dikongoro lives is mostly covered with foam. The water is always deep and dark and does not flow.⁷⁰

The same respondent is very precise in naming places where one should be able to find *Ekongoro*:⁷¹

These days, they [Makongoro] are very scarce to be found, but they still live in the water. There is a place at Kanorombwe where Dikongoro still lives. Also at Popa and Andara. there are places where Dikongoro is expected to live currently.

Another respondent had to report the following:⁷²

According to what I was told: Dikongoro still lives in a place we call Shadikongoro . And the agriculture irrigation site of Shadikongoro⁷³ was named because of the fact that Dikongoro lived and still lives in this place.

⁶³ See here also already Fisch (1979) and Seifert (2006:81ff.).

⁶⁴ Cf. Hinz (2013b and 2013d), informing about this first phase of the TFO customary law research. The second phase of the research (currently in the process of evaluation) was to explore specific matters, such as access to water, control of access, rules against pollution and rules to protect water etc.

⁶⁵ Namibia Water Corporation Limited, the Government controlled public water provider.

⁶⁶ Cf. interview 069. *Makongoro* is the plural of *Ekongoro*. *Fumu* (sing. to *Hafumu*) means king / queen or ruler. (The transcripts of all quoted interviews are on file with the Centre of African and Migration Studies, University of Bremen.)

⁶⁷ *Ekongoro* (pl. *Makongoro*) is Rukwangali; *Likongoro* (pl. *Makongoro*) is Rumanyo (Rushambyu and Rugeciriku); *Dikongoro* (pl. *Makongoro*) is Thimbukushu. Quoting from interviews, the language is the language used by the interviewee. In references of the author, the Rukwangali language is used.

⁶⁸ Interview 026.

⁶⁹ Interview 053.

⁷⁰ Interview 041.

⁷¹ Interview 041. The places mentioned in the following quotation are in Mbukushu area (Mukwe District).

⁷² Interview 043.

The stories told about *Ekongoro* are stories heard along the Kavango River and in adjacent areas.⁷⁴ They are obviously told from generation to generation and even appear in material used in schools.⁷⁵ Incidents with *Ekongoro* are remembered with details. Who was with whom when *Ekongoro* attacked is remembered and even the year in which incidents happened is recalled. The key-sentence “Makongoro are the Hafumu of water– the Makongoro are the rulers of water - and we respect them” found, indeed, support in a broad number of the interviews. It was not just the narrative of one respondent, who enjoyed to be interviewed and who allowed himself to be taken away by his imagination. The key-sentence finds support in the sense that *Ekongoro* is still seen as a powerful animated entity in the relationship between human beings and water.

The animated non-human parts of the environment appear as if they were human-like entities, i.e. entities which human beings can see, even have encounters with. Human beings can communicate with these entities. Despite their power over human beings, they are part of the world of human beings. How else would it have been possible that the grandfather in one of the quoted interviews became *Ekongoro* after his death? As ancestor, he could become *Ekongoro*, as it is part a widely spread understanding in African traditional cultures that ancestors remain as the living-dead part of the human world, are able to communicate with the living-living, have influence on them, are even open to negotiate this influence.⁷⁶ They may induce fear, but they also allow negotiations to avoid negative consequences.

The fact the *Ekongoro* is called *Fumu* is also to be considered in this context. The *Fumu* is not only a respected personality, the *Fumu* usually an offspring of a royal house, has special relations to the ancestors that allow him / her to communicate with them for the benefit of the community. The office of the *Fumu* is religiously blessed, it is sacred, what does not exclude that the ruler acts wrongly and eventually against the aspirations of the community.⁷⁷

Ekongoro is reported to attack canoes and human beings, *Ekongoro* is also said to kill people. This is one side, there is another side according to which *Ekongoro* saves water and natural resources and protects them, that *Ekongoro* provides for the growing of grass by holding water available. There is one voice which says that *Ekongoro* may swallow people, but will them always release alive.

To clarify the discrepant views, it will be helpful to refer here to the fact that, following other respondents, there are two sorts of *Ekongoro* or two mythical entities that live in the waters of

⁷³ Again a place in the Mbukushu area.

⁷⁴ There was no opportunity to investigate about *Ekongoro* in Angola. The fact that the same people live on the Angolan side where the river is the border between the two countries allows the conclusion that *Ekongoro* is present there as it in Namibia.

⁷⁵ Helgard Patemann thankfully drew the attention of the author to a textbook for standard 2 in Thimbukushu that contains a chapter on *Ekongoro*. After referring to Shadikongoro as the place where *Ekongoro* “lived in this place long ago”, the text requests the learner to consult with their grandfathers or elders to tell them “rightfully” about *Ekongoro*; Kloppers / Majavero (1991:25f.). It would certainly enrich the understanding of *Ekongoro* to learn to what extent learners have made use of the request to contact their grandfathers about *Ekongoro* and also to what extent the school-supported inquiries contributed to the story-telling on *Ekongoro*!

⁷⁶ Cf. here Hinz (2003:36ff.); Patemann (2004).

⁷⁷ Cf. e.g. the description of ‘Royal prerogatives and duties’ of the Kwangari Hompa in McGurk / Gibson (1981:68ff.). According to this the Hompa is “the source and repository of wealth, dispenser of gifts, leader in war, officiant in religious ceremonies, and in some situations a medicine man. ... the chief or another member of the royal family is the ‘rainmaker for all the tribes’ and as such is the keeper of the hereditary rain-making medicine.” Similar notations can be found for the other traditional communities in the Kavango Region; see Gibson *et al.* (1981).

the Kavango River: There is *Ekongoro* and *Mbava*, called the female side of *Ekongoro*, which has the same powers as *Ekongoro* and is said to be the most dangerous being in the waters.

As much as *Ekongoro* was part of the research interest from the beginning of the customary water law inquiry, *Mbava* came only late to the attention of the reported research. More information is, indeed, needed that would also require questions about the statement why *Mbava* is the female side to *Ekongoro*. *Ekongoro* and *Mbava* which represent separately the quality of good and bad or we have the two qualities in one is eventually not very relevant. Relevant is that we have a dichotomy, a dichotomy of elements which are related to each other. There is the one, the animated force, let's call it *Ekongoro* that maintaining water as the source of life, for the availability of fish, it is the rainbow that shines over the earth after life-supporting rain. There is the other, let's call it *Mbava*, which is very dangerous to people and may cause harm to them. There is one side, which is good, there is another, which is bad.

The dichotomy of *Ekongoro* and *Mbava*, or the dichotomy within *Ekongoro* itself, reminds of what is essential in the discourses on the animation of nature.⁷⁸ This discourse deals with the concept of force, that is neutral on the surface, but can turn out to be good or depending on the case of employment. The power in the animated nature can, indeed, be supportive to humans, but also harmful. The power of nature can be good or bad as the power of human beings can be good and bad.

There are two important messages in the philosophy of the animated nature:⁷⁹ The first is that otherwise unexplainable causes of events are explainable with reference to the execution of power by the animated non-human world: You are not ill because of an unexplainable illness, you are ill because somebody, a human or non-human force, made you ill.⁸⁰ The second message is that the described power, despite its ambivalence, is not excluded from human influence. Influence can be negotiated.⁸¹ *Ekongoro* expresses a network of relationships that reach from human connotations (you communicate with *Ekongoro*) to humanised non-human and even supra-human connotations (*Ekongoro*, the *Fumu* of water; our grandfather is *Ekongoro*). The complex conceptualisation of *Ekongoro* reflects the complexity of the traditional world order. In ethno-philosophical terms and having customary law as the rules of this world order in mind, one could say that *Ekongoro* is the manifestation of some kind of a customary law *Grundnorm*, which, in focusing on power, sets rules and governs the behaviour of human beings.

6 Traditional Conservationism

The environmental discourse in general and the discourse in anthropology in particular have for years been occupied with interpreting traditional ecological and environmental approaches. Traditional conservationism is a topic that has filled countless pages in anthropological publications.⁸² It is therefore worthwhile to place the results in a broader legal and political anthropological framework. A short summary of what is understood by traditional

⁷⁸ Reference is here to discourses on African philosophy, which cannot be elaborated on here. See on this articles in Coetzee / Roux (2002), but also Glenn's analysis of the legal traditions (Glenn (2014)).

⁷⁹ Which go beyond the interpretation by Fisch who, at (1979:43), holds against a religious or ethical qualification of the *Ekongoro* and the stories about *Ekongoro*.

⁸⁰ To the latter see again Patemann (2004).

⁸¹ This is exemplified in Patemann (2004).

⁸² Cf. Ingold (2000); the collection of articles in Grim (2001); but also Hinz (2003:19ff.); Falk (2008) and Proepper (2009).

conservationism or by relating biodiversity to the ancestors⁸³ will be helpful in preparing the skeleton of this framework.

Environmental and anthropology-based environmental literature allows for the identification of two extreme views about traditional concepts of nature conservation.⁸⁴ The one denies their existence or ignores them as irrelevant in view of the modern mainstreams which prevail in environmental approaches. The other view overemphasises traditional conservationism. Traditional communities and their environmentalist approaches are said to reflect positions of the so-called Indian⁸⁵ eco-saint who always knew what to take from nature and never went as far as modern societies did – in their exploitation of nature to the point of irreparable destruction.

Ecological anthropology has undergone important theoretical changes. One of its last transformations no longer believes in the Indian ‘eco-saint’, the ‘noble savage’ and other myths that were the products of European escapists. The American anthropologist Headland can be quoted here: his views led to a far-reaching debate amongst scholars in this field.⁸⁶ Headland is a moderate revisionist, searching for a middle road which he defines as “history-grounded” and of “good anthropology”.⁸⁷ He argues that “all ecosystems have been greatly modified by humans for thousands of years”⁸⁸

Radical revisionism, on the other hand, rejects the view, held by many that “tribal peoples lived generally in great harmony, health, and happiness and in balance with their stable environment.”⁸⁹ “Primitive polluters” is the title of a publication by the anthropologist Rambo.⁹⁰ Its message is to demonstrate “the essential functional similarity of the environmental interactions of primitive and civilised societies.”⁹¹

In a brief, but empirically founded response to the debate on Headland’s revisionism,⁹² the hypothesis was submitted that people in traditional societies do conserve, but do so only in respect of natural resources whose “depletion they can envisage”.⁹³ The author of the hypothesis, Dye, adds that such societies must “rely on very limited data to ascertain whether a particular resource is being seriously depleted.”⁹⁴ In his research among a group of rain forest people in Papua New Guinea, Dye saw how crocodiles that had gathered in a small lake – the only bit of water available in an extraordinary dry season – were harvested to extinction. This occurred alongside the community’s refusal to use long gill-nets for fishing in the lake, because they “would fish out the lake”.⁹⁵

Why is there a lack of conservationism in the case of the crocodiles, but conservationism in the case of the fish? Dye answers this by referring to the fact that the community had already

⁸³ As the title of Hinz / Ruppel (2008) calls for.

⁸⁴ The following relies on Hinz (2003:19ff.).

⁸⁵ Indian from the Americas, i.e. Native Americans.

⁸⁶ Headland’s (1997) article was published in *Current Anthropology*. Ten scholars reviewed his article, with Headland responding. See also Vol. 101 of *The American Anthropologist*.

⁸⁷ Headland (1997:609).

⁸⁸ Ibid:605.

⁸⁹ Edgerton (1992), quoted by Headland (1997:607).

⁹⁰ Rambo (1985).

⁹¹ Ibid:2.

⁹² Dye (1998:352f.).

⁹³ Ibid:353.

⁹⁴ Ibid.

⁹⁵ Ibid.

experienced having wiped out fish when they had used their traditional way of fishing, i.e. by poisoning fish in pools in small streams. Dye discussed this with the villagers, who numbered only 125, saying that they would never be able to fish out a lake measuring five square miles, but they were resolute in their defence: “What does he know, with only 10 years here? And anyway, he doesn’t even fish.”⁹⁶

Dye’s explanation that the lack of conservationism resulted from the lack of capacity to assess probabilities and the lack of traditionalised experience is certainly helpful to place conservationist concerns within the respective societal context. The efficiency of mechanisms of balancing short-term societal interests in using and consuming natural resources against long-term interests in sustaining those same resources depends on all sorts of factors; and these factors determine the actual situation of the given society or community and the environmental framework they live in. It is not only the knowledge of the consequences of certain behaviour, however: such knowledge must also – as the villagers’ answer to Dye shows – have become part of the collective memory, thus influencing the behaviour of the villagers.

Dye’s arguments did not reach out to this last point. Reaching out to it would have meant delving into the very difficult legal sociological and anthropological question of how knowledge becomes societally accepted, and how such knowledge is transformed into, again societally accepted, normative principles.

Bodley, an anthropologist whom revisionists criticise as a supporter of the ‘noble savage’ argument, warns against the exaggeration of revisionism with its focus on myths, which are easy to target, but, at the same time, “miss the point of the cultural ecological realities”.⁹⁷ Contrary to what revisionists hold against him, Bodley quotes from his own writing where he does, in fact, employ a balanced view.⁹⁸ While he stresses, on the one hand, that man has always been a significant force for environmental modification and that primitive cultures have sometimes seriously disturbed their local environment, he says on the other hand that “primitive cultures achieved a far more stable environmental adaptation than presently assumed by industrial civilisation”.⁹⁹

Anthropological records are full of reports on rites that have formed part of traditional approaches to natural resources.¹⁰⁰ Traditional interventions into nature, such as fishing or hunting, had to be counterbalanced by acts of restoration and re-harmonisation. However, the interventions were not undertaken from a position of strength and superiority of humans over nature,¹⁰¹ but from a position of caution. From a modern perspective, one may ask whether traditional rites were performed to secure the necessary supremacy over the animals the hunter wanted to hunt, or rather to prepare for a situation of disturbed forces which would arise with the killing of the animal and, thus, prompting efforts to bring the situation back to equilibrium. If the first were the prevailing function of the rites, then it would be very easy to understand why they became redundant: not only because of diverging ideological and religious influences, but also because of the increasingly available modern weapons that secured superiority and rendered the inherited practices superfluous. If the second were the function, an element of true and genuine traditional conservationism could be assumed. Whether this alternative approach would entail more than achieving the same goal through different

⁹⁶ Ibid.

⁹⁷ Bodley (1997:612).

⁹⁸ Bodley (1976).

⁹⁹ Ibid:47.

¹⁰⁰ Cf. for Namibia e.g. Fisch (1994).

¹⁰¹ Cf. Hinz (1974:69ff.).

avenues, or a goal that was grounded more securely, is difficult to ascertain. But even if only the first possibility were true, it would be worthwhile to pursue. To those whose way of life is more closely aligned to traditional concepts than to modern ones, a conservationism based on the traditional avenue would be more convincing than one based on modern approaches.¹⁰²

In other words, and as it apparently gains increasing prominence in the interpretation of what is called traditional, instead of juxtaposing the so-called ‘traditional’ to the so-called ‘modern’, one should rather emphasise that the so-called ‘traditional’ of today is but one manifestation of several possibilities of modernity, or an alternative modernity. Such an interpretation will, indeed, open an unbiased approach to assess environmental perceptions and practices to the benefit of the protection of the environment and natural resources.

7 The Protection of Traditional Knowledge¹⁰³

Brown writes in the preface to a book with the title *Who Owns Native Culture?*¹⁰⁴

In the late 1980s, ownership of knowledge and artistic creations traceable to the world’s indigenous societies emerged, seemingly out of nowhere, as a major social issue. Before then, museum curators, archivists, and anthropologists had rarely worried about whether the information they collected should be treated as someone else’s property. Today the situation is radically different. Scarcely a month passes without a conference examining the ethical and economic questions raised by the worldwide circulation of indigenous art, music, and biological knowledge.

Legal examinations have added their questions to the debate. While a few countries enacted statutes to protect traditional knowledge,¹⁰⁵ to be more precise: access to biodiversity and genetic resources, the main focus of the debate lies in international and regional fora. The aim here is to establish, a consensus on legal mechanisms suitable to the protection of traditional knowledge.¹⁰⁶ When in 1997 WIPO, the World Intellectual Property Organisation, established its Global Intellectual Property Issues Division, it provided space to so far neglected voices in its first programme. The aim for this was

to identify and explore the intellectual property needs and expectations of new beneficiaries, including holders of indigenous knowledge and innovations, in order to promote the contributions of the IP system to their social, cultural and economic development.¹⁰⁷

WIPO conducted a worldwide fact-finding mission in 1998 and 1999, which took note of existing customary rules and practices employed in many communities as instruments to protect cultural assets against misuse and unwanted exploitation.¹⁰⁸ WIPO’s fact-finding report is up to today the most comprehensive collection of legal anthropological data relevant for the still on-going effort to develop legal answers to the challenge posed by the demands to protect traditional knowledge.

¹⁰² The Constitutional Court of South Africa held that it would be more convincing for certain parts of the South African population to argue against the death penalty by referring to *ubuntu* than to international and national human rights discourses. Cf. *S v Makwanyane* 1995 (6) BCLR 665 (CC).

¹⁰³ Cf. for the following Hinz (2011a).

¹⁰⁴ Brown (2003:IX).

¹⁰⁵ Cf. WIPO (2010).

¹⁰⁶ Cf. the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights of 1995 and its Art 27 2, which accepts the possibility of *sui generis* regimes for certain intellectual property rights, albeit within certain limits set by the agreement in general terms.

¹⁰⁷ Main Programme 11, Programme and Budget 1998-1999, quoted from WIPO (2001:16).

¹⁰⁸ Cf. WIPO (2001:57ff. and 207ff.).

The Harare-based African Regional Intellectual Property Organisation (ARIPO) has added to the debate by adopting the Legal Instrument for the Protection of Traditional Knowledge and Expressions of Folklore adopted in Lesotho in 2007 and, in pursuance of this, the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore on 9 August 2010. 19 African countries are members of ARIPO,¹⁰⁹ of which nine have signed the protocol, amongst them Namibia.¹¹⁰ In accordance with its Section 27(3) of the Protocol, it came into force in May 2015 after six states (as required by the Protocol): Botswana, Zimbabwe, Gambia, Rwanda, Malawi and Namibia deposited their instruments of ratification or accession.¹¹¹

The Swakopmund Protocol deserves a special place in the debate about the protection of traditional knowledge, the question about what traditional knowledge is and why it is relevant to protect it will be discussed. It responds to questions of this nature by linking them in a special way to customary law and traditional authorities. This is the reason why the following, after an inquiry about approaches that have been explored to provide legal protection of traditional knowledge, focuses on the Swakopmund Protocol.¹¹²

What is traditional knowledge and why is it relevant to protect?

There is not one generally accepted definition of traditional knowledge.¹¹³ The fact-finding report of WIPO lists examples for what is commonly understood to be traditional knowledge, and illustrates the nature of such traditional knowledge.¹¹⁴

Traditional knowledge is not limited to any specific field of technology or the arts. Traditional knowledge systems in the fields of medicine and healing, biodiversity conservation, the environment and food and agriculture are well known. Other key components of traditional knowledge are the music, dance, and “artisanat” (i.e. designs, textiles, plastic arts, crafts, etc.) Although there are creations which may be done purely to satisfy the aesthetic will of artisans, many such creations are symbolic of a deeper order or belief system. When a traditional singer performs a song, the cadence, melody, and form all follow rules maintained for generations. Thus, a song’s performance entertains and educates the current audience, but also unites the current population with the past.

Modern art and modern science are predominantly products of individual accomplishments. Traditional knowledge represents the cooperative efforts of communities. Plants used in accordance with traditional knowledge do very often carry symbolic values. When certain traditional sculptures are crafted, the process of crafting may be informed by inherited

¹⁰⁹ The 19 countries are: Botswana, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mozambique, Namibia, Rwanda, Sierra Leone, São Tomé and Príncipe, Somalia, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe.

¹¹⁰ Cf. Saez (2010).

¹¹¹ The ratification of the Protocol by the Republic of Zambia in August 2015 brings the number of member states party to the Protocol to seven. See more at: <http://www.aripo.org/news-events-publications/news/item/79-zambia-ratifies-the-swakopmund-protocol#sthash.99dOWmOZ.dpuf>; accessed 14 October 2015.

¹¹² Reason for focusing on the Swakopmund Protocol is – and this is very different from the Nagoya Protocol of 2011, which is promoted by the Secretariat of the Convention on Biological Diversity – also that this protocol is not really acknowledged in research. See also chapter 18, which analyses intellectual property rights and traditional knowledge in more general terms.

¹¹³ Reflection of the difficulty to determine the concept of traditional knowledge is also that local knowledge is sometimes used instead of traditional knowledge. See Hinz (2002:4f.). Cf. also Wekesa (2009:267).

¹¹⁴ Ibid:211.

practices and with performing rituals in order to generate religious potential to be activated when need arises.¹¹⁵ In the words of the fact finding report:¹¹⁶

Traditional knowledge is a multifaceted concept than encompasses several components. Traditional knowledge is, generally, produced in accordance with the individual or collective creator's responses to and interaction with their cultural environment. This may apply to all forms of knowledge, however, whether "traditional" or "modern". In addition, traditional knowledge, as representative of cultural values, is generally held collectively. This results from the fact that what can sometimes be perceived as an isolated piece of literature (a poem, for example) or an isolated invention (the use of a plant resource to heal wounds, for instance) is actually an element that integrates a vast and mostly coherent complex of beliefs of knowledge, control of which may not vest in the hands of individuals who use isolated pieces of knowledge, but be vested in the community or collective.

The reference to 'traditional' in traditional knowledge is not to mean that the knowledge so characterised is ancient and static. Traditional knowledge is traditional only in so far as the knowledge referred to is part of the – often - only orally transmitted cultural tradition of a given community.¹¹⁷

While the fact-finding mission of WIPO still follows a very broad understanding of traditional knowledge, other discussions (including discussions in WIPO) distinguish between traditional knowledge and expressions of folklore. One can assume that the reason behind this distinction can be found in the different practical relevance of traditional knowledge in the narrower understanding and the expressions of folklore.¹¹⁸ Traditional knowledge about plants, in particular their medicinal facilities, holds extreme societal values and is, above this, in high demand by manufacturers of industrially produced pharmaceuticals. More than half of the world population relies on traditional medicine. In some countries, more than 70% of the people depend on traditional medicine. More than 80% of the medicines used worldwide are of plant origin. ARIPO maintains that "a significant part of the global economy is based on the appropriation of traditional knowledge".¹¹⁹ However, the same statement concludes that in spite of the important role traditional knowledge plays in sustainable development, it continues to be largely disregarded in development planning. It currently plays only a marginal role in biodiversity management and its contribution to the society in general is neglected. Furthermore, traditional knowledge is being lost under the impact of modernisation and of ongoing globalisation processes.¹²⁰

How to provide legal protection to traditional knowledge? At the very beginning of the debate about the protection of traditional knowledge (understood to include expressions of folklore) is the statement that intellectual property law, as it stands in international treaties, domestic legislation and decided cases, is unable to protect traditional knowledge. As a rule, intellectual property law aims at unknown knowledge generated by an individual.¹²¹ Hence, the main purpose of such law is to protect the knowledge of the mentioned individual against the

¹¹⁵ Ibid:212.

¹¹⁶ Ibid.

¹¹⁷ Ibid.

¹¹⁸ Cf. Wekesa (2009:269f.) and LeBeau (2003:26ff.).

¹¹⁹ ARIPO (2006).

¹²⁰ Ibid.

