

**REVIEW OF POLICY AND LEGISLATIVE SUPPORT  
TO THE SUSTAINABLE USE  
OF WETLANDS IN THE ZAMBEZI BASIN**

**FINAL REPORT (NAMIBIA)**

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## ACRONYMS

ASSELLAU	Association of Environmental Law Lecturers in African Universities
AU	African Union
BDTF	Biodiversity Task Force
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention of Migratory Species
COFI	International Committee on Fisheries
EIA	Environmental Impact Assessment
EU	European Union
FAO	Food and Agriculture Organisation
FIRM	Forum for Integrated Resource Management
GG	Government Gazette
GN	Government Notice
GMO	Genetically Modified Organisms
ICES	International Council for the Exploration of the Seas
IPPC	International Plant Protection Convention
IUCN	The World Conservation Union
JPWC	Joint Permanent Water Commission
KAZA	Kavango Zambezi Transfrontier Conservation Area
LUEB	Land Use and Environmental Board
MAWRD	Former Ministry of Agriculture, Water and Rural Development
MAWF	Ministry of Agriculture, Water and Forestry
MET	Ministry of Environment and Tourism
MFMR	Ministry of Fisheries and Marine Resources
MLR	Ministry of Lands and Resettlement
NAPCOD	National Programme to Combat Desertification
NDP	National Development Plan
NEPAD	New Partnership for African Development
NPC	National Planning Commission
OKAKOM	The Permanent Okavango River Basin Water Commission
ORASECOM	Orange-Senqu River Commission
PJTC	Permanent Joint Technical Commission
PWC	Permanent Water Commission
SACU	Southern African Customs Union
SADC	Southern African Development Community
SWAPO	South West Africa People's Organisation
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WASP	Water and Sanitation Sector Policy
WHO	World Health Organisation
WTO	World Trade Organisation
ZACPLAN	Zambezi River System Action Plan
ZAMCOM	Zambezi River Commission
ZBWCRUP	Zambezi Basin Wetlands Conservation and Resource Utilization Project

## EXECUTIVE SUMMARY

Wetlands in Southern Africa are an important source of water and nutrients necessary for biological productivity and often sheer survival of people. Wetlands provide for natural resources as well as for ecological services and they have an economic value. Sustainable management of wetlands is crucial to the protection of ecosystems.

The low rainfall and high evaporation typical for most of Namibia means that surface water supplies are irregular and unreliable, as is groundwater recharge. As a result, water is often inadequately distributed. Historically, water supply priority was given to the water needs of people, livestock, industry and agriculture. Wetlands, their natural resources and their environmental water requirements were not specifically acknowledged. Legislation, at the time of Independence, such as the South African Water Act No 54 of 1956, did not recognise the natural environment as a user of water, a habitat for aquatic plants and animals nor as a provider of essential processes and services. Nor did it stipulate the sustainable use of water resources in socio-economic and environmental terms.

Today, Namibia has a broad range of sectoral policies, plans and laws, particularly those applicable to natural resource conservation, management and utilisation that are pertinent to the conservation and management of the Zambezi River Basin. Many current Government initiatives such as the Green Scheme, Aquaculture, and Community based forestry, Fishery and Wildlife Management, Tourism expansion and Resettlement are focussed in higher rainfall areas such as the Caprivi Region. It is important that policies, laws and regulations to manage wetlands also take into consideration impacts to neighbouring countries that share the Zambezi River Basin. Emerging legislation takes account of the vulnerability of Namibia's wetlands, the limitations of agriculture in a dry country and changing land use, planning and land tenure.

The paper traces the status of policy and legislative support to the sustainable use of wetlands in the Zambezi River Basin from a Namibian as well as from an international perspective in order to highlight the importance of wetlands. The review also identifies gaps within policies or legislation and gives recommendations in order to allow more sustainable management of wetlands in Namibia.

## **1. INTRODUCTION**

### **1.1. Background of the Review**

This Review is part of Phase II of the Zambezi Wetlands Project, which was known in its first Phase as the Zambezi Basin Wetlands Conservation and Resource Utilization Project (ZBWCRUP). The implementation of the Phase II project is facilitated by IUCN ROSA. Phase II is five years and its implementation commenced in April 2004.

The goal of the project is to contribute to the sustainable use of the Zambezi Basin wetland ecosystems and to influence the development of national policies and of regional protocols that maintain and/or improve the ecological integrity of wetlands ecosystems, while improving the well-being of wetlands communities including women, men, boys and girls.

The aim of this review is to trace the status of policy and legislative support to the sustainable use of wetlands in the Zambezi from a Namibian perspective.

### **1.2. Wetlands**

The definition of wetlands provided by the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat will be the basis for the purpose of this review.<sup>1</sup> The Convention (Ramsar, Iran, 1971) is an intergovernmental treaty whose mission is the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world.<sup>2</sup> As of September 2006, 153 nations have joined the Convention as Contracting Parties, and more than 1600 wetlands around the world, covering over 145 million hectares, have been designated for inclusion in the Ramsar List of Wetlands of International Importance.<sup>3</sup> Namibia is a party to the Convention since 1995.<sup>4</sup>

As defined by Article 1 of the Convention

“[...] wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.”

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<sup>1</sup> The Text of the Ramsar Convention can be found at <http://www.ramsar.org>.

<sup>2</sup> *The Ramsar Convention Manual: a Guide to the Convention on Wetlands* (Ramsar, Iran, 1971), 4th ed. Gland, Switzerland: Ramsar Convention Secretariat, 2006: 7.

<sup>3</sup> See *supra* p. 6.

<sup>4</sup> Cf. *Register of International Treaties and other Agreements in the Field of the Environment*, (United Nations Environment Programme) (2005): 125 ff.

### **1.3. The Zambezi River Basin**

The Zambezi basin is the fourth-largest river basin of Africa, after the Congo/Zaire, Nile and Niger basins. It is the largest and most important river basin in southern Africa and covers eight countries: Angola, Namibia, Botswana, Zimbabwe, Zambia, Malawi, Tanzania and Mozambique. Its total area represents about 4.5% of the area of the continent. The Zambezi River flows eastwards for about 3000 km from its sources to the Indian Ocean. The Namibian parts of the Zambezi River basin are located in the Caprivi Region. 17.426 km<sup>2</sup> of the Zambezi River Basin are situated in Namibia, which is only 1,3 % of the basin's total area and 2,1 % of the total area of Namibia (824.900 km<sup>2</sup>). The average annual rainfall in the Namibian basin area varies from 545 mm to 690 mm.<sup>5</sup>

In addition to the Zambezi River, the Caprivi Region is bordered by the Kwando/Linyanti/Chobe river system and contains extensive floodplain areas that include several floodplain lakes including Lake Liambezi. Interestingly due to the flat terrain, some of these rivers can flow in either direction, for example when the Zambezi River is in flood the Chobe River acts as a backwater and flows westwards towards the lake, yet when the Kwando/Linyanti section is in flood this can push flows eastwards out of the lake into the Chobe River. In recent years Lake Liambezi has dried up several times, only holding water briefly after exceptionally high floods from the Zambezi caused inflows via the Bukalo channel.

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<sup>5</sup> Cf. *Irrigation potential in Africa: A basin approach*, (FAO Land And Water Bulletin 4) (1997), <http://www.fao.org/docrep/W4347E/w4347e0o.htm>.

## **2. POLICY REVIEW**

### **2.1. Wetlands in Namibia**

The Conservation and wise use of wetlands in Namibia is of utmost relevance since Namibia is one of the driest countries in sub-Saharan Africa. Rainfall in Namibia is low and variable and can occur at any time from October to May. The country's mean rainfall varies from >50 mm at the coast to about 600 mm in the northeast and is highly variable in both time and space.

The protection and wise use of wetlands play an important role in Namibia as all Namibian rivers and associated wetlands, both perennial and ephemeral, represent vital lifelines of resources for people throughout the country. They supply water, either as surface water or indirectly from groundwater sources, which they recharge, as well as important wetland plant and animal resources and many less tangible, essential ecological services such as nutrient transfers, water purification and flood attenuation. Yet in a country where drought is common and where, even in good years, water availability is limited; a responsible balance must be sought between meeting the water needs for the country's present and future development and the basic long-term water needs of the environment.

#### **2.1.1. Wetlands of International Importance**

According to Article 2 of the Ramsar Convention each Contracting Party shall designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance. Wetlands of international importance are selected for the List on account of their international significance in terms of ecology, botany, zoology, limnology or hydrology. Namibia acceded to the Ramsar Convention on 23 December 1995 and has at this stage four wetlands included in the List of Wetlands of International Importance:

- Walvis Bay Wetlands
- Sandwich Harbour
- Orange River Mouth (shared jointly with South Africa); and
- Etosha Pan

Prior to incorporation into Namibia in 1994, the Walvis Bay wetlands fell within a proclaimed nature reserve, unfortunately this protection was not part of the agreement when the land was handed over and currently these important wetlands have no protected status. Yet it is

considered the most important coastal wetland in Southern Africa and one of the top 3 in Africa with up to 250 000 birds in summer and 80 000 in winter. At present it falls under the jurisdiction of the Walvis Bay Municipality and is the special concern of the Coastal Environment Trust of Namibia, an NGO that works hard to ensure the wise use and conservation of this wetland.

Prior to Independence, Sandwich Harbour was Namibia's only marine reserve, unfortunately this status too has been lost, although the landward section of this wetland is well protected within the Namib Naukluft Park administered by the Ministry of Environment and Tourism.

The very small Orange River Mouth Ramsar Site falls within the protected Sperrgebiet or Diamond Area in Namibia and the Richtersveld Park in South Africa. It extends some 10km from the Harry Oppenheimer bridge to the sea and since being designated as a Ramsar site the bird numbers it supports have dropped so drastically that it has been added to the Montreux List, a list of Ramsar sites in peril. The main cause for this concern has been human interference and the loss of extensive mudflats. The site is jointly managed by Namibia and South Africa and its value is recognised and appreciated by ORASECOM, the river commission that manages the Orange River.

The Etosha Pan site, the only site where greater and lesser flamingoes breed in Namibia is well protected within the Etosha National Park by the Ministry of Environment and Tourism, although there is concern that this protection only extends to the edge of the park boundary and does not include the rest of the Cuvelai River system on which its flows depend. It is important that "wise use" of the upstream catchment be promoted to ensure the viability of this internationally important wetland.<sup>6</sup>

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<sup>6</sup> Bethune S, Roberts KS; *Conservation and Management of Water Weeds in Southern Africa*; in: Hirji R, Johnson P, Maro P and Matiza Chiuta T (eds) *Water Resources Management in Southern Africa*. SADC, IUCN, SARDC, World Bank: Maseru/Harare/Washington D.C (2002).

### 2.1.2. Other Wetlands in Namibia

Although a dry country, almost 5% of Namibia's surface area consists of different types of wetlands, many of which like all the rivers in the interior of the country are dry most of the time. Of these wetlands the following have been identified as potential Ramsar sites<sup>7</sup>:

<b>WETLAND</b>	<b>TENURE</b>	<b>CONSERVATION STATUS</b>
Kunene River Mouth (Staging point for migratory waders and only site where two turtle species occur)	Ministry of Environment and Tourism	Falls within the Skeleton Coast National Park and the Transboundary Park linked to the Iona NP in Angola
Cape Cross lagoons (waterbirds)	Ministry of Environment and Tourism	Falls within West Coast recreational Area
Swakop Saltworks	Privately managed for commercial salt and oyster production	Proclaimed private nature reserve within West Coast recreational Area and Swakopmund municipality
Lakes Otjikoto and Guinas as well as the subterranean Karst caves – e.g. Aigamas and Dragons Breath caves (endemic fish and invertebrate fauna)	Privately owned commercial farmland – lake Otjikoto has a privately run information centre open to tourists. Access controlled.	Protected by the farm owners and the exact location of the caves are kept secret to protect them (Scientific Society of Namibia)
Nyae Nywe pans system	Under the jurisdiction of the Nyae Nyae Conservancy with the communal area.	Protection within the Nyae Nyae conservancy
The lower Okavango River Mukwe downstream to the border with Botswana (rocky rapids habitat with endemic fish and birds)	Communal land and some sections Ministry of Environment and Tourism and emerging conservancies	Largely unprotected within communal land, lower section within Popa resort, Muhango NP, Buffalo core area within Bwabwatwa NP
The Zambezi River Floodplains, Linyanti swamp and Lake Liambezi	Communal land, traditional authorities, conservancies and Ministry of Environment and Tourism	Mudumu and Mamili NP Salambala and 7 other conservancies

<sup>7</sup> Kolberg H; *Preliminary Inventory of Namibia's Wetlands*; Ministry of Environment and Tourism (2002).

<b>WETLAND</b>	<b>TENURE</b>	<b>CONSERVATION STATUS</b>
Cuvelai system oshanas	Communal land, traditional authorities	One small conservancy, King Nehale immediately north of Etosha NP
Near shore islands	Under jurisdiction of the Ministry of marine resources and fisheries	No formally protected status but access is controlled

## **2.2. The Policy Formulation Process in Namibia**

### **2.2.1. Namibia's Green Plan**

Namibia's Green Plan was first presented at the Rio Conference in 1992.<sup>8</sup> According to this plan, Namibia's objective is to manage its water resources for present use without jeopardising future water supplies, biotic diversity and or ecological processes. The water chapter specifically mentions cross border co-operation on shared water resources.

Namibia's Green Plan cautions that environmental policies must be based on the precautionary principle and that all major construction projects in the water sector should always be preceded by an EIA in order to prevent or minimize the potential negative effects on the environment.

With regard to wetlands the Green Plan states that Namibia's goal is to protect and manage its wetland systems by means of rational and integrated land-use planning in accordance with the philosophies of the Ramsar Convention, based on the principles of

- preserving biotic diversity
- monitoring life support systems; and
- ensuring the sustainable utilization of wetland resources.

It is further provided that genetic resources should be protected and the rich biodiversity maintained and that legislation is needed to protect wetlands from damaging human activities.

The first mention of environmental water requirements is in the Green Plan and calls for the possibility and need for including compensation releases in the environmental assessment of

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<sup>8</sup> Brown C. J. (Ed). 1992 Ed. *Namibia's Green Plan (Environment and Development)*. Brown, Ministry of Wildlife, Conservation and Tourism. Republic of Namibia. Presented at Rio World Summit.



any new project.<sup>9</sup> A revised version of the Green Plan takes this a step further emphasising that research is needed in order to take the entire river downstream of any scheme into account, not just the part immediately below the scheme and that allowance for controlled releases must be considered for water and hydro-electric schemes on perennial rivers, as well as the seasonal flow requirements of these river systems.

