

**National Report to be prepared in advance of the
7th Meeting of the Conference of the Contracting Parties to the
Convention on Wetlands (Ramsar, Iran, 1971)
San JosJ, Costa Rica, 10-18 May 1999**

The Report should reach the Ramsar Bureau by 1 September 1998

Introduction

From the very first meeting of the Ramsar Conference of the Contracting Parties in 1980, countries have submitted National Reports on their implementation of the Convention. National Reports constitute a vital source of information on the implementation of the Convention at the country, regional, and global levels.

For COP6 (Brisbane, Australia, 1996), **ALL Contracting Parties** submitted their National Reports, an achievement that hopefully will be repeated for COP7.

The present format for National Reports was considered by the Ramsar Standing Committee at its meeting in October 1997. It approved the new format in principle and sought some improvements. These were introduced by the Bureau of the Convention and the revised form approved by the Chair of the Standing Committee in December 1997. The new format is based on the Ramsar Strategic Plan 1997-2002 adopted by COP6. (If necessary the Bureau can provide additional copies of the Strategic Plan, which is also available on the Ramsar World Wide Web site at <http://iucn.org/themes/ramsar/>).

This report format contains key questions related to each of the eight General Objectives of the Strategic Plan, although Contracting Parties are welcome to respond in more detail concerning the specific actions listed under each objective in the Strategic Plan.

The Ramsar Bureau needs to receive the National Reports by 1 September 1998 in order to have sufficient time to prepare regional overviews for presentation at COP7.

At COP7 only the seven regional overviews, prepared by the Bureau based on the National Reports, will be translated into the three official languages of the Convention and distributed as conference documents. All National Reports will be available, on request, in the official Ramsar language in which they were submitted to the Bureau.

In preparing their National Reports, countries are urged to seek input and comment from National Ramsar (or similar) Committees where they exist and, as appropriate, the Convention's non-governmental partner organizations and others with expertise in wetland management. These reports should be considered as an official status report by the Contracting Party on its implementation of the Ramsar Convention and Strategic Plan.

The Ramsar Bureau would prefer to receive National Reports in both electronic (diskette or e-mail) and hard copy versions. To assist with the preparation of electronic versions, a copy of this format will be placed in the Ramsar World Wide Web site and in the Ramsar Exchange (e-mail mailing list). Floppy disks containing the format can also be obtained upon request to the Bureau.

**Implementation of the Ramsar Convention in general,
and of the Ramsar Strategic Plan 1997-2002 in particular,
during the period since the National Report prepared in 1995
for Ramsar COP6 and 30 June 1998**

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Ramsar Strategic Plan - General Objective 1

To progress towards universal membership of the Convention.

- 1.1 Describe any actions your government has taken (such as hosting regional or subregional meetings/consultations, working cooperatively with neighbouring countries on transfrontier wetland sites) to encourage others to join the Convention.**

Southern African Sub Regional Ramsar Meeting

The Government of South Africa (with financial assistance from the United States government) hosted the Southern African Sub Regional Ramsar Meeting in Pretoria, South Africa from 2 to 6 February 1998. This meeting was called in response to a request by the African countries, during the last meeting of the Conference of the Parties to the Convention held in Brisbane, Australia during March 1996, for coordination meetings to be organised at sub regional level. It follows similar meetings held in the West African sub region.

The objectives of the meeting, which was run in English, were:

- C To provide information about the implementation of the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar 1971) at national level;
- C To identify priority actions for strengthening the application of the Convention in southern Africa, and
- C To strengthen cooperation between states in the sub region.

The meeting was aimed at government officers at policy development and management level. The representatives of each government were invited to prepare themselves for discussion on the current activities and priorities for wetland conservation in their countries.

Orange River Mouth transboundary Ramsar site

Several meetings between officials of the South African and Namibian governments have taken place with the aim of designating the mouth of the Orange River, which forms the border between the two countries, as a transboundary Ramsar site. This is highly feasible as both countries have already designated their respective parts of the mouth as Ramsar sites. Drafting of a plan for the joint management of the site has already commenced.

Ramsar Strategic Plan - General Objective 2

To achieve the wise use of wetlands by implementing and further developing the Ramsar Wise Use Guidelines

- 2.1 Has a National Wetland Policy/Strategy/Action Plan been developed, or is one being developed or planned for the near future? If so:**

A national wetland policy and a strategy for its implementation is under development. This will be processed as an addendum to the national Policy on the Conservation and Sustainable Use of South Africa's Biological Diversity, thus merging South Africa's approach to meeting its obligations in terms of both the Convention on Wetlands (Ramsar 1971) and the Convention

on Biological Diversity.

a. What are/will be its main features?

The main features include:

1. National objective of the draft Policy:

Ensure the conservation of South Africa's wetlands in such a way that the ecological and socio-economic functions, products and attributes of wetlands are maintained for present and future use.

2. The following goals are proposed for the policy:

\$ Maintenance of wetlands and their functions throughout South Africa.

\$ Protection of wetlands of national and international significance.

\$ Enhancement of wetlands in areas where the continuing loss or degradation of wetlands or their functions have reached critical levels.

\$ Recognition of wetland functions in resource planning, management and economic decision-making.

\$ Utilization of wetlands in a manner that enhances prospects for sustained and productive use by future generations.