¹²¹ Cf. on this Matsushita *et al.* (2006:695f.) and also Oguanaman (2006).

unauthorised trading of this knowledge. The need to create so-called *sui generis* protection for traditional knowledge was, therefore, seen to be a logical consequence.¹²²

Yet, this approach turned out to be too simple. Although the just-quoted statement about conventional intellectual property law holds truth, it could not exclude the possibility of developing intellectual property law further so that it would also offer at least some protection of traditional knowledge. An example for this is the extension of copyright law to protect the performance of a traditional song, which would as such not qualify for protection under copyright law, against the free recording (fixation) of the performance.¹²³ South Africa, where matters relating to traditional knowledge have been discussed extensively since the change to democracy,¹²⁴ a far-reaching Intellectual Property Laws Amendment Bill was introduced in 2007 and re-submitted in an amended version in 2010.¹²⁵ The Bill was adopted in 2013.¹²⁶ The intention was to provide for amendments to a wide range of intellectual property statutes so that the scope of these would also cover aspects of traditional knowledge. When the Bill was introduced, it met with different comments: While the Congress of Traditional Leaders of South Africa (CONTRALESZA) welcomed the Bill in principle as it intended to protect “indigenous knowledge systems in the same way as western systems of knowledge”,¹²⁷ others have criticised the Bill for being “ill-conceived” and to be replaced with a law “dedicated to the protection of indigenous knowledge as a separate and distinct species of intellectual property”.¹²⁸ Interestingly, although the Act was signed by the South African president, up to now the Act will only come into effect on a date to be fixed by the president – which, so far, has not happened.¹²⁹

In other words: the manifestation of *sui generis*-approaches are called upon for the more appropriate protection of traditional knowledge. When looking at what was developed as *sui generis*-approaches, one notes attempts to provide protection to traditional knowledge by placing it into the wider framework that seeks the recognition of rights of indigenous communities in terms of relevant parts of international law that distinguishes indigenous communities from other traditional communities.¹³⁰ The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples of 1993 illustrates this in a very significant manner.¹³¹ The preamble of the declaration refers to the much-debated right to self-determination of indigenous peoples¹³² and has as its first recommendation to indigenous

¹²² The meaning of such a *sui generis* protection will be explained below.

¹²³ See the WIPO Performances and Phonograms Treaty (WPPT) of 20 December 1996 at www.wipo.int/treaties; accessed 13 November 2010.

¹²⁴ Cf. e.g. Normann *et al.* (1996).

¹²⁵ Government Gazette of South Africa of 5 May 2008, Republic of South Africa, Minister of Trade and Industry, B 8B-2010.

¹²⁶ Intellectual Property Laws Amendments Act No. 28 of 2013.

¹²⁷ Contralesa on RSA’s Traditional Knowledge Bill, *afro-ip* 2 September 2010; afro-ip.blogspot.com/2010/09/contralesa-on-rsas-traditional.html; accessed on 17 October 2010.

¹²⁸ *Business Day* 20 May 2010. AllAfrica.com/stories/201005200070.html; accessed 17 October 2010.

¹²⁹ Cf. <http://www.ip-watch.org/2014/02/19/south-african-traditional-knowledge-protection-bill-amends-ip-laws/>; accessed 20 September 2015.

¹³⁰ Cf. here UN (2009).

¹³¹ Reproduced in Hinz (2002:90ff.).

¹³² Cf. the debate about the Declaration on the Rights of Indigenous Peoples of 13 September 2007 (UNGA Res 61/295), which was eventually adopted by the majority of the members of the General Assembly of the United Nations after consensus could be reached on the Namibia-promoted reservation clause of Article 46.

communities that a definition of their own intellectual and cultural property be formulated.¹³³ Thomas Cottier relates demands of this nature to claims “for new human rights, especially protecting the habitat and lifestyles of traditional indigenous and local communities and their intellectual property rights”.¹³⁴ Accordingly, so Cottier, the “holistic concept of Traditional Resource Rights” emerged, grounded on very (“largely unclear”) principles and rights.

The Earth Summit of 1992 and its overarching policy instrument – Agenda 21 – is still the most prominent and internationally agreed upon document, laying the groundwork for the *sui generis* treatment of all matters related to traditional knowledge. It recognises that traditional rule and customary law are grounded in their specific local knowledge and wisdom. Local wisdom governs practice in many instances. Taking note of the potential of traditional governance and customary law and the need to acknowledge this in development strategies, the way forward demands specific attention to what Chapter 26 of Agenda 21 states in its first paragraph:

Indigenous people and their communities have an historical relationship with their lands In the context of this chapter the term lands is understood to include the environment of the areas which the people concerned traditionally occupy. They have developed over many generations a holistic traditional scientific knowledge of their lands, natural resources and environment.¹³⁵

The Convention on Biological Diversity of 1992, in force since 4 June 1993, translated important parts of the Agenda 21 into a binding international treaty. The Convention contains a variety of obligations for actions by its members to protect biological diversity found in the member countries. Particularly noteworthy is that the Convention refers repeatedly to traditional knowledge. Article 8(j) of the Convention is a kind of constitutional *Grundnorm* with respect to traditional knowledge. The Article expects that the members of the Convention

respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices;

Article 10(c) of the Convention demands from the members of the Convention to:

[p]rotect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements;

Article 17(2) of the Convention includes in the needed exchange of information “specialised knowledge and traditional knowledge”.

Article 15 of the Convention, in dealing with access to genetic resources, two principles, which have been also acknowledged beyond the field of genetic resources: the need to prior informed consent between the members of the Convention (Article 15(5)) and the need to have measures in place which will allow for the sharing of “benefits arising from the commercial and other utilisation of genetic resources with the Contracting Parties providing such resources (Article 15(7)).¹³⁶

¹³³ See Point I.1 of the Declaration.

¹³⁴ Cottier (1999:1828ff.).

¹³⁵ Retrieved from www.un.org/esa/dsd/agenda21; accessed on 20 November 2010.

¹³⁶ Cf. here also the various contributions in Kamau / Winter (2009).

The preamble of the Swakopmund Protocol acknowledges the value of traditional knowledge systems and their contribution to local and traditional communities as well as “all humanity”. It further expresses the need

to recognise and reward the contributions made by such communities to the conservation of the environment, to food security and sustainable agriculture, to the improvement in the health of the populations, to the progress of science and technology, to the safeguarding of cultural heritage, to the development of artistic skills, and to enhancing a diversity of cultural contents and artistic expressions...

The Preamble also underscores the need to respect the continuing

customary use, development, exchange and transmission of traditional knowledge and expressions of folklore by traditional and local communities, as well as the customary custodianship of traditional knowledge and expressions of folklore...

Meeting the needs of the holders and custodians of traditional knowledge and expressions of folklore is an important aim of the Protocol. The empowerment of the holders of traditional knowledge and expressions of folklore is contained in this aim, to be able to exercise “due control over their knowledge and expressions”. The Preamble further emphasises that the protection of traditional knowledge and expressions of folklore must be “tailored” to the specific characteristics of both.

According to Section 1 of the Protocol, it is its purpose to protect the holders of traditional knowledge against infringements of their rights and to protect expressions of folklore against misappropriation, misuse and “unlawful exploitation beyond their traditional context”. Section 3 of the Protocol provides for the establishment of a National Competent Authority, the task of which will be the implementation of the Protocol. Education, advice and the settlement of disputes are amongst the duties of National Competent Authorities and also the office of ARIPO.¹³⁷

The definition Section of the Protocol, Section 2, has definitions of expressions of folklore and traditional knowledge. Expressions of folklore are

any forms, whether tangible or intangible, in which traditional culture and knowledge are expressed, appear or are manifested, and comprise the following forms of expressions or combinations thereof:

- i. verbal expressions, such as but not limited to stories, epics, legends, poetry, riddles and other narratives; words, signs, names, and symbols;
- ii. musical expressions, such as but not limited to songs and instrumental music;
- iii. expressions by movement, such as but not limited to dances, plays, rituals and other performances; whether or not reduced to a material form; and
- iv. tangible expressions, such as productions of art, in particular, drawings, designs, paintings (including body-painting), carvings, sculptures, pottery, terracotta, mosaic, woodwork, metal ware, jewellery, basketry, needlework, textiles, glassware, carpets, costumes; handicrafts; musical instruments; and architectural forms.

Traditional knowledge

shall refer to any knowledge originating from a local or traditional community that is the result of intellectual activity and insight in a traditional context, including know-how, skills, innovations, practices and learning, where the knowledge is embodied in the

¹³⁷

Cf. Section 14 in the part on traditional knowledge; Section 22 in the part on expressions of folklore; and Section 24 on regional protection in the final part of the Protocol.

traditional lifestyle of a community, or contained in the codified knowledge systems passed on from one generation to another. The term shall not be limited to a specific technical field, and may include agricultural, environmental or medical knowledge, and knowledge associated with genetic resources.

Both parts of the Protocol specify traditional knowledge and expressions of folklore in the two opening Sections of Part II on traditional knowledge and Part III on expressions of folklore, which are both titled Protection criteria. Section 4 reads:

Protection shall be extended to traditional knowledge that is:

- (i) generated, preserved and transmitted in a traditional and intergenerational context;
- (ii) distinctively associated with a local or traditional community; and
- (iii) integral to the cultural identity of a local or traditional community that is recognised as holding the knowledge through a form of custodianship, guardianship or collective and cultural ownership or responsibility. Such a relationship may be established formally or informally by customary practices, laws or protocols.

Section 16 says:

Protection shall be extended to expressions of folklore, whatever the mode or form of their expression, which are:

- (a) the products of creative and cumulative intellectual activity, such as collective creativity or individual creativity where the identity of the individual is unknown; and
- (b) characteristic of a community's cultural identity and traditional heritage and maintained, used or developed by such community in accordance with the customary laws and practices of that community.

The protection of traditional knowledge is not bound to any formality (Section 5(1)). The beneficiaries of traditional knowledge are the holders of that knowledge, i.e. the local and traditional communities, but also recognised individuals within the communities who are involved in the creation, preservation and transmission of traditional knowledge (Section 6). The right to authorise the exploitation of rights to traditional knowledge vests in the "owners" of the rights. Owners shall also have the right to prevent anyone from the exploitation of their rights (Section 7(1) and (2)). The owners of traditional knowledge have the right to assign the right to somebody else and also to conclude licensing agreements. However, traditional knowledge belonging to a local or traditional community may not be assigned (Section 8). Compulsory licences are possible in case that traditional knowledge is not sufficiently exploited by the rights holders and there is an interest of public security or public health (Section 12).

The fair and equitable sharing of benefits generated by the commercial or industrial use of the knowledge is to be part of the mutual agreement between the parties (Section 9). The use of traditional knowledge "beyond its traditional context" shall be acknowledged to the holders (Section 10).

A special rule protects genetic resources: Section 15 clarifies that authorised access to traditional knowledge associated with genetic resources does not imply the right to access genetic resources (Section 15).

Part III of the Protocol, devoted to expressions of folklore follows basically the structure of Part II. The protection of expressions of folklore is also not bound to formalities (Section 16).

Beneficiaries of expressions of folklore are the

owners of the rights in expressions of folklore shall be the local and traditional communities:

- (a) to whom the custody and protection of the expressions of folklore are entrusted in accordance with the customary laws and practices of those communities; and
- (b) who maintain and use the expressions of folklore as a characteristic of their traditional cultural heritage.

Section 19 of the Protocol contains a detailed obligation for the members to the Protocol to develop the necessary legal instruments that will ensure that – as it is said in Section 19(2) of the Protocol “the relevant community can prevent ... acts from taking place without its free and fair consent”.

Section 20 regulates exceptions and limitations applicable to the protection of expressions of folklore. Section 20 reads:

Measures for the protection of expressions of folklore shall:

- (a) be such as not to restrict or hinder the normal use, development, exchange, dissemination and transmission of expressions of folklore within the traditional or customary context by members of the community concerned, as determined by customary laws and practices;
- (b) extend only to uses of expressions of folklore taking place outside their traditional or customary context, whether or not for commercial gain;
- (c) be subject to exceptions in order to address the needs of non-commercial use, such as teaching and research, personal or private use, criticism or review, reporting of current events, use in the course of legal proceedings, the making of recordings and reproductions of expressions of folklore for inclusion in an archive or inventory exclusively for the purposes of safeguarding cultural heritage, and incidental uses,

provided that in each case, such uses are compatible with fair practice, the relevant community is acknowledged as the source of the expressions of folklore where practicable and possible, and such uses would not be offensive to the relevant community.

Having noted these quotations from the Protocol, the contribution of the Swakopmund Protocol can be summarised in the following five points:

First: Looking back to the development of the debate on the protection of traditional knowledge, the Swakopmund Protocol is an important step forward to conceptualise the much demanded *sui generis* protection of traditional knowledge (and expression of folklore for that matter).

Secondly: The Protocol gives the Namibian constitutional recognition and confirmation of customary law¹³⁸ an additional international blessing. It relies in its orientation to acknowledge and protect traditional knowledge on the respective existing customary law. In other words, it binds existing customary law into its international framework and acknowledges by this that all efforts to protect traditional knowledge will only work when they provide space for the law that is closest to traditional knowledge: customary law.

Thirdly: The Protocol follows the established trend to link the use of traditional knowledge to the two principles that became prominent in the Convention of Biological Diversity, viz. the principle of prior informed consent and the principle of sharing benefits.

Fourthly: The Protocol offers an approach to the determination of holders of traditional knowledge and expressions of folklore, which will certainly influence the on-going debate about the need to concretise traditional knowledge rights, but also to balance the realm of legally protected interests and public interests in intercultural communication.

¹³⁸

See Article 66(1) of the Constitution of Namibia.

Fifthly: The tasks assigned to the National Competent Authority and the references therein to customary law are not only a clear indication that education and the creation of awareness will be paramount to the success of the Protocol, but also the active engagement of traditional authorities which, *inter alia*, have the task to ascertain and even develop their customary law – a task, which is a special challenge when it comes to traditional knowledge!

8 Concluding Remarks

The above-quoted Section 3(2)(c) of the Traditional Authorities Act obliges traditional leaders to ensure that the members of their communities use the natural resources in a manner that conserves the environment and maintains the ecosystem for the benefit of all persons in Namibia. Is this duty a new duty that the legislators found necessary to add to the inherited list of tasks of traditional authorities? Was the wording done in reference to the list of Government policy principles spelled out in Article 95 (1) of the Constitution of Namibia? Or: Is Section 3(2)(c) of the Traditional Authorities Act a mere confirmation of what was in any event traditionally part of the duties of a traditional leader?

Furthermore, why did the lawmakers find it necessary to translate the environmental requirement of the Constitution into the Traditional Authorities Act and not, for example, into the Local Authorities and Regional Councils Acts?¹³⁹ Would this not have been much more important – since traditional communities, by virtue of their direct social and economic dependence on their environments, have a genuine interest in the sustainable management of their natural resources and, therefore, would not need to be called upon to be environmentally sensitive? What is the explanation of the quoted sub-section in the Traditional Authorities Act referring to the “benefit of all persons” in Namibia and not to all persons, irrespective of domicile? Is this limitation, e.g., intended to mean that the use of water from the Kavango River, which may have negative implications for the people in Angola, should be of no concern to the traditional authority that has the say on the Namibian side of the river?

The problems reflected in these questions have their reasons, at least to some extent, in the uncertainty of modern law and policymakers to give traditional governance its place in society in general and in the structure of Government. The legislative orientation of traditional environmental responsibility to persons in Namibia was most probably not meant as an attempt to prevent environmental responsibility from becoming supranational, i.e. beyond national borders, but rather to secure the extension of traditional responsibility beyond ‘tribal’ borders. With the chosen wording, however, the lawmakers unfortunately lost the chance to link local interests to global ones, although the Earth Summit of 1992, the Rio+20 Conference¹⁴⁰ and Agenda 21 devoted considerable effort to do just that. Chapter 28 of Agenda 21 emphasises the beginning of successful movements worldwide to engage local authorities in the global process to achieve sustainability as the basic ingredient of societal policies and interventions. Chapter 26 of Agenda 21 complements Chapter 28 and the role of local authorities, by referring to indigenous peoples as being as equally relevant as other societal entities and actors in the process towards sustainability.¹⁴¹ Therefore, it would have set a strong political signal to refer

¹³⁹ Local Authorities Act No. 23 of 1992, as amended, and Regional Councils Act No. 22 of 1992, as amended.

¹⁴⁰ Cf. on the Rio+20 UN A/Conf.216//1.

¹⁴¹ The mention of “indigenous peoples” in Chapter 26 of Agenda 21 is primarily a reference to indigenous peoples in the sense defined in the ILO Conventions and the UN Declaration on the Rights of Indigenous Peoples quoted in the Introduction to this publication. The use of this definition is motivated by the fact that paragraph 26.2 of Agenda 21 takes explicit note of the said international instruments. However, the introductory words of paragraph 26.2 read as follows: “Some of the goals inherent in the objectives and activities of this programme … .” This could be understood to mean that the programme envisaged by

leaders of traditional communities to the fact that problems that appear on the surface to be local are indeed relevant to humankind as a whole.

The reasons for the second omission are easier to trace. The reluctance to write Agenda 21 implications into either the Local Authorities Act or the Regional Councils Act can be understood in view of the fact that what we see today in the movements of local authorities to join the universal battle for sustainability and protection of the environment is the result of a development that did not fall from heaven with the Rio Conference.¹⁴² This is true not only for Europe and the United States of America, where local authorities have achieved a consolidated position throughout the countries concerned, but more so in other parts of the world, including Africa, where many local authorities are still struggling for financial and political survival.

Are traditional leaders – and, for that matter, African customary laws – things that should be left to the past and replaced by modern law? Will traditional governance and customary law be able to respond appropriately to modern needs? Can traditional governance and customary law be brought in line with the requirements of the principles of democracy and human rights? Namibia and many other African countries have found answers to these questions.¹⁴³ On the one hand, governments recognise the existence of traditional governance and customary law as being relevant to their societies; but on the other, there is a great quantum of scepticism about the political realities to be associated with the recognition. The scepticism is nourished by ignorance of the potential of traditional authorities and customary law – a potential that contributes effectively to peace and welfare in the communities to which they apply, and beyond. Indeed, the reported research underlines the potential of traditional authority and customary law. The research on customary environmental law has shown that traditional rule and customary law are grounded in local knowledge and wisdom. Local wisdom governs practice in many instances; in others where this is not the case, it could be made available if desired.

Taking note of what has been said about the potential of traditional governance and customary law, the possible way forward would pay specific attention to an element that has been underestimated in respect of the inherited land tenure systems, which one finds in most traditional communities. Chapter 26 of Agenda 21 states the following in its first paragraph:

Indigenous people and their communities have an historical relationship with their lands
... In the context of this chapter the term lands is understood to include the environment of the areas which the people concerned traditionally occupy. ... They have developed over many generations a holistic traditional scientific knowledge of their lands, natural resources and environment.

Whatever the concept of indigenous peoples is for the Agenda,¹⁴⁴ the quoted statement is also relevant for traditional communities in the broader sense. The anthropological fact that many traditional communities see land as an encompassing entity that includes what is underneath and above the soil; includes what moves on the soil and in water; and includes, in a wider sense the living and the dead, has not been fully explored yet in legal terms. How can all the resources: the trees, the wildlife, the mineral resources, the water, the traditional knowledge be managed and administered in a way that supports sustainability for the benefit not only of local

Agenda 21 has a wider range, and that what is found in the quoted instruments are just examples of that with which the Agenda is concerned.

¹⁴² Cf. here Hilliges / Nitschke (2007:14ff.).

¹⁴³ Cf. Hinz (2006a).

¹⁴⁴ See the remarks on this above.

owners, but also of those beyond the boundaries of the village, in a national and even global sense, now and in the future?

The customary law case studies done in the BIOTA project and more so in the TFO project have shown that, in many cases, members of local communities were not aware that traditional knowledge was a valuable asset. The apparent international trend in transforming – or, rather, dissecting – culturally determined social and, in terms of the quote from Chapter 26 of Agenda 21, holistic entities into marketable commodities will have to be reviewed, as will the consequences of such marketing.¹⁴⁵

Strengthening attempts to take research results back to the researched communities will be of utmost importance! Feedback to the communities will stimulate and strengthen dormant or suppressed caches of the traditional worldview and the customary law associated with this worldview! Feedback of research will allow people to think about how to improve their customary law and its application!

¹⁴⁵

See here in particular Hinz (2012 and 2013c).

CHAPTER 18

WESTERN INTELLECTUAL PROPERTY RIGHTS REGIMES AND TRADITIONAL KNOWLEDGE PROTECTION SYSTEMS IN AFRICA

Eliamani Laltaika

1 Introduction

Indigenous and traditional communities in Africa and elsewhere depend on the natural environment for their livelihood. Traditional Knowledge (TK) related to medicine, agriculture, fisheries and food preservation, among others, is an important tool for their survival. Due to, among other reasons, advancement in biotechnology, the value of TK and associated genetic resources has increased tremendously in the past few years. Such increase in value calls for concerted legal efforts for protection. Mindful of this, the international community is working on possible modalities for protecting TK. Organisations involved in TK protection include the World Intellectual Property Organisation (WIPO), the Convention on Biological Diversity (CBD), the Council for the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organisation (WTO) and the World Bank. The African Regional Intellectual Property Organisation (ARIPO) has, likewise, recently adopted a protocol for the protection of TK and expressions of folklore, the Swakopmund Protocol, named after the Namibian town where it was adopted.

These organisations by and large use the conventional or western intellectual property system as their point of departure for devising methods of protecting TK. However, the inherent differences between western intellectual property systems and traditional communities' perceptions still pose challenges to an effective protection of TK with the aim of benefitting their communities of origin. This chapter underscores some of these challenges and offers perspectives for a holistic approach that puts environmental protection and community welfare at the centre of the equilibrium as opposed to proprietary rights, whether collective or individual.

2 Defining Traditional Knowledge and Associated Genetic Resources

The World Intellectual Property Organisation describes Traditional Knowledge (TK) as

tradition-based literary, artistic or scientific works, performances, inventions, scientific discoveries, designs, marks, names and symbols; undisclosed information, and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields.¹

TK is the totality of knowledge of local and indigenous communities that enable them to live in harmony with the environment while supporting their livelihood. It is traditional not because it is old but because it is "created, preserved, and disseminated in the cultural traditions of

¹

WIPO (2008:5).

particular communities.”² TK is time-tested, as it has enabled local and indigenous communities to interact with nature for centuries.

Genetic resources (GR) or materials, on the other hand, are “any material of plant origin, including reproductive and vegetative propagating material, containing functional units of heredity”.³ The CBD puts genetic resources in a larger box of “biological resources” which includes “genetic resources, organisms or parts thereof, populations or any other biotic component of ecosystems with actual or potential use or value for humanity”.⁴ The phrase “with actual or potential value” signifies the fact that some genetic resources may not be of known economic value at the time of collection.

Joseph Straus observes that GR have a double legal nature due to the fact that:

asphenotypes i.e. individual plants and animals, they traditionally constitute private (tangible) goods; as *genotypes*, i.e. information embodied in the genetic constitution of micro-organism, plant or plant species, they *a priori* conform to the definition of public good.⁵

Although the practice has been to discuss TK and GR as one and the same, opinions differ on the matter. Some commentators are of the opinion that TK is not necessarily manifested in GRs and that not all GR embody TK of local and indigenous communities.⁶ Another school of thought holds that TK and GR are inseparable, and that any legal instrument for protection must appreciate their inseparable nature.⁷

Not only are the above differing views on the nexus between TK and GRs difficult to reconcile, but also widened by a lack of recognition of local and indigenous communities as true holders of TK and GR.⁸ Moreover, conventional intellectual property rights, particularly patents, have been used as a tool to misappropriate TK, much to the detriment of local and indigenous communities.⁹ The Ayahuasca¹⁰, Neem¹¹ and Hoodia¹² speak loud and clear on biopiracy, as will be explained in the next section.

² Singhal (2008:732).

³ Article 2 CBD.

⁴ Article 1 CBD.

⁵ Straus (2000:144); emphasis original.

⁶ According to this view, the CBD’s use of the term ‘potential value’ of GRs signifies that the importance of some GR is yet to be discovered by conventional scientists and is also unknown to local and indigenous communities.

⁷ This view is preferred by local and indigenous peoples whose philosophy of life evolves around a holistic world and interconnected life to them is a continuous journey of exploration.

⁸ As will be explained later, customary laws and protocols of local and indigenous communities can provide useful guidance on ownership of TK and GR.