In terms of legislation, the Green Plan requires that to ensure that wetland system attributes, functions and conservation are adequately covered by legislation, this must give recognition to the social, economic and ecological values of wetlands such that essential processes are maintained and effective enforceable legislation is developed to adequately protect these systems. The wetland chapter highlights that, Namibia cannot afford to view its wetlands in isolation as the most important wetlands lie along the borders and are shared resources that originate in neighbouring countries, and recognises that Namibia should continue to participate in co-operative programmes with neighbouring countries to ensure sustainable wetland management on a regional basis.

### **2.2.2. The National Water Resources Management Review**

In 1998, the Minister responsible for Agriculture, Water and Rural Development commissioned a National Water Resources Management Review team to review water resource management, develop a water policy, revise the outdated water legislation and make policy recommendations. The aim was to enable Namibia; to achieve equitable access to, and the sustainable development of, freshwater resources by all sections of the populations especially the rural and urban poor, in order to promote long-term social and economic development.

The process yielded a new legislative framework based on a comprehensive set of recommendations, a new National Water Policy and the Water Resources Management Act. A separate initiative by the Wetlands Working Group of Namibia has led to the parallel development of a draft wetland policy for Namibia which was submitted to the Ministry of Environment and Tourism in 2004.

Both the Namibia Water Resources Management Review and the Wetlands Working Group of Namibia recognised that sound water resource management is essential to ensure the sustainability of future use of water and wetland resources. Management for sustainable use

<sup>9</sup> Crerar S and S Bethune, *Continuing Action to Protect and Restore Our Water*. In Brown C J (ed), *Namibia's Green Plan (Environment and Development)* (1992). Presented at Rio World Summit 1992.

of wetlands implies an understanding of how they function and how much water is required to maintain these functions and their associated biodiversity. Currently there is only basic monitoring on the use and importance of wetland resources. Most monitoring is concerned with only one resource – water. Little research has been done on wetland productivity and functioning. With Namibia’s ever-increasing water demands, such information will be needed for successful management of the country’s wetlands to ensure the sustainable use of their resources.

Since the Rio World Summit in 1992, Namibia has increasingly recognised the importance of aquatic ecosystems, their uses by people and the ecological services that they provide. Several publications aimed at improving water awareness in Namibia have addressed these issues in the last decade.<sup>10</sup>

### **2.2.3. The Namibian Constitution**

Article 100 of the Constitution of Namibia, vests all natural resources, including water, in the State, unless otherwise legally owned. Thus unless legal ownership to water resources in a specific locality is proved, such water resources are owned by the State, yet it implies that water can be privately legally owned thereby denoting the existence of riparian water rights. The Constitution of the Republic of Namibia lays the foundation for all policies and legislation in Namibia and contains two key “environmental clauses” relevant to sustainable use of natural resources.

The first is Article 91 (c) that 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.”

The second is Article 95 (1) which stipulates that the state shall actively promote and maintain the welfare of the people by adopting policies which include the:

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<sup>10</sup> These include the DRFN publication and map on *Ephemeral Rivers* (Jacobson *et al* 1995), the Sida review on *Sharing Waters in southern Africa* (Pallett 1997), the *Decision Makers Guide* (Heyns *et al* 1998), the *State of the Environment Report on Water* (WCE *et al* 1999), the *Water Pollution* book of the National Water Awareness Campaign (Tarr 2002), the *Groundwater in Namibia* map and book (Christelis and Stuckmeier 2001), a series of regional profiles on Caprivi (Mendelsohn and Roberts 1997), the Kavango region (Mendelsohn and Obeid 2003) the profile on the Okavango River Basin (Mendelsohn and Obeid 2003), and two publications by the Wetland Working Group of Namibia, the booklet on *Wetlands of Namibia* (Shaw *et al* 2004) and most recently *Caring for our water A resource guide for Upper Primary teachers and learners* (Roberts and Squazzin 2007). Many of these were produced in partnership with the National Water Awareness Campaign run by the Department of Water Affairs since the drought of 1992 and funded by Sida.

“ 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...”.

The constitution set 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 increased awareness as a result of publications linked to the National Water Awareness Campaign, triggered widespread legislative reform particularly in terms of natural resource management. The Water Act 54 of 1956 and much of the environmental legislation were outdated and in serious need of revision. These laws needed to be brought in line with the new constitution, the ideals of community-based natural resource management, sustainable natural resource use and the development priorities and realities of post-independence Namibia. 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.

#### **2.2.4. Namibia’s Vision 2030**

The growing realisation that healthy, water resources and their sustainable use are linked to well-functioning aquatic and wetland ecosystems is reflected in Namibia’s Vision 2030.<sup>11</sup> Chapter five of Vision 2030 generally deals with sustainable resource base. Formulated as a sub-vision of Vision 2030, one objective is to ensure a sustainable resource base and to keep Namibia’s freshwater resources free of pollution in order to ensure social well-being, support economic development and to maintain natural habitats.<sup>12</sup> Some of the long-term aims of Namibia’s Vision 2030 with regard to freshwater and associated resources are<sup>13</sup>:

- Efficient use of water
- Equitable access to potable water
- Clean, unpolluted water

<sup>11</sup> Government of the Republic of Namibia, Office of the President, *Namibia Vision 2030, Policy Framework for Long-term National Development*, (AIM Publications) (2004); Text available at <http://www.npc.gov.na/>.

<sup>12</sup> Government of the Republic of Namibia, Office of the President, *Namibia Vision 2030, Policy Framework for Long-term National Development*, (AIM Publications) (2004): 137.

<sup>13</sup> Aims regarding freshwater and associated resources as well as a collection of things that have to be done in order to achieve these aims are listed: Government of the Republic of Namibia, Office of the President, *Namibia Vision 2030, Policy Framework for Long-term National Development*, (AIM Publications) (2004): 138.

- Productive and healthy natural wetlands with rich biodiversity
- Appropriate tenure over wetland resources.

The Vision 2030 also refers to topics like fisheries and marine resources, land and agricultural production, forestry, wildlife and tourism as well as to biodiversity. Strict pollution control is a guiding principle to be considered within all these topics.

### **2.3. Existing and Proposed National Development Plans Related to Wetlands**

Namibia's Vision 2030 visualises the National Development Plans as the main vehicles for achieving its objectives and realizing the long-term Vision. The successive National Development Plans will contain the goals and intermediate targets (milestones) that will eventually lead to the realization of the Vision.

#### **2.3.1. National Development Plan 2**

Namibia is currently finalising its Third National Development Plan which will be launched in August 2007. A review of the Second National Development Plan approved by the Namibian Cabinet in 2002 shows consideration of water and the environment and advocates the sustainable use of the scarce water resources.

The Second National Development Plan, NDP 2<sup>14</sup> (2001/02 – 2005/06) sought sustainable and equitable improvement in the quality of life of all the people in Namibia. The National Development Objectives were to 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. Chapter 12 dealt with water and the goal was “ To provide safe water to the whole population, to manage the resource according to the principles of equity and sustainability, and to ensure that water provision contributes effectively and efficiently towards the development of Namibia's economy” The major objectives were:

- Provide access to water of acceptable quality for the whole population, with priority to rural areas

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<sup>14</sup> Government of the Republic of Namibia (GRN), National Planning Commission, *Second National Development Plan (NDP2) 2002*.

- Utilise, conserve and protect all water resources in an environmentally sustainable manner
- Manage and allocate the scarce water resources in an equitable and efficient manner with due consideration to the environment
- Promote institutional efficiency and financial sustainability taking into account affordability and equity for all consumers
- Ensure that water availability promotes and supports gender balance, social and economic development

Strategies to achieve this included legislative, institutional and administrative change and development that included partnership with local institutions and sustainability of water and wetland systems. The stated strategy to ensure equitable and efficient access to and use of water, by both people and the environment, is to put proper legislation in place. This implied that the water laws then being refined should address the need for ecological or environmental water reserves and ensure that EIAs be conducted on all water development projects.

To ensure the achievement of these objectives, targets for the five year period included:

- Have methodology finalised to determine ecological reserves and basic needs in water management basins in Namibia
- Environmental Assessments will be conducted for all new projects according to the environmental assessment policy and relevant legislation
- Have monitoring strategy plans finalised for all water management basins in Namibia.

### **2.3.2. National Development Plan 3**

The draft Guidelines for the formulation of the NDP 3<sup>15</sup> have been prepared in the latter part of 2006, and approved by the Cabinet in December 2006. It will be launched in August 2007.

During the first half of 2007, Thematic Working Groups comprising representatives of the stakeholders will design the programmes and activities to achieve the NDP 3 goals. A first draft of the NDP 3 is expected to be ready in mid-2007, with the Plan scheduled to be launched in August 2007. The overall theme of NDP 3 is defined as accelerated economic growth through deepening rural development.<sup>16</sup>

<sup>15</sup> Government of the Republic of Namibia, National Planning Commission, *Guidelines for Preparing the Third National Development Plan (NDP3): 2007/08 – 2011/12*, text at [www.npc.gov.na/](http://www.npc.gov.na/).

<sup>16</sup> Government of the Republic of Namibia, National Planning Commission, *Guidelines for Preparing the Third National Development Plan (NDP3): 2007/08 – 2011/12*: 22

Productive Utilization of Natural Resources and Environmental Conservation are key result areas and goals of NDP 3.

NDP 3 recognises that with the country's scarce and fragile natural resource-base, the risk of over-exploitation is considerable and that therefore sustained growth is highly dependent on sound management of the natural resources.

The guidelines for preparing the NDP 3 stipulate that the renewable resource capital needs to be maintained in quantity and quality. This is to be achieved by reinvestment of benefits in natural resources by diversifying the economy away from resource-intensive primary sector activities and by increasing the productivity per unit of natural resource input.<sup>17</sup>

Two NDP3 goals ensuring the protection of wetlands (as well as other environmental concerns) are:

- Optimal and Sustainable Utilization of Renewable and Non-Renewable Resources; and
- Environmental Sustainability<sup>18</sup>

The coordination of these goals fall into the responsibility of the Ministry of Agriculture, Water and Forestry and the Ministry of Environment and Tourism.

## **2.4. Sector Specific Policies**

### **2.4.1. Water Policies**

Three main policy documents are directly relevant to water and wetland resources in Namibia. These are the Water and Sanitation Sector Policy (WASP), the Namibia National Water Policy as well as Namibia's Wetland Policy, currently still in draft form. These policy documents augment each other in that the WASP deals with water and sanitation issues whilst the National Water Policy deals with more general water resources management and the Wetlands Policy deals more directly with environmental issues.

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<sup>17</sup> *Supra* p 30.

<sup>18</sup> *Supra* p 32-3

#### **2.4.1.1. Water Supply and Sanitation Policy (MAWRD, 1993)**

Although called the Water and Sanitation Policy (WASP) it deals pertinently with Water Supply and Sanitation issues, touches on irrigation provision to improve sustainable food self sufficiency and security and provides the basis for equitable and efficient development of water supply in Namibia. The policy aims to provide improved water supply, improved sanitation and irrigation at an affordable price to all Namibians that such developments are environmentally sustainable and subject to environmental impact assessments. The policy states that:

- Improved water supply provision should contribute towards improved public health, support basic needs, reduce the burden of collecting water, promote community based social development especially taking into account the role of women and stimulate economic growth.
- Improved provision of sanitation should contribute to improved health, ensure a hygienic environment, protect water sources from pollution, promote water conservation and stimulate economic development
- Provision of irrigation should improve nutrition and food security, support settlements and stimulate development of viable arable agriculture.
- Water supply services should be a combined effort between the Government and the beneficiaries and that communities determine their water supply and sanitation service levels and contribute to costs.
- First priority should be given to domestic use (including livestock watering for subsistence and economic farming), and second priority to economic activities (mining, industry and irrigation).
- Water tariffs should be developed that cover running and maintenance costs of water provision to ensure the self-sufficiency and sustainability of the sector and these tariffs be subject to ministerial approval.

This policy laid the foundations for the establishment of the Directorate of Rural Water Supply, the current community-based management of rural water supplies and for the establishment of over 200 Water Point Committees countrywide. It 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 services. The policy stresses environmentally sustainable development and utilization of water resources and thus by implication that water point committees should be concerned about any developments or alterations that may pose a threat to water supply and their water resources and that they will be responsible for implementing specific management measures such as the strict allocation of an ecological water reserve and water demand management measures. The policy places strong emphasis on community involvement, participation and responsibility.

#### **2.4.1.2. The National Water Policy 2002**

In 2002 the Namibian cabinet approved the National Water Policy White Paper<sup>19</sup> that forms the basis for the new Water Resources Management Act that is currently being amended for ease of implementation. 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, 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” that 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 given 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. It is assumed that this and other strategies in the water policy will form the basis of the future legislation and that aquatic scientists will be approached to advise on appropriate regulations. The Environmental Water Reserve is specifically included in the “Legislative and Regulatory Principles” that states that “... legislation will provide for determining an environmental water reserve for freshwater sources before they can be used to supply any other demand than domestic and subsistence livestock watering.”

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<sup>19</sup> White Paper on National Water Policy for Namibia, May 2000



The National Water Policy was developed to guide water resources management in Namibia. It is based on the country's physical 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. This 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** - It states that 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** - It states that 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 will respect the right of all stakeholders including basin communities to participate in negotiations and consultations at international level.
- **Integrated management and planning** - It provides that management and planning of water resources should be integrated across economic, environmental, and social dimensions.
- **Development and intergenerational equity** - It states that 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** - It stipulates that all Namibians should have the right of access to sufficient safe water for healthy productive life.
- **Water for Ecosystems** - It denotes that water resources management needs to harmonise human and environmental requirements and recognise the role of water in supporting ecosystems.

- **Recognition of economic value** - It provides that economic value of water resources in Namibia should be recognised given its scarcity and vulnerability, and that abstraction, management, conservation and use should be efficient and cost effective.
- **Stakeholder involvement** - It states that 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** - It stipulates that 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** - It provides that the management of water resources and water services should be decentralised to the lowest practicable level and recommends basin management.
- **Roles of Institutions** - It denotes that there is a need to have institutional functions clearly defined.
- **Capacity building** - It states that capacity building should be a continuous process of institutional and human development and should include participation from public, private, civil society and community structures.

Important to this review is that 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 “polluter pays” principles 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 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....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.

#### **2.4.1.3 Namibia’s Draft Wetland Policy (November 2004 Draft)**

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 enduring 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. Those relevant to this review are:

- **Ownership:** Namibia’s limited and sensitive wetlands are a national asset, whose ownership is vested in the state on behalf of the whole society. However, many wetlands are part of much larger systems, some of which have considerable

components in other countries, whilst others are of international importance in that they serve as vital feeding and breeding areas for migratory birds and other species. Consequently, Namibia is committed to respecting all regional, continental and global associations relating to wetlands.