3. In order to implement the policy, a set of nine guiding principles are proposed for use. These are:

\$ Wetlands and their functions contribute significantly to the health and well-being of South Africans and are an essential element of South Africa's natural diversity. As such, the conservation of wetlands is a priority requirement of environmental management and sustainable economic development efforts.

\$ Wetland conservation is dependent on the incorporation of environmental objectives into the economic decision-making process, as recommended by the World Commission on Environment and Development.

\$ Wetlands and wetland functions are often inextricably linked to surrounding ecosystems and, therefore, wetland conservation must be pursued in the context of an integrated systems approach to environmental conservation and sustainable development and integrated catchment management.

\$ The continued development of scientific knowledge and expertise in South Africa is fundamental to the achievement of wetland conservation.

\$ Wetland conservation can only be achieved through a coordinated, cooperative approach involving all levels of government and the public, especially landowners non-government organizations, and the private sector.

\$ The government can and must play a leading role in achieving wetland conservation, while respecting the rights of individual landowners coupled to realistic legislation, binding all the groups.

\$ Where local communities exercise a traditional use of wetlands, the government will only undertake activities affecting such wetlands in consultation and cooperation with the relevant communities and their leaders.

\$ A basic change in the attitude and perceptions of South Africans regarding wetlands, through communication and education programmes, is also a vital prerequisite of wetland conservation.

\$ South Africa, as a founder member of the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 1971), and its location on the southern tip of Africa, has a special responsibility to

provide leadership in international wetland conservation efforts, through the management of transboundary resources such as water and wildlife in southern Africa and through encouragement of global wetland conservation.

4. Eight implementation themes follow, concerning:

- \$ Promoting the effective conservation of South Africa=s wetland systems, their values, functions and attributes;
- \$ Control of developments affecting wetlands;
- \$ Development and maintenance of a sound scientific base;
- \$ Addressing the hydrological needs of wetlands, to ensure their integrity;
- \$ Application of the principles of conservation and sustainable use of wetland biota;
- \$ Ensuring effective pollution control of South Africa=s wetlands;
- \$ The effective implementation of international obligations and actions; and
- \$ The development and implementation of effective management systems.

b. Was it, or is it, intended that the Policy/Strategy/Action Plan be adopted by the whole of Government, the Minister responsible for Ramsar matters or through some other process. Please describe.

National policy is adopted by the whole government, while the Minister of Environmental Affairs and Tourism is responsible for taking the policy through the parliamentary procedures.

c. How does it relate/will it relate to other national environmental/ conservation planning initiatives (e.g., National Environmental Action Plans, National Biodiversity Action Plans, National Conservation Strategies)?

The wetland conservation policy for South Africa will complement and strengthen a number of other national policies and draft policies or White Papers, including the following:

- \$ The national policy on the conservation and sustainable use of South Africa=s biological diversity;
- \$ Environmental management policy for South Africa;
- \$ National water policy;
- \$ Integrated pollution and waste management policy;
- \$ Coastal zone management policy;
- \$ Marine fisheries policy for South Africa.

2.2 If a policy is in place, how much progress has been made in its implementation, and what are the major difficulties being encountered in doing so?

2.3 If a Policy/Strategy/Action Plan is in place, is the responsibility for implementing it with:

a. a single Government Ministry,

b. a committee drawn from several Ministries, or

c. a cross-sectoral committee?

Please provide details.

2.4 For countries with Federal systems of Government, are there Wetland Policies/Strategies/Plans in place, being developed or planned for the provincial/state or

regional levels of Government? Yes/No

No

If yes, please give details.

2.5 Has a review of legislation and practices which impact on wetlands been carried out, and if so, has this resulted in any changes which assist with implementation of the Ramsar Convention? Please describe these.

A review of legislation affecting wetlands was carried out prior to this triennium. Some 11 national acts have effects on wetlands, their conservation and sustainable use, but it was found that none of them had wetland conservation as their primary concern. This resulted in the drafting of the Wetland Conservation Bill (W3-95). This bill is currently undergoing revision. This revision aims to ensure that conservation of our wetlands receives the necessary attention missed in current and pending legislation. It is likely that this revised bill will form a chapter of the proposed biodiversity bill, rather than being a stand alone bill.

**2.6 Describe the efforts made in your country to have wetlands considered in integrated land/water and coastal zone planning and management processes at the following levels:
a. national**

Coastal Management Policy Programme

The Department of Environmental Affairs and Tourism, with assistance from the British Government, has embarked on a consultative process to produce a policy on coastal management. The Coastal Policy Green Paper was released in September 1998 and lays the foundations for the implementation of integrated coastal management in a manner that is participative, practical and scientifically sound. The proposed focus of the policy is sustainable coastal development, which entails enhancing the capacity of current and future generations to realise their human potential, within the context of maintaining diverse, healthy and productive coastal ecosystems, in a manner that minimises harm to other life-forms.

Wetland issues, although not mentioned directly in the Green Paper, are broadly addressed under the following proposed goals of the policy:

- \$ To maintain and enhance the diversity and harmony of coastal land- and sea-scapes by maintaining an appropriate balance between built, rural and wilderness areas;
- \$ To maintain the diversity, health and productivity of coastal processes and ecosystems;
- \$ To establish and effectively manage a system of protected areas to maintain the diversity of coastal