⁹ It is submitted that intellectual property law regime should rather do the opposite that is offer innovative ways of protection. It is with this legitimate expectation that local and indigenous communities look up to WIPO for intervention and assistance against, among other things, biopiracy.

¹⁰ The *Banisteriopsis caapi* is a medicinal plant that has been used by Ayahuasca in Latin America for centuries. In early 1980s an American researcher ‘discovered’ its usefulness and was issued with US Patent No 5751 issues in June 1986. As a result of collective efforts by civil societies and individuals, this patent was revoked in 1999 but later upheld.

¹¹ The Neem tree *Azadirachta indica* is native to India and has been used by local and indigenous Indian communities for a long time. It has medicinal, spiritual and economic value. As with the Ayahuasca, the knowledge of the usefulness of the tree was used to ‘work on’ a discovery that led to an invention and subsequent grant of a patent by the European Patent Office EPO in 1994. This patent was however revoked in 2000 for lack of novelty.

3 Biopiracy

There is no commonly agreed definition of biopiracy. According to Dutfield:

biopiracy has emerged as a term to describe the ways that corporations from the developed world claim ownership of, free ride on, or otherwise take unfair advantage of, the genetic resources and traditional knowledge and technologies of developing countries.¹³

Biopiracy can be described as illegal and unethical bioprospecting. In the context used here, bioprospecting is the “search for useful biological materials in micro-organisms, plants, fungi, animals and humans”.¹⁴ As with other tangible properties, unauthorised access to genetic resources for the purposes of prospecting passes the test of misappropriation or theft. This is the crux of concerns of developing countries.

An act that can be labelled biopiracy therefore involves any or a combination of the following:

- Unauthorised acquisition of biological resources;
- the unauthorised use of TK associated with genetic resources for profit;
- obtaining intellectual property rights, especially patents for an “invention” based on traditional knowledge.

The following cases, documented by the African Centre for Biosafety are illustrative:¹⁵

Swiss researchers are staking claims to drugs from *Cussonia zimmermannii*, a tree found in Tanzania, Kenya, Uganda, Mozambique, and other countries in east and southern Africa. According to the European research group, the *Cussonia zimmermannii* extracts are active on the human central nervous system’s GABA(A) receptor and therefore may be of use in treating a variety of diseases, including epilepsy and mental disorders such as anxiety. The claim that *Cussonia zimmermannii* can be used to treat nervous system disorders will come as no surprise to Africans familiar with the tree’s medicinal uses. In fact, even the Swiss ‘inventors’ concede that Kenyan researchers noted in 1986 that the plant is traditionally used to treat mental illness and that in 1964 an article on ethnobotany noted its traditional use in treating epilepsy. In addition, parts of the tree are used to treat other conditions including fever and post-partum bleeding. On what basis then, do the Swiss institutions claim their candidate drug is novel and inventive? Judging by the patent application, they seem to believe that by isolating and describing a chemical found in *Cussonia zimmermannii*, they have made an invention.

Source: African Centre for Biosafety (ACB) Pirating African heritage: A Brief Note by the African Centre for Biosafety (2009).

Agriculture and healthcare giant multinational Bayer, based in Germany, has staked a claim to the use of any extract from any plant of the *Vernonia* genus in Madagascar for “improving the

¹² For many years, the indigenous San of Southern Africa used Hoodia as a hunger suppressant. This traditional use was noted by a Dutch anthropologist in 1937. In 1995 the South African Council for Scientific and Industrial Research (CSIR) obtained a patent for Hoodia’s appetite suppressing element. Based on this knowledge, a team of researchers patented this knowledge in the United Kingdom and later licensed it to Pfizer, an American pharmaceutical company.

¹³ Dutfield (2004:1).

¹⁴ Polski (2005:543).

¹⁵ The African Centre for Biosafety (ACB) is a non-profit organisation, based in Johannesburg, South Africa. According to its website “It provides authoritative, credible, relevant and current information, research and policy analysis in issues pertaining to genetic engineering, biosafety and biopiracy in Africa.” See <http://www.biosafetyafrica.net/index.html/>; accessed 21 November 2010.

skin status". In addition to claiming all *Vernonia* from Madagascar, Bayer's patent application makes specific claim to eight *Vernonia* species. The patent claim further focuses on the shrub species *Vernonia appendiculata*, commonly known as 'ambiaty', a plant which is endemic to the island. There are ample citations that document important traditional uses of the 'ambiaty' plant in Madagascar. Directly related to the alleged novelty of Bayer's patent claims is 'ambiaty's' documented traditional use in wound healing and in herbal steam baths – in both cases traditional uses that obviously relate to skin care and health. It has also been used traditionally in products such as dyes. Yet Bayer's patent application makes no reference to these and other traditional uses of 'ambiaty'.

Source: African Centre for Biosafety (ACB) *Pirating African heritage: A Brief Note by the African Centre for Biosafety* (2009).

Biopiracy appears to be on the increase, fuelled by new developments in biotechnology and the desire by pharmaceutical companies to be at the cutting edge as far as research and development (R&D) is concerned. It appears also that many of the organisations involved in, or suspected of conducting biopiracy, are aware of their obligations under international law including abiding by ethical research standards and obtaining necessary permits from concerned Government agencies. This knowledge notwithstanding, both big and small companies do not seem to care about these obligations while operating in developing countries. This calls for concerted efforts at the international level, not only in enacting laws, but also in cooperation and capacity-building programmes. At the moment only a few cases of 'foul play' by pharmaceutical companies are discovered and subsequently made public. There are many cases which go undiscovered, and the concerned companies reap where they have not sown. Could it be that the problem lies in the current international legal regime for intellectual property rights (IPR) governance? The next section aims to explore this.

4 Western Intellectual Property Regime versus Community Rights

The main challenge hampering protection of TK, both at the national and international level, is the concept of *communal* as opposed to *individual* property rights, entrenched in Western IP law.¹⁶ This line of reasoning puts TK into the public domain and therefore as free for the taking. This approach has been strongly criticised as being against social justice. Davis illustrates this, using two hypothetical cases:

It happens that the chemical compound that constitutes Thermo's cold cure actually occurs naturally in the leaf of a tree which is indigenous to India. The leaf has been used in India for many centuries as a cold cure. Aware of this fact, Thermo has analysed the chemical make-up of the leaf and reconstituted it in its laboratories. Susan visits Chile and overhears a "folk song" which is widely sung in the villages, although no one is sure of its origins. Susan returns to England, translates and arranges the song, which becomes a best seller.... an intellectual property regime which rewards Thermo and Susan, with patent and copyright respectively, but provides no mechanism for rewarding the villagers of India and Chile.¹⁷

The second difficulty lies in the way indigenous and traditional communities look at life as a connected whole. According to former UN Special Rapporteur for Indigenous Affairs, Irene Daes, subdividing the heritage of indigenous people into legal categories such as "cultural", "artistic" or "intellectual" would be inappropriate.¹⁸ As indicated earlier, the international

¹⁶ An exception to this general rule is Geographical Indications (GIs). See Blakeney (2001).

¹⁷ Davis (2003:8).

¹⁸ Daes (1993); Gupta (2005).

community has been working hard – for over two decades now – to find better ways of protecting cultural resources of indigenous people.¹⁹ So far, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) of the World Intellectual Property Organisation (WIPO) has generated a number of useful documents, state-of-the-art-research, and conference reports on various aspects of Traditional Knowledge (TK).²⁰ According to the new mandate passed by member states in 2009, the committee should come up with a legal instrument (or instruments) for protecting TK and Traditional Cultural Expressions (TCEs).²¹ In the meantime, the secretariat of the Convention on Biological Diversity and the United Nations Food and Agriculture Organisation (FAO) continues to deliberate on improving ways of protecting TK and GR.²² The two have, at different times, come up with the concepts of access and benefit sharing (ABS) and farmers rights, respectively. Both of these attempt to recognise rights of communities to their TK and associated GR as will be explained in the next two sections.

5 The Convention on Biological Diversity: A New Era for GR Governance?

[M]ost of us in developing countries find it difficult to accept the notion that biodiversity should [flow freely to industrialised countries] while the flow of biological products from the industrial countries is patented, expensive and considered the private property of the firms that produce them. This asymmetry [...] is unjust.²³

The Convention on Biological Diversity (CBD)²⁴ was adopted under the auspices of the United Nations Environment Programme (UNEP) and opened for signatures in Rio de Janeiro, Brazil, in 1992.²⁵ The aim of this convention is:

... to promote the conservation of biodiversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from the use of such resources, including appropriate resources and transfer of relevant technologies.²⁶

The most relevant articles for the purposes of this chapter are Article 8(j) on protection of TK and Article 15 on access and benefit sharing.²⁷ These articles sum up the main IPR related work of the CBD, namely protecting the traditional knowledge of indigenous communities and

¹⁹ In 1981, for example, the *World Intellectual Property Organisation* (WIPO) and the *United Nations Educational, Scientific and Cultural Organisation* (UNESCO) adopted a model law on folklore. For a detailed historical account cf. O' Connor (2000:677).

²⁰ Some documents are available at <http://www.wipo.int/meetings/en/doc>; accessed 25 October 2010.

²¹ The mandate reads in part “(a) The committee will, during the next budgetary biennium (2010/2011), and without prejudice to the work pursued in other fora, continue its work and undertake text-based negotiations with the objective of reaching agreement on a text of an international legal instrument (or instruments) which will ensure the effective protection of GRs, TK and TCEs”; available at <http://www.ip-watch.org/weblog/wp-content/uploads/2009/10/wipo-ga-decision-on-tk-1-october-2009.pdf>; accessed 13 November 2010.

²² Ibid.

²³ Ally Hassan Mwinyi, Former President of the United Republic of Tanzania; UN Doc. A/CONF. 151/26/Rev.

²⁴ CBD (1992).

²⁵ As of November 2010, 188 states had ratified this agreement. See *Secretariat of the Convention on Biological Diversity, Parties to the Convention on Biological Diversity*; available at <http://www.biodiv.org/world/parties.asp>; accessed 13 November 2010.

²⁶ See Article 2.

²⁷ These and related articles point to the Conventions' third objective namely “The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.”

advocating for disclosure of origin (Disclosure of Origin of Genetic Resources and Traditional Knowledge/DOO) by applicants for intellectual property rights.²⁸ According to Article 8(j) each contracting party shall, as far as possible and appropriate and

... subject to its national legislation, respect, preserve, and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity. They should also promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices.²⁹

It should be noted, however, that although the CBD contains general provisions, as opposed to specific, normative terms, the above article has been criticised for lack of incentive for implementation. The article, it has been argued, “does not talk of protection of knowledge but merely calls upon parties to respect, preserve and maintain that knowledge”.³⁰ The phrase is especially problematic in countries still embracing “fortress conservation” where local communities’ presence in protected areas is seen as a nuisance rather than an opportunity to foster and protect TK.³¹

On GR, the Convention seeks to “facilitate deal making” between technologically-rich countries in the north and technologically-poor but biodiversity-rich countries in the south. Ideally, this deal would allow “industrialised countries to support the transfer of proprietary technologies to developing states as a *quid pro quo* for access”.³² Achieving this goal, however, has never been easy, due to among other reasons, the defensive nature of developing countries when it comes to intellectual property related issues.³³ The concept of *Access and Benefit Sharing* (ABS) was born out of these attempts.³⁴ ABS is a complex resource utilisation issue, requiring an interdisciplinary approach not only in the legislation, but also the implementation process. According to Young:

[...]ABS is in some ways ‘unique’, particularly in its merger of very new concepts of commercial law and science with the goals of conservation, sustainable use and equity. New legal concepts and tools are needed, as well as new uses of existing tools. Legal innovation, however, is not an easy process.³⁵

According to the CBD, ABS agreements must be based on prior informed consent (PIC) and equitable sharing of benefits. To facilitate this exercise, the Sixth Conference of Parties (COP) to the CBD³⁶ adopted the *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of their Utilisation* (Bonn Guidelines).³⁷ As

²⁸ Helfer (2004:29).

²⁹ See Article 8j.

³⁰ Mugabe (1998:9).

³¹ As will be seen later in this chapter delinking human-nature interaction is sometimes detrimental to the ecosystems aimed to be protected.

³² Helfer (2004:28).

³³ The fact that GR were free for the taking for many years may help explain such resistance by industrialised countries as will be explained in part three below.

³⁴ ABS is just one of several initiatives that seek to implement the third mandate of the CBD namely “equitable sharing of benefit arising out of the utilisation of genetic resources”.

³⁵ Young (2004:2).

³⁶ Meeting in The Hague 7-19 April 2002.

³⁷ CBD (2002).

mentioned before, the aim of bioprospecting is to obtain useful bio-chemicals in genetic resources in particular or biological materials in general. For inventions based on GR obtained in developing countries, the Bonn Guidelines invite states to encourage the disclosure of the country of origin of genetic resources in applications for intellectual property rights, in order to prevent issuance of “bad patents” on “pseudo-inventions” or biopiracy.³⁸ Due to the fact that the Bonn Guidelines are not binding legal rules, cases of biopiracy and unregulated access to genetic resources have been on the increase. At the time of writing this paper, members to the 10th COP to the CBD had adopted the Nagoya Protocol on ABS whose provisions, unlike those of the Bonn Guidelines, will be binding on all members after they have been signed into force.³⁹ While it can be said that commendable efforts have been made internationally under the CBD regime concerning ABS, many issues remain unresolved on TK and genetic resources for food and agriculture.

6 Intellectual Property in Plant Genetic Resources for Food and Agriculture and TK

Plant genetic resources for food and agriculture (PGRFA) refers to “the genetic resources or material of actual or potential value for human and agriculture that are contained in plants”.⁴⁰ PGRFA have been described as “building blocks” for breeders and traditional farmers alike “in improving crops and introducing new traits into those crops such as drought or pest resistance”.⁴¹ The use of such building blocks to improve productivity and maintain useful characteristics of crops is not a new phenomenon. Since mankind moved from hunting and gathering to agriculture, the quest for better and improved crops has been a constant. Quoting from Genesis, Tritton argues that the practice is evident from biblical times, although “the methodology described therein reveals a more Lamarckian (i.e. teleological) than Darwinian, approach to the introduction of certain desired traits”.⁴² For many years, PGRFA were freely exchanged between and among farmers and communities in different regions. This exchange reached a climax during the 19th century’s Columbian Exchange. This term refers to the exchange of biological resources between Europe, Africa and the Americas since the so-called discovery of the ‘New World’ by Christopher Columbus.⁴³

There is no doubt that developed countries benefited immensely from this free-for-all, hence their desire for a continuation of this *status quo*. This “wish list”, however, is difficult if not impossible to achieve because Western countries want stronger IPRs for ‘elite parental lines’ and little or no IPR protection at all on cultivars or landraces. This approach fails to appreciate traditional knowledge of indigenous and local farmers throughout the world, whose hard work has produced and protected PGRFAs. Linking the historical plunder with the on-going expansive nature of IPRs, many commentators think that IPRs in living things are a new form

³⁸ With regards to preventing patents based on TK, India has established a digital database of traditional knowledge searchable in several languages that has been approved by both the *European Patent Office* (EPO) and the *United States Patent and Trademark Office* (USPTO).

³⁹ According to the wildlife trade monitoring network TRAFFIC: “For the first time, the new ABS regime will provide an internationally binding framework, applying for example to private sector enterprises actively bio-prospecting for pharmaceutical, medicinal, biochemical, aromatic and food resources;” available at <http://www.traffic.org/home/2010/10/29/a-ray-of-light-from-the-land-of-the-rising-sun.html>; accessed 13 November 2010.

⁴⁰ Moore / Tymowski (2005:2).

⁴¹ Ibid.

⁴² Tritton (2002:420).

⁴³ Tyler (1996).

of colonialism and way of looting natural resources from developing countries. The following newspaper extract from Kenya summarises this sentiment:

Slavery, colonialism, plunder, cheap labour, brain drain... and now bio-piracy. Nothing has changed much in Africa-Europe ties for centuries. Africa continues to oil the wheels of industry in the West. The latest example is the ongoing debate over the kikoi, a name (kikoy) that a British firm wants to patent in the UK. Other cases have involved the kiondo and an enzyme used to give jeans a faded look. In 1992, American company Genencor International discovered commercially useful organisms in several lakes in the Rift Valley. The organisms are now being used to manufacture enzymes, which, among other properties, give jeans cloth a faded look. The company has reportedly made huge profits yet the Kenyan Government says it has not benefited from the venture.⁴⁴

6.1 The International Undertaking on Plant Genetic Resources

The first attempt to regulate the exchange of PGRFA at the international level led to the adoption of the International Undertaking on Plant Genetic Resources (hereafter “undertaking”) by the FAO Conference in November 1983 under Resolution 8/83.⁴⁵ The undertaking was based on the then universally accepted principle that plant genetic resources were “a heritage of mankind and consequently should be available without restriction”.⁴⁶ Apparently, many developing countries were unhappy with the underlying idea that PGRFA should be available unreservedly. In 1989 the undertaking was revised to provide for ‘Farmers Rights’ defined as the rights arising from the past, present and future contributions of farmers in conserving, improving and making available plant genetic resources, particularly in their centres of origin/diversity. These rights are vested in the international community as trustee for present and future generations of farmers, for the purpose of “ensuring full benefits to farmers, and supporting the continuation, as well as attainment of the overall purpose of international undertaking”.⁴⁷ The interpretation of the revised undertaking required that farmers from developing countries be sufficiently rewarded for the use of PGRFA by developed countries, and that an International Gene Fund be established for this purpose.

Although the international undertaking was not meant to be a binding instrument of international law, the definition above has influenced subsequent international, regional and national laws with the bearing on farmers’ rights. In many cases, justification for the right is both historical and futuristic. Historical as it recognises past contribution and futuristic as it recognises even those contributions yet to be made.

6.2 The TRIPS Agreement and UPOV

The coming into force of the World Trade Organisation (WTO) Agreement on Trade Related Aspects of Intellectual Property (TRIPS) on 1 January 1995 took IPR in plants to a higher level. According to this agreement, member states to the WTO “shall provide protection of plant varieties either by patents or an effective *sui generis* system or a combination thereof”.⁴⁸ Although the agreement neither defines *sui generis* nor lays down criteria for an effective one, the International Union for the Protection of New Varieties of Plants (UPOV) is widely regarded as a *sui generis* system. UPOV was adopted in 1961 by a group of western European countries because of pressure from the private sector, which argued that the lack of

⁴⁴ Gatonye (2007:13).

⁴⁵ FAO (1983).

⁴⁶ Ibid. See Article 2.

⁴⁷ FAO (1983).

⁴⁸ TRIPS Article 27.3(b).

intellectual property rights in this field threatened their development. It is noteworthy, however, that UPOV is taken to be a lesser-evil-approach by countries that are not comfortable with patenting life forms.⁴⁹

6.3 Historical Backdrop

Although IPR in plants now form part and parcel of not only international IP law but also international trade, the road to this acceptance was never an easy one. It is in the USA and in Europe, where these rights are more grounded and from whose inspiration (and influence) developing countries enact their laws on plant variety protection.⁵⁰ In the 19th century, it was widely accepted that natural powers and the forces of nature could not be patented. In 1852, the US Supreme Court in the case of *Le Roy v Tatham*⁵¹ held that:

... a principle in the abstract, is a fundamental truth; an original cause, a motive; these can not be patented; and no one could claim in either of them an exclusive right. Nor can an elusive right exist to a new power, should one be discovered to those already known.⁵²

As this judicial reasoning presupposes, the objection raised against intellectual property rights in plants was mainly that plants are a product of nature.⁵³ As a result of developments in plant genetic engineering and plant breeding, the US Congress in 1930 enacted the Plants Patents Act.⁵⁴ This Act provided patent protection only to asexually reproduced plants, i.e. those plants produced by propagating or grafting. In 1970, the Plant Variety Protection Act was enacted, widening the horizon of patentable plants to include asexually reproduced varieties. Another often-cited historical event leading to the consolidation of intellectual property rights in plants in general and patents in particular, is the US Supreme Court's ruling in the case of *Diamond v Chakrabaty* that "anything under the sun made by man is patentable".⁵⁵ The USA currently grants patents for plants and any other living thing, provided it involves human ingenuity.

In Europe, earliest (first generation) patent laws excluded all forms of life. However, this position was not always accepted. According to Greer:

Although continental legislators clearly had in mind only inventions in the field of inanimate techniques (in German: *tote Technik*) when drafting first generation Acts, the majority of the Belgian, German and Dutch legal doctrines dismissed the objection that inventions relating to living materials are not patentable.⁵⁶

This indirect opposition to the general position of the law continued, albeit with little progress. A major development was achieved in 1961, when western European countries, notably

⁴⁹ See generally Laltaika (2007).

⁵⁰ Ibid.

⁵¹ *Le Roy v Tatham* 55 US (14 How) 156 (1852).

⁵² Ibid:175.

⁵³ Note that this reasoning was challenged in 1939 in the famous case of *Dennis v Pitner* 106 F. 2d 142, 7th Cir 1939. In this case, a patent was sought for the discovery of an effective insecticide from the root of a plant found in South America. The court observed inter alia that "[i]t is true that an old substance with newly discovered qualities possessed those qualities before the discovery was made. But it is a refinement of distinction both illogical and unjustifiable, and destructive of a laudable object of the statute to award a patent to one who puts an ingredient A with old ingredients B and produces a cure for ailment C; and deny patent protection to one who discovers that a simple and unadulterated or unmodified root herb or a chemical has ingredients or health-giving qualities, hitherto unknown and unforeseen."

⁵⁴ Plants Patents Act of 1930. The purpose of this Act was to "afford agriculture, so far as practicable, the same opportunity to participate in the benefits of the patents system as has been given industry".

⁵⁵ *Diamond v Chakrabaty* 447 US 303, at 309, 100 S. Ct 2207 at 2207, 206 USPQ 193 (1980).

⁵⁶ Van Overwalle (1999:143).

France, Belgium and Germany established a union for the convention of new plant varieties through what came to be known as the Convention on the Protection of New Varieties of Plants, better known by its French acronym UPOV.

6.4 The Pinch of IPR to Farmers

The pinch of these ‘intruding rights’ is not only felt in developing countries but also in industrialised and other developed countries. The Canadian case of *Monsanto v Percy Schmeise* provides a good illustration.⁵⁷ In this case, the court issued an injunction restraining a traditional farmer from planting seed retained from the plaintiff’s canola crops. The prohibition extended to:

... any seed saved from plants which are known or ought to be known to be Roundup tolerant, and from selling or otherwise depriving the plaintiffs of their exclusive right to use plants which the defendants know or ought to know are Roundup tolerant, or using the seeds from such plants.⁵⁸

As if the legal barriers are not enough, increasing conflicts of interest have led to the development of the ‘terminator technology’. This technology prevents farmers from harvesting seeds from crops they have grown using genetically engineered seeds, thereby forcing them to buy more of the original seed each planting season. According to Kieff:

... [t]erminator technology can also be thought of as the agricultural equivalent of copy protection technology in the software industry. Such terminator and copy protection technologies are each a form of self-help that can be used as an alternative to legal protection in a way that is likely to be more costly than legal protection.⁵⁹

In a world where many people, especially in developing countries, are starving, it is imperative to rethink IPR regimes, which on the face of it do more harm than good to the poor farmers and the environment.⁶⁰

7 African Approach

Although many African countries retain colonial elements in their laws, making them almost wholly Western, the concept of community rights is not alien to the African legal regime. In 1980, an African anthropologist and human rights activist, Asmaron Legesse, deliberated on how the Universal Declaration of Human Rights (UDHR) would have looked like if drafted by Africans.⁶¹ According to Legesse:

If Africans were the sole authors of the Universal Declaration of Human Rights, they might have ranked the rights of communities above those of individuals, and they might have used a cultural idiom fundamentally different from the language in which the ideas are now formulated.⁶²

⁵⁷ *Monsanto v Percy Schmeise* [2001] F.C. 256; available at <http://decisions.fct-Cf.ge.ca/fct/2001/2001fct256.html>; accessed 15 November 2010.