- **Ecosystem values and sustainability:** The Ramsar Convention on Wetlands' definitions and guidelines regarding the wise use of wetlands will be followed. The environment is a legitimate water user and in order to safeguard water quality, minimise the loss of livelihood options and the high financial costs associated with wetland rehabilitation, sufficient water, of good quality, shall be available to maintain essential ecological functions, goods and services and biological diversity provided by wetland ecosystems. Care shall be taken to maintain seasonal flow patterns.
- **Shared watercourses:** Namibia shall cooperate with her neighbours and the international community regarding the conservation, management and sustainable utilisation of shared wetlands and wetlands of international importance. In all negotiations regarding shared watercourses, Namibia shall adhere to generally accepted principles of international law. User rights asserted by Namibia will respect the rights of upstream and downstream users, and support the need for shared rivers to produce optimal benefit to all the riparian countries.

The policy was developed within the framework of the National Water 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 Protocol on Shared Watercourse systems, NEPAD, several regional water commissions on shared river courses, the Ramsar Convention, the UNCBD, the UNCCD and the UNFCCC and 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 transfrontier protected areas e.g. along the lower reaches of the Okavango River downstream of Mukwe, is specifically stated. The proposed KAZA Transfrontier Peace Park is directly relevant to the wetlands of the Zambezi River system.

Legislative and regulatory principles include the development of legislation to protect Namibia's diverse and vulnerable wetlands and that the need to protect the biodiversity and

ecological functioning of wetlands will be factored into all new laws and policies as well 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.

Also important to shared wetland resources of the Zambezi is that Namibia's draft wetland policy contains several clauses specific to alien invasive species. The introduction of invasive species are specifically mentioned in section 3.2 as one of the major causes of wetland degradation, and the five most invasive waterweeds are listed by name – *Salvinia molesta*, *Azolla filiculoides*, *Pistia stratiotes*, *Myriophyllum aquaticum* and *Eichhornia crassipes*. The policy recognises that the introduction of invasive animals can cause pest problems, habitat destruction and in the case of non-indigenous species, genetic pollution of closely related native animals.

Included in section 4.2 on wetland resource use and conservation principles are three clauses that are particularly pertinent to shared watercourses:

- The importation of, and trade in, seeds, plants and animals that are alien to Namibia and that have the ability to invade natural wetland habitats and thus compete with or threaten the survival of indigenous species shall be avoided.<sup>20</sup>
- Alien aquatic weeds, including the Kariba weed, *Salvinia molesta*, water hyacinth, *Eichhornia crassipes*, red water fern, *Azolla filiculoides*, water lettuce or Nile cabbage, *Pistia stratiotes*, and parrot's feather, *Myriophyllum aquaticum* and other alien invasive organisms that threaten wetland functioning and production shall be controlled through a combination of government funded mechanisms, local government incentives and cross-border co-operation.<sup>21</sup>
- All wetlands that have been identified as Ramsar sites or potential Ramsar sites should be afforded the highest possible protection by the State.<sup>22</sup>

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<sup>20</sup> Section 4.2.13 of the policy.

<sup>21</sup> Section 4.2.14 of the policy.

<sup>22</sup> Section 4.2.15 of the policy.

## **2.4.2. Agricultural Policies**

### **2.4.2.1. The National Agricultural Policy (1995)**

The National Agricultural Policy 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 Assessments for agriculture projects and proposes a review of legislation related to agrochemical use. The aims of the National Agricultural Policy are largely economic and focus on increasing agricultural productivity, real farm incomes and so doing to contribute to national and household food security. It recognises the limitations imposed by the Namibian climate and soils and seeks to promote sustainable utilization 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.

The Zambezi River Basin in the Caprivi Region includes some of the best agricultural land in Namibia and large areas within the catchment have been earmarked for irrigation schemes linked to the 'Green Scheme'. Thus this policy, particularly the recognition that environmental impact assessments should be undertaken for new developments in the sector is important to this review.

### **2.4.2.2. The National Drought Policy and Strategy (1997)**

The National Drought Policy 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, NAPCOD<sup>23</sup>, recent responses to crop failures in the north and north east have again reverted to relief programmes. As a crop growing area where much of the subsistence and small scale agriculture is rain-fed the Zambezi River catchment in Namibia is susceptible to droughts and the policy is applicable. Drought preparedness is one of the important aspects of sustainable resource use and strongly advocated in activities of conservancies elsewhere in the country.

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<sup>23</sup> Schachtschneider and Bethune (2002)

**2.4.2.3. The Regional Planning and Development Policy (NPC 1997)**

This policy 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, important to agriculture alongside the Zambezi River.

**2.4.3. Fishery Policies: Namibia's Aquaculture Policy – towards responsible development of aquaculture (March 2001)**

The 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 minimize 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 insure 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 FAO Technical Guidelines for Aquaculture Development as well as the Holmenkollen Guidelines and recognises international responsibilities in terms of CITES, 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 the aquaculturists and to identify the responsible authorities in terms of enforcement and set out 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.<sup>24</sup>

The policy explicitly deals with maintaining genetic diversity and the integrity of aquatic ecosystem and stresses a precautionary approach.<sup>25</sup> Any proposals for further introductions or translocations of freshwater aquatic organisms, particularly the introductions 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 known to have had harmful environmental consequences when introduced or translocated, 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 aquaculturists for safe and efficient farm management and touches on quality, health and ethical concerns.<sup>26</sup>

The aquaculture policy is important to the management and conservation of the Zambezi River wetlands for aquaculture development in the Caprivi is being strongly supported by the Government and the risks of pollution and inadvertent releases of invasive alien fish and plant species need to be guarded against.

#### **2.4.4. Forestry Policies:**

##### **2.4.4.1. Namibia Forestry Strategic Plan (MET 1996)**

This is the main instrument for implementing the Development Forestry Policy and one important aim of this plan is the development of community level natural forest management which includes community management of the riparian forests and woodlands adjacent to our wetlands.

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<sup>24</sup> Cf. Section 3.1.11(d) of the policy.

<sup>25</sup> Cf. Section 4 of the policy

<sup>26</sup> Cf. Section 5 of the policy.



#### **2.4.4.2. Development Forestry Policy (MET 2001)**

Biodiversity conservation is central to this policy that 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 successful implementation of sustainable forestry management in Namibia and paves the way for the establishment of community forests and their custodianship by the people most dependent on forestry resources.

#### **2.4.5. Environment and Wildlife Policies**

##### **2.4.5.1. Namibia’s Environmental Assessment Policy (1994)**

The Environmental Assessment Policy was approved by cabinet in 1994 and provides the framework for environmental assessments including those to be undertaken in respect to large water supply schemes and other water consumptive developments. As a guiding principle, this policy states that Namibia shall place a high priority on maintaining ecosystems and related ecological processes, maintaining maximum biological diversity. The policy furthermore recognises that Environmental Assessments are a key tool towards implementing integrated environmental management. The policy will gain legislative backing once the draft Environmental Management bill is finally passed. In the meantime the policy serves to guide developers who wish to conduct environmental assessments and the Ministry of Environment and Tourism has taken on the responsibility of vetting EIA results and drawing up environmental contracts to ensure that the necessary measures to mitigate serious environmental impacts are taken and monitored in all new developments essentially following the steps as set out in Appendix A of the policy. Appendix B lists activities requiring environmental impact assessments. Pertinent to this review are:

- Land acquisition for national parks, nature reserves, protected natural environments or wilderness
- Any Government policy, programme or project on the use of natural resources
- Pest control programmes (in terms of malaria, bilharzia, tsetse fly and Kariba weed control)
- Power generation facilities with and output of 1 megawatt or more.

- Introduction and/or propagation of invasive alien plant and animal species
- Afforestation projects
- Genetic modification of organisms and releases of such organisms
- Major pipelines, canals, aqueducts, river diversions and water transfers
- Permanent flood control schemes
- Major dams, reservoirs, levees and weirs
- Major agricultural activities (e.g. cultivation projects in previously undeveloped/unused areas)
- Small scale (formal) water supply schemes
- Aquaculture and Mariculture
- Multinational projects
- Commercial tourism and recreation facilities
- Significant use of pesticides, herbicides, and defoliant
- Drought relief schemes
- Veterinary fencing

#### **2.4.5.2. Policy for Prospecting and Mining in Protected Areas and National Monuments (1999)**

This policy recognises that mineral exploitation can result in significant negative environmental impacts including habitat destruction, loss of biodiversity and impacts that will threaten growth within the tourism industry. It aims to ensure that the environment is protected through the implementation of mitigation measures that are adopted before, during, and after the prospecting and mining activities. Two points would be important in terms of conservation and management of the Zambezi River Basin should any mineral exploration be undertaken within the catchment: The Ministry of Environment and Tourism regulations should control wild and domestic fauna and flora, both within and outside of proclaimed protected areas and Environmental Impact Assessments should be required.

#### **2.4.6. Tourism Policies**

##### **2.2.6.1. The Tourism White Paper (1994)**

This tourism policy Paper commits the Government of Namibia to *inter alia* developing the tourism industry without threatening Namibia's biodiversity. It requires part of the income derived from tourism be re-invested in the conservation of natural resources, including those associated with wetlands. It identifies eco-tourism for foreign visitors as the primary product, and assigns the Ministry of Environment and Tourism the lead role to coordinate inter-ministerial activities relevant for tourism and cooperate with the private sector to create a national tourism identity.<sup>27</sup>

##### **2.4.6.2. The Draft National Tourism Policy (MET 1999)**

This policy aims to secure and develop important tourism areas including those associated with wetlands such as the Zambezi so that their value is not undermined by other, unsustainable land use options.

##### **2.4.6.3. The Community-Based Tourism Policy (MET 1995)**

This policy was developed in recognition of 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 emphasis on environmental sustainability, biodiversity conservation and community participation in tourism makes it very pertinent to guiding development in the Zambezi River Basin.

##### **2.4.6.4. Revised Draft Tourism Policy 2001-2010 (MET 2001)**

Environmental sensitivities and sustainability are stressed throughout the report. The policy stresses that no tourist development should be at the cost of biodiversity and requires that some of the income derived be re-invested in natural resource conservation.

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<sup>27</sup> Cf. Section 3.13 of the policy.

#### **2.4.7 Health Policies: The National Policy and Strategy for Malaria Control (1995)**

This policy and strategy for Malaria Control recommends personal protection against malaria through the use of low impact repellents which, when compared to pesticides like DDT, are considered to be environmentally more friendly. Section 5.2.3 on vector control calls for the design and evaluation of vector control strategies based on sound field research. At a subsequent workshop on the biological control of mosquitoes to mitigate malaria (MFMR, 1999), emphasis was placed on maintaining and enhancing indigenous populations of bullfrogs, bats and fish to reduce the incidence of malaria, rather than introducing alien fish species, and to conduct further studies.

#### **2.4.8. Land Policies**

##### **2.4.8.1. Land-use Planning: Towards Sustainable Development (MET 1994)**

This policy document drafted by the Ministry of Environment and Tourism defines five physiographic land forms:

- communal state land
- privately-owned commercial farmland
- proclaimed state land
- urban areas and
- wetland systems including their catchments.

The policy emphasises sustainability of natural resources, biodiversity and essential ecological processes.

##### **2.4.8.2 The National Land Use Planning Policy (MLRR 2002)**

This policy provides a framework for the implementation of regional integrated land use plans.

##### **2.4.8.3 The National Land Policy (MLRR 1998)**

The National Land Policy 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 decentralization 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. In terms of the management and conservation of the Zambezi River Basin, the Land Use and Environmental Board could be an effective ally and control body, particularly if other legislation pertinent to environmental sustainability is strengthened.

#### **2.4.8.4. The National Resettlement Policy**

This policy provides for resettlement, in accordance with the basic objectives of the Government, which is institutionally, socially, economically and environmentally sustainable and will enable the beneficiaries to become self supporting.

#### **2.4.8.5. The National Land Tenure Policy (2003 Draft)**

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. Important to this review is that the policy promotes sustainable utilization of the nations land and other resources, provides a way to regulate different land tenure rights, 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 where 22% is desert receiving less than 100mm/a rainfall, 33% is arid with a rainfall of between 100 – 300 mm/a, 37% is semi-arid receiving 300 – 500mm/a, leaving only

8% semi-humid and sub-tropical area that gets 500 – 700mm/a. The Zambezi River Basin falls in this last category and is thus targeted for agricultural expansion.

#### **2.4.9. Research and Education Policies: National Policy on Enabling the safe use of Biotechnology (BDTF, 1999)**

This policy prepared by the Namibian Biotechnology Alliance was published as a national policy document by the Ministry of Higher Education, Vocational Training, Science and Technology in October 1999. Pertinent to this review are the two main goals of this national policy:

- to guide the judicious use of modern biotechnology in Namibia for sustainable development, in ways which do not in any way jeopardize human and environmental health, including Namibia's biodiversity and genetic resources; and
- to ensure effective control of transboundary movements of genetically modified organisms or products thereof resulting from modern biotechnology, through exchange of information and a scientifically based transparent system of advance informed agreement.

Importantly, 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. The policy states that Namibia will adopt the EU Contained Use Regulations of (2000) with respect to genetically modified organisms GMOs. The policy sets out the fundamental steps for risk assessment, containment measures and classification for GMOs and recommends four classes of activities ranging from, class 1 - those that carry no or negligible risk to human and environmental health, to class 4 – those with a high risk.

#### **2.5. Evaluation of Reviewed Plans and Policies and Identified Gaps**

Recent policy reforms have created a unique opportunity for Namibia to incorporate environmental sensitivity and as a result Namibia is fortunate to have sound policies to support and sustainable use of natural resources and development.

Namibia has a broad range of sectoral policies, particularly those applicable to natural resource conservation, management and utilisation that are pertinent to the conservation and

management of the Zambezi River Basin. Many Government initiatives such as the Green Scheme, aquaculture development, community-based forestry, fishery and wildlife management, eco-tourism expansion and resettlement are in process. Important to this review is that the National Water Policy recognises the need to promote equitable and beneficial use of international watercourses based on generally accepted principles and practices of international law. 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.

In terms of guaranteeing water for people and to some extent their livestock and in terms of recognising the basic water requirements to maintain healthy wetland ecosystems, Namibia has gone some way towards incorporating these environmental water requirements in the National Water Policy, draft Wetland Policy and National Development Plans. Environmental flow requirements should be determined for each basin, a task that will require detailed information on the flow characteristics, water resources, and water requirements of both people and the wetland ecosystems.

Throughout the water resources management review process, consultation and debates on the need to recognise the environment as a legitimate water user have taken place. The National Water Policy includes principles and strategies to harmonise human and environmental water requirements by recognising the role of water in supporting the ecosystem. This, in keeping with the Namibian Constitution, includes, providing sufficient water to the environment to maintain the biological diversity and essential ecological functions of aquatic ecosystems.

There have been sincere attempts to harmonise the different policies that govern the use and management of natural resources, for example Namibia's draft wetland policy was developed within the framework of the National Water policy and takes into account international obligations in terms of SADC protocols, Ramsar and the UN conventions on biodiversity, to combat desertification and on climate change. Even though there is no specific legislation in place yet that makes environmental impact assessments mandatory, the policies of many sectors clearly outline the need to do EIAs as part of sound development planning. It was noted by stakeholders that often the policies of one sector serve the needs of another, for example the wildlife policies by protecting habitats automatically protect forest areas.

Comments from the stakeholders interviewed revealed that most natural resource policies are practical and generally well implemented. With regard to the conservation of wetland resources, in areas such as the Caprivi where conservancies exist community game guards look after the resources and report offenders to their committees and to the Ministry of Environment and Tourism, whose regional offices have contact with local residents. Where there are no conservancies, some communities have traditional set-ups to ensure sustainable use of wetland resources e.g. fish. However, management and conservation, to adequately protect Zambezi wetland resources, is at times not sufficient due to the heavy reliance of communities living along rivers on resources from rivers. Controlling resource use by these communities is a big challenge and more capacity for implementation and monitoring of the policies has to be generated. The water policy is seen as good but now needs to be supported by the implementation of practical regulations e.g. on water-use and on effluent treatment and disposal. One of the gaps identified during the stakeholder consultations is that a clear water pricing policy needs to be developed to ensure wise water use by all sectors.

## **2.6. Recommendations**

In terms of the existing policies in Namibia it can be concluded that these provide adequate instruments for the management and conservation of wetland resources. However, it must be stated that these need to be supported by practical regulations and the resources, both financial and in terms of manpower, to implement and effectively monitor the policies. It will also be necessary to harmonise the regulations of the different sectors responsible for the various wetland resources. The key to sustainable use and conservation of wetland resources in shared watercourses like the Zambezi however, is consistent trans-boundary cooperation between countries sharing them. Awareness has to be raised in all countries sharing the rivers e.g. it won't help raising awareness in one sharing country, while people across the river fish in prohibited areas or with prohibited gear. The KAZA Transfrontier Conservation Area is a good opportunity for the riparian states to draft joint wetland policies and programmes.

Stakeholders interviewed strongly recommended that the draft National wetlands policy should be passed as a matter of urgency and that vacant posts in the ministries responsible for the implementation of wetland related policies be filled by suitably qualified ecologists.

To improve awareness at local level it was suggested that, small demonstration projects be set up with communities to demonstrate the value and benefits derived from wise use.



## Policy and Legislative Review of Wetland Use and Management in Namibia

These recommendations should be carried out by the Ministry of Environment and Tourism and the Ministry of Agriculture, Water and Forestry together with the Regional Governor and his council, traditional and local authorities, conservancies and development partners. An ideal forum for such co-operation at National level is the River Basin Management Committee whilst at international level it will be ZAMCOM. Namibia has signed and ratified this and appointed commissioners. One of the projects under the present ZACPRO 6 is to harmonize policies and laws of the eight countries that share the Zambezi River Basin.

### 3. LEGISLATIVE REVIEW

#### 3.1. Existing and Proposed National Legislation Related to Wetlands

##### 3.1.1. Customary law: The Traditional Authorities Act, No 25 of 2000

Before the arrival of the colonists the indigenous populations have lived for generations according to their own distinctive law. Unwritten, customary law was passed on orally from generation to generation.<sup>28</sup>

After Independence Namibia has decided to restore its customary law and give it a recognised place in the constitutionally guaranteed legal order. After years of marginalisation and exposure to the discretionary abolition as it pleased colonial and apartheid politics, customary law received a constitutionally safeguarded place at the same level as the imported general common law in the form of Roman-Dutch law and its amendments.<sup>29</sup>

Article 66 of the Namibian Constitution lays the foundation for the constitutional recognition of traditional authorities. 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 that such customary or common law does not conflict with the Constitution or any other statutory law. This hybrid system has led to the existence of a legal pluralism.<sup>30</sup>

Traditional authorities legislation provided for environmental responsibilities as early as 1924. These Native Reserve Regulations<sup>31</sup> stipulated the duty to assist in the combating of fire and the eradication of noxious weeds. 1930 the Regulations prescribing the duties, powers and privileges of chiefs and headmen<sup>32</sup> added the duty to preserve game and forests and to prevent soil erosion. Later enactments like for example the legislation about the establishment of Representative Authorities repeated the quoted responsibilities. It contains provisions that 1980 empowered to enacting laws on soil conservation, the protection of water sources, nature conservation and conservation of the environment, including forestry.<sup>33</sup>

The Traditional Authorities Act of 1995, extended the responsibilities of traditional authorities. Sec 10(2)(c) thereof was certainly influenced by art 95(l) of the Constitution,

<sup>28</sup> Du Plessis L; *An Introduction to Law*, 3rd Edition (Juta Kenwyn) 1999: 67ff.

<sup>29</sup> Erasmus, M G; *The impact of the Namibian Constitution on the nature of the state, its politics and society: the record after ten years*, in Hinz, M O; Amoo, S K; van Wyk D (eds) *The constitution at work, 10 years of Namibian nationhood* (University of Namibia, Windhoek) (2002): 20.

<sup>30</sup> Cf Griffiths, J; "What is legal pluralism?" *Journal of Legal Pluralism and Unofficial Law* 24 (1986): 4.

<sup>31</sup> GN 137 of 1924.

<sup>32</sup> GN 60 of 1930.

<sup>33</sup> Schedule to the Representative Authorities Proclamation, AG 8 of 1980.

which calls upon the state to promote and maintain the welfare of the people by adopting, inter alia, 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.

In 1998 the communities of the Kavango, Owambo, Caprivi, Damara, Nama, Tswana/Kalahari, Mbanderu and Herero were gazetted as Traditional Authorities.<sup>34</sup> Representatives of these recognised communities formed the body that was convened to launch the Traditional Authorities Council on 3 June 1998.

The Traditional Authorities Act 25 of 2000 finally gave certain powers, duties and functions to traditional authorities and members thereof.<sup>35</sup> According to the Act it is the overall responsibility of traditional authorities to supervise and ensure the observance of the customary law of that community by its members.<sup>36</sup> Concerning nature conservation it is one of the duties of a traditional authority to ensure that the members of his or her traditional community use the natural resources at their disposal on a sustainable basis and in a manner that conserves the environment and maintains the ecosystem for the benefit of all persons in Namibia.<sup>37</sup>

Talking about the traditional authorities in Caprivi means basically talking about three communities:<sup>38</sup> In the east there are the Masubiya with their headquarters (called kuta) at Bukalo. The Mafwe community is the biggest in the Caprivi Region and has its headquarters at Linyanti. A number of Mbukushu who live close to the Cuando river are under the authority of the Linyanti kuta. The Mayeyi have their kuta at Swangali. Most of the Customary rules are not written down but transmitted orally from generation to generation.<sup>39</sup>

The unwritten laws of the traditional communities are quite similar. As to fishing for example members of the aforementioned communities are allowed to fish without any permit within the area of their own community, whereas persons coming from another community must

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<sup>34</sup> Cf GN 64 of 1998.

<sup>35</sup> Section 3 thereof.

<sup>36</sup> Section 3(1) thereof.

<sup>37</sup> Section 3(2)(c) thereof.

<sup>38</sup> Hinz MO, *Customary Law and the Implications for Forests, Trees and Plants*, in: *Customary Law in Namibia: Development and Perspective*, 7<sup>th</sup> ed CASS (Centre for Applied Social Sciences) Paper No 48 (2002), 260ff.

<sup>39</sup> An example for customary laws that were written down are those of Uukwambi providing specifically for the protection of water, recognising that "Water is life it is essential to all living organisms, human being, animals and plants therefore water must be protected and be well taken care of against vandalism. If there is no water, plants, animals and human being would not be there, therefore the traditional authority have the task to protect water." Section 13 of the rules also contain provisions relating to fishing and the prevention of water pollution.

apply for a permit. The Mafwe community which has self-stated law, has included a provision prohibiting to catch small fish with track nets.

The jurisdiction of traditional courts in East Caprivi also encompasses nature conservation matters under customary law.<sup>40</sup> The resolution of disputes and dispensation of justice is usually the prerogative of traditional authorities that apply customs and traditions in courts presided over by traditional leaders, chiefs and headmen.<sup>41</sup> Customary law and traditional courts historically up to now enjoy wide acceptance among the Namibian people. Recent research on the political and economic sustainability of traditional authorities showed an unchanged support for traditional courts. In 2003, after almost ten years of research and consultation, the Community Courts Act 10 was signed into law.<sup>42</sup> The Act attempts to order traditional courts and makes provisions for their registration by registered traditional authorities, the appointment of judges and other officials, appeal procedures and the enforcement of judgments.

### **3.1.2. Water Related Legislation**

#### **3.1.2.1. 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 signature by the Minister. Although the new Water Resources Management Act was approved by parliament in 2004 it has yet to be signed by the Minister and is currently being amended to take into account practical aspects of implementing it. 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 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 basically makes the Department of Water Affairs responsible for the use, allocation, control, and conservation of Namibia's surface and groundwater resources. It made 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

<sup>40</sup> Hinz MO, *Without Chiefs there would be no game – Customary Law and Nature Conservation*, Ministry of Environment and Tourism, Environmental Legislation Project, (2003), 30.

<sup>41</sup> Ruppel OC, *Nature conservation: Customary law to complement statutory environmental law?* Symposium: *New Horizons in Environmental Law, Natural Resources and Poverty Eradication*, held in Entebbe, Uganda by UNEP's Project on Partnership for the Development of Environmental Law and Institutions in Africa (PADELIA), 25-28 September 2006.

<sup>42</sup> GN 185/2003, GG 3044.

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 Act 54 of 1956 makes provision for the ownership, control and use of water and categorically distinguishes between 'private' water and 'public' water. Section 5 of the Act states that the sole and exclusive use and enjoyment of private water shall be in the owner of the land on which such water is found. This means that owners of land through which water flows are vested with riparian water rights, this is in contradiction with what has since been stated in the Namibian Constitution and in the National Water Policy. The Water Policy states that 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 and does not make provision for private ownership or water rights.

According to this old Act, private entities are entitled to water-user rights exercised through a permit issued by the State. The permit outlines user rights and stipulates the quantity of water to be used for certain purposes. Individual irrigation projects found along perennial rivers are allocated water through permits thereby controlling the quantity of water used from shared rivers. Permit holders are required to submit monthly returns to the Department of Water Affairs stipulating the quantity of water used. The quantity of water used for domestic supply along perennial shared rivers is further regulated by specific agreements between the Government of Namibia and other riparian basin States. The old Water Act determines the quality of effluent to be disposed in public wastewater systems and further forbids the disposal of effluents in any ephemeral or perennial rivers thus ensuring the maintenance of the 'receiving water' quality standards. The Act also includes legislation covering the control of aquatic alien plants, whereas, the present draft of the new bill does not specifically cover this. It is in the interest of countries sharing perennial rivers that this shortcoming is addressed before the new bill is finalised.

For many years the old Water Act has been the major legal instrument governing the management of water resources in Namibia, and although it served this purpose adequately in terms of regulating the allocation of water and water rights and covering water quality and resource conservation issues, it was not designed for the niceties peculiar to the Namibian hydrological, political, social, and economic conditions. Despite ensuring basic water supply requirements and that water quality standards are maintained, it does not address issues relating to securing water to maintain ecosystem health, protection of long-term sustainability of freshwater flows, and accessibility of data on water to all parties, nor does it adequately

cover issues important to shared watercourses such as ways to prevent and resolve conflicts over water and ways to ensure wide stakeholder participation in water planning and decision-making. These issues, together with the constitutional issue of ownership, will be addressed in the new Water Resources Management Act.

**3.1.2.2. Water Resources Management Act No 24 of 2004 (MAWRD 2004) as per draft amendments 2007**

The Water Resources Management Act has been approved and published in the Government Gazette,<sup>43</sup> however it has not yet come into force as a date for commencement of the Act as prescribed by section 138 (1) (b) has not yet been determined by the Minister. Once the Act is in force, the Water Act of 1956 will be repealed as whole. The Act is based on the National Water Policy and provides for the management, development, protection, conservation, and use of water resources. It establishes the Water Advisory Council, the Water Regulatory Board and the Water Tribunal; and it provides for incidental matters.

The objective of this Act is to ensure that Namibia's water resources are managed, developed, protected, conserved and used in ways which are consistent with or conducive to the following fundamental principles set out in section 3 of the Act:

- 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, economic, environmental and social dimensions;
- openness and transparency, by making available water resources information accessible to the public;

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<sup>43</sup> GG 3357/2004

- management of water resources so as to promote sustainable development;
- recognition of the economic value of water resources and of the need for their development to be cost-effective;
- furthering a process of human resources development and building of competency in water resources decision-making;
- facilitating and encouraging awareness programmes and participation of interested persons in decision-making;
- consistency of water resources decisions with firm and specific mandates from Government that separate policy making from operational and regulatory roles;
- prevention of water pollution, and the polluter's duty of care and liability to make good;
- 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; and
- regional diversity and decentralisation to the lowest possible level of government consistent with available capacity at such level.

This reflects both the principles stated in the policy and the environmental clause in the Namibian Constitution.

The Act provides for basic human and environmental water needs although not as specifically as stated in the National Water Policy. Two of the General functions and Powers of the Minister are to participate in consultations and negotiations with other countries regarding shared water resources and to ensure that water resources management operates in accordance with the principles of environmental sustainability.

In keeping with the Legislative and Regulatory Principles of the Water Policy which clearly states that legislation will provide for determining an environmental reserve for freshwater sources before they can be used to supply any other demand than domestic and subsistence livestock watering, the Act contains section 27 called “Reservation of water resources” that states that:

“The Minister with the concurrence of the regional councils concerned, may on recommendation of the Water Resource Management Agency or the Basin Management

Committee, reserve part or all of the flow of a watercourse, including any groundwater resource and the water stored in a dam or lake to-

- (a) meet the domestic use of the water users concerned and
- (b) reasonably protect aquatic and wetland ecosystems, including their biological diversity and to maintain essential ecosystem functions.”

Regulations will need to be developed on how to determine these reserved water resources. It is assumed that this reserve will be based on the ecological environmental flow requirements and basic human water requirements pertinent to a particular river system or basin.