⁵⁸ Ibid.

⁵⁹ Kieff (2002:317).

⁶⁰ Surely, genetic resources should not be put on the same scale as computer software. Even though we may romanticise the magic of biotechnology, the truth still remains that mankind cannot make genes. Our ingenuity is limited to the level of using DNA methods to ‘improve’ characteristics.

⁶¹ As we know, the UDHR was negotiated and adopted while the entire African continent was under colonial domination.

⁶² Legesse (1980:52).

Two years later, this contention is proved by the African Charter on Human and Peoples Rights (Banjul Charter), which fully recognises group rights.⁶³ Indeed not all human rights scholars are fully content with the approach adopted by the Banjul Charter, and its formal recognition of group or community rights. It is imperative to note that group rights are not a one-size-fits-all concept. To understand the parameters of group rights, McCamant advises that the concept:

... works best where there exist clearly defined ethnic communities who carry on life separate from the wider society. These groups exist most prominently in areas where large scale production and trade have not yet brought about economic integration.⁶⁴

We now turn to specific agreements that seek to protect TK of communities in Africa.

7.1 The OAU Model Legislation on the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources

The Organisation of African Unity (OAU) Model Legislation on the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources (OAU model law), was endorsed by Heads of State of the Organisation of African Unity (now African Union/AU) in July 1998.⁶⁵ The law underscores the value of traditional knowledge for biodiversity conservation and food security on the continent and the potential effects of IPRs in agriculture. Article 9 of this law provides explicitly that:

(1) Patents over life forms and biological processes are not recognised and cannot be applied for. (2) The collector (of GRs) shall, therefore, not apply for patents over life forms and biological processes under this legislation or under any other legislation relevant to the regulation of access and use of a biological resource, community innovation, practice, knowledge and technology, and the protection of rights therein.⁶⁶

While scholars continue to debate whether or not such prohibition is in conformity with the TRIPS Agreement, it is submitted that the issue here should be to try to relieve farmers of the burden created by IPR which by and large steal from their reserve without any compensation. The African Model law may seem too radical and against biotechnological inventions but still there should be ways to strike a balance. When it comes to PGRFA, the human right to food should override recouping R&D expenses, as it is often times contended. It is proposed that the concept of farmers' rights be taken seriously for the benefit of not only farmers but also as a stimulant for protection of landraces.

7.2 The Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore

It was a commendable initiative to protect TK in Africa by a diplomatic conference, convened at the coastal Namibian town of Swakopmund, with the Protocol on the Protection of Traditional Knowledge and Expressions of Folklore within the Framework of the African Regional Intellectual Property Organisation (ARIPO).⁶⁷

The Protocol recognises:

⁶³ Howard (1986).

⁶⁴ McCamant (1981:542).

⁶⁵ OAU / AU (1998).

⁶⁶ Ibid: see Article 9.

⁶⁷ ARIPO (2010).

... the intrinsic value of traditional knowledge, traditional cultures and folklore, including their social, cultural, spiritual, economic, intellectual, scientific, ecological, agricultural, medical, technological, commercial and educational value.⁶⁸

It defines traditional knowledge as:

... any knowledge originating from a local or traditional community that is the result of intellectual activity and insight in a traditional context, including know-how, skills, innovations, practices and learning, where the knowledge is embodied in the traditional lifestyle of a community, or contained in the codified knowledge systems passed on from one generation to another.⁶⁹

While the protocol recognises the holistic approach to life as perceived by indigenous and local communities as discussed above⁷⁰ and considers communities as holders of TK, it commits a greatly errs by entitling individuals within such communities with “ownership” of TK. Section 6 provides:

The owners of the rights shall be the holders of traditional knowledge, namely the local and traditional communities, and recognised individuals within such communities, who create, preserve and transmit knowledge in a traditional and intergenerational context in accordance with the provisions of Section 4.⁷¹

Debates are raging around the incompatibility of individual rights within local and indigenous communities. In Australia, an Aborigine artist is reported to have told a court of law:

As an artist, while I may own copyright under Western law, under Aboriginal law, I must not use an image or story in such a way as to undermine the rights of all the other Yolngu.⁷²

There are many instances, however, where Western-oriented laws introduce individual rights in indigenous communities in order to ‘modernise’ them and the aftermath has more often than not been catastrophic, demonstrated for instance by the results of the introduction of individual land rights in pastoralist lands in Kenya.⁷³ It is advised therefore that this particular aspect of TK protection be taken seriously to avoid importing problems, which were the reason for the slow-paced investigation for alternative methods of protection in the first place.

8 The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefit Arising from their Utilisation: Too Little, Too Late?

Shortly after the publication of the first edition of this book, the 10th Conference of the Parties (CoP) to the convention on biological diversity (CBD) meeting in the city of Nagoya, Japan, adopted the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefit Arising from their Utilisation. The Protocol, though yet to come into force, has awakened a sense of hope and enthusiasm among civil society activists and communities.

⁶⁸ Ibid: see preamble.

⁶⁹ Ibid: see Article 2.1 (ix).

⁷⁰ Article 1.2 provides “This Protocol shall not be interpreted as limiting or tending to define the very diverse holistic conceptions of: (a) traditional knowledge; or (b) cultural and artistic expressions, in the traditional context”.

⁷¹ Ibid.

⁷² *Milpurrurru and Others v Indofurn Pty Ltd and Others* [1996] AUIndigLawRpr 20. For a commentary on the case see Blakeney (1995).

⁷³ Rutten (1992).

As a brief update to the previous edition of this chapter, this section explores the main sections of the protocol and asks whether, coming 17 years after the coming into force of the Convention on Biological Diversity, the protocol is not too little, too late.

8.1 Overview of the Protocol

The objective of the Protocol is a verbatim repeat of the third objective of the CBD, namely “conservation of biological diversity and the sustainable use of its components.”⁷⁴ With regard to access, the Protocol requires provider states to provide for “legal certainty, clarity and transparency” as well as “fair and non-arbitrary rules and procedures” on access to genetic resources. On Benefit Sharing, the Protocol obliges member states to take legislative, administrative, or policy measures to ensure that benefits arising from the utilisation of genetic resources as well as subsequent application and commercialisation are shared fairly and equitably with the providing party.⁷⁵

8.2 Does the Protocol Make a Difference?

When it comes to local and indigenous communities who are custodians of traditional knowledge and associated genetic resources, the Protocol does not seem to make any difference. It retains the same powers of governments to designate "competent authorities" and generally assert their "sovereignty to natural resources" as provided by the CBD.

8.3 Too Little, Too Late?

As this paper has shown, many cases of biopiracy have already taken place in Africa. The Protocol, although it contains commendable provisions for ABS, does not address cases prior to its coming into force. It remains to be seen whether by addressing the future, the past is capable of taking care of itself.

9 The Need for a Paradigm Shift

For Africa to effectively protect TK, it must not only put local and indigenous communities at the centre, but also tap into their know-how to enhance conservation. However, most African legal dispensations for conservation of natural resources lack this essential component for modern conservation. The origin of these laws and policies, which exclude people from nature in the context of conservation, can be traced back to colonial times.⁷⁶ Due to this ‘colonial hangover effect’, many if not most policy makers in Africa and other developing countries take the conservation of biological resources to be synonymous with the eviction of local communities from such lands. Although it is undeniable that human activities contribute greatly to the destruction of the environment and ecosystems, not all human activities are incompatible with conservation. Sometimes, de-linking the human-nature interaction is detrimental to ecosystems and the environment at large.⁷⁷ Many are the times also that those entrusted with the task of conservation turn out to be the reason for inefficiency much to the dismay of local communities. A Maasai elder, evicted by the Government of Tanzania from the Ngorongoro crater, summarises such dismay:

I was born in Engitati in Ngorongoro Crater where I spent my youth. I remember the rhino. They were so many. They outnumbered the buffalo. They were everywhere. We rarely killed the rhino and when we did it was because they threatened us in some way.

⁷⁴ Nagoya Protocol 2010: Article 1.

⁷⁵ Ibid: Articles 5.1 and 5.5.

⁷⁶ Kameri-Mbote (2004).

⁷⁷ Sharma (2000:32).

We have lived in the Crater together with wild animals, listening to the lions roar. Then we were moved to where we are now. When I look at the Crater I feel a dead sadness. Once control of the Crater was given to someone else, the rhinos started to disappear.⁷⁸ Now they have almost gone. Is this what they call conservation?

When it comes to farmers, eviction is less common but there are no deliberate efforts to support their inventiveness as already discussed above. Our intellectual property laws reward inventors, breeders and other entrepreneurs, while punishing the local peasant with frequent change of policies and skyrocketing prices of agricultural produce.

A paradigm shift is necessary among policy makers in Africa to understand the important attachment that local communities have to their lands as well as the value of traditional knowledge in agriculture and associated genetic resources, including landraces. The argument that was advanced here is that Government authorities should avoid implementing policies which destroy communal structures.

10 Concluding Remarks

Law is more than just rules written on a piece of paper, and/or debated by legislative authorities, parliaments or international organisations. Using aspects of customary law to protect TK/TCEs will make such laws more meaningful to indigenous and local communities. Customary law is an aggregate of culture, history and spirituality of the local and indigenous communities. Without such recognition, it is doubtful if current initiatives to protect TK/TCEs will ever be successful. The old adage ‘the magic of ownership turns sand into gold’ is especially true if applied to communal ownership of traditional knowledge and associated genetic resources in Africa.

⁷⁸

Majamba (2006:8).

CHAPTER 19

HUMAN RIGHTS AND THE ENVIRONMENT

Oliver C. Ruppel

1 Introduction

Modern human rights law is commonly considered to have its roots in the 1945 Charter of the United Nations (UN), whereas environmental concerns started to move to the centre of international activities with the UN Conference on the Human Environment held in Stockholm in 1972.¹ More than 30 African countries² participated at this conference and committed themselves – at least to some extent – to the recognition and promotion of environmental concerns on the international level.³ At the conference, the then Indian Prime Minister Indira Gandhi stated this:

We do not want to impoverish the environment any further, but we cannot forget the grim of poverty of large numbers of people. When they themselves feel deprived how can we urge the preservation of animals? How can we speak to those who live [...] in slums about keeping our oceans, rivers and the air clean when their own lives are contaminated at the source? Environment cannot be improved in conditions of poverty.⁴

Colonialism, apartheid and the unequal distribution of resources have curbed human rights and challenged progress in Namibia for a long time. Today, over 20 years after Independence⁵ and the promulgation of the Constitution of the Republic of Namibia,⁶ the country still faces challenges that impede, *inter alia*, the explicit recognition of environmental (human) rights. The adoption of a human rights framework and culture in terms of the Namibian Constitution of 1990 has, without doubt, been a positive attribute of the country since it gained independence. The Constitution serves as the fundamental and supreme law, and the Namibian Government is subordinate to it.⁷ The Constitution also established a new regime relating to natural resources in the country.⁸ Regardless of the aforementioned, the legal milieu in support of environmental human rights is still far from perfect.

In its first part, this Chapter examines the categorisation and concept of human rights in general, and then views the Namibian constitutional dispensation in the light of environmental concerns. The Chapter intends to establish whether, and to what extent, environmental human

¹ The following passages were largely taken from Ruppel (2010i).

² Some 113 states were invited, in accordance with UN General Assembly Resolution 2850 (XXVI). The following African states took part in the Conference: Algeria, Botswana, Burundi, Cameroon, Central African Republic, Chad, Congo, Egypt, Ethiopia, Gabon, Ghana, Guinea, Ivory Coast, Kenya, Lesotho, Liberia, Libyan Arab Republic, Madagascar, Malawi, Mauritania, Mauritius, Morocco, Niger, Nigeria, Senegal, South Africa, Sudan, Swaziland, Togo, Tunisia, Uganda, United Republic of Tanzania, Zaire, and Zambia.

³ It should be noted that the Stockholm Declaration is legally only a non-mandatory document.

⁴ Quoted in Anand (1980:10).

⁵ Namibia became independent on 21 March 1990.

⁶ No. 1 of 1990.

⁷ Naldi (1995:15-19).

⁸ Carpenter (1991:56-57).

rights are explicitly or implicitly recognised in Namibia. At the same time this Chapter aims to show how human rights and the environment are interrelated and actually indivisible.

2 Human Rights Categories

The categorisation of human rights into generations has not been without criticism;⁹ and it must be admitted that the attempt to relegate human rights into categories, be it into generations or other classifications, always bears the risk of not being capable of determining exactly which rights belong to which category. This is inherent in the very nature of human rights in general, as human rights are universal, inalienable, indivisible, interrelated and interdependent.¹⁰

The categorisation of human rights into three generations goes back to the first Secretary-General of the International Institute for Human Rights in Strasbourg, the Czech-French lawyer Karel Vasak. As early as 1977, he divided human rights into three generations. *First-generation* human rights refer to traditional civil and political liberties that are considered important in Western liberal democracies, such as freedom of speech, of religion, and of the press, as well as a right of the individual to bodily inviolability, i.e. an obligation of non-interference against individuals by the state.¹¹ These rights are the classical human rights, as contained in Chapter 3 of the Namibian Constitution. For many years, the dominant position was that only these were genuine human rights.¹²

Second-generation rights are economic, social and cultural rights. These have generally been considered as requiring affirmative Government action for their realisation. Second-generation rights are often seen to be group rights or collective rights, as they pertain to the well-being of groups, social formations, even whole societies. They contrast with first-generation rights - perceived as individual entitlements or prerogatives of individuals - as they refer to rights held, ascribed to and exercised by people collectively or by specific subgroups. Examples of second-generation rights include the right to education, work, social security, food, self-determination, and an adequate standard of living. These rights are codified in the International Covenant on Economic, Social and Cultural Rights (ICESCR),¹³ and also in Articles 23–29 of the Universal Declaration of Human Rights.¹⁴ Writers reluctant to recognise second-generation rights as human rights have often based their argument on the assumption that courts are unable to enforce affirmative duties on states and that, therefore, such rights are merely aspirational. Similarly, critics have opined that, regardless of the political system or level of economic development, all states are able to comply with civil and political rights, but not all states have the means to provide the financial and technical resources for the realisation of affirmative obligations such as education and an adequate standard of living.¹⁵

⁹ Scheinin (2009:25).

¹⁰ These important characteristics of human rights were formulated and reaffirmed by the World Conference on Human Rights held in Vienna in 1993, and are laid down in Section I(5) of the Vienna Declaration and Programme of Action. See [http://www.unhchr.ch/huridocda/huridoca.nsf/\(symbol\)/A.CONF.157.23.En?OpenDocument](http://www.unhchr.ch/huridocda/huridoca.nsf/(symbol)/A.CONF.157.23.En?OpenDocument); accessed 25 November 2009.

¹¹ Vasak (1977).

¹² Steiner *et al.* (2008).

¹³ 1966 United Nations International Covenant on Economic, Social and Cultural Rights; see www.unhchr.ch/html/menu3/b/a_cescr.htm; accessed 29 December 2009.

¹⁴ 1948 United Nations Universal Declaration of Human Rights; see <http://www.unhchr.ch/udhr/lang/eng.htm>; accessed 29 December 2009.

¹⁵ On the classification of human rights see Parker (2002).

Third-generation¹⁶ or *solidarity rights* are the most recently recognised category of human rights.¹⁷ This group has been distinguished from the other two categories of human rights as their realisation is predicated not only upon both the affirmative and negative duties of the state, but also upon the behaviour of each individual. Rights in this category include self-determination as well as a host of normative expressions; their status as human rights is still controversial. Third-generation rights include the right to development, the right to peace, and so-called environmental human rights.¹⁸ Actually, and strictly speaking, environmental human rights do not really fit into any one particular category or generation of human rights. More generally, third generation rights can be viewed from different angles, somehow touching on all of the above-mentioned generations of rights. One could argue, for instance, that it should be possible to give individuals and groups access to environmental information, judicial remedies, and political participation through existing civil and political rights.¹⁹ In this context, environmental rights should be seen as empowerment rights that grant participation in environmental decision-making, compelling governments to meet minimum standards of protecting life and property from environmental hazards. This anthropocentric approach²⁰ focuses on harmful environmental effects on individuals rather than on the environment, thus leading to a ‘greening’ of human rights law. Another possibility for dealing with environmental human rights would be to treat an intact and healthy environment as an economic, social or cultural right, comparable to those codified in the ICESCR. This approach values the environment as a good in its own right, one that is vulnerable and at the same time linked to development. Like (other) economic, social and cultural rights, environmental rights are still largely of an aspirational nature and in many cases enforceable only through the relatively weak international supervisory mechanisms.

The fact that environmental human rights are usually not expressly recognised by the 1966 Conventions²¹ means that their status and content is often still seen to be contentious.²² Environmental human rights – for the purpose of this Chapter and, more importantly, for their improved recognition and application in Namibia – should not be seen in isolation from other human rights. They are Janus-faced, embracing simultaneously morality and the law. They are constructions rather than moral truths to be discovered and, as such, have an inherently juridical character, which entails an orientation towards a positive conceptualisation.²³

3 Constitutionality of Environmental Human Rights?

Many national constitutions cover environmental protection and establish it as a constitutional objective, an individual right, or both. These include Brazil, Ecuador, Kenya, Peru, the Philippines, South Africa, and South Korea. Among Council of Europe member countries, the

¹⁶ See Ruppel (2008a:101ff.).

¹⁷ Recent reference has been made to so-called fourth-generation human rights or communication rights, which are concerned with human rights in the information society.

¹⁸ Vasak (1977).

¹⁹ 1966 United Nations International Covenant on Civil and Political Rights; see <http://untreaty.un.org/cod/avl/ha/iccp/iccpr.html>; accessed 29 December 2009.

²⁰ Also a human-centred approach, as opposed to an ecocentric approach that is focused on the environment, or a theocultural approach that is focused on religion, philosophy and culture. See Theron (1997:23-44).

²¹ Both the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR) were adopted by the United Nations General Assembly on 16 December 1966.

²² Scheinin (2009:25).

²³ Mushkat (2009:119ff.).

constitutions of Belgium, Hungary, Norway, Poland, Portugal, Slovakia, Slovenia, Spain and Turkey acknowledge a fundamental individual right to environmental protection, while those of Austria, Finland, France, Germany, Greece, the Netherlands, Sweden and Switzerland enshrine environmental protection as a constitutional objective. In southern Africa, it can be observed that, during the past few decades, states have placed a strong emphasis on including environmental provisions in their respective legal frameworks. While some constitutions explicitly recognise the existence of such right within their respective Bills of Rights,²⁴ others include environmental concerns in the principles of state policy²⁵ rather than formulating a human right to environment as a fundamental human right.

When the Namibian Constitution came into force, it was lauded as a model for Africa because of its drafting process and content. The Constitution as adopted by the Constituent Assembly came into force on the date of Independence, namely 21 March 1990.²⁶ The Constitution can be considered to be among the most liberal and democratic in the world. It enjoys hierarchical primacy amongst the sources of law by virtue of its Article 1(6). It is thematically organised into 21 Chapters that contain 148 Articles relating to the Chapter title. Together, they organise the state and outline the rights and freedoms of the Namibian people.²⁷

The Namibian Constitution is special in several ways. Firstly, it was developed largely under the eyes and with the assistance of the international community. This is closely related to the fact that Namibia's decolonisation process was strongly supported by the implementation of UN Resolution 435. Secondly, the Namibian Constitution was certainly an experiment in southern Africa in putting an end to racial discrimination and apartheid.²⁸ Namibia has not totally relinquished its South African legal legacy and Article 140 provides for legal continuity, stating that all existing laws prior to Independence are to remain in force until repealed by Parliament. This does not only mean that Roman–Dutch law continues to be the ordinary law of the land, but also that Namibia has a considerable amount of pre-Independence legislation, of which some certainly needs renewal.

The constitutional rights relevant to environmental human rights will be analysed in several steps. Since the Namibian Constitution does not provide explicitly for entrenched and enforceable environmental human rights, it has to be determined whether (and to what extent) these rights are covered by the Constitution's fundamental rights and freedoms, or whether the respective rights form part of it in other Sections, e.g. as principles of state policy. Arguably, the fundamental rights and freedoms – to life, human dignity and equality – reinforce claims that people may have to an environment of a certain quality, even if positive obligations on the part of the state are not imposed *per se*. International aspects of environmental human rights applicable in Namibia, e.g. via Article 144 of the Constitution, will also be outlined below.

3.1 The Preamble

The preamble of a constitution is an important tool for the interpretation of such document, because it reflects the general spirit of the drafters.²⁹ The Namibian Constitution makes no

²⁴ One example of a human right to environment codified on the national level is Article 24 of the 1996 Constitution of the Republic of South Africa.

²⁵ Such as Article 95 of the Namibian Constitution on the promotion of the welfare of the people in the Chapter entitled "Principles of State Policy".

²⁶ Article 130.

²⁷ Bukurura (2002:57).

²⁸ Watz (2004:21).

²⁹ Ibid. He further quotes Hartmut Ruppel, Namibia's first Attorney-General after Independence, and the Chairman of the Standing Committee on the issue, that the content of the Preamble was critically debated at

clear reference to the environment in its Preamble. However, it explicitly recognises that “the inherent dignity” and “the equal and inalienable rights of all members of the human family is indispensable for freedom, justice and peace”. The reference to *inalienable rights* leads immediately to Chapter 3 and Article 5 therein. It states that

[t]he fundamental rights and freedoms enshrined in this Chapter shall be respected and upheld by the Executive, Legislature and Judiciary and all organs of the Government and its agencies and, where applicable to them, by all natural and legal persons in Namibia, and shall be enforceable by the Courts in the manner hereinafter prescribed.

The 1996 South African Constitution aims to “... establish a society based on democratic values, social justice and fundamental human rights...”³⁰

Here, the reference to “fundamental human rights” also opens the way for Chapter 2 of the 1996 South African Constitution, namely the Bill of Rights, and therein to Section 24.³¹ The 1996 South African Constitution makes it very clear from the outset that not only the Bill of Rights but also the environmental rights in Section 24 thereof apply to all laws in the country, and is obligatory for all the organs of the state. However, Section 24 jurisprudence in South Africa has not always been applauded when it comes to understanding the nature of such right and how it operates vis-à-vis other rights.³² In the case of *HTF Developers (Pty) Ltd v Minister of Environmental Affairs and Tourism and Others*,³³ for example, the court held that Section 24(b) was akin to a directive principle and was “aspirational in form”. The aforementioned view of the court is, however, incorrect.³⁴ Firstly, the rights in the Bill of Rights are justiciable rights, which can be distinguished from directive principles in two ways: While fundamental rights may either prohibit the state from doing something or may place a positive obligation on the state, directive principles are simply affirmative instructions to the state. While fundamental principles are legally binding, directive principles are not. Secondly, Section 24(b) is clearly not aspirational in nature. The mandate stemming from Section 24(b) “falls within the realm of real expectations”³⁵

3.2 Fundamental Rights and Freedoms

Chapter 3 of the Namibian Constitution outlines 16 fundamental rights and freedoms, reflecting the values and spirit of the independent Namibian nation. The Constitution excels in being a document that guarantees human rights by comprehensive coverage and provisions set out in clear language. Human rights are justiciable as their protection can be secured through the courts.³⁶ This gives citizens the right to take executive agencies to court, and the judiciary reigns as the authority to adjudicate such matters. The set of enforceable fundamental human rights and freedoms are to be respected and upheld by the Executive, the Legislative and the

the time. Some members raised the question whether the Preamble had been influenced predominantly by Western values.

³⁰ Preamble of the 1996 South African Constitution.

³¹ Section 24 reads as follows: “Everyone has right (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”

³² Ferris (2009:132).

³³ 2006 (5) SA 512 (T).

³⁴ This is in accordance with Ferris (2009:132).

³⁵ Ibid.

³⁶ Bukurura (2002:21).

Judiciary, all organs of Government, its agencies, and, where applicable, by all natural and legal persons in Namibia.³⁷ Apart from the right to culture (Article 19) and the right to education (Article 20), Chapter 3 does not contain any typical socio-economic rights – such as rights to housing, water or access to health services.³⁸ Instead, such socio-economic considerations are addressed elsewhere in the Constitution, especially in the Principles of State Policy.³⁹

Chapter 11 contains Principles of State Policy that cannot be categorised as constitutional rights in the strictest sense.⁴⁰ Article 95(l) compels state organs to be directed by the environmental principle of state policy.⁴¹ Article 95 stipulates that

[t]he State shall actively promote and maintain the welfare of the people by adopting, *inter alia*, policies aimed at the following:...

(l) maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future;

Article 101 states that the Principles of State Policy are not legally enforceable, but merely serve as societal goals in making and applying laws to give effect to the fundamental objectives of the different principles. The principles must also be employed in the interpretation of Namibian law and guide the state in its decision-making processes.⁴² Constitutional Principles of State Policy serve as a stimulus for new initiatives or endeavours – especially where existing policy, law or programmes seem inadequate to attain the principles' objectives.⁴³ The principles must similarly be employed as direction indicators in setting Government priorities. Also, the judiciary should apply the Principles of State Policy in constitutional interpretation and use them to fill gaps in the legislative framework when and where necessary. These generic features of constitutional principles of state policy arguably also apply to the environmental principle of state policy in the Constitution of Namibia. The language used in Article 95 indicates that the fulfilment of the Principles of State Policy requires positive action on the part of Government, i.e. “[t]he State *shall* ... promote and maintain” [emphasis added]. At first sight, this creates the impression that such state principles create enforceable obligations that must be fulfilled.⁴⁴ Although this is not the case in Namibia, the state is expected to promote and maintain the welfare of the people by adopting policies aimed at maintenance.⁴⁵

The following Section deals with those Articles in the Namibian Constitution that in one way or another are related to promoting the protection of environmental human rights and justice:

3.3 Article 6: The Right to Life

Article 6 regulates, amongst others, that “[t]he right to life shall be respected and protected.”

³⁷ Article 5.

³⁸ See Erasmus (1991:13).

³⁹ Watz (2004:75).

⁴⁰ Naldi (1995:99).

⁴¹ Hinz (2001:77).

⁴² Watz (2004:186).

⁴³ Du Plessis (2008:177-179).

⁴⁴ Ibid.

⁴⁵ Ibid.

It is clear that human life depends strongly on the state of the environment, including water, air, natural resources, plant and animal life. Environmental degradation threatens people's lives and livelihoods. The right to life is the most basic human right: a person can exercise no other right unless this most primary of rights is adequately protected. As such, the right to life is one that should be interpreted narrowly and this arguably requires the state to adopt positive measures. Presenting compelling facts, however, is critical for an individual to successfully present a case. Obviously, the most compelling cases involve environmental harm that is likely to cause death in the short term.⁴⁶

3.4 Article 8: Respect for Human Dignity

Article 8 of the Namibian Constitution states that:

- (1) The dignity of all persons shall be inviolable.
- (2) (a) In any judicial proceedings or in other proceedings before any organ of the State, and during the enforcement of a penalty, respect for human dignity shall be guaranteed.
- (b) No persons shall be subject to torture or to cruel, inhuman or degrading treatment or punishment.

Dignity has to be read in conjunction with other fundamental rights set out in the Constitution, such as the right to equality and to non-discrimination (Article 10). The dignity of a person is inseparably linked to environmental human rights, as a person's health, well-being and respect-worthiness are subject to environmental human rights, as e.g. access to clean and sufficient water, sanitation services, and waste disposal are aspects relevant to human dignity.⁴⁷ In 2002, the UN Committee on Economic, Social and Cultural Rights concluded that there was a human right to water embedded in Article 11 of the ICESCR, which defined the right to livelihood as including adequate food, clothing and housing. The General Comment on the right to water was adopted by this Committee in 2002, so the 145 countries that ratified the Covenant agree that the human right to water entitles everyone to sufficient, affordable, physically accessible, safe water acceptable for personal and domestic use, and that they are required to develop mechanisms to ensure that this goal is realised.⁴⁸ The Committee recognised that –⁴⁹

... the right to water clearly falls within the category of guarantees essential for securing an adequate standard of living, particularly since it is one of the most fundamental conditions for survival.

The 1979 Convention on the Elimination of all Forms of Discrimination against Women⁵⁰ and the 1989 Convention on the Rights of the Child⁵¹ have already identified access to water as a human right. By becoming party to these agreements, the Republic of Namibia has committed itself to protect and realise the rights of women and children to water. Namibia thus agreed to hold itself accountable before the international community for the fulfilment of its obligations in the framework of the aforementioned conventions. A right to water as an individual prerogative for all (not only for women and children), was adopted in the Sixty-fourth UN General Assembly Plenary held on 28 July 2010.⁵² The UN adopted (by a vote of 122 in favour

⁴⁶ Herz (2008:173-281).

⁴⁷ WHO (2003:18ff.).

⁴⁸ See http://www2.ohchr.org/english/issues/water/docs/CESCR_GC_15.pdf; accessed 8 January 2010.

⁴⁹ Ibid.

⁵⁰ GA Res. 34/180, 18 December 1979, Article 14(2)h.

⁵¹ GA Res. 44/25, 20 November 1989, Article 24(2)c.

⁵² GA 10967.

to none against, with 41 abstentions) a resolution calling on states and international organisations to provide financial resources, build capacity and transfer technology, particularly to developing countries, in scaling up efforts to provide safe, clean, accessible and affordable drinking water and sanitation for all. Through this text on the human right to water and sanitation, the Assembly expressed deep concern that some 884 million people were without access to safe drinking water and more than 2.6 billion lacked access to basic sanitation. Bearing in mind the commitment to fully achieve the Millennium Development Goals,⁵³ it expressed alarm that 1.5 million children under five years old died each year as a result of water- and sanitation-related diseases, acknowledging that safe, clean drinking water and sanitation were integral to the realisation of all human rights.⁵⁴

In the recent 2011 judgement of *Matsipane Mosetlhanyane and Others v the Attorney General of Botswana*⁵⁵ the Botswana Court of Appeal overturned a decision of the High Court that prohibited the Kalahari Bushman from sinking boreholes in the Central Kalahari Game Reserve necessary to sustain their livelihood. The ruling interestingly draws a balance between the interests of nature conservation with those of indigenous people's water rights. The court in its judgement *inter alia* made reference "to the United Nations Committee on Economic, Social and Cultural Rights, which on 20 January 2003 submitted a report on what it termed Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights. In its introduction it stated the following:-

1. Water is a limited natural resource and a public good fundamental for life and health. The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realisation of other human rights...

In paragraph 16 (d) of its report the Committee said the following:-

16. Whereas the right to water applies to everyone, States Parties should give special attention to those individuals and groups who have traditionally faced difficulties in exercising this right, including women, children, minority groups indigenous peoples, refugees, asylum seekers, internally displaced persons, migrant workers, prisoners and detainees. In particular, States Parties should take steps to ensure that:

(d) Indigenous people's access to water resources on their ancestral lands is protected from encroachment and unlawful pollution. States should provide resources for indigenous peoples to design, deliver and control their access to water.⁵⁶

In the 2009 South African case of *Lindiwe Mazibuko and Others v City of Johannesburg and Others*,⁵⁷ the Constitutional Court had to decide over an alleged violation of the right to have access to sufficient water under Section 27 of that country's Constitution. Section 27 stipulates that

- (1) Everyone has the right to have access to-
- (a) health care services, including reproductive health care;

⁵³ In September 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at United Nations Headquarters in New York to adopt the United Nations Millennium Declaration, committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have become known as the Millennium Development Goals; cf. <http://www.un.org/millenniumgoals/bkgd.shtml>; accessed 19 December 2010.

⁵⁴ See <http://www.un.org/News/Press/docs/2010/ga10967.doc.htm>; accessed 12 November 2010.

⁵⁵ Case No. CACLB-074-10, unreported judgment of the Appeal Court of Botswana dated 27 January 2011.

⁵⁶ Ibid.

⁵⁷ *Lindiwe Mazibuko and Others v City of Johannesburg and Others CCT 39/09 [2009] ZACC 28.*

- (b) sufficient food and water; and
- (c) social security, including, if they are unable to support themselves and their dependents, appropriate social assistance.
- (2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights.

Lindiwe Mazibuko and Others v City of Johannesburg and Others was the first case in which the Constitutional Court had considered the obligations imposed by the right to access sufficient water, as set out in Section 27(2) of the South African Constitution.

Under the Namibian Constitution, the right to water is not explicitly included in the fundamental rights,⁵⁸ but is an implicit component of existing fundamental human rights. Therefore, water must be available and accessible in sufficient quality and quantity for personal and domestic consumption.⁵⁹ The protection of the right to water is an essential prerequisite to the fulfilment of many other human rights.⁶⁰ Without guaranteeing access to a sufficient quantity of safe water, respect for human dignity and other human rights may be jeopardised.⁶¹ Formal recognition of the right to water means acknowledging the environmental dimension of existing human rights.⁶²

In 2002, Namibia adopted a National Water Policy that states that all Namibians have a right to access sufficient safe water for a healthy and productive life. Moreover, Sections 2 and 3 of the Water Resources Management Act⁶³ state that the state has an obligation to ensure that water resources are managed in ways consistent with fundamental principles to warrant equitable access to water by every citizen. Although Parliament approved the Water Resources Management Act, the rather out-dated Water Act⁶⁴ remains in force until the new Water Resources Management Act is promulgated.⁶⁵ The relationship between water quality regulation and human rights jurisprudence is very significant.⁶⁶

3.5 Article 10: Equality and Freedom from Discrimination

As part of the Bill of Rights under Chapter 3 of the Constitution, Article 10 provides for the following:

- (1) All persons shall be equal before the law.
- (2) No persons may be discriminated against on the grounds of sex, race, colour, ethnic origin, religion, creed or social or economic status.

The equality clause can be interpreted to strongly support the notion of environmental human rights, thus putting the state under the obligation to protect its people equally and to ensure that

⁵⁸ This is also reflected in the recent article by Mungunda (2011) which elaborates on “Access to water: A human right” in Namibia.

⁵⁹ See Mapaure (2010).

⁶⁰ Ruppel (2008a:107).

⁶¹ Ruppel (2012c).

⁶² Mapaure (2010). Through a rights-based approach, victims of water pollution and people deprived of essential water to meet their basic needs are provided with access to remedies.

⁶³ No. 24 of 2004.

⁶⁴ No. 54 of 1956.

⁶⁵ The Water Act was still applied by the High Court in Windhoek in the recent case concerning the use of groundwater by the Valencia Uranium Mine; see Hinz / Ruppel (2008b:48) with further references.

⁶⁶ Koonan / Khan (2010:294).

benefits are distributed fairly that is to the greatest possible extent.⁶⁷ Human vulnerability also exacerbated by means of global warming and climate change is felt most acutely by those segments of the population who are already in vulnerable situations due to factors such as poverty, gender, age, minority status, and disability.⁶⁸ Vulnerability and impact assessments in the context of climate change largely focus on the economic sector, and tend to not take into account the former factors.⁶⁹

Since independence, the Government of Namibia has made various efforts in terms of strengthening women's and children's rights, first of all by according gender equality the status of a constitutionally guaranteed fundamental right and by subsequently passing progressive gender-based laws. Moreover, a Ministry of Gender Equality and Child Welfare was established in 2000 with the objective of ensuring the empowerment of women, men and children, and the equality between men and women as prerequisites for full participation in political, legal, social, cultural and economic development.⁷⁰

3.6 Article 15: Children's Rights

A recently conducted study on children's rights has shown that Namibia can be lauded for initiating law reform for the improvement of such rights.⁷¹ This reflects Namibia's remarkable commitment to protecting children's rights by, amongst other things, incorporating a broad variety of international legal instruments into the domestic system. Namibia is a State Party to the most relevant legal instruments on the protection of children's rights on global, regional and sub-regional level. Thus, the Convention on the Rights of the Child (CRC) explicitly states that the child has a right to "clean drinking water, taking into consideration the dangers and risks of environmental pollution".⁷² Of course, effective implementation and the entire reporting system, which are imperative for enhancing the situation of children, can only work if States Parties collaborate to improve the situation of children.⁷³ In this context there can be no doubt, that the recognition of environmental human rights is not only supportive to, but in all means in the best interest of the child. Although the Namibian Constitution does not seem to envisage the concept of the *best interest of the child* to be of paramount consideration,⁷⁴ international human rights standards must be applied accordingly.⁷⁵

3.7 Articles 18 and 5: Administrative Justice

The Constitution deals with administrative justice in two of its Articles: 18 and 5. Article 18 requires that administrative bodies act fairly and reasonably, and that they comply with the requirements stipulated in common law and relevant legislation. This article obviously plays an eminent role in the proper implementation of administrative measures, being a means of achieving compliance with environmental laws and, thus promoting environmental human rights in Namibia. Article 5 contains the fundamental obligation enshrined in modern constitutionalism according to which the three organs of the state – including the executive –

⁶⁷ Bilchitz (2003:1-26).

⁶⁸ Ruppel (2010a, b, d).

⁶⁹ Ruppel (2008g).

⁷⁰ Ruppel (2008b, g; 2009a; 2010b, c, d).

⁷¹ Ruppel (2009e, f).

⁷² Article 24(2)(c) CRC.

⁷³ Ruppel (2009e:2-3).

⁷⁴ Naldi (1995:79).

⁷⁵ Ruppel (2009f).

are obliged to uphold and respect the fundamental rights and freedoms set out in Chapter 3 of the Constitution. Thus, Article 5 reaches beyond Article 18: the yardsticks of Article 5 are the fundamental rights and freedoms. Article 5 requires substantial compliance by confronting administrative actions and the law authorising such actions with the comprehensive catalogue of human rights. The placement of Article 5, as an integral part of Chapter 3's fundamental freedoms, expresses – in line with what follows later, namely in Article 21(1) and Article 22 – that the fundamental rights and freedoms are invested with real constitutional and legal weight.⁷⁶

3.8 Article 19: The Right to Culture

With Article 19 the right to culture is guaranteed under the Bill of Rights in the Constitution, as well as in Article 15(1)(a) of the International Covenant on Economic, Social and Cultural Rights (ICESCR). In terms of these two legal obligations, the Government is required to take legislative and administrative action to ensure the fulfilment of these rights. Although Chapter 3 is not primarily aimed at protecting economic, cultural and social rights (such as those of Article 19), it is important to remember that Article 5 makes those listed within Chapter 3 legally enforceable. From this arose the right to profess, maintain and promote a language in the case of *Government of the Republic of Namibia v Cultura 2000*.⁷⁷ Cultural diversity is also closely linked to ecological biodiversity.⁷⁸ The collective knowledge of biodiversity, its use and its management rests in *cultural diversity*, and can, therefore, also be regarded as an (indigenous) environmental human right.⁷⁹

The right to tradition also falls under Article 19, which seeks to ensure that the traditions and way of life of the different indigenous groups⁸⁰ comprising Namibia's society are protected. Article 19 is in line with Article 17(3) of the Banjul Charter, which proclaims that the state has the duty to protect traditional values.⁸¹ Traditional knowledge, without doubt, is such a value. So far, Namibian courts have been reluctant to consider the right to culture as a means of protecting traditional knowledge. In a case decided by a Magistrate's Court,⁸² the harvesting of almost 400 kg of hoodia was at issue. *Hoodia gordonii*, a cactus-like plant native to the Namib Desert, is widely believed to be an appetite suppressant, used by some traditional (indigenous) communities.⁸³ All hoodia species are protected under the Convention on the Illegal Trade of

⁷⁶ Hinz (2009:81-89).

⁷⁷ 1994 (1) SA 407 (NmS).

⁷⁸ See in detail Hinz / Ruppel (2008b).

⁷⁹ Ibid:57.

⁸⁰ Indigenous groups can be defined as “originating in and characteristic of a particular region or country; native; ... e.g. the indigenous peoples of southern Africa.” See <http://dictionary.reference.com/browse/indigenous>; accessed 19 December 2010.

⁸¹ Naldi (1995:97).

⁸² The case was decided at the end of 2007 by the Mariental Magistrates' Court; cf. *Allgemeine Zeitung*, 8 January 2008.

⁸³ Members of the San community used this plant for centuries when hunting. As hunting usually took several days, they used to eat the hoodia to still their hunger. The San name for the hoodia is *!khoba*. The events related to the hoodia plant are one of the cases dealing with bioprospecting (also described as *biopiracy*), describing the appropriation, generally by means of patents, of legal rights over indigenous biomedical knowledge without compensation to the indigenous groups who originally developed such knowledge. However, hoodia is registered in the name of the South African Council for Scientific and Industrial Research (CSIR). In 2003, after years of disputes with the CSIR, the latter concluded an agreement with the San, granting them 6% of the royalties paid to the CSIR by Phytopharm, in addition to 8% of the ‘milestone income’ paid by Phytopharm in case the development of the product made substantial progress. This agreement was the first of its kind, granting participation in profits to indigenous people resulting from

Endangered Species (CITES), to which Namibia is a signatory. Accordingly, it is listed as a protected plant under Schedule 9 of the Namibian Nature Conservation Ordinance,⁸⁴ as amended after Independence by the Nature Conservation Amendment Act.⁸⁵ Thus, according to Section 73(1) of the Ordinance, no person other than the lawful holder of a permit granted by the Executive Committee is permitted at any time to pick or transport any protected plant. The Magistrate's Court, however, discharged two suspects of the alleged theft of almost 400 kg of hoodia. In its ruling, the court held that it could not be proved that the confiscated plants were of the specific *Hoodia gordonii* species. Taking into consideration that Schedule 9 of the Ordinance lists all *Hoodia* species as protected plants, the reasoning for the ruling in this case is not clear.⁸⁶ The Ordinance deals with *in situ* and *ex situ* conservation by providing for the declaration of protected habitats as national parks and reserves, also for the protection of scheduled species. It regulates hunting and harvesting, possession of and trade in listed species for the propagation, protection, study and preservation of wild animal life, wild plant life, and objects of geological, ethnological, archaeological, historical and other scientific interest, and for the benefit and enjoyment of the inhabitants of Namibia and other persons.

Traditional knowledge is an important part of cultural identity. CITES has links to traditional knowledge (e.g. traditional medicine) and culture (folklore, artefacts), with the essential purpose and operation of the Convention noting that Appendix III provides a practical mechanism for States Parties to list specific species for specific purposes, e.g. the protection of intellectual property rights. Notwithstanding the question as to whether the protection of traditional knowledge actually lies within the logic of the intellectual property system or the human rights system, intellectual property law uses the language of economic incentive to justify intellectual property protection. Apart from the economic value of protecting traditional knowledge, it must be protected for cultural reasons as well, as stated in Article 19 of the Constitution.

3.9 Article 25: Enforcement of Fundamental Rights and Freedoms

Article 25(2) of the Constitution provides that –

[a]ggrieved persons who claim that a fundamental right or freedom guaranteed by this Constitution has been infringed or threatened shall be entitled to approach a competent Court to enforce or protect such a right or freedom, and may approach the Ombudsman to provide them with such legal assistance or advice as they require, and the Ombudsman shall have the discretion in response thereto to provide such legal or other assistance as he or she may consider expedient.

Article 25(2) plays an important role in the constitutional framework, as it makes clear reference to the Ombudsman. Chapter 10 of the Constitution deals with the Ombudsman in more detail. In Namibia, ombudsmanship was already introduced in 1986 by the enactment of the Ombudsman of South West Africa Act.⁸⁷ After Independence in 1990, the Office of the Ombudsman was established as a constitutional Office. The legal foundations of this institution are to be found in Articles 89–94 of the Constitution. In addition to the

traditional knowledge. Nonetheless, the CSIR, despite having signed the agreement with the San for good reasons, at a later stage alleged as part of proceedings before the European Patent Office that it was doubtful whether the San really did have knowledge about the effect of hoodia. See also Hoering (2004).

⁸⁴ No. 4 of 1975.

⁸⁵ No. 5 of 1996.

⁸⁶ This corresponds with the view of Ben Beytell of the Ministry of Environment and Tourism; see article in the *Allgemeine Zeitung*, 8 January 2008.

⁸⁷ No. 26 of 1986, as amended by the Ombudsman of South West Africa Amendment Act No. 11 of 1988.

constitutional provisions, the Ombudsman Act⁸⁸ defines and prescribes the powers, duties and functions of the Ombudsman, and provides for matters incidental thereto. The Office of the Ombudsman is intended to ensure that citizens have an avenue open to them, free of red tape, and free of political interference.⁸⁹ The Ombudsman has a relatively broad mandate and corresponding powers. According to Article 91 of the Namibian Constitution, the mandate of the Ombudsman mainly relates to four broad categories: human rights, administrative practices, corruption,⁹⁰ and the environment.⁹¹ The Ombudsman's human rights and environmental mandates are crucial for an effective protection and realisation of environmental human rights in Namibia. For this purpose the Office, however, needs to become much more proactive, especially in view of its role as a national human rights institution.⁹²

Article 25(3) obliges the state *inter alia* to make all necessary and appropriate orders to respect and uphold fundamental rights and freedoms, including by interdict and injunction. Namibian courts have stated in the past that the Constitution requires a generous interpretation, avoiding the austerity of tabulated legalism, in order to give individuals the full measure of their rights. However, Namibian courts also adhere to the presumption of constitutionality, meaning that the onus is on the applicant to prove that a fundamental right or freedom has been infringed upon and that he/she has *locus standi* as an aggrieved person under Article 25(2). Generally speaking, the common law test for *locus standi* is that the person applying for standing either has a private right or is able to demonstrate that s/he has a special interest in the subject matter of the action before the relevant court.⁹³ The special interest does not need to involve a legal or pecuniary right, but can also be of an intellectual or emotional concern.⁹⁴

3.10 Article 95(1): The Environmental Principle of State Policy⁹⁵

Chapter 11 contains principles of state policy that cannot be categorised as constitutional rights in the strictest sense.⁹⁶ Such states Article 101 that the principles of state policy are not legally enforceable, but merely serve as societal goals in making and applying laws to give effect to the fundamental objectives of the different principles. The principles must also be employed in the interpretation of Namibian law and guide the state in its decision-making processes.⁹⁷

⁸⁸ No. 7 of 1990.

⁸⁹ Tjitendero (1996:10).

⁹⁰ With the Namibian Constitution Second Amendment Bill, corruption is removed from the list of the functions of the Ombudsman; see http://www.parliament.gov.na/bills_documents/36_namibian_constitution_second_amendment_bill.pdf last accessed 10 January 2010. The intention behind this amendment is to avoid concurrent overlapping competences between the Office of the Ombudsman and the Anti-Corruption Commission, and to divert all corruption-related complaints to the Commission. The latter was established by the Anti-Corruption Act, 2003 (No. 8 of 2003), and inaugurated in early 2006.

⁹¹ Ruppel-Schlichting (2008).

⁹² Currently, the Ombudsman's Office is heavily understaffed and underequipped in terms of financial resources, leading to a state where it is barely responsive to its aforementioned constitutional mandates. On the Ombudsman and the environment, see the chapter on the Ombudsman and the Environment in this volume.

⁹³ Fisher / Kirk (1997:372).

⁹⁴ In this respect, the Namibian legal set-up is quite different from many others. The 1996 South African Constitution, for example, contains a rather generous allocation of legal standing. People seeking protection for their environmental right need not prove a direct interest in proceedings in order to have *locus standi*; see Du Plessis (2008:261) with further references.

⁹⁵ See Ruppel (2010i:346ff.).

⁹⁶ Naldi (1995:99).

⁹⁷ Watz (2004:186).

Article 95(l) compels state organs to be directed by the environmental principle of state policy.⁹⁸ Article 95 stipulates that –

[t]he State shall actively promote and maintain the welfare of the people by adopting, *inter alia*, policies aimed at the following:

...