Another Fundamental Principle of the Act is to “ the management of water resources do as to promote sustainable use for sustainable development: The Act thus provides for the establishment of a Water Resources Management Agency as well as Basin Management Committees to manages our water resources sustainably.

Section 7 outlines the functions of the proposed Water Resources Management Agency which include integrated management of Namibia’s water resources, the collection, analysis and sharing of data concerning the conservation and management of water resources and resource quality in Namibia, guiding, assisting and coordinating basin management committees. Whilst section 13 gives those of the proposed Basin Management Committee include to protect, develop, conserve, manage and control water resources and water resource quality within its water management area in consultation with other water management stakeholders; to promote community participation in the protection, use, development, conservation, management and control of water resources in its water management area through education and other appropriate activities; to provide input in the preparation of a water resources plan for the basin; to monitor and report on the effectiveness of policies and action in achieving sustainable management of the basin; and to collect, manage and share such data as are necessary to properly manage the basin in coordination with the Water Resources Management Agency.’ It is assumed that the responsibility to protect the basin and its resources includes the requirement to do environmental impact assessments for all proposed development projects. The Basin Management Committees proposed in this Act aim to involve all stakeholders in decisions regarding their water resources and to delegate the task to the most appropriate level of management as captured in the Fundamental Principle regional diversity and decentralization to the lowest possible level of government consistent with available capacity at such level.



It is assumed that the Agency will be responsible for determining water quality, pollution control and environmental flow requirements to be prescribed in the Regulations under this Act and that these will be subject to public consultation. Once agreed, the water standards, allocations, pollution control measures and determined environmental flow requirements should be taken into consideration when licenses for water abstraction, impoundment, inter-basin transfers and effluent discharges are issued. The requirement to conduct environmental impact assessments for water projects is adequately taken into account in the draft Environmental Management Act, yet to be passed, and is also a requirement for water abstraction and effluent discharge permits under the Water Resources Management Act.

The Act specifically deals with the control of alien invasive species in section 133 on regulations, stating that the Minister may declare any species to be an alien invasive species and may make regulations for their eradications 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 that the Water Resources Management Act is based on is that Namibia meets its international obligations and promotes respect for Namibia's 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 recognizes 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 is authorized 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.

Although approved by parliament in 2004 this Act has yet to commence on a date to be determined by the Minister and is currently being amended for practical implementation. This discussion includes the wording as suggested for the amendments.

### **3.1.2.3. The Namibia Water Corporation Act, No 12 of 1997**

The Namibia Water Corporation Act<sup>44</sup> establishes the water utility company, NamWater, and important for this review, it places an obligation on NamWater to conduct its functions in an environmentally sustainable and sound manner, and as it 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. There is however no specific mention of environmental water requirements. Although the studies on and monitoring of water releases for ecological purposes from the Oanob Dam become functions of NamWater when the parastatal was formed, there have not been any releases since NamWater took over although this is planned. Nationally, 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. Water supply to the town of Katima Mulilo on the Zambezi River is the responsibility of NamWater.

### **3.1.2.4. Water Research Act No 34 of 1971**

Although this South African Act which provides for water related research through the establishment of a water research commission and fund remains applicable in Namibia, neither the commission nor the fund were ever established in Namibia.

### **3.1.2.5. Water Quality Control Regulations**

The legal instruments that govern quality of potable water include the Water Act, the Public Health Act, Municipal Drainage Regulations, the Model Sewerage and Drainage Regulations (1996), and the Namibian Water Guidelines. The Namibian Water Guidelines are based on the World Health Organisation (WHO) and European Union (EU) standards. The purpose of these guidelines is to ensure the aesthetic, chemical, and bacteriological quality of potable water.

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<sup>44</sup> GG 1732; it came into force on 20 November 1997, GN 234/1997.

### **3.1.3. Agriculture Related Legislation**

#### **3.1.3.1. The Agricultural Pests Ordinance No 11 of 1927**

This very outdated legislation has to all intents and purposes been repealed by the Agricultural Pests Act 38 of 1973 and will certainly fall away once the new Plant Quarantine Act of 2007 comes into operation on a date yet to be determined by the Minister. It is useful in that it lists prohibited imports that can cause pest and weed problems as well as those species allowed by permit that would require particular precautionary measures. These regulations are important when dealing with transboundary wetlands, such as those bordering the Caprivi Region as are those of the Agricultural Pests Act below.

#### **3.1.3.2. 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 biocontrol 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 already in place administered jointly by Customs and Excise and the Phytosanitary section in the Ministry of Agriculture. This act too, will be repealed by the new Plant Quarantine Act 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).

**3.1.3.4. The Weeds Act No 42 of 1937 and the Weeds Ordinance No 19 of 1957**

Both the Weeds Act and the Weeds Ordinance, although no longer applicable in South Africa, still apply in Namibia but it is not clear which would take precedence. According to the ordinance the “administrator” has the power to declare weeds and land owners have a duty to eradicate such weeds. It allows for regulations including ones that prevent the introduction of weeds by prohibiting or restricting their importation and distribution. Important to this review is Section 8 that makes it a criminal offence to place, cause or permit any portion of a weed or any weed in any river, watercourse, or water furrow or on any public road. This is particularly pertinent in controlling the potential spread of aquatic weeds such as *Salvina molesta* and *Pistia stratiotes*.

**3.1.3.4. The Soil Conservation Act No 76 of 1969 and the second Soil Conservation Amendment Act No 38 of 1971**

The Soil Conservation 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. Thus where management strategies for the Zambezi River Basin are conducive to these aims, particularly the conservation of water resources this act is applicable. 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 catchment area of the Zambezi River Basin in the Caprivi Region is communal land and this provision is thus important.

The Second Soil Conservation Amendment Act No 38 of 1971 applies the Soil Conservation Act to Namibia and deals mainly with soil conservation, soil stabilization 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. This provides an ideal opportunity to incorporate some broader conservation issues pertinent to wetland conservation and shared watercourses. Sediment transport has been identified as a driving force in the wetland dynamics of the Okavango Delta and is likely to be as important in the floodplains of the Zambezi River. Soil conservation measures applied upstream would have an impact on wetlands downstream particularly at the Zambezi River Mouth. Another area that should be addressed in this emerging legislation is the control and importation of alien invasive species and the development of appropriate screening mechanisms to protect riparian and wetland

ecosystems from plants that take advantage of disturbed areas that have been subject to erosion, particularly alongside river courses.

### **3.1.3.5. The Agricultural (Commercial) Land Reform Act No 6 of 1995**

This Act gives preferential purchase rights to the state for commercial land for tenure reform purposes. This land may avail Namibians who have been socially, economically and politically disadvantaged by past discriminatory laws and practices. Applicability of this Act for the Zambezi River Basin is limited for there is little commercial farmland within the Zambezi River catchment in Namibia.

## **3.1.4. Marine and Fishery Related Legislation**

### **3.1.4.1 Marine Resources Act No 27 of 2000**

The Marine Resources Act<sup>45</sup> provides for the conservation of the marine ecosystem and the responsible utilization, 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. For the purpose of this review the provisions of the Act are of minor relevance since they do only apply to coastal waters.

### **3.1.4.2 The Aquaculture Act No 18 of 2002**

The Aquaculture Act<sup>46</sup> regulates and controls aquaculture activities and the sustainable development of aquaculture resources. It allows the Minister to formulate 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. There is no specific requirement for someone from the environmental sector to serve on the advisory council although the act specifies that Environmental Assessment requirements should be determined with the concurrence of the Minister responsible for environment and in accordance with such legislation or policy dealing with environmental assessments (sec 12(2)), that an environmental clearance be

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<sup>45</sup> The Act came into force on 1 August 2001 (GN 152/2001, GG 2591).

<sup>46</sup> The Act came into force on 3 December 2003 (GN 245/2003, GG 3104); Regulations related to licensing are contained in GN 246/2003 (GG 3104).

issued in accordance with the relevant laws (sec 13(1c)) and that environmental impact assessments be undertaken prior to the designation of an Aquaculture Development Zone (sec 33 (2)).

All aquaculture ventures will be subject to strict licensing. The most important clauses in terms of this review are those dealing specifically with the introduction and transfer of aquatic organisms (sec 27 (1 and 3)):

- 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.

Of utmost relevance are the provisions related to the import and export of live aquatic organisms (sec 28 (1)) according to which a person may not without written permission granted by the Minister import or export aquatic organisms.

#### **3.1.4.3 The Inland Fisheries Resources Act No 1 of 2003**

The Inland Fisheries Resources Act<sup>47</sup> deals with the conservation and utilization 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 that 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

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<sup>47</sup> It came into force on 6 June 2003 (GN 117/2003, GG 2992).

the introduction, transfer, import and export any species of fish or crustacean without written permission (sec 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 23(2a) and sets out the powers of fishery inspectors. The Act makes it compulsory to have a fishing licence to fish in any inland water 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 for 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 to 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. As the Zambezi is one of the most important rivers supporting inland fisheries in Namibian this Act and the regulations under it are particularly pertinent to the conservation and management of the Zambezi River Basin.

#### **3.1.4.4. Prevention and Combating of Pollution at Sea by Oil Act 6 of 1981**

This Act prohibits the discharge of oil from ship, tanker or off-shore installation and gives the state certain powers to prevent such pollution and to deal with the removal of oil spills. For the purpose of this review this Act is of minor relevance as it is applicable to coastal waters. Inland pollution is covered by the Water Act.

#### **3.1.5. Forestry Related Legislation: The Forest Act No 12 of 2001**

The Forest Act<sup>48</sup> 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. It replaces the Preservation of Trees and Forests Ordinance 37 of 1952 and the Forest Act 72 of 1968. This Act defines ‘forest produce’ broadly as any thing which grows or is naturally found in a forest including, any living organism. This Act is centered around sustainable management of forests, and the purpose for which forest resources are managed and

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<sup>48</sup> GG 2667/2001; The Act came into force on 15 August 2002 (GN 138/2002, GG 2793).

developed, including the planting of trees where necessary, in Namibia, is to conserve soil and water resources, maintain biological diversity.<sup>49</sup>

The Act provides for the protection of the environment and of importance to this review is the clause for the protection of riparian vegetation that in effect also legislates against soil erosion and resultant siltation.<sup>50</sup> This clause, essentially taken from the old Forestry Act No 72 of 1968 states that it is an offence to harm, injure or remove any living tree, bush or shrub within 100m of any river, stream or watercourse. However, in practice this legislation has never been enforced and large areas of riparian vegetation have been lost and continue to be cleared.

Broadly interpreted there are elements within this Act that would allow the incorporation of concerns related to shared river courses such as clearing of riparian forests and the eradication or control of alien invasive species within designated protected areas. For areas under threat the proposed Forestry Council can be expected to include concerns about deforestation and alien invasive species in reports to the Minister, the national forest inventory should include alien invasive species and forest management plans should include measures to control the clearing of river banks and the inadvertent spread of alien invasive species. The opportunity to incorporate sustainable management of riparian forests in the Zambezi catchment in forestry stewardship guidelines exists.

Section 15 of the Forest Act deals specifically with community forests in consultation with the Chief or Traditional Authority responsible for communal land. This together with the 1996 Nature Conservation Amendment Act promotes the devolution of rights over natural resources, including forestry resources to communities to manage their own conservancies. As the Caprivi wetlands support dense riparian forests, particularly alongside the Zambezi River, this Act has allowed the establishment of community forests thus affording some degree of protection to these woodlands.

The act specifies that a management plan be prepared together with details on how community members will use and ensure equal access to forestry resources, how this will be financed and benefits shared.<sup>51</sup>

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<sup>49</sup> Section 10 of the Act.

<sup>50</sup> Cf. Section 22 (1) (b) of the Act.

<sup>51</sup> Section 12 of the Act.



### **3.1.6. Environment and Wildlife Related Legislation**

#### **3.1.6.1. Nature Conservation Ordinance No 4 of 1975 and Amendments:**

Although this legislation does not specifically deal with shared watercourses, it is relevant to note that the definition of ‘wildlife’ does not include invertebrates and that section 66 that deals with fish in inland waters and prohibits the placing or release of any fish in inland waters was recently repealed in the Inland Fisheries Resources Act 1 of 2003, essentially reflecting the take over of responsibility for freshwater fish by the Ministry of Fisheries and Marine Resources. Relevant to this review is that the Minister is responsible for the preservation of wild animals, exotic game, fish and plants and 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. Essentially this Act affords protection to wetlands located inside National Parks.

With the introduction of communal conservancies, amendments to the ordinance and its regulations were made and came into effect in 1996.<sup>52</sup> The amendments were made to take into account the establishment of conservancies and Wildlife Councils. Wildlife conservancies are gaining importance within the Zambezi catchment area granting communities custodianship of their natural resources particularly wildlife and fish.

#### **3.1.6.2. Draft Parks and Wildlife Management Bill of 2005**

The proposed Parks and Wildlife Management Act will protect all indigenous species and control the exploitation of all plants and wildlife. The preamble clearly states that the Bill is intended to give effect to paragraph (l) of Article 95 of the Namibian 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 and the Convention on International Trade in Endangered Species of Wild Fauna and Flora. In keeping with the Namibian Constitution the principles underlying the draft Act, are simply that biological diversity and essential ecological processes and life

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<sup>52</sup> Nature Conservation Amendment Act No. 5 of 1996.

support systems be maintained. In case the proposed Act comes into force, it repeals the Nature Conservation Ordinance 4 of 1975.

In its Principles of Conservation (sec 3) the Bill *inter alia* recognises that

- Biological diversity must be maintained, and where necessary, rehabilitated; and that
- Essential ecological processes and life support systems must be maintained.

### **3.1.6.3. Environmental Management and Assessment Bill (Draft 2004)**

This long overdue Bill requires adherence to the principle of optimal sustainable yield in the exploitation of all natural resources. The Bill gives effect to Article 95(1) of the Namibian Constitution by establishing general principles for the management of the environment and natural resources. It promotes the co-ordinated and integrated management of the environment and sets out responsibilities in this regard. It furthermore 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 matters in connection therewith.

Once enacted, it will promote inter-generational equity in the utilisation of all natural resources and make Environmental Assessments (EAs) essential prior to the development of projects that can impact on wetlands. In terms of the management of shared wetlands such as the Zambezi two issues are important:

- the threat posed by invasive alien species particularly plants and
- the need of sufficient water to maintain ecological functioning of the Zambezi River.

One of the principles on which the draft bill is based is that equitable access to sufficient water of ecological systems shall be fulfilled to insure the sustainability of such systems. This essentially requires that all ecosystems be provided with sufficient water to meet their ecological water requirements. To cater for this principle, several activities that would have an impact on natural water resources and the goods and services provided by wetlands are included in the list that would by law require detailed Environmental Impact Assessments. Those that would be applicable to the management and conservation of the Zambezi River Basin are:

- The abstraction of ground or surface water
- Alteration of natural wetland systems

- The drilling of boreholes and the construction of dams, reservoirs, levees and weirs
- The construction of canals and channels including the diversion of normal flow of water in a riverbed and water transfer schemes between water catchments and impoundment.

#### **3.1.6.4. Pollution Control and Waste Management Bill (Draft 2003)**

The proposed Act 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 make provision for the establishment of an appropriate framework for integrated pollution prevention and control, to regulate noise, dust and odour pollution, to establish a system of waste planning and management and to enable Namibia to comply with its obligations under international law in this regard.

In its third part the Bill contains specific provisions for relating to water pollution covering *inter alia*:

- Water quality monitoring
- Water quality action areas
- Discharge of pollutants or waste to water or a watercourse; and
- Water pollution licences

#### **3.1.7. Land Related Legislation**

##### **3.1.7.1. The Communal Land Reform Act No 5 of 2002**

This Act provides for the allocation and administration of all communal land and makes provision for the prevention of land degradation and mitigating the impacts of mining, prospecting, roadworks and water provision.

Communal Land in the Caprivi is the part of Namibia lying east of the meridian of longitude 23E 18'00". The Act provides certain rights to communal farmers and traditional authorities and representation on Communal Land Boards. Section 45 of the Act states that future regulations will address issues pertinent to the conservation and sustainable management of the Zambezi River Basin as it stipulates that the Minister may make regulations in relation to

- Watercourses, woods and the use of water (sec 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 and any other matter as the Minister may consider necessary or expedient for giving effect to this Act

Of note, is the provision of Communal Land Boards, with representation of officials from both the Ministry Environment and Tourism and the Ministry of Agriculture, Water and Rural Development as well as representatives from any conservancies.

### **3.1.7.2. Land Survey Act No 33 of 1993**

This Act provides land surveying where new title deeds are required and makes the office of the Surveyor General responsible for all land surveys. This includes cases of sub-division or consolidation of land, where the property has to be surveyed by a qualified Land surveyor and the survey records and diagrammes must be approved by the Surveyor General.

### **3.1.8. Mining and Energy Related Legislation: The Minerals Prospecting and Mining Act No 33 of 1992**

The Minerals Prospecting and Mining Act<sup>53</sup> provides for the reconnaissance, prospecting, mining, disposal and control of minerals in Namibia. It has significance for water supply in Namibia in general as it has several references to adequate protection of the environment including water. The Act contains provisions with regard to environmental protection like the liability of license holders in cases of pollution of the environment (sec 130). Environmental concerns have to be considered in the process of granting licences. Mining licenses may only be granted, if the proposed programme of mining operations to be carried out will ensure adequate protection of the environment (sec 92 (2)(c)(ii)(bb)).

### **3.1.9 Customs Related Legislation: The Customs and Excise Act No 20 of 1998**

Although the Phyto-sanitary Division of the Directorate of Veterinary Services within MAWRD is tasked to remove weeds and prevent their importation under the Agricultural Pests Act, customs officials, under Customs and Excise in the Ministry of Finance, execute the function of controlling entry of exotic plants and animals. Provision is made for this in the Customs and Excise Act of 1998, under section 123: Goods which may, in terms of any provision of the Act or of any other law, only be imported into Namibia in terms of a permit,

<sup>53</sup> The Act came into force on 1 April 1994 (GN 41/1994, GG 828).

certificate or other authority. Under this, a list of prohibited goods, including several alien invasive species or weeds and pests, has been compiled and is updated from time to time. The list includes a description of the goods, the prohibition or restriction, the relevant Authority, and the action required. According to the Ministry of Finance, the system works well, with regular training sessions conducted by the Phyto-sanitary Division of the MAWRD. However, according to the Phyto-sanitary Division, this is not always the case, due to the “technical nature” of phyto-sanitary issues and shortage of trained staff. Customs officials at border posts often do not have lists to assist them with the identification of prohibited organisms and it is strongly recommended that lists and posters for easy identification of such goods be developed. It would be in the interests of those responsible for the joint management of the Zambezi River Basin to assist with the development of appropriate information sheets for border checkpoints.

### **3.2 Evaluation of Reviewed Legislation and Identified Gaps**

Legislative reforms since Independence 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 the sustainable use of natural resources. Despite this much of the current legislation is still looking more at the traditional conservation ways where emphasis is still strong on conservation rather than on wise use and strong community involvement. Yet it is one of the legal duties of traditional authorities to ensure that community members use natural resources sustainably, in a way that conserves the environment and maintains ecosystems for the benefit of all Namibians.<sup>54</sup> The main traditional authorities in Caprivi are the Basubiya, the Mafwe, the Mbukushu and the Mayeyi.

The fundamental principles of the yet to be initiated new Water Resources Management Act reflects both the principles stated in the National Water Policy and the environmental clause in the Namibian Constitution. The Act provides for basic human and environmental water needs although not as specifically as stated in the National Water Policy. One of the General functions and Powers of the Minister deals specifically with shared watercourses and are to participate in transboundary agreements, consultations and negotiations with other countries that share our water resources and another particularly pertinent to this review is the obligation to ensure that water resources management operates in accordance with the principles of environmental sustainability. The Water Resources Management Bill gives

<sup>54</sup> Section 3(2)(c) thereof.

priority to the allocation of water to meet domestic needs and to reasonably protect aquatic and wetland ecosystems. The proposed Basin Management Committees allowing stakeholders to cooperate to protect, develop, conserve, manage and control water resources and water resource quality in coordination with the Water Resources Management Agency is important. This will involve all stakeholders within the Zambezi Basin in Namibia in water resource decisions at to the most appropriate level of management.

Pertinent to this review is that the Water Resources Management Act is based on the fundamental principal that Namibia meets its international obligations and promotes respect for Namibia's rights to internationally shared water resources, resource quality, the abstraction of water for beneficial use and the discharge of polluting effluents. It recognizes Namibia's obligations under international agreements, specifically the Law of Non-navigational Uses of International Watercourses and the revised SADC Protocol on Shared Water Resources. The minister is authorized to participate in developing a shared database and joint projects and to establish institutional links, ensure stakeholder participation, collect and share information with neighbouring riparian states. Although approved by parliament in 2004 this Act has yet to commence on a date to be determined by the Minister and is currently being amended for practical implementation.

The Inland Fisheries Resources Act too encourages cooperation with neighbouring countries regarding the management and conservation of shared waterways and it prohibits the introduction, transfer, import and export any species of fish or crustacean within internationally shared waters without written permission, presumably this will only be granted after consultation with other countries sharing the basin.

The Forest Act provides for the protection of the environment and of importance to this review is the clause for the protection of riparian vegetation that in effect also legislates against soil erosion and resultant siltation.<sup>55</sup> The pertinent clause makes it is an offence to harm, injure or remove any living tree, bush or shrub within 100m of any river, stream or watercourse. However, in many riparian zones including alongside the Zambezi river and its tributaries this legislation is not strictly enforced and large areas of riparian vegetation have been lost and continue to be cleared. Riparian bush clearing particularly for agriculture remains a serious threat to wetland health in the Caprivi and capacity to monitor and control this is needed, the Department of Forestry requires more vehicles, more qualified manpower and resources before this can be effectively controlled.

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<sup>55</sup> Cf. Section 22 (1) (b) of the Act.

Although the Nature Conservation Ordinance affords protection to wetlands located inside National Parks, the long overdue Environment Management and Assessment Bill is urgently needed to protect vulnerable wetlands from development threats by making EIAs mandatory. The Communal Land Reform Act makes provision for communal land boards that include representatives from the environment and water sectors and from conservancies. Once functional these will allow broader stakeholder input into land use and management decisions. Issues that emerge as relevant to the shared management of the Zambezi River Basin from this review are the control of the importation and translocation of invasive alien species that can cause weed and pest problems, the prevention of soil erosion, increasing community ownership of natural resources through traditional authorities, conservancies and community forests, effective border control, the harmonisation of regulations with regard to freshwater fishing, wildlife conservation, pollution and health issues such as malaria control and water quality standards. Emerging legislation takes account of the vulnerability of Namibia's wetlands, the limitations of agriculture in a dry country and changing land use, planning and land tenure.

It can be concluded that many steps have been made in order to provide for adequate instruments to manage and conserve wetlands in Namibia. However, despite the many successes, many challenges remain for example the amendments to the Natural Water Resources Management Act have to be finalised and several proposed environmental Bills, some of which have been delayed for eight years have to go through the legislative process to become effective. Existing legislation has to be implemented effectively, which is at times especially outside conservancies, is not the case due to a lack of capacity.

As much of this legislation pertinent to wetland resource use is relatively new it has yet to be tested in a court of law and practical regulations and guidelines e.g. water quality standards and lists of prohibited alien invasive species, to support these laws are still being developed, this affords Namibia an opportunity to ensure that these regulations are in harmony with those of the other countries that share the Zambezi River Basin and with the relevant agreed international, regional and basin transboundary agreements, protocols and conventions that Namibia is party too. (See section 4).

### **3.3. Recommendations**

For an effective conservation of wetlands and their wise use it is essential that the proposed legislation comes into force and the capacity to implement the laws and regulations be developed. This refers especially to the Water Resources Management Act, the Environmental Management and Assessment Bill and the Pollution Control and Waste Management Bill. Once these are in force, effective instruments for the sustainable use of wetlands resources will be available. The next step has to be to implement these provisions effectively through appropriate and practical regulations and effective monitoring and enforcement. This in many sectors will only be possible if human and financial capacity is increased substantially. The concept of sustainable use of wetlands resources will only succeed if local communities are involved strongly in the process.

Use should be made to the potential to amend several acts currently under review, e.g. the Agricultural Pests Act which should be amended to incorporate a wider spectrum of alien invasive species that threaten the Caprivi wetlands and so to make use of the existing measures of inspection and enforcement already in place administered jointly by Customs and Excise and the Phytosanitary section in the Ministry of Agriculture, Water and Forestry. The Soil Conservation Act too is being revised and provides an ideal opportunity to incorporate some broader conservation issues pertinent to wetland conservation and shared watercourses.

The present development of Forestry stewardship guidelines provides an ideal opportunity to incorporate sustainable management of riparian forests in the Zambezi catchment.

Further recommendations to improve the implementations of legislation and regulations to ensure sustainable wetland resource use in the Caprivi, that emerged from the stakeholder consultations included: Better funding for wetland monitoring programmes specified in NDP3, to establish a national Zambezi River Basin Committee in Caprivi which should conduct a needs assessment in the region, have broad stakeholder representation and raise awareness to improve the cooperation by the public to abide by the laws and regulations, to get the proposed Water Resources Management Agency staffed and running and to improve training opportunities for Government, NGO and community project staff who have the responsibility of monitoring, managing and conserving the wetland resources. The need for national and regional scientific research into wetland dynamics, productivity, biodiversity and conservation and the development of appropriate environmental education materials to improve awareness of the importance of wetland resources was also highlighted.



#### **4. AGREEMENTS ON TRANSBOUNDARY WETLANDS MANAGEMENT TO WHICH NAMIBIA IS A PARTY**

##### **4.1. Global Agreements**

##### **4.1.1. Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar) 1971**

Namibia signed the Ramsar Convention in 1995. The objective of this international convention on wetlands aims to stem the progressive encroachment on and loss of wetlands now and in the future, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value. The aim is to curb the loss and degradation of wetlands and conserve those that remain through wise use and management.

The Ramsar Convention requires parties to, designate at least one suitable wetland for the List of Wetlands of International Importance (known as Ramsar sites), to manage these sustainably (Article 2); to include wetland conservation considerations within their national land-use planning (Article 3, to promote the conservation of wetlands through the establishment of wetland reserves (Article 4); and to co-operate internationally for the sound management of shared wetlands and shared wetland species (Article 5).

Namibia has so far designated four Ramsar sites, the Etosha Pan and three coastal wetlands, the Orange River mouth, Sandwich Harbour and the Walvis Bay wetlands. Several other wetlands in Namibia might well qualify for Ramsar site status. These are: The Kunene River Mouth; The Cape Cross Lagoons; Lakes Otjikoto and Guinas; The Nyae-Nyae Pans system; the lower Okavango River (downstream from Mukwe); the Zambezi floodplains, Linyanti Swamp and Lake Liambezi, the Oshana of the Cuvelai system and Namibia's offshore islands (Kolberg, undated, Shaw *et al* 2004). Of importance to this review is that the rocky rapid habitat section of the Zambezi River at Wenela near Katima Mulilo which would meet the Ramsar criteria and is considered a potential Ramsar site. As a signatory to Ramsar, Namibia has the obligation to conserve its wetlands and co-operate in the sound management of shared wetlands and wetland species. The rocky rapids are one of only two known habitats for the red data fish species, *Clariallabes platyprosopos* and the oscellated spiny eel, *Aethiomastacembalus vanderwaali*.

**4.1.2. Protocol to amend the Convention on Wetlands of International Importance, Paris, 1982**

The objective of this protocol is to render the Convention more effective. The provisions can be summarised as follows: article 1 provides for the inclusion in the Convention of an article 10 b which defines a mechanism for amending the Convention. Article 2 provides for the deletion of the words “in any case of divergency, the English text prevailing“ from the testimonium following article 12 and Article 3 states that the revised text of the original French version of the Convention is reproduced in the annex to the Protocol.

**4.1.3. The United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses**

This Convention on the Law of the Non-Navigational Uses of International Watercourses was signed on 19 May 2000 at the United Nations, New York, United States of America, on behalf of Namibia by Honourable Minister Theo-Ben Gurirab, Minister of Foreign Affairs, Information and Broadcasting of the Republic of Namibia. The Convention was ratified by the Namibian Parliament on 3 October 2000. Namibia is a signatory to the Convention and ratified the Convention. The implementation of the Convention as an international instrument of international water law by the United Nations is very important for Namibia who will in future be acutely dependant on access to the internationally shared waters of the perennial border rivers of Namibia to augment the scarce water resources in the interior of the country.

Parts IV and V of the Convention makes provision for the protection, preservation and management of ecosystems, as well as the prevention and mitigation of harmful conditions. This can be applied to wetlands as well.