(l) maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future;

Constitutional principles of state policy serve as a stimulus for new initiatives or endeavours – especially where existing policy, law or programmes seem inadequate to attain the principles' objectives.⁹⁹ The principles must similarly be employed as direction indicators in setting Government priorities. Also, the judiciary should apply the principles of state policy in constitutional interpretation and use them to fill gaps in the legislative framework when and where necessary. These generic features of constitutional principles of state policy arguably also apply to the environmental principle of state policy in the Constitution of Namibia. The language used in Article 95 indicates that the fulfilment of the principles of state policy requires positive action on the part of Government, i.e. “[t]he State *shall* ... promote and maintain” [emphasis added]. At first sight, this creates the impression that such state principles create enforceable obligations that must be fulfilled.¹⁰⁰ Although this is not the case in Namibia,¹⁰¹ the state is expected to promote and maintain the welfare of the people by adopting policies aimed at maintenance.

3.11 Article 100: Sovereign Ownership of Natural Resources¹⁰²

The land, the water, and the natural resources below and above the land, in the continental shelf and within the territorial waters as well as within the exclusive economic zone of Namibia belong to the state in terms of the Constitution, if not otherwise lawfully owned. To this extent, the Namibian Constitution establishes sovereign state ownership of natural resources not under the control of others.¹⁰³

This seems to be in line with Principle 21 of the Stockholm Declaration:

“States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.”¹⁰⁴

Principle 21 thus applies the principle of state sovereignty to the environmental realm providing the sovereign right of states to exploit and utilise natural resources according to their

⁹⁸ Hinz (2001:77).

⁹⁹ Du Plessis (2008:177-179).

¹⁰⁰ Ibid.

¹⁰¹ Greeff – on the basis of the Caprivi Treason Trial Case *Government of the Republic of Namibia & Others v Mwilima & All Other Accused in the Caprivi Treason Trial* 2002 NR 235 (SC) – attempted to assess whether the Constitution provides an enforceable and pursuable environmental right. The author of the aforementioned article rightfully admits that “the case, in its entirety, is not applicable to the subject matter at hand”. Cf. Greeff (2012:30).

¹⁰² See Ruppel (2010i:346ff.).

¹⁰³ Watz (2004:182-186).

¹⁰⁴ Principle 21, Stockholm Declaration on the Human Environment 1972.

own national policies, and secondly, the obligation upon states not to cause environmental damage to other states or areas outside their national jurisdiction.

However, extensive natural exploitation of resources does not only bring benefits: it is also deemed to have destructive effects to ecosystems and habitats that support essential living resources. Mining activities therefore need to be monitored with regard to their impacts on human – and, thus, environmental – rights. In regard to the state ownership of natural resources, this entails that the state should accordingly take environmentally related responsibility with a special focus on the principle of sustainability and respect for the rights of present and future generations.¹⁰⁵ This is particularly true in the light of the global economy's growing dependence on natural and exhaustible resources extracted in Africa.¹⁰⁶

3.12 Article 144: International Law

Namibia is party to various international human rights¹⁰⁷ and environmental covenants, treaties, conventions and protocols and is, therefore, obliged to conform to their objectives and obligations. As to the application of international law, a new approach was formulated after Independence, as embodied in the Namibian Constitution. Article 144 therein provides that –

[u]nless otherwise provided by this Constitution or Act of Parliament, the general rules of public international law and international agreements binding upon Namibia under this Constitution shall form part of the law of Namibia.

Thus, the Constitution explicitly incorporates international law and makes it part of the law of the land. *Ab initio*, public international law is part of the law of Namibia.¹⁰⁸ No transformation or subsequent legislative act is needed.¹⁰⁹ A treaty will become binding upon Namibia in terms of Article 144 of the Constitution if the relevant international and constitutional requirements have been met.

The 1981 African (Banjul) Charter on Human and Peoples' Rights¹¹⁰ is a human rights treaty that proclaims environmental rights in broadly qualitative terms. It protects the right of peoples both to the “best attainable state of physical and mental health” (Article 16) and to a “general satisfactory environment favourable to their development” (Article 24). Article 24 of the African Charter establishes a binding human-rights-based approach to environmental protection, linking the right to environment to the right to development.¹¹¹

In the *Ogoni* case, for example, the African Commission on Human and Peoples' Rights held, *inter alia*, that Article 24 of the African Charter imposed an obligation on the state to take reasonable measures to “prevent pollution and ecological degradation, to promote conservation, and to secure ecologically sustainable development and use of natural resources”.¹¹² The *Ogoni* case decided by the African Commission on Human and Peoples'

¹⁰⁵ Ruppel (2008a:119).

¹⁰⁶ Cf. Ruppel (2012c).

¹⁰⁷ As far as can be established, Namibia has formally recognised the African Charter on Human and Peoples' Rights in accordance with Article 143 read with Article 63(2)(d) of the Constitution. Thus, the provisions of the Charter have become binding on Namibia and form part of Namibian law in accordance with Articles 143 and 144 of the Constitution. See also Viljoen (2007:549f.).

¹⁰⁸ See Tshosa (2001:79ff.).

¹⁰⁹ Erasmus (1991:94).

¹¹⁰ Hereafter African Charter.

¹¹¹ Van der Linde / Louw (2003:169).

¹¹² See Communication 155/96 available at <http://www.cesr.org/ESCR/africancommission.htm>; accessed 13 April 2010. For further details see *The Social and Economic Rights Action Center and the Center for*

Rights in 2001 and communicated to the parties in 2002 is considered to be a landmark decision with regard to the effective protection of economic, social and cultural rights in Africa, particularly the protection of the right of peoples to a satisfactory environment. The *Endorois* case¹¹³ is considered to be another landmark decision by the African Commission on Human and Peoples' Rights. This decision delivered in November 2009, deals with the displacement of an indigenous community of approximately 60,000 people in Kenya, the Endorois, from their ancestral lands around the Lake Bogoria without proper prior consultations, adequate and effective compensation for the loss of their property, the disruption of the community's pastoral enterprise and violations of the right to practise their religion and culture, as well as the overall process of development of the Endorois people.

Article 24 of the African Charter should also be viewed together with the Bamako Convention and the first Organisation of African Unity (OAU) treaty on the environment, the Convention on the Conservation of Nature and Natural Resources, which predates the African Charter.¹¹⁴ It has to be noted that Namibia is not a signatory to the original Convention. However, Namibia has signed the Revised African Convention on the Conservation of Nature and Natural Resources. The latter was adopted by the Second Ordinary Session of the African Union (AU) Assembly of Heads of State and Government in Maputo, Mozambique, in July 2003. It has, however, not yet come into force. The Bamako Convention, which was adopted after the African Charter, was drafted in reaction to the human suffering caused by the dumping of petrochemical waste. It bans the import of waste to the continent.

The Southern African Development Community (SADC) was established in Windhoek in 1992 as the successor to the Southern African Development Coordination Conference (SADCC), which was founded in 1980. SADC's objectives include the achievement of development and economic growth; the alleviation of poverty; the enhancement of the standard and quality of life; support of the socially disadvantaged through regional integration; the evolution of common political values, systems and institutions; the promotion and defence of peace and security; and achieving the sustainable utilisation of natural resources and effective protection of the environment.¹¹⁵

It might appear that the promotion and protection of human rights is not SADC's top priority as an organisation – one that furthers socio-economic cooperation and integration as well as political and security cooperation among its 15 member states. However, the protection of human rights plays an essential role in economic development as it has an impact on the investment climate, which in turn contributes to growth, productivity and employment creation. Other SADC objectives such as the maintenance of democracy, peace, security and stability refer to human rights, as do the sustainable utilisation of natural resources and the effective protection of the environment. With the 2003 Declaration on Agriculture and Food Security, the SADC community has ascribed substantial importance to some specific objectives laid down in Article 5 of the SADC Treaty.¹¹⁶ The Declaration is of specific

Economic and Social Rights v Nigeria (27 October 2000); Coomans (2003:749-760); Ebeku (2003:149-166).

¹¹³ Communication 276/03 *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council Kenya* available online at http://www.achpr.org/english/Decison_Communication/Kenya/Comm.%20276-03.pdf.

¹¹⁴ Viljoen (2007:287ff.).

¹¹⁵ These are some of the SADC objectives laid down in Article 5 of the SADC Treaty.

¹¹⁶ Namely the promotion of sustainable and equitable economic growth and socio-economic development to ensure poverty alleviation with the ultimate objective of its eradication; the achievement of sustainable

importance for the human right to food, and covers a broad range of human-rights-relevant issues. The SADC Tribunal is the judicial institution within SADC.¹¹⁷

The African Charter, and AU and SADC law automatically form part of Namibian law in so far as the relevant legal instruments have been adopted by the country.¹¹⁸ Despite the absence of a justiciable environmental human right in the Namibian Constitution, Government incurs environmental-rights-based duties in terms of Article 24 of the African Charter.¹¹⁹ Thus, Namibian courts are under the obligation to take judicial notice of the aforementioned international instruments as a source of national law.¹²⁰ In this context, Article 144 is an important constitutional mechanism.¹²¹

4 Concluding Remarks

Environmental human rights cannot be seen in isolation from other human rights. They are not only protected under various international conventions, but interlinked with many fundamental rights and freedoms in the Namibian Constitution. They are not only relevant under the constitutional principles of state policy but beyond. Human rights must be justiciable and their protection must be secured through the courts.¹²² This gives citizens the right to take executive agencies to court, and the judiciary reigns as the authority to adjudicate such matters. The judiciary is most essential in the protection and promotion of environmental human rights. It leads the way in interpreting relevant legislation and settles disputes arising between citizens and/or between citizens and the state. While the inclusion of environmental concerns into human rights jurisdiction is still in its infancy in African jurisprudence, relevant rulings from other courts in the world such as the European Court of Human Rights¹²³ and the Indian Supreme Court¹²⁴ may be taken as examples when it comes to the link between human rights and environmental concerns and the recognition and judicial enforcement of a human right to environment.

¹¹⁷ utilisation of natural resources and effective protection of the environment; and mainstreaming of gender perspectives in the process of community- and nation-building.

¹¹⁸ For a more detailed review of the SADC Tribunal, see Ruppel (2009a, b, c; 2012a); Ruppel / Bangamwabo (2008).

¹¹⁹ Ruppel (2008a:101ff.).

¹²⁰ Du Plessis (2008:193).

¹²¹ Ibid with further references.

¹²² Ruppel (2008a:108-111).

¹²³ *Bukurura* (2002:21).

¹²⁴ *TATAR v Romania* (Application No. 67021/01) Judgment 27 January 2009; *Okyay and Others* (Application No. 36220/97) Judgment 12 July 2005. *Fadeyeva v Russia* (Application No. 55723/00) Judgment 9 June 2005; *Oneryildiz v Turkey* (Application No. 48939/99) Judgment 30 November 2004; *Moreno Gómez v Spain* (Application No. 143/02) Judgment 16 November 2004; *Taskin and others v Turkey* (Application No. 46117/99) Judgment 10 November 2004; *Hatton and Others v United Kingdom* (Application No. 36022/97) Judgment 2 October 2001, see *Heselhaus / Marauhn* (2005:549); *Athanassoglou and Others v Switzerland* (Application No. 27644/95) Judgment 6 April 2000; *Guerra and Others v Italy* (Application No. 14967/89) Judgment 19 February 1998; *Balmer-Schafrroth and Others v Switzerland* (Application No. 22110/93) Judgment 26 August 1997, Reports 1997-IV; *López Ostra v Spain* (Application No. 6798/90) Judgment 9 December 1994; *Powell and Rayner v United Kingdom* (Application No. 9310/81) Judgment 21 February 1990.

¹²⁵ One prominent example of Indian jurisdiction on environmental concerns and fundamental rights is the Delhi vehicular pollution case of *MC Mehta v Union of India* (No. 13029/1985) Judgment 28 July 1998. For further details see Rosencranz / Jackson (2003:228).

CHAPTER 20

ENVIRONMENTAL JUSTICE, COMPLIANCE AND ENFORCEMENT

Oliver C. Ruppel

1 Introduction

Compliance (adherence to legal norms or requirements) and enforcement (actions in response to non-compliance) are essential in the field of environmental law, in which prevention is the golden rule, both for ecological and economic reasons.¹ Several compliance and enforcement measures are available to ensure environmental protection. Apart from environmental litigation in courts as enforcement measures, several compliance mechanisms are available in the pre-litigation phase, starting with administrative measures such as permits, licences, notices and directives. Statutory environmental law provides for a variety of compliance and enforcement measures. In cases where conflicts arise, methods of alternative dispute resolution may be appropriate instead of or prior to court proceedings, which can play an important role in terms of remedial action to protect the environment or to secure compliance, especially when it comes to cases concerned with criminal prosecution or the recovery of damages.

2 Environmental Justice and Advocacy

Today, both in the industrialised and developing parts of the world, a growing body of evidence demonstrates that poor and other disenfranchised groups have been the greatest victims of environmental degradation. The poor and marginalised often still lack access to justice, especially environmental justice. The North-South divide also still needs to be bridged in this respect.² The social impact of degradation increases the vulnerability of specific groups and populations. This vulnerability has become a key element in human rights discussions. Rights and responsibilities regarding the utilisation of environmental resources need to be distributed with greater fairness among communities – globally, regionally and domestically. Therefore, human rights movements increasingly apply a rights-based strategy to confront global environmental devastation and to protect ecological habitats and the planet for future generations.³

Environmental justice as a concept embraces two objectives. The first is to ensure that rights and responsibilities regarding the utilisation of environmental resources are distributed with greater fairness amongst communities. This entails ensuring that poor and marginalised communities do not suffer a disproportionate burden of the costs associated with the development and exploitation of resources, while not enjoying equivalent benefits from their utilisation. The second is to reduce the overall amount of environmental damage, again globally and domestically.⁴ Recognition of the link between the abuse of the human rights of various vulnerable communities and related damage to their environment is expressed in the

¹ Kiss / Shelton (2004:151).

² Beyerlin (2006:259-296).

³ Kiss / Shelton (2004:12ff.).

⁴ Ibid.

concept environmental justice. The scale and urgency of environmental justice are beyond past challenges: solving them will perhaps mean destabilising and reorienting global economic growth.⁵

Environmental justice includes two complementary dimensions: *procedural* and *substantive*. The procedural dimension is divided into three rights: the right to information, the right to participate in decision-making, and the right of access to justice in environmental matters. Environmental rights still face a multitude of challenges of procedural nature. To what extent these challenges are relevant depends, amongst others, on the following:

The question of whether and under what conditions an individual, organisation or state has the right to commence action regarding a right to environment needs to be addressed. The issue of *locus standi* is of great relevance in respect of judicial enforcement of the right to environment and needs specific attention. The Indian experience with the establishment of public interest litigation has shown that environmental concerns can be advanced more efficiently by enabling any citizen to appeal directly to the Supreme Court.⁶

Another focal point deals with the question of who would be the proper addressee of claims dealing with a right to environment, and whether a right to environment is to be enforced vertically between individuals and/or horizontally between individuals and states. Moreover, the question whether environmental rights can be enforced at the national or international level is of particular interest in the globalising world, also with regard to the concept of regional integration, which is playing an increasingly important role in sub-Saharan Africa.⁷

Namibia is at the dawn of environmental advocacy, which refers to the act of speaking out in favour of, supporting, and defending the environment with the aim of having an impact on a decision or policy. Environmental advocates seek to preserve the natural and man-made environment, and to protect the relationships that people have with their environment. Cities, villages, communities and individuals can experience a wide array of threats to the environment that may require advocacy. Business interests may be moving forward with a development project such as a dam, without addressing the needs and interests of the communities that will be affected by it. A factory may be polluting air or water, thereby posing risks to public health; or the Government or other resource users might be proposing an activity that threatens humans and wildlife alike. Many problems can potentially be addressed through environmental advocacy. Through environmental advocacy, environmental rights can be strengthened. Through more public participation in environmental affairs and more participatory democracy,⁸ environmental justice is more likely to be achieved. Unfortunately, more often than not, the people who suffer from violations of their environmental rights are incapable of instituting litigation due to a number of factors, including poverty, access to information, and access to justice.⁹

⁵ Thus, the issue of climate change prompts significant questions about justice and distribution. There is an acute need for intelligent collective action focusing on the human suffering that climate change will cause in future. As a matter of law, the human rights of individuals need to be viewed in terms of state obligations: it is the state that is responsible for human rights fulfilment. This assignation of such responsibility may seem inadequate in the context of climate change, where social and economic rights in poor countries are threatened primarily by actions undertaken elsewhere. The special responsibility of wealthy countries to mitigate climate change remains – and is widely accepted. See also Kiss / Shelton (2004:12ff.).

⁶ Rosencranz / Jackson (2003:228).

⁷ Ruppel (2009c:277ff.).

⁸ Ruppel / De Klerk (2009:2-4).

⁹ Ferris (2009).

3 Administrative Procedures for Compliance and Enforcement

Administrative procedures play a major role in terms of compliance and enforcement. Some examples of administrative compliance and enforcement measures will be highlighted in the following.

One of the core mechanisms to secure adherence to environmental legal norms or requirements is the system of permits or licences. Specific activities with an impact on the environment may only be carried out, if a permit or licence is granted by the competent authority as required by many environmental statutes. Specific examples of licences under statutory environmental law include the following:

An environmental clearance certificate as required by the Environmental Management Act No. 7 of 2007 (EMA) for activities having an impact on the environment can be seen as a licensing mechanism to ensure that the general principles of environmental management as laid down in Section 3 of the Act are applied.

The Water Act No. 54 of 1956 for example requires a licence for the abstraction of subterranean water. Similarly, the Water Resources Management Act No. 11 of 2013, which will repeal the Water Act, requires licences to abstract or use water and to discharge effluents. Drilling or construction of boreholes or wells is also subject to a licence issued by the Minister. Specific licences are needed for prospecting and mining activities according to the Minerals Prospecting and Mining Act No. 33 of 1992 such as reconnaissance licences, exclusive prospecting licences, mining licences or mineral deposit retention licences.

To ensure environmental protection, the Forest Act No. 12 of 2001 provides that unless authorised by the Act or a licence, it is not allowed to cut, destroy or remove vegetation as defined by the Act. The Act furthermore demands specific licences with regard to the use of forest or forest produce, e.g. to harvest, to graze or to carry on agricultural activities, to carry out mining activities, or to construct roads or buildings.

Directives or compliance orders are further effective mechanisms to secure compliance with regulatory frameworks. Environmental officers for example, who are appointed to help enforcing the Environmental Management Act, have the competence to issue compliance orders if there is reason to believe that a person has contravened the Environmental Management Act or violated a condition of an environmental clearance certificate issued under the Act. The penalty for a failure to obey a compliance order issued under Section 20 of the EMA is a fine of up to N\$500,000 or imprisonment for up to 25 years, or both.

The Water Resources Management Act provides for various forms of directives, which can be given by the Minister, e.g. to water service providers who fail to comply with a licence (Section 43) or directives related to measures for the prevention of water pollution (Sections 68 and 89) or in cases of failure to comply with a licence to discharge effluents (Section 83). For the purpose of promoting the sustainable use and protection of aquifers the owner or occupier of land may be directed by the Minister to seal off any borehole situated on the land (Section 66). Furthermore, the Minister may give directives in cases of risks related to the safety of dams (Section 95).

4 The Role of Namibian Courts in Environmental Matters

Environmental litigation can play an important role in shaping and preserving the quality of life. Namibia has enacted numerous statutes designed to improve air and water quality, better cope with waste, protect the wild life and endangered species, and establish rules for the management of land and marine resources. These statutes are deemed to become more and more subject in law suits, filed by affected industry, state and local governments, indigenous

groups, conservation groups and private citizens. Environmental litigation entails a variety of highly specialised legal fields, *inter alia*:

- Global climate change litigation;
- Environmental criminal litigation;
- Civil environmental enforcement litigation;
- Insurance recovery for environmental liabilities;
- Natural resource damages litigation.¹⁰

Courts have various functions related to matters concerned with environmental protection. On the one hand, courts are involved in classical litigation. On the other hand, courts play a vital role when it comes to the implementation of environmental laws.

Courts can for example be approached to obtain interdicts, which are important mechanisms in terms of the conservation of the environment in that they put a temporary or final stop present or future infringements, which might have negative impact on the environment.¹¹ An interdict secures the termination of offending actions or conduct, or the abandonment or alteration of offending procedures. Interdicts can also require the performance of a particular action.¹² Upon application, the court can grant an interdict provided that the applicant can cumulatively satisfy the following requirements: (1) a clear right; (2) an unlawful interference with that right; (3) the absence of any other satisfactory remedy.¹³

Courts are also approached in environmental matters for judicial review of administrative decisions. Such enforcement mechanisms of administrative law nature, are contained in various environmental law statutes with the Environmental Management Act leading the way. Appeals can, for example, be brought to the High Court if a person feels aggrieved by a decision of the Minister related to the review of decisions of the Environmental Commissioner or to compliance orders (Section 51 of the Environmental Management Act). In the appeal, the High Court only considers legal questions but not facts. Similarly, the Minerals Prospecting and Mining Act No. 33 of 1992 provides for a right to appeal to the High Court if a person feels aggrieved by a decision of the Minerals Ancillary Rights Commission (Section 113).

Deciding on matters regarding compensation for environmental damage also falls into the responsibility of Namibian Courts. An example for this can be found in the Water Resources Management Act No. 11 of 2013, which provides that the court by which a person is convicted may upon a written request, “after enquiry into the nature and extent of the damage, order the person convicted to pay, in addition to any other penalty that may be imposed, compensation to the person for the damage suffered or, in the case of damage to a water resource, compensation to the Minister representing the actual or expected cost of restoring or rehabilitating the water resource or its dependent ecosystems.”¹⁴ Further invaluable environmental law enforcement mechanisms exercised by courts relate to criminal offences.

¹⁰ Perlman (2009).

¹¹ Du Plessis *et al.* (2013:121).

¹² Ibid.

¹³ Amoo (2015:198).

¹⁴ Section 128.

5 Criminal Law

The role of criminal law for environmental protection is significant. Environmental crimes (potentially) harm the environment including all natural resources and/or the health and well-being of people and criminal law ensures that non-compliance with environmental legal standards results in criminal consequences such as fines or even imprisonment. Cancellation of environmental licences can also result from a conviction. Criminal law has a deterrent effect and can therefore contribute to environmental protection. All statutes in the ambit of Namibian environmental legislation contain provisions with criminal sanctions. The teeth of environmental legislation in terms of offences are sharp. However, relatively few criminal sanctions are being applied vigorously.

The Environmental Management Act as the main environmental framework legislation contains extensive provisions pertinent to crimes, penalties and forfeiture. The magistrate's court has jurisdiction to impose any penalty provided for in terms of the EMA as laid down in Section 53.

It is a crime under the EMA if waste is disposed anywhere else than at a waste disposal site (Section 5). With regard to environmental clearance certificates, the EMA stipulates that it is a crime to proceed with activities listed in the EMA without an environmental clearance certificate or not to comply with conditions set out in the environmental clearance certificate. To forge an environmental clearance certificate; to give false information or to withhold relevant information in an application for an environmental clearance certificate are further crimes relating to environmental clearance certificates (Sections 27, 34, 37 and 43). Moreover, certain activities hindering environmental officers to perform their duties are qualified as crimes under the EMA, such as giving false information to an environmental officer or refusing to answer questions asked by an environmental officer, unless there is a lawful excuse (Section 22). Criminal prosecution of directors, members, managers, trustees and other officers for crimes for which a legal entity is responsible is anchored in Section 53 of the EMA, another important enforcement mechanism in view of major environmental transgressions – especially pollution – by corporations. Section 54 of the EMA contains provisions regarding forfeiture with the aim to remove the incentives to commit a crime. Any item related to the commission of a crime might have to be forfeited to the State.