**4.1.4. United Nations Convention on the Law of the Sea (UNCLOS)**

The objective of this Convention which in Namibia has ratified in 1983 is 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. Some of the most important provisions are the following:

- Definition of the territorial sea and the contiguous zone (arts. 3 and 33);

- Use of straits for international navigation (arts. 34 to 45) and archipelagic States (arts. 46 to 54);
- Definition of the exclusive economic zone (art. 55). The parties to have sovereign rights therein for the purpose of exploring and exploiting, preserving and managing its natural resources, as well as other rights and duties (art. 56);
- The coastal State to exercise over the continental shelf, (defined in article 76) sovereign rights for the purpose of exploring it and exploiting its natural resources (defined in article 77);
- Freedom of the high seas to comprise (part VII) freedom of navigation, of overflight, of laying submarine cables and pipelines, subject to the provisions of part VI, of constructing artificial islands, etc., subject to the provisions of part VI, and of fishing and of scientific research, subject to the provisions of parts VI and XIII;
- The regime of islands described (art. 121), together with enclosed or semi-enclosed seas (arts. 122 and 123). Land-locked States to enjoy the right of access to and from the sea and freedom of transit (arts. 124 to 132);
- The Area (the sea bed and ocean floor and subsoil thereof,, beyond the limits of national jurisdiction) and its resources to be the common heritage of mankind (art. 136). The resources of the Area to be developed (arts. 150 to 155). An Authority to be established through which States Parties to the Convention shall organize and control activities in the area, particularly with a view to administering the resources of the Area (art. 157). A Sea Bed Disputes Chamber to be established, and the manner in which it shall exercise its jurisdiction specified (art. 186);
- International rules and national legislation to be developed for the prevention, reduction and control of pollution of the marine environment, and provisions set out concerning enforcement and responsibility and liability;
- Rules set out to govern marine scientific research, the development and transfer of marine technology and the settlement of disputes. The obligation to settle disputes by peaceful means specified (art. 279). Compulsory procedures set out entailing binding decisions:
- Uses of the seas for peaceful purposes (art. 301).

The Convention has *inter alia* an Annexure on highly migratory species.

For the purpose of this review the convention is of minor relevance as it is not applicable to internal waters.

#### **4.1.5. United Nations Convention on Biological Diversity (UNCBD) 1992.**

Namibia signed the Treaty on Biological Diversity (UNCBD) at Rio in 1992 and ratified it in 1997. The next year, an initial national review of biological diversity was published as the country study.<sup>56</sup>

This review, in effect reflects government policy on national implementation of the UNCBD. Since then Namibia has actively implemented its obligations under the convention. The primary domestic instrument in guiding this is the National biodiversity strategy and a ten year strategic plan on “*Biodiversity and Development in Namibia – 2001-2010*” drawn up by the National Biodiversity Task Force.<sup>57</sup> This is a thorough document developed consultatively.

Of importance to this review is that Sustainable Wetland Management is the fifth objective of this strategy and action plan. The main strategic aims of this objective are to:

- Protect and maintain essential ecological functions and the biological diversity of Namibia’s wetland ecosystems;
- Create additional conservation areas for wetlands;
- Promote integrated land and water management;
- Raise awareness of wetland values and threats;
- Identify and monitor the main environmental threats;
- Improve mechanisms for integrating sectoral planning and implementation activities; and
- Review and streamline policy and legal frameworks.

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<sup>56</sup> Barnard, P and National Biodiversity Task Force; *Biological diversity of Namibia – a country study*; Ministry of Environment and Tourism, Windhoek (1998).

<sup>57</sup> Barnard P, Shikongo S and Zeidler J (eds.); *Biodiversity and Development - Namibia’s Ten Year Strategic Plan of Action for Sustainable Development Through Biodiversity Conservation 2001- 2010*; Government of the Republic of Namibia, Windhoek (2002).

#### **4.1.6. United Nations Convention to Combat Desertification (UNCCD) 1994**

Namibia was one of the first African countries to sign the UNCCD in 1994 and ratified this 1997. Since then Namibia has been an active member of the Africa group and presented two reports on national implementation.<sup>58</sup> Although this convention does not deal directly with wetlands nor shared watercourses it is important in that the Africa group has given the SADC Water Sector the responsibility of dealing with projects relevant to shared water basins. One of these was the regional project, initiated by Namibia, on the introduction and translocation of aquatic weeds in Southern Africa. Unfortunately this project was put on hold when World Bank funding was withdrawn in mid 2003. Should alternative funding be found this regional project will be important to all countries involved in the Zambezi River Basin.

#### **4.1.7. United Nations Framework Convention on Climate Change (UNFCCC) 1992**

The United Nations Framework Convention on Climate Change (UNFCCC) recognises the need to integrate climate change risks into water and wetland resource management and policy development in southern Africa. Increasing global temperatures and altered rainfall patterns associated with human induced global warming are likely to have negative impacts on the region's already overburdened hydrology.

Namibia ratified the UNFCCC on 16 May 1995. Studies since then have confirmed that Namibia's contribution to greenhouse gases is negligible but as a largely semi-arid country it is highly vulnerable to predicted climate changes, particularly increased temperature, resultant increase evaporative losses and even more variable rainfall patterns and an estimated sea level rise of .3 to 1 meter by 2100.<sup>59</sup> Wetlands are identified as being particularly vulnerable to these changes that will adversely impact on all natural resources. Several of the adaptation and mitigation projects identified in terms of Article 4.4 of the convention: the obligation of developed countries to assist developing countries that are particularly vulnerable to climate change in meeting the cost of adaptation to these effects may have implications in terms shared watercourses and impact on the Zambezi River Basin. The proposed control of malaria and water-borne diseases may have environmental consequences downstream whilst

<sup>58</sup> Bethune S, Pallett J; *Namibia's Second National Report on the Implementation of the UN Convention to Combat Desertification*; Presented at the first session of CRIC- UNCCD, held in Rome, November (2003); Napcod discussion document 7(2002), Bethune S; *Namibia's First National Report on the Implementation of the UN Convention to Combat Desertification*, Presented at the 4<sup>th</sup> Conference of the Parties to the UNCCD, held in Bonn, 11-22 December (2000).

<sup>59</sup> MET; *Namibia. Initial National Communication to the United Nations Framework Convention on Climate Change July 2002*; Ministry of Environment and Tourism (2002).

the testing and dissemination of heat, drought and salt tolerant crops may take place in the basin area where much of the recent agricultural development is focused. Increasing demands on the decreasing water resources could certainly make the Zambezi the focus of future water supply projects and afforestation projects are recommended particularly for the northern part of the country. Care must be taken to insure that these mitigation measures proposed to decrease vulnerability to climate change do not have adverse impacts on the ecological functioning of the Zambezi River Basin as a whole.

#### **4.1.8. FAO Fishery Department Code of Conduct for Responsible Fisheries (October 1995)**

In 1991 the International Committee on Fisheries (COFI) asked the FAO to prepare an international Code of Conduct. This provided input to the 1992 Rio Conference on Environment and Development (UNCED) - and by October 1995, the FAO Code of Conduct for Responsible Fisheries was unanimously adopted. Although compliance is voluntary, it established sound conservation, management and development principles adopted by many countries to ensure sustainable exploitation of aquatic living resources in harmony with the environment.

Namibia has endorsed the Code of Conduct for Responsible Fisheries and, as stated in the Aquaculture Policy (MFMR 2001), is committed to managing its fisheries in accordance with these internationally accepted guidelines, particularly the specific provisions for aquaculture. The Code of Conduct on Responsible Fisheries recognises that, the worlds' fisheries provide a vital source of food, employment, recreation, trade and economic well being and that to continue to do so, requires responsible management. The Code aims to ensure the effective conservation, management and development of living aquatic resources, with due respect to ecosystems and their biodiversity. It strives to take into account both ecological concerns i.e. the biological characteristics of the resources and their environment as well as economic considerations i.e. the interests of consumers and other users. Principles that are relevant to this review are:

- States and users of living aquatic resources should conserve aquatic ecosystems. The right to fish carries with it the obligation to do so in a responsible manner so as to ensure effective conservation and management of the living aquatic resources (6.1.).

- States should apply a precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment (6.5.).
- All critical fisheries habitats should be protected and rehabilitated. Particular effort should be made to protect such habitats from destruction, degradation, pollution and other significant impacts resulting from human activities that threaten the health and viability of the fishery resources (6.8.).
- In terms of aquaculture - States should ensure that resources are used responsibly and adverse impacts on the environment and on local communities are minimized (6.19.)
- Article 7 on management advocates the Precautionary Approach: States should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. The absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures (7.5.1.).
- States should promote responsible development and management of aquaculture, including an advance evaluation of the effects of aquaculture development on genetic diversity and ecosystem integrity, based on the best available scientific information (9.1.2.).
- States should establish effective procedures specific to aquaculture to undertake appropriate environmental assessment and monitoring with the aim of minimizing adverse ecological changes and related economic and social consequences resulting from water extraction, land use, discharge of effluents, use of drugs and chemicals, and other aquaculture activities. (9.1.5).
- States should consult with their neighbouring States, as appropriate, before introducing non-indigenous species into trans-boundary aquatic ecosystems (9.2.3).
- States should conserve genetic diversity and maintain integrity of aquatic communities and ecosystems by appropriate management. In particular, efforts should be undertaken to minimize the harmful effects of introducing non-native species or genetically altered stocks used for aquaculture including culture-based fisheries into waters, especially where there is a significant potential for the spread of such non-native species or genetically altered stocks into waters under the jurisdiction of other States as well as waters under the jurisdiction of the State of origin. States should,

whenever possible, promote steps to minimize adverse genetic, disease and other effects of escaped farmed fish on wild stocks (9.3.1).

Much of this is well reflected in Namibia's aquaculture policy and Aquaculture Act of 2002.

#### **4.1.9. Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973**

Namibia is a member of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). Of importance to this review is that CITES deals with trade in a number of wetland species and therefore has important links with Ramsar and that it takes seriously the risks posed by the inadvertent release of alien species into the wild. This concern is clearly presented in the preamble which recognises the risks of releasing confiscated specimens into the wild, such as the introduction of pathogens and parasites, genetic pollution and negative effects on the local fauna. The guidelines developed from this concern include the following pertinent annexes 1 to 3 to CITES:

- Guidelines for the disposal of confiscated live animals,
- Guidelines for the disposal of confiscated live plants and
- Guidelines to develop an action plan on seized and/or confiscated live specimens.

CITES requires that each Party should establish a procedure for implementing the Guidelines in accordance with the party's domestic law and policy. Namibia has not yet fully complied but should include this in the new Parks and Wildlife Management Bill currently being drafted.

#### **4.1.10. Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979**

Although not yet a signatory to the Convention of Migratory Species (CMS), Namibia may in future become party to the Bonn Convention which is particularly relevant to wetlands and rivers and their international role as feeding and breeding sites for migratory birds and fish (e.g. the catfish and tigerfish migration between Namibia and Botswana).

Namibia has signed a Memorandum of Understanding as to the protection of African Marine Turtles in 2006.



#### **4.1.11. International Plant Protection Convention (IPPC) 1951**

The purpose of the Convention is to secure a common and effective action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control. As the scope of the Convention extends to the protection of both cultivated and natural flora and includes both direct and indirect damage by pests it is also relevant to natural environments such as the Zambezi River Basin.

The Convention falls under the Food and Agriculture Organization of the United Nations (FAO) and was adopted in 1951. Signatories to this convention are organised into National Plant Protection Organisations (NPPOs) and Regional Plant Protection Organisations (RPPOs) which work together to help contracting parties meet their obligations. Although 127 governments are currently signatories, Namibia is not yet a signatory to this convention, but is in the process of acceding to it as an active participant in FAO initiatives.

#### **4.1.12. The WTO Agreement on the Application of Sanitary and Phyto-sanitary measures (SPS Agreement) 1995**

The World Trade Organisation (WTO) agreement on the Application of Sanitary and Phytosanitary Measures entered into force with the establishment of the World Trade Organisation on 1 January 1995. It attempts to establish consistency in applying sanitary and phyto-sanitary measures and safeguards against countries using strict Phyto-sanitary measures as a smokescreen for trade protectionism. Namibia is a member of WTO.

Amendments approved at Twenty-ninth FAO Conference (1999) reflect the complementary relationship of the IPPC to the Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization. The IPPC and SPS Agreement together provide some form of international protection from plant and animal pests, which includes alien invasive species that may threaten the Zambezi River Basin e.g. *Salvinia molesta*. Implementation of the SPS Agreement in Namibia is the responsibility of the Phytosanitary Division within Directorate of Veterinary Services of the Ministry of Agriculture Water and Rural Development.

## **4.2. African Agreements**

### **4.2.1. African Convention on the Conservation of Nature and Natural Resources, (African Union, 2003)**

This treaty has yet to come into force. Once Namibia the treaty comes into force, Namibia will have to provide appropriate legislation for its implementation. Article IX on Species and Genetic Diversity is particularly apt and states that countries shall maintain and enhance species and genetic diversity of plants and animals, particularly preserve as many varieties as possible and strictly control the international and, as far as possible, accidental introductions, in any area, of species which are not native to that area and endeavour to eradicate those already introduced where the consequences are detrimental to native species or to the environment in general.

### **4.2.2. Revised SADC Protocol on Shared Watercourse Systems 1985, revised in 2000**

This protocol signed by all SADC Heads of State in Windhoek in 2000, recognises the need for co-ordinated and environmentally sound, sustainable development and equitable utilization of shared watercourses in the SADC region and seeks to promote co-ordinated and integrated environmentally sound development and management of shared watercourses. This Protocol recognises international consensus on a number of concepts and principles related to water resource development and management in an environmentally sound manner. 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.

The revised Protocol of 2000 promotes the environmental protection of wetlands. The environment is acknowledged as a legitimate water user and clearly defined objectives promote co-ordinated and integrated, environmentally sound development and management of shared watercourses within SADC as well as the harmonisation and monitoring of legislation and policies for planning, development, conservation, protection of shared watercourses, and allocation of the resources thereof and promotes research and information sharing. This is further emphasised in the principle to exchange available information and data regarding the hydrological, hydro-geological, water quality, meteorological and environmental condition of shared watercourses.

One of the key principals is to take all measures to prevent significant harm whilst under the section that deals with Environmental Protection and Preservation alien invasive species are specifically addressed in 2c: “Introduction of alien or new species...take all measures to prevent the introduction and spread of alien or new species into a shared watercourse which may have effects detrimental to the ecosystem of the watercourse resulting in significant harm to other watercourse states.” This clause prompted the SADC regional programme to control the introduction and translocation of aquatic weeds. Recognising that water deficient countries like Namibia and Botswana will suffer if national and regional water policies and laws do not take cognisance of the water needs of the environment, the need to maintain an environmental reserve is implied in the general principle that water utilizations must take into account adequate protection of the watercourse for the benefit of current and future generations.

#### **4.2.3. SADC Protocol on Fisheries 2001**

Namibia signed this on 14 August 2001. This regional 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 emphasizes the necessity for joint co-operative and integrative actions at regional level, awareness and support of national initiatives to implement international conventions on sustainable use and recognises the unique transboundary character of the aquatic resources and ecosystems and the need to cooperate in their management.