Similar provisions are contained in other environmental statutes such as the Marine Resources Act No. 27 of 2000 which for example states in Section 54(1):

Where a court convicts a person of an offence under this Act the court may, in addition to any other penalty it may impose

- (a) order any marine resource, fishing gear, vessel, vehicle or item in respect of which the offence was committed or which was used in connection with the commission thereof, to be forfeited to the State, subject to paragraph (c);
- (b) cancel or suspend, for such period as the court may consider fit, any licence or other authorization issued or given to such person under this Act; or
- (c) where the marine resources, fishing gear, vessel or item have been released under section 55(4), order the amount guaranteed in respect of the value thereof under that section to be forfeited to the State.

The penalties in the EMA vary and range from fines up to N\$500,000 or imprisonment up to 25 years or both. According to Section 27, fines paid under the EMA as well as financial resources resulting from forfeiture are paid into the Environmental Investment Fund of Namibia, which is established under the Environmental Investment Fund Act No. 13 of 2001. These financial resources are used for measures aiming at environmental conservation.

The fact that criminal law is an important component of compliance and enforcement can be seen in respective provisions in the various environmental statutes, which all link certain penalties to non-compliance. Some examples of criminal law implications of statutory environmental law are sketched in the following:

Section 20 of the Nature Conservation Ordinance of 1975 as amended in 1986 and 1990 provides that illegal hunting is an offence and a fine not exceeding R200,000 or imprisonment for a period of not exceeding twenty years or both may be imposed (for illegal hunting of elephants or rhinos; the fines for hunting other specially protected game range from R20,000 to five years imprisonment or both; the Ordinance contains various other provisions regarding illegal hunting). Further offences specified in the Ordinance relate among many others to the illegal entering of game parks and nature reserves (Section 18); illegal picking of indigenous plants (Section 24); import and export of game and wild animals and their skins (Section 49) and illegal catching of fish in inland waters (Section 71).

The Water resources Management Act contains a catalogue with water related offences (Section 127) *inter alia* stating that it is an offence to abstract and use or dispose water otherwise than in accordance with a licence under the Act or to cause a water resource to be polluted by any act or omission unlawfully and intentionally or negligently.

Part VIII of the Aquaculture Act No. 18 of 2002 deals with offences and penalties and stipulates that a person commits an offence who without written permission introduces into any Namibian waters any species of aquatic organisms or any genetically modified aquatic organism or transfers any species of aquatic organisms from one aquaculture facility to another. To engage in aquaculture without a licence is also considered an offence (Section 39).

Examples of offences under the Forest Act (see Section 45 for a catalogue of offences) relate to damage or destruction of vegetation in a protected area or the destruction or removal of living trees, bushes or shrubs growing within 100 metres of a river, stream or watercourse.

6 Conflict Resolution

6.1 Environmental Litigation

Disputes relating to environmental issues are often characterised by a blurring of boundaries requiring professional expertise, time-consuming processes, high costs and irreversible damage to the environment or to public health. In the case of matters relating to the development and construction of infrastructure, for example, the advantages of development are almost always accompanied by heavy social and public costs. The production of goods almost inevitably (and the provision of employment) pollutes air, water and soil, the construction of roads takes place at the expense of open spaces, the lack of a clear suburbanisation policy results in unwanted urban sprawl, imposing strain on the municipal systems. There are many other examples. In a nutshell: environmental disputes usually occur where different interests collide.

Litigating, for example, industries and corporations that cause environmental damage can be quite demanding. Many businesses prefer cheaper methods of production, but these are far more often than not the ones' that produce more pollution. Even in the face of strict regulation, companies sometimes act against the law. Taking these companies to court can prove to be a challenging endeavour. In order to prepare a successful case, plaintiffs must be able to link the damage to the alleged source. For the lawsuit to make it to court, the plaintiff must have credible evidence that he/she was exposed to, for example harmful substances. A resident may develop cancer and sue a nearby chemical manufacturer, but to prove it was that specific chemical in the water or in the air that caused the cancer, as opposed to, e.g. a genetic predisposition, requires substantial scientific evidence.

Moreover, taking a large corporation to court can be expensive. Whenever corporations' profits and public perceptions are at stake, these are often quite willing pay for highly skilled (and expensive) legal teams to preclude an unwanted negative outcome. One strategy is to draw the trial out as long as possible, as the prospect of spending years in court can wear plaintiffs down. Defence teams often use this strategy to bully victims to agree to 'more favourable' out-of-court settlements.

In Namibia, environmental litigation, with very few exceptions, has not yet been an issue. For this purpose lawyers need to be trained in the theory and practice of environmental litigation. Environmental litigation is an integral part of the environmental regulatory instruments and the designing of environmental policy. The role of lawyers in environmental litigation should become clearer when it comes to effective project planning, consultation and sound environmental management practices. Lawyers need to be familiarised with specific litigation strategies, the litigation process and in particular the use of expert witnesses. Environmental litigation is not only a means to enforce the law by private individuals using common law and statutory avenues. Environmental litigation can also be used against Government decisions and by Government, including civil litigation and criminal prosecutions.

6.2 Alternative Dispute Resolution (ADR) in the Area of Environmental Conflict

6.2.1 General Features of ADR

ADR is an important set of mechanisms, which are beneficial to conflicts related to the environment. Although litigation plays an important role when it comes to environmental disputes, ADR methods are increasingly being used to address environmental conflicts. Even environmental statutes provide for ADR mechanisms to resolve certain disputes.

ADR generally refers to informal dispute resolution processes with the involvement of a professional third party who assists to resolve the dispute in a way that is less formal than is done in the courts. The most common forms of ADR are conciliation, mediation, facilitation, negotiation and arbitration. These methods differ from each other in the degree of the parties' control over the process and the extent to which parties bind themselves to the outcome of the ADR proceedings.

Forms of ADR	
Conciliation	Informal process in which a third party (the conciliator) who does not take part in the process itself brings disputing parties together in order for them to resolve their dispute.
Mediation	Consensual dispute resolution process. Neutral third party (mediator) helps parties to identify issues, clarify perceptions and explore options for a mutually acceptable outcome. Generally, the mediator offers the opportunity to expand the discussion beyond the issues in dispute and to focus on developing creative solutions instead of giving own opinions regarding outcomes of the dispute.
Facilitation	Process in which a neutral third party (facilitator) uses his/her skills to promote communication and understanding of negotiable issues.

	Facilitator focuses purely on moderating the discussion among the parties.
Negotiation	Process whereby the parties involved in a conflict discuss options for resolution directly with each other. The parties themselves control the decision-making and meeting processes.
Arbitration	Arbitration can be voluntarily or compulsory and is similar to court proceedings, but less formal and generally private. The arbitrator, a third-party neutral, holds a confidential hearing with the disputing parties. Based on the facts and evidence presented, a legally binding award is rendered which may be subject to appeal.

General features which apply to all ADR methods include that the parties decide to resolve the dispute out of court and that the parties to the conflict decide upon the process and the result of dispute resolution themselves. Compared to litigation, ADR is based on more direct participation by the disputants, rather than being run by lawyers, judges, and the state. In most cases, ADR is voluntary, but may also be mandated by the law as a first step before parties can take a case to court. The objectives of ADR are to find a solution to the conflict agreeable for all parties and to resolve the dispute promptly and effectively. Compared to litigation, ADR can be less costly, less formal, less competitive and less time-consuming. Specific benefits of ADR include the following:

- Increase in efficiency;
- Reduction of time taken;
- Encouragement of constructive approaches;
- Sense of ownership by parties to the conflict;
- Reduction of on-going disputation;
- Courts can still enforce decisions reached through ADR.

Private business actors are using mediation in many parts of the world with increased regularity in order to resolve commercial environmental disputes, such as those involving pollution indemnification or regulatory compliance. Mediation has also been used to address prosecutorial disputes between Government and business. Finally, and more surprisingly, parties are turning to mediation to address seemingly intractable disputes over deeply rooted values, which are often the source of the environmental conflict.

In the resolution of environmental disputes, adversarial processes (like litigation) are only advantageous under certain circumstances. This is the case, when there is an imbalance in power between disputants or when one or both parties aim to establish a precedent in an evolving area of the law. Consequently, litigation and mediation importantly remain complementary of one another.¹⁵ Against this backdrop, there are numerous reasons why parties choose to mediate an environmental dispute, even where litigation is an option. Mediated processes, for example, help parties control dispute resolution costs that might otherwise escalate. These cost savings are advantageous regardless of whether a dispute

¹⁵

Ruppel (2007).

concerns two businesses, a Government prosecutorial action, or a citizen suit against developers. Mediated processes also allow people to maintain control over the dispute without delegating decision-making power to a third party or divulging confidential information. As a result, in mediation, parties can explore innovative means of dispute settlement that may offer joint gains for the parties involved, and also improve environmental quality. In mediated processes, parties are also more likely to develop parallel dispute and information management processes such as joint fact-finding sessions to navigate the inevitable scientific and technical complexities and uncertainties that exacerbate environmental conflict. Mediation allows parties to sit around the negotiating table and create the solution together. However, an agreement reached through mediation should always be formally drawn up so that the agreement can be implemented and enforced.¹⁶

6.2.2 ADR in Namibian Statutory Law

Several Namibian environmental statutes contain mechanisms for out-of-court proceedings. Of particular relevance is the duty of the Ombudsman enshrined in the Constitution to investigate complaints “concerning the over-utilization of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia”.¹⁷ To this end, the Constitution specifies that the Ombudsman makes use of various methods of ADR, particularly negotiation and compromise. The environmental mandate of the Ombudsman is dealt with in more detail in Chapter 21.

Section 121 of the Water Resources Management Act explicitly provides for mediation of disputes and is a good example of ADR in the area of environmental conflicts. Section 121 reads as follows:

- (1) If a dispute arises between two or more persons or between any person and the Minister, the Minister may, on the Minister’s initiative or at the request of any party to the dispute, direct that the dispute be dealt with by way of mediation involving an independent mediator.
- (2) A directive under subsection (1) must specify the period within which the mediation process must commence, and request the parties to select by agreement an independent mediator and determine the place and time of the mediation proceedings.
- (3) If the parties fail to select a mediator, the Minister, by agreement with the parties, may appoint the mediator, who may be a staff member of the Ministry, if the Minister is not a party to the dispute.
- (4) The parties, by agreement, may at any time during the course of mediation proceedings appoint another person to act as mediator.
- (5) The contents of discussions and submissions made during the mediation proceedings are privileged and may not be used in evidence in any court of law, unless the parties agree otherwise.

7 Concluding Remarks

In Namibia, more than 25 years after Independence, a legal culture upholding environmental rights is still in the initial phase of being created. On paper, a broad variety of laws directed at environmental protection exists; and in principle, these laws also provide for effective mechanisms to ensure compliance with and enforcement of these environmental laws. What,

¹⁶ Ibid.

¹⁷ Article 91(c).

however, remains a challenge is the full implementation of these provisions. It seems essential to strengthen the Executive and the Judiciary in terms of manpower and know-how in order to ensure that the principles anchored within the broad field of Namibian environmental laws are implemented in due consideration of all aspects of good governance, including transparency, reliability, accountability, predictability and the rule of law.

The holistic fulfilment of the Constitution's environmental principles regarding state policy requires even more political will and public participation at different levels. There is also a need for the Namibian society as a whole, and individuals in particular, to pass on a healthy and viable environment to future generations. For this purpose, it is imperative that Namibia considers a healthy and viable environment to be (at least implicitly) a fundamental right of its citizens and is ready to reaffirm its international commitments regarding the protection of the environment. The right to information, public participation and the right of access to justice should also be underlined in this respect.

The courts' role in promoting environmental justice cannot be overestimated. Internationally, the experiences of courts that have been tasked to decide over cases dealing with environmental rights show that the judiciary is crucial when it comes to interpreting existing law in a way that takes into account recent developments incorporating environmental concerns. In the 2009 South African case of *Lindiwe Mazibuko and Others v City of Johannesburg and Others*, O' Reagan J held that –

[t]he purpose of litigation concerning the positive obligations imposed by social and economic rights should be to hold the democratic arms of Government to account through litigation. In so doing, litigation of this sort fosters a form of participative democracy that holds Government accountable and requires it to account between elections [for] specific aspects of Government policy. When challenged as to its policies relating to social and economic rights, the Government agency must explain why the policy is reasonable...¹⁸.

Litigation concerning environmental rights cannot only lead to more environmental justice for the individual, but will also exact more detailed accounting from Government and, with an attendant beneficial influence on the policy-making process. In this context, the Namibian judiciary will inevitably be confronted with the dilemma of *judicial activism* versus *judicial self-restraint*.¹⁹ While the latter refers to a situation in which the judge tries to avoid developing the law beyond its clearly established parameters in order not to take over a lawmaker's function, *judicial activism* describes a situation in which judges extend or modify certain legal provisions as living legal instruments by interpreting them in the light of present-day conditions.²⁰

In this spirit it is hoped, that in the course of dealing with practical cases and a subsequent increase in environmental rights litigation and advocacy, Namibian courts gradually clarify the substance of those rights, while also drawing on international experiences.

Environmental mediation can be a flexible alternative permitting a wider view of the dispute and the reaching of agreements that extend the range of possible solutions (unlike a judicial process, which is usually characterised by its focus on a very limited aspect of the problem and which is bound by procedural rules). After all, it is the complexity of environmental disputes that often requires an overall and comprehensive viewpoint and creative solutions.

¹⁸

Lindiwe Mazibuko and Others v City of Johannesburg and Others, Case CCT 39/09, [2009] ZACC 28.

¹⁹

The term was coined by Mahoney (1990:57-88).

²⁰

White / Boussiakou (2009:42).

CHAPTER 21

THE OMBUDSMAN AND THE ENVIRONMENT

Katharina Ruppel-Schlichting

In 1982, the United Nations General Assembly requested the Lusaka-based United Nations Institute for Namibia (UNIN), to prepare a comprehensive document on all aspects of socio-economic reconstruction and development planning for an independent Namibia.¹ The document recommended the creation of an institution based on the model of the Ombudsman, which has its origin in Sweden.² At the beginning of the nineteenth century, the Swedish Parliamentary Ombudsman was instituted to safeguard the rights of citizens through a supervisory agency independent of the Executive. The tasks of Ombudsmen, making Government accountable, have meanwhile been developed to a sophisticated level. Today, such institutions have been adopted in many countries all over the world and in many countries of southern Africa.³ In some countries there have also been developments of Ombudsman schemes in the private sector. Within the Southern African Development Community (SADC), all member states have institutions that keep an eye on the proper execution of power and the protection of human rights, even though not all these countries use the term Ombudsman.⁴

Usually, the Ombudsman is established per constitutional stipulation as an official, appointed by Government or Parliament. This official is charged with representing the interests of the public by investigating and addressing complaints reported by individual citizens. The major advantage of an Ombudsman is that he/she examines complaints independently of those state institutions charged with irregular conduct. In Namibia, the Office of the Ombudsman was constitutionally established, at Namibian Independence on 21 March 1990. Since then, two Acting Ombudsmen, one Deputy Ombudsman, two Ombudsmen and one Ombudswoman have been at the helm of the Office.⁵

1 Legal Foundations

The intention behind this institution, the Ombudsman, is to protect and maintain the respect of the State for the rights of the individual citizen, to promote the rule of law, and to promote and

¹ UNIN (1986). UNIN was established in 1976 by the United Nations Council for Namibia. The document was prepared in cooperation with the South West Africa People's Organisation (SWAPO), the Office of the United Nations Commissioner for Namibia and the United Nations Development Programme.

² UNIN (1986:970).

³ Cf. Kasuto / Wehmhörner (1996).

⁴ Ombudsmen are established in Angola, Botswana, Lesotho, Malawi, Swaziland, Zambia, Zimbabwe, Namibia, Mauritius, and the Seychelles. In Mozambique, the institution of an Ombudsman was established by constitutional amendment in 2005, which is in the process of being realised. In Tanzania similar functions to those typically held by an Ombudsman are performed by the Permanent Commission of Enquiry. In South Africa, the title Ombudsman was changed to 'Protector-General', Madagascar has established an institution of a public protector (*Défenseur du Peuple*) and the Democratic Republic of Congo constitutionally provides for five institutions to support democracy, including the National Observatory for Human Rights. (*L'Observatoire National des Droits de l'Homme*) as well as a Commission for Ethics and Anti-corruption (*La Commission de l'éthique et de la lutte contre la corruption*).

⁵ The Office is headed by Ombudsman John Walters since 2004.

advance democracy and good governance.⁶ The Namibian Bill of Rights in Chapter 3 of the Constitution contains a provision dealing with the enforcement of fundamental human rights and freedoms. Article 25(2), reads as follows:

Aggrieved persons who claim that a fundamental right or freedom guaranteed by this Constitution has been infringed or threatened shall be entitled to approach a competent Court to enforce or protect such a right or freedom, and may approach the Ombudsman to provide them with such legal assistance or advice as they require, and the Ombudsman shall have the discretion in response thereto to provide such legal or other assistance as he or she may consider expedient.

However, the really relevant legal provisions with regard to the Ombudsman are to be found in Chapter 10 of the Namibian Constitution as well as in the Ombudsman Act⁷. They include provisions on the establishment of the office and on his/her political independence, appointment and term of office, functions and powers of investigation, amongst others.

According to Article 91 of the Constitution, the mandate of the Ombudsman in Namibia relates to three widely-defined categories:⁸ human rights, administrative practices and the environment. Moreover, the Ombudsman contributes proactively towards education and development.⁹ Before the Namibian Constitution Second Amendment Act¹⁰ came into force, the Ombudsman's mandate also included the fight against corruption. However, with the amendment, the word corruption was removed from the list of functions of the Ombudsman in Article 91 in order to avoid a duplication of functions between the Office of the Ombudsman and the Anti-Corruption Commission of Namibia, which was established by the Anti-Corruption Act¹¹, and inaugurated in early 2006. Thus, corruption-related complaints are now to be followed-up by the Anti-Corruption Commission (ACC).

Generally speaking, the Ombudsman in Namibia investigates complaints concerning violations of fundamental rights and freedoms, and regarding the administration of all branches of Government. Violations are rectified by attempting a compromise between the parties concerned, or by bringing the matter to the attention of the authorities, by referring the matter to the courts or by seeking judicial review.

2 Basic Characteristics of the Ombudsman in Namibia

To ensure citizens have an avenue, open to report complaints, free of red tape and free of political interference, the Namibian Ombudsman is politically independent, impartial, fair, and

⁶ Kasuto / Wehmhörner (1996:118).

⁷ No. 7 of 1990.

⁸ For more details on the mandates of the Ombudsman see Ruppel / Ruppel-Schlichting (2010).

⁹ The Office of the Ombudsman provides for outreach programmes and specific human rights education, in order to enhance public education. These programmes are carried out in collaboration with NGOs, community leaders, local authorities, etc. The Office of the Ombudsman has also conducted several awareness campaigns, and continues to do so. Such campaigns take the form of public lectures, community meetings, or the distribution of newsletters and brochures, to name but a few. Furthermore, during April 2006, in collaboration with NGOs, civil society organisations and the Council of Churches in Namibia, the Ombudsman established the Ombudsman Human Rights Advisory Committee. The latter Committee consists of 20 members of the afore-mentioned institutions, who together create a forum for dialogue on all aspects of human rights. For more detail on specific awareness campaigns undertaken by the Office of the Ombudsman, see Walters (2008:122f.).

¹⁰ No. 7 of 2010.

¹¹ No. 8 of 2003.

acts confidentially in terms of the investigation process.¹² Negotiation and compromise between the parties concerned are the main objective when handling complaints.¹³

Different acts or non-actions can give rise to complaints under the competence of the Ombudsman. They include the failure to carry out legislative intent, unreasonable delay, administrative errors, abuse of discretion, lack of courtesy, oppression, oversight, negligence, inadequate investigation, unfair policy, partiality, failure to communicate, maladministration, unfairness, unreasonableness, arbitrariness, inefficiency, violation of law or regulations, abuse of authority, discrimination, and all other acts of injustice.

Complaints may be submitted to the Office of the Ombudsman by any person, free of charge and without specific formal requirements. The Office of the Ombudsman cannot investigate complaints regarding court decisions, however. The Office cannot assist complainants financially or represent a complainant in criminal or civil proceedings. Authorities which may be complained about include Government institutions,¹⁴ parastatals,¹⁵ local authorities and, in the case of the violation of human rights or freedoms, private institutions and persons.¹⁶ In 2009, complaints were brought against several Ministries, the Namibian Police, Prison Service, and others.¹⁷ A statistical analysis of cases taken up by the Ombudsman's office during the period 2007–2009 shows that among those objections against Government institutions, around 65% were directed at the Ministry of Justice and the Namibian Police, and prison-related matters.¹⁸

In order to effectively fulfil his or her functions, the Ombudsman has to be impartial, fair, and independent. Independence is probably the most fundamental and inviolable value for the successful functioning of the Ombudsman's office.¹⁹ This is emphasised in Article 89 of the Constitution, which explicitly provides that “[T]he Ombudsman shall be independent and subject only to this Constitution and the law” and that

[N]o member of the Cabinet or the Legislature or any other person shall interfere with the Ombudsman in the exercise of his or her functions and all organs of the State shall accord such assistance as may be needed for the protection of the independence, dignity and effectiveness of the Ombudsman.

The underlying rationale for independence is that an Ombudsman has to be able to conduct fair and impartial investigations, be credible to both complainants and the authorities that may be reviewed by the Office of the Ombudsman.²⁰ There are several determining factors, which, taken as a whole, serve to secure the independence of the institution. These factors are related to the positioning of the institution within the legal framework, the method of appointing and removing an incumbent from office, accountability, funding and personnel issues, enforcement mechanisms, and the investigation process.²¹

¹² Tjitendero (1996:10). As to the characteristics of a classical Ombudsman in general see Gottehrer / Hostina (1998).

¹³ Article 91(e) of the Constitution and Section 5(1) of the Act.

¹⁴ Including Ministries, the National Assembly, the National Planning Commission, and the Attorney-General.

¹⁵ Including NamPower, Telecom, NamWater, NamPost, and the Namibian Broadcasting Corporation.

¹⁶ Gawanas (2002:104).

¹⁷ Office of the Ombudsman (2010:29ff.).

¹⁸ Ibid:29.

¹⁹ See Ruppel-Schlichting (2008:277).

²⁰ UNDP (2006:12).

²¹ Ruppel-Schlichting (2008:277).

In terms of functional and political autonomy, it is essential that the Ombudsman is independent of the institutions or organisations he/she reviews.²² If this were not the case, there would be an increased risk of serving the interests of the reviewed organisation, and complaints would not be dealt with in an impartial manner based on examination and analysis of the facts and the law. Provision for the independence of the Ombudsman from the organisations he/she reviews is made in Article 89(2) of the Constitution. Legislative control is only permissible by way of the Ombudsman's appointment, reappointment or removal from office, with strict preconditions attached to the latter, as regulated by Article 94. To have the Ombudsman's independence supported and acknowledged remains a challenge in practice:

the ‘battle’ to have the Ombudsman’s independence supported and indeed acknowledged, remained a problem; this is mainly attributed to the fact that the Office of the Ombudsman is a directorate situated within the Ministry of Justice and is treated by the Ministry as such.

To name a few examples, the Ombudsman cannot travel or designate his staff to travel within or outside of Namibia without the explicit approval of the Permanent Secretary; the new office in Ongwediva still does not have furniture, because the Ombudsman is not provided with his own budget for furniture, but has to request furniture through the Ministry’s administrative main division, where funds for furniture are centralised. This means that the Ombudsman has to compete with other directorates for resources and is subjected to delays caused by the staff of the Ministry.²³

In Namibia, the establishment of the Office of the Ombudsman rests on two pillars. The first of these, the legal authority, is found in the Constitution. The Constitution of Namibia also authorises the legislative body to enact statutory law to amplify the Ombudsman’s powers and responsibilities. This law has duly taken the form of the Ombudsman Act. By integrating the institution of the Ombudsman into the Constitution, which is the supreme law of the land,²⁴ the permanence and authority of the institution is underscored, since any constitutional amendment is subject to strict conditions. The aforementioned measure creates stability for the office, and lends credibility to it in terms of public perception. The Ombudsman is thus free to investigate cases without fear that the office’s activities will be hampered by political considerations, that it will easily be closed down or restricted in its tasks.

The Ombudsman is appointed by the President on the recommendation of the Judicial Service Commission.²⁵ The latter consists of the Chief Justice, a judge appointed by the President, the Attorney-General, and two members of the legal profession.²⁶ The appointment process is initiated by the Judicial Service Commission’s recommendation and followed by the formal act of proclamation by the President. The two-stage appointment process intends to make sure that the Ombudsman is independent of any agency. If the Ombudspersons were not independent of the agency being reviewed, he/she could be subject to pressures that would reduce the credibility of the institution. All appointments of Ombudsmen to date have observed this

²² An example of the independence of the Ombudsman in Namibia is associated with a Government directive that prohibits offices, ministries and agencies to advertise in one specific newspaper. The Ombudsman, however, does not follow this directive, demonstrating his independence. To reach the public, the Ombudsman considers it necessary to approach the public in all newspapers. Interview with Ombudsman J Walters with OC Ruppel, 12 August 2008. See also Blaauw (2009:18).

²³ Office of the Ombudsman (2014:3).

²⁴ Article 1(6), Namibian Constitution.

²⁵ Article 90(1), Namibian Constitution.

²⁶ Article 85(1), Namibian Constitution.

constitutional two-stage appointment process.²⁷ With regard to the appointment of an acting or deputy Ombudsman, respective provisions are contained in the Ombudsman Act.²⁸ Strict selection criteria in terms of personal qualifications are applied to warrant that the Ombudsman is not subject to further control:

The Ombudsman shall either be a Judge of Namibia, or a person possessing the legal qualifications which should entitle him or her to practise in all the Courts of Namibia.²⁹

The Ombudsman enjoys a fixed, long term of office – which is another way of securing independence from actual political developments. Article 90(2) of the Constitution provides that the Ombudsman holds office until the age of 65. However, the retiring age may be extended by the President to the age of 70. No further provision is contained in the Act as to the term of office, which implies that, regardless of the age at the time of appointment, the Ombudsman theoretically holds office until the age of 65 or 70, respectively. The Ombudsman Act, however, states that the appointment of the Ombudsman is required to be in accordance with such terms and conditions as the President may determine. Many legal systems providing for the establishment of the institution of Ombudsman have a time restriction on the term of office, combined with the possibility of an extension. In light of especially the independence of the institution, a long, fixed term of office, subject to a time limit with the option of reappointment or extension seems to more acceptable, than an indefinite term of office. Experience has shown, however, that the possibility of one person holding the office for decades remains theoretical. Before the expiry of the Ombudsman's term of office, the Ombudsman can only be removed from his office subject to the tight requirements of Article 94 of the Constitution. The President, acting on the recommendation of the Judicial Service Commission, is empowered to remove the Ombudsman from office only for specified causes, e.g. incapacity, or gross misconduct. This guarantees that the Ombudsman will not be removed for political reasons or just because the results of investigations have offended those in political power in the legislative body.

Following the principle of immunity from liability and criminal prosecution that is granted to heads of state, it is considered appropriate to grant immunity to an Ombudsman for acts performed under the law. The Southern African Conference for the Institution of the Ombudsman in its resolutions and recommendations provides that

[t]he Ombudsman and members of his/her staff should not be personally liable for anything that they do in the due course of their duties, provided that liability be attached to the Institution for the Ombudsman and his/her staff for wilfully committing or omitting anything in bad faith.³⁰

Namibia's Ombudsman Act provides for a limitation of liability in respect of anything done in good faith under any provision of the Act.³¹ This applies to the Ombudsman³² as well as to his/her deputy and other office staff. According to Section 2(4) of the Ombudsman Act, the Ombudsman is not permitted to perform remunerative work outside his or her official duties without the permission of the President.

²⁷ So far, three Ombudsmen have taken office: the late Fanuel J Kozonguizi in 1992, Bience Gawanas in 1996, and John Walters in 2004.

²⁸ Section 2.

²⁹ Article 89(4), Namibian Constitution.

³⁰ The Conference was held in November 1995 in Swakopmund, Namibia. For the resolutions and recommendations, see Kasuto / Wehmhörner (1996:6).

³¹ Section 11 of the Ombudsman Act.

³² The Ombudsman holds a diplomatic passport *ex officio*.

3 The Environmental Mandate of the Ombudsman

Beside the mandates on human rights and maladministration, the environmental mandate is of specific importance with regard to the legal implications of environmental concerns in Namibia. This mandate, according to Article 91(c) of the Constitution, *inter alia*, relates to the over-utilisation of natural resources, the protection of ecosystems, and to the maintenance of the beauty and character of Namibia.

The power to investigate complaints concerning environmental issues contains unique provisions, which go beyond the traditional powers and functions of an Ombudsman institution. The environmental mandate of the Ombudsman is a progressive and innovative step towards environmental protection, which may have model rule character. However, the provision could be given a more vital role within the Ombudsman's activities. Two major points may be listed for the fact that the Office of the Ombudsman to date are not dealing with many complaints under the environmental mandate; on the one hand, the imbalance can be traced back to the nature of topics/complaints, with some occurring more frequently than others; on the other hand, despite the fact, that the Office of the Ombudsman endeavours to raise publicity for the institution and to take the office to the grassroots level,³³ the awareness of the potential of the Ombudsman in environmental matters is very low. Many people are still unaware of the availability of the institution in environmental matters.³⁴ The lack of sufficient specifically trained staff³⁵ and financial resources as well as the heavy workload are further challenges for the Ombudsman's activities in environmental matters. Nevertheless, the Ombudsman's environmental mandate is a progressive step towards environmental protection in Namibia and it is hoped that because of the multi-functionality of the Office this mandate can be invested with the much-deserved and needed importance in future.

Although the categories of maladministration and violation of human rights play the most vital role in the work of the Office of the Ombudsman,³⁶ environmental concerns deserve equal attention. The imbalance as to complaints by specific mandates can be clearly seen when consulting relevant data of the recent years.³⁷

³³ Tours all over the country are recurrently undertaken by the Office of the Ombudsman to expose the office to the population and to enhance publicity; alongside the main Office of the Ombudsman in Windhoek, the institution maintains branches in Keetmanshoop and Oshakati.

³⁴ Many cases of environmental concern do, regrettably, still not find their way to the Ombudsman Office. The case of the Epupa dam might serve as a prominent example. In this case, a hydropower scheme was proposed by NamPower (the Namibian parastatal for the bulk supply of electrical power) for the lower Kunene River in north-western Namibia. The case drew local and international attention, when the Himba community opposed the project in 1998. However, in this case, it was not the Office of the Ombudsman that was approached with a complaint by the communities' Chief. For further reference see Daniels (2003:52).

³⁵ However, several training measures on environmental issues, such as workshops on environmental law in Namibia, have been performed recently in order to train staff of the Office of the Ombudsman in environmental matters. Further projects of this kind are on the Ombudsman's agenda in the near future. Walters (2008:121ff.).

³⁶ See the annual reports by the Office of the Ombudsman (2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 and 2014); available at <http://www.ombudsman.org.na/reports/annual-reports>; accessed 4 November 2015.

Table 1: Complaints to the Office of the Ombudsman by mandate from 2008 to 2013³⁸

	2008	2009	2010	2011	2012	2013
Maladministration	872	1,064	1,397	1,656	978	1,288
Human rights violations	138	165	236	221	189	236
Corruption	35	30	14	10	6	8
Environment	3	6	4	5	6	6
Miscellaneous	494	343	475	659	746	805
Total number of complaints	1,542	1,608	2,126	2,551	1,925	2,343

One of the environment-related complaints in 2013 was filed by a lodge owner against the Okahandja Municipality. Subject at matter was the alleged noise pollution and environmental destruction caused by a sand mining company who was granted a sand mining permit by the Okahandja Municipality to collect sand from the Okakongo river located next to the lodge owner's camp site. The investigation by the Office of the Ombudsman revealed that no environmental clearance certificate had been issued by the Environmental Commissioner as required by the Environmental Management Act No. 7 of 2007. As a result, the company seized with its sand mining activities while waiting for the required environmental clearance certificate.³⁹

Another environmentally relevant complaint brought to the attention of the Ombudsman in 2011 relates to the harvesting of Cape fur seals (see box below).

The Ombudsman and the Annual Harvest of the Cape Fur Seals in Namibia

While seal harvesting in South Africa was banned in 1990, the harvesting of seals is still permitted under certain conditions. The harvest is carried out in three main areas: Cape Cross, Wolfe Bay and Atlas Bay, annually from July to November. On one side, the Namibian Government argues that seals are harvested due to the fact that the seal population has flourished to such an extent they exceeded the carrying capacity of the environment and represent a threat to other marine life. Namibia's seal population would thus have to be curbed to a level where they can be sustained by the environment. On the other side, environmentalists argue that harvesting is motivated by the greed for profit; baby seals are harvested for their soft pelts, while bull seals are shot for their genitals, exported mainly to Asian markets and used for aphrodisiac products.

Under international law, Namibia is bound by the Convention on the Trade in Endangered Species of Fauna and Flora (CITES). The International Union for Conservation of Nature (IUCN) has listed the Cape Fur Seal in Appendix II of CITES, which means that the species is not necessarily threatened with extinction, but that trade must be controlled in order to avoid utilization incompatible with their survival. Under national law, seal harvesting is governed by the Marine Resources Act (MRA) No 27 of 2000 and the regulations under Section 61 of the MRA, namely the Regulations Regulating to the Exploitation of Marine Resources⁴⁰. Section

³⁸ Cf. Office of the Ombudsman (2009, 2010, 2011, 2012, 2013 and 2014).

³⁹ Office of the Ombudsman (2014:31).

⁴⁰ Government Notice No. 241, 2001.

20 of these regulations specifically deals with the harvesting of seals. The current Namibian seal population stands at around 700,000 individuals and the current 3 year rolling total allowable catch, which is revised annually currently stands at 6,000 males and 80,000 pups per season.

In 2011, the Ombudsman received a complaint by Dawson, Edwards and Associates on behalf of Seal-Alert SA, alleging illegalities pertaining to the annual seal hunt in Namibia and requesting an urgent interdict preventing the harvest from commencing. Grave concerns about Namibia's annual seal harvest have furthermore been raised by several civil society organisations, NGOs and individuals.

An interdict for the harvesting season 2011 could not be obtained because the Ombudsman's office needed time to investigate the matter. However, on 22 June 2012, the Office of the Ombudsman published its report on the matter at hand⁴¹. The Ombudsman concluded that the harvesting of seals is lawful and that he does not have adequate and sufficient grounds in law and fact to recommend to the Namibian Government to stop the annual seal harvest. On the question however, of whether, in harvesting Cape Fur Seals in the manner, which is currently practised, Namibia would use its natural resources unsustainably, the Ombudsman was unable to come to a definite finding. The lack of sufficient evidence in this regard was given as reason. The Ombudsman in his report⁴² states that despite several oral and written requests, he could not obtain the information requested by the Ministry of Fisheries and Marine Resources, namely the 2011/12 aerial survey of seals by the Benguela Current Commission and other related information. This outcome is worrying, indeed. Not only for the case at hand, but also and in particular for future cases, the rule of law and the institution of the Ombudsman *per se*. It raises grave concerns, if after a year of investigations, the Ombudsman is not able to obtain information from a Government institution, a Ministry in this case, despite the vast powers of investigation with which he/she is endowed and penalties and offences related thereto. All available measures should be exhausted in order to prevent a situation in which a question is left open, which is essential for a balanced and satisfactory finding in the case, and particularly for its assessment under international law.

The few investigations on environmental issues in 2009 touched on waste disposal at the Windhoek Central Prison, and the oxidation pond system and the management of the solid waste disposal side in Okahandja.⁴³ In an earlier case in relation to a Malaysian textile company, Ramatex, which allegedly had failed to maintain sound environmental practices and contaminated some soil and groundwater in Windhoek, a complaint was brought to the Office of the Ombudsman by Earthlife Namibia, an environmental NGO.⁴⁴

The above cases show that the Office of the Ombudsman is committed to carry out the environmental mandate as enshrined in the Namibian Constitution. But still, many cases of environmental concern do not, regrettably, find their way to the Ombudsman's Office. The Namibian Constitution, as well as a multitude of statutory enactments and policies underlines the importance of environmental matters and the Ombudsman is endowed with the constitutional power, to play a significant role within the wide field of environmental protection. Hopefully, the importance of the Ombudsman's environmental mandate will be reflected in a higher number of environmentally relevant complaints sometime in future.

⁴¹ Office of the Ombudsman (2012).

⁴² Office of the Ombudsman (2013).

⁴³ Office of the Ombudsman (2010:20ff.).

⁴⁴ See in this regard Ruppel (2008b:116ff.).

4 Investigation, Enforcement and Reporting Procedures

Section 4 (a) of the Ombudsman Act provides that

[W]hen the Ombudsman performs his or her duties and functions in terms of the Act the Ombudsman may in his or her discretion determine the nature and extent of any inquiry or investigation.

The investigative powers and procedures are described in Article 92 of the Constitution and Section 4 of the Act.⁴⁵ The Ombudsman may determine the nature and extent of any inquiry or investigation and has

...the right to enter at any time...any building or premises..., except any building or premises or any part thereof used as a private home, and to make such enquiries therein or thereon, and put such questions to any person employed thereon...in connection with the matter in question....

Usually, the investigation process is started by a complaint brought before the Ombudsman by an individual. In this context, and with regard to the Ombudsman's independence, consideration needs to be given to whether the Ombudsman, apart from conducting an investigation on the basis of a complaint, may also conduct proactive investigations. Such competence would indeed contribute to the independence of the Ombudsman in that he/she would not be tied down by incoming complaints only. Proactive investigations may also be appropriate in cases where the persons affected are unable to make a complaint themselves, e.g. if affected persons would endanger themselves by submitting a complaint.⁴⁶

Although neither the Constitution nor the Ombudsman Act contains an explicit provision allowing the Ombudsman to conduct an investigation without having received a complaint, the Ombudsman may decide to undertake proactive investigation if such an investigation concerns issues and involves authorities which would be within the institution's competence if they had been brought by a complainant.⁴⁷ Own-motion investigations are acceptable and are indeed being conducted.⁴⁸ After having received a complaint, and after having decided on the question of jurisdiction, and whether to investigate, investigations are undertaken through fact-finding by collecting all necessary information with the goal to resolve complaints where possible and to achieve a remedy for the complainant and/or a restoration of rights that have been violated. Generally, the Ombudsman raises requests in order to obtain relevant information. To have enquiries answered by offending institutions has proven difficult, as expressed by the Ombudsman in his recent annual report:

Regarding responses from offending institutions in a timely fashion, it saddens me to have to report that there has not been any improvement whatsoever; on the contrary, the situation seems to have worsened and I had to subpoena more persons than ever before to force institutions to answer enquiries from the Ombudsman. I am at my wits end as to how this problem should be addressed, but one can only hope that Permanent Secretaries will accept responsibility for this and perhaps designate focal persons to deal with enquiries; such a small gesture will go a long way in addressing this particular problem.⁴⁹

⁴⁵ As to the adequacy of powers given to the institution, see Gawanas (2002:105).

⁴⁶ UNDP (2006:25).

⁴⁷ For further reference see Ruppel-Schlichting (2008:283).

⁴⁸ The recent investigation with regard to waste disposal at Windhoek Central Prison was initiated on the Ombudsman's own motion in the course of a routine visit at the prison; see Office of the Ombudsman (2010:20). Especially in cases of human rights violations, own-motion investigations have repeatedly been conducted.

⁴⁹ Office of the Ombudsman (2014:3).

In the event the Ombudsman is of the opinion that any instance investigated by him or her can be rectified or remedied in any lawful manner, he or she gives notification of his or her findings and the manner in which the matter can, in his or her opinion, be rectified or remedied.⁵⁰

Although the Ombudsman obviously has to adhere to the provisions of the Constitution and the Ombudsman Act, strict rules of procedure such as those that apply to court proceedings do not have to be applied by the Ombudsman. Instead, the Ombudsman uses his/her discretion to generate a speedy and informal resolution by applying techniques such as negotiation and compromise.⁵¹ The powers of investigation described in Article 92 of the Constitution and Section 4 of the Ombudsman Act warrant self-determined investigation procedures.⁵²

The Ombudsman, furthermore, has the right to access all documents relevant to the investigation, as well as the right to seize anything that he/she deems necessary in connection with the investigations.⁵³ The investigative powers of the Ombudsman also imply the right to require any person to appear before him/her in relation to a specific inquiry or investigation. Individuals may be compelled to appear and give testimony, or to produce information determined to be relevant to the investigation. In this regard, the Ombudsman even has the right to issue subpoenas.⁵⁴ These far-reaching powers of investigation and their anchorage in the afore-mentioned legal instruments emphasise the basic approach that the Ombudsman is empowered to conduct investigations without being dependent on any other body. However, litigation might become necessary to enforce the powers granted to the Ombudsman by the Constitution and the Ombudsman Act.

The investigation generally ends once the Ombudsman is satisfied that it has yielded all the relevant facts. As soon as the investigation process is completed, the Ombudsman notifies the person who laid the matter before him or her, and takes appropriate action or steps to call for or require the remedying, correction and reversal of matters such as: negotiation and compromise between the parties concerned; reporting the findings to the superior of an offending person; referring the matter to the Prosecutor-General or to the Auditor-General or both, or bringing proceedings in a court.⁵⁵

The Ombudsman may in general not make binding orders. It could be argued that without such power, the Ombudsman cannot protect the rights under his or her mandate efficiently and the lack of such power might be interpreted as a weakness of the Ombudsman institution. On the other hand, the Ombudsman has extensive powers to inquire and investigate. If the Ombudsman would have the power to make binding orders, the institution would take the function of a court of last instance, which would – despite the fact that much more financial resources would be needed – not meet the basic rationale of such institution.⁵⁶ In case that

⁵⁰ Section 5(1)(b) of the Act.

⁵¹ Article 91(e)(aa), Namibian Constitution.

⁵² As to the adequacy of powers given to the institution, see Gawanas (2002:105).

⁵³ Section 4(1)(b), Ombudsman Act.

⁵⁴ Article 92(a), Namibian Constitution.

⁵⁵ Article 91(e), Namibian Constitution and Section 5 of the Act.

⁵⁶ See UNDP (2004:3). This Report on the Fourth UNDP International Round Table for Ombudsmen institutions in the ECIS Region makes the point convincingly, that the lack of power of making binding orders, considered by some as a weakness, in fact is the institution's strength for “[w]here any institution has the power to order others to do its bidding, another institution must have to power to review the decisions of the first institutions. In this case, if Ombudsmen were to have the power to issue binding orders, the courts would be the place where the Ombudsman's orders would be reviewed. Having the power to order that recommendations be implemented would change dramatically the dynamic of an Ombudsman

complaint shows that the complainant was justified in bringing the complaint, the Ombudsman's main instrument is rather to make recommendations in order to solve problems or prevent them from reoccurring.⁵⁷ By using this method, Government agencies are persuaded rather than forced to act, which in many cases may lead to more effective and efficient solutions.

The Ombudsman is not endowed with the coercive powers typical of formal justice systems. The institution follows the approach of alternative dispute resolution; an informal process in which conflicting parties revert to the assistance of a third party who helps them resolve their dispute in a less formal and often more consensual way than would be the case in court. The methods for dealing with grievances underline the Ombudsman's independence in terms of the broad variety of options available for conflict resolution. On the one hand, the Ombudsman can bring proceedings before competent courts if he/she deems it necessary;⁵⁸ on the other, the Ombudsman can opt for various alternative methods to resolve the disputes in question. Compared with the rights-based traditional adversarial attitude towards dispute resolution, the alternative interest-based approach to dispute resolution has expanded significantly within the past few years, not only in the field of human rights and administrative justice, but also in the private sector.⁵⁹

Indeed, several arguments favour alternative dispute resolution above court proceedings. Normally, such alternatives are faster and less expensive. Generally, they also allow greater and more flexible control over the dispute. Moreover, the process is based on more direct participation by the disputants, rather than being run by lawyers, judges, and the state; and finally, in most processes, the disputants outline the process they will use and define the substance of the agreements. This type of involvement is believed to increase people's satisfaction with the outcomes, as well as their compliance with the agreements reached. By avoiding court proceedings, the relationship between the disputing parties is often less afflicted, which is a key advantage in situations where the parties need to continue interacting after settlement has been reached, such as in labour cases.

While the most common forms of alternative dispute resolution are mediation and arbitration, there are many other techniques and procedures applied by Ombudsman institutions. Typically, the Ombudsman explores options and attempts to achieve equitable solutions for all parties. The Ombudsman works through alternative dispute resolution methods such as negotiation, mediation, consultation, influence, shuttle diplomacy, and informal investigation.

Due to the fact that the Ombudsman may not issue binding orders, he/she cannot be taken to court to appeal the findings; neither can the findings and reports be subject for review or modification. However, courts may decide upon the question, whether or not the Ombudsman has jurisdiction in specific cases. A claimant can still take the case to the courts after having submitted a respective complaint to the Ombudsman, for one objective of establishing the

institution... What was created to be a less formal and faster way of solving problems would likely become more formal and slower. The cost to the Ombudsman, the people and the state would be greater and the benefits would be fewer." Similar arguments were given by the European Ombudsman, Diamandouros (2006).

⁵⁷

For these reasons, the sub-regional *Conference on the Ombudsman in southern Africa* in its concluding resolutions and recommendations held that "[T]he Ombudsman should not have enforcement mechanisms and/or powers". See Kasuto / Wehmörner (1996: 5).

⁵⁸

Article 91(e) of the Constitution provides for specific instances in which the Ombudsman can bring proceedings before the courts, e.g. in order to obtain an interdict to secure the termination of the offending action or conduct, Article 91(e)(dd) or to seek an interdict against the enforcement of legislation by challenging its validity, Article 91(e)(ee).

⁵⁹

Ruppel (2007:1).

office is to offer an alternative to litigation, but not to force an aggrieved party to choose between the option to submit a complaint to the Ombudsman and the possibility of taking the alleged offender to court.

According to the Constitution and the Act, the Office of the Ombudsman is obliged to draft reports on his/her investigations.⁶⁰ These reports can be divided into two main categories: those drafted for single complaints, and those containing all the activities of the Office within a specific period. When investigations are completed, the Ombudsman drafts a report containing findings on the complaint, as well as recommendations to solve the problems or to prevent them from happening again. Despite the final recommendations, the report summarises the complaint, the facts found, the law governing the situation, an analysis of the facts in light of the law, as well as a finding on what the complaint alleged.⁶¹ An annual report containing the Ombudsman's activities during the period ending on 31 December of the previous year has to be drafted and submitted to the Speaker of the National Assembly and subsequently to the National Assembly.⁶² The annual reports contain information as to the scope of activities, complaints, investigations, management services and administration, outreach activities and public education. The reports impressively reflect that the Office of the Ombudsman takes seriously the task to protect and promote the values under his mandate through independent and impartial investigations, as words are not minced in these annual reports. The annual reports contain specific case summaries and, statistical breakdowns, which draw a clear picture on the work performed by the office in several respects.

⁶⁰ Provisions for reports to be furnished by the Office of the Ombudsman are contained in Article 91(g) of the Constitution as well as in Section 6 of the Ombudsman Act.

⁶¹ UNDP (2006:21).

⁶² Article 91 (g) of the Constitution and Section 6 (2) of the Act.

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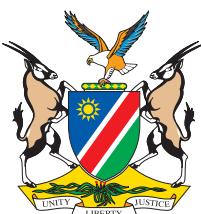
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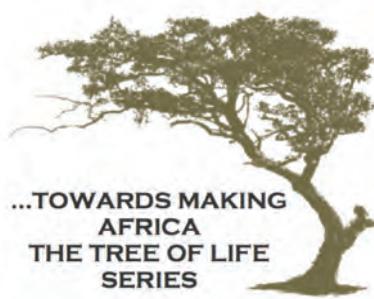


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