Articles 6, 7 and 8 deal explicitly with issues pertinent to the management of the Zambezi River Basin, namely, international relations, management of shared resources and harmonisation of legislation respectively. Under international relations the state parties are committed to upholding their responsibilities in term of international conventions and agreements. In terms of management of shared resources the countries agree to cooperate in information exchange on shared fishery resources, to establish joint instruments for cooperation and management, agree on harmonized management plans and implementing measures, that such management plans with balance the needs of the industry and fishermen in a politically, environmentally and economically sustainable manner, and involve all stakeholders in decision making at the appropriate level and finally to introduce relevant

national legislation to enable rapid and appropriate responses to the above provisions. Article 8 binds the states to harmonise legislation in terms of shared resource management and to cooperate in terms of law enforcement.

Article 12 on Artisanal, Subsistence Fisheries and Small Scale Commercial Fisheries is particularly relevant to the Zambezi River Basin. Under this the parties agree to seek a rational and equitable balance between social and economic objectives by safeguarding the rights of artisanal and subsistence fishermen particularly those who are socially and economically disadvantaged. They agree to promote small scale commercial fisheries, provide appropriate training and support the development of infrastructure and programmes of benefit to artisanal, subsistence and small scale commercial fisheries. The parties undertake to involve the fishermen in the control and management of these fisheries through broad based and equitable participatory processes and to work towards harmonizing their national legislation on appropriate traditional resource management systems, taking into account indigenous knowledge. This section further makes provision for those who are traditionally part of a transboundary fishery to continue this practice.

Under Article 13 dealing with aquaculture, paragraph 7 is relevant: A State Party shall not introduce exotic species or genetically modified species to shared aquatic eco-systems including the full extent of the river basin unless the affected State Parties agree to the introduction. This makes it imperative to consult with all riparian countries and gain permission prior to any introductions and allows states to veto these. The first point under Article 14 on the protection of the aquatic environment binds parties to conserve aquatic ecosystems, including their biodiversity and unique habitats. Paragraph 2 goes further to state that parties shall apply the precautionary principle to ensure that activities within their jurisdiction and control do not cause excessive transboundary adverse impacts. Paragraph 4 deals specifically with the protection of endangered living aquatic species and their habitats whilst 7 commits countries to co-ordinating the establishment of areas to protect critical habitats and endangered species, particularly migratory species in transboundary areas. States are required to adopt legislative and administrative measures to prevent pollution in paragraph 10 and paragraph 9 adds that parties undertake to take due account of the environmental impact and migrations of aquatic species.

Together these Articles and the clauses highlighted provide sound guidelines for the development of both national and regional strategies to effectively manage shared watercourses such as the Zambezi River Basin.

#### **4.2.4. SADC Protocol on Forestry 2002**

Namibia is a signatory to the SADC protocol on Forestry and is about to ratify this commitment. This is relevant to the Zambezi wetlands and much of the Namibian forest and woodland area falls within the Zambezi River Basin. The protocol recognises the transboundary 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 ‘effective protection of the environment’ and the ways listed to achieve the objectives includes “harmonising approaches to sustainable forest management, forest policy, legislation and enforcement...” The guiding principles include the obligation to State Parties to “facilitate, promote and continually improve policy and legal frameworks that promote sustainable forest management”. Article 11 clearly requires member countries to implement national legal measures to ensure that ‘no competent national authority may make a decision’ regarding ‘major projects involving afforestation, reforestation or measures to change the species composition of existing natural forests, and any activity that may have significant adverse impacts on forests’ unless a full assessment of the environmental and social impacts of the proposed activity has been conducted...”. Paragraph 2 of Article 11 again emphasises the need for effective regional ‘harmonisation of national forest-related laws.’ Article 14 deals specifically with Transboundary Forests, which by their very nature of flanking international rivers applies to the riparian forests of the Zambezi in Caprivi. This reads: “ State Parties shall, where appropriate, establish programmes and enter into agreements to promote the co-operative and integrated management of transboundary forests and protected areas. Article 15 on the protection of forests highlights “measures to address natural and human-induced threats to forests, particularly those that may have transboundary impacts.” The second paragraph specifically mentions the threats posed by uncontrolled fires and introduction of alien species and requires countries to “where appropriate, eradicate invasive alien species other than exotic species deliberately planted in managed plantations.” In a more general way Article 19 on capacity building and awareness, Article 20 on research and development, Article 21 on reporting and information exchange and Article 22 on co-operation with other states, member states and organisation are relevant to the sustainable management of all transboundary natural resources within the Zambezi River Basin.

#### **4.2.5. Regional Water Commissions**

##### **4.2.5.1. The Permanent Joint Technical Commission (PTJC)**

This Agreement is 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 Agreement was signed on 18 September 1990 in Lubango, Angola, and was ratified by the Namibian Parliament on 2 July 1997. This Commission is active and responsible for the development of the Cunene Basin. The purpose of the Commission is to advise the Governments on the development of the Cunene Basin (Item 9 of the Terms of Reference and Constitution of the PJTC). The parties recently expanded their mandate to include the Cuvelai Basin. Meetings take place on a regular basis. To date the Commission has done a feasibility study and an environmental assessment on future hydropower developments at Epupa and Baynes on the lower Cunene. The Commission plans to prepare a Master Plan for the development of the Cunene and a proposal has been accepted to investigate the feasibility to revise the existing water use agreements on the Cunene. The work in the Cuvelai entails the expansion of the water supply network in southern Angola with support from Namibia.

The management of the Commission comprises one delegation from each basin State and each delegation has three Commissioners. Any number of technical advisors can be co-opted at a meeting of the Commission. There are a number of joint subcommittees that have been allocated specific tasks and must report back to the Commission. A proper record is kept of meetings and activities to enable the Commission to jointly advise the respective Governments about the work. All parties are responsible to cover their own costs when attending Commission meetings. No specific reference is made to environmental issues or sustainable development in the PJTC Agreement, but these responsibilities are routinely incorporated in the various development studies as part of sound professional engineering practice and are reflected in the studies that have been undertaken on the proposed future hydropower projects on the lower Cunene.

##### **4.2.5.2. The Joint Permanent Water Commission (JPWC)**

This Agreement is 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

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 Agreement was signed on 13 November 1990 in Windhoek, Namibia, and ratified by the Namibian Parliament on 2 July 1997. 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 party to the Agreement on the development of the Okavango River. The negotiations leading to the establishment of the Zambezi River Commission 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. However, in spite of this, the work that had been started by Botswana and Namibia on the biological control of Kariba weed, *Salvinia molesta* in the Kwando – Linyanti – Chobe River System continued unaffected by the political events. The purpose of the Commission was to advise the Governments on all matters relating to the development and utilization of water resources of common interest. The Commission comprised one delegation from each basin State and each delegation had three Commissioners. Any number of technical advisors could be co-opted at a Commission Meeting. A proper record was kept of meetings and activities to enable the Commission to jointly advise the respective Governments about the work. All parties were responsible for their own costs. No specific reference is made to environmental issues or sustainable development in the JPWC Agreement, but the protection of water resources and wetlands, as well as the sustainable utilization of groundwater aquifers were clearly understood by the Parties to the Agreement to be included where they are of common interest to the Parties.

#### **4.2.5.3. The Permanent Water Commission (PWC)**

This Agreement is 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, concentrating at present on the lower Orange River. The Agreement was signed on 14 September 1992 in Noordoewer, Namibia, and ratified by the Namibian Parliament on 2 July 1997. 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 objective of the Commission is to act as technical adviser to the

Parties on matters relating to the utilization of water resource of the lower Orange River. Meetings take place on a regular basis. The Commission recently completed a study on the management of the lower Orange River. This work led to the formulation of further work in various fields, including the execution of a feasibility study for the development of a re-regulating dam on the lower Orange. The Commission comprises one delegation from each basin State and each delegation has three Commissioners. As with the other agreements, any number of technical advisors can be co-opted at a meeting of the Commission. There are two subcommittees that must direct and manage specific tasks. One sub-committee deals with the management of the Vioolsdrift and Noordoewer Joint Irrigation Authority and the other with a number of technical studies. The Committees must report back to the Commission. A proper record is kept of meetings and activities to enable the Commission to jointly advise the respective Governments about the work. Each party covers its own costs. No specific reference is made to environmental issues or sustainable development in the PWC Agreement, but these are incorporated as a matter of course in the development studies in the past as part of sound professional engineering practice, and this is reflected in the concern for the Ramsar site at the mouth of the river in the Lower Orange River Management Study project recently completed.

#### **4.2.5.4. The Vioolsdrift and Noordoewer Joint Irrigation Scheme**

This Agreement is 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 was signed on 14 September 1992 in Noordoewer, Namibia, and ratified by the Namibian Parliament on 2 July 1997.

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 Authority is very active and functions independently, but under the auspices of the PWC. The JIA has a Board that is responsible to manage the operation and maintenance of the cross border irrigation infrastructure and to control the abstraction of the quantity of water allocated to the irrigation farmers in international irrigation district. The JIA is fully functional. Meetings take place regularly. The Board of the JIA comprises four members from each country and has a secretariat. A small workforce is employed on a permanent basis, but a larger number of people are appointed on contract as the need arises. The JIA submits an annual report to the



respective Governments via the PWC. No specific reference is made to environmental issues or sustainable development in the JIA Agreement, except for the normal stipulations to enable the Authority to operate efficiently.

#### **4.2.5.5. Permanent Okavango River Basin Water Commission (OKACOM)**

This Agreement is 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). The Agreement was signed on 15 September 1994 in Windhoek, Namibia, and was ratified by the Namibian Parliament on 2 July 1997. This Commission is active and the objective is to act as technical adviser to the Parties on matters relating to the conservation, development and utilization of water resources of common interest and to perform such other functions pertaining to the development and utilization of such resources as the Parties may agree to assign to the Commission. Meetings take place at least annually but usually more often.

The vision of the Commission is to develop an integrated management plan for the Okavango Basin and various studies have been done. The Commission undertakes its own studies, or endorses studies to be done on its behalf and takes note of the scientific studies done by institutions working in the Basin. The most notable studies to date include:

- A Transboundary Diagnostic Assessment of the entire river in all three countries done with support from the Global Environmental Facility.
- Two feasibility studies that included environmental impact assessments, one on the proposed Rundu – Grootfontein pipeline project in Namibia and the other on the proposed Popa Falls hydropower project
- The Every Rivers has its People Project being implemented in Namibia by the Namibia Nature Foundation (NNF) and funded by Sida,
- The Integrated River Basin Management Project, also implemented in Namibia through NNF and funded by the United States Agency for International Development (USAID).
- The Sharing Waters Project, funded by USAID
- The Okavango Delta Management Plan in Botswana funded jointly by the International Conservation Union (IUCN) and the Government of Botswana

The Commission comprises one delegation from each basin State and each delegation has three Commissioners. Any number of technical advisors can be co-opted at a Commission Meeting. The Okavango Basin Steering Committee (OBSC) has been established by the OKACOM to manage and direct projects under the auspices of the Commission and reports back to the Commission. An interim Secretariat has been established and good progress is being made towards a permanent secretariat. A proper record is kept of meetings and activities to enable the Commission to jointly advise the respective Governments about the work. All parties are responsible for their own costs when attending Commission meetings. In the preamble to the OKACOM Agreement specific reference is made to the concepts of environmentally sound natural resource management, sustainable development and the equitable utilization of shared watercourse systems. The Parties also expressed the desire to promote coordinated and environmentally acceptable regional water resource development objectives.

#### **4.2.5.7. The Orange-Senqu River Commission (ORASECOM)**

This Agreement is 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). The Agreement was signed on 3 November 2000 in Okapuka near Windhoek, Namibia, and was ratified by the Namibian Parliament on 06 June 2001. This Commission is active and responsible to advise the Governments on the development of the Orange River Basin. Meetings take place on a regular basis. This Commission comprises one delegation from each of the four basin States, each delegation has three Commissioners, technical advisors can be co-opted and there are a number of subcommittees allocated specific tasks that must report back to the Commission. An interim secretariat has been established that keeps a proper record of meetings and activities to enable the Commission to jointly advise the respective Governments about the work and each party meets its own costs. In the Preamble of the Agreement reference is made to the principle of sustainable development with regard to the river system, as well as the Helsinki Rules, the UN Water Convention and the SADC Water Protocol. It can therefore be assumed that it is understood by the Parties that the sustainable use and protection of all aquatic ecosystems are covered by this agreement.

#### **4.2.5.7. The Zambezi River Commission (ZAMCOM)**

This Agreement is 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). The Agreement was signed on 13 July 2004 in Kasane, Botswana, and was ratified by the Namibian Parliament 15 March 2005. The Commission is not yet active. Its management comprises a Council of Ministers, a Technical Committee and a Secretariat. The Technical Committee comprises one delegation from each of the eight basin States and each delegation has three members. Any number of technical advisors can be co-opted at a meeting. The Secretariat comprises an Executive Secretary and several staff members according to the identified needs for staff. All parties are responsible to contribute to cover their own costs when attending Commission meetings and to contribute to the operation of the Commission. In the Preamble of the Agreement reference is made to the principle of sustainable development with regard to the river system, as well as the UN Water Convention and the Revised SADC Water Protocol. Articles 12 and 13 reinforce the principles of sustainable use and protection of aquatic ecosystems.

#### **4.3. Evaluation and Recommendations**

The activities required and the procurement of financial means to achieve the set objectives can best be facilitated through the future work of ZAMCOM. As ZAMCOM only started recently and has yet to produce results, it will take time before positive results are seen because of the great effort and large number of people involved in the management of a river basin that stretches across eight countries. It will be essential for all these basin States to realise the importance of an use the potential of ZAMCOM as an institution that can mobilise support in the quest to resolve conflict in the Zambezi Basin and to stimulate development in the interest of all the people in the basin and beyond in the SADC region (Export of hydropower, water, food, minerals).

It is recommended that the Zambezi has its People initiative be fully supported by all eight countries to insure that the voices of all stakeholders particularly at community level are part of the overall development planning for the basin.

## **5. CONCLUSION**

In Namibia, the first steps towards the sustainable use of wetland resources have been made. The issue has been identified and laid down in several national policies and legislation.

The challenge now is to promote an enabling legislative framework, and the political will, to support sustainable wetland use, conservation and management for wetland ecosystems within Namibia and those shared with neighbouring countries. This will involve the finalisation of proposed legislation together with capacity building, the gaining of knowledge about Namibia's own and shared wetland systems and the development of methods to enable water allocation that takes into account social, economic and environmental needs and users within Namibia and downstream.

From an international point of view a framework for the sustainable use of wetlands exists. The activities required internationally can be tackled best through international agreements like the establishment of ZAMCOM.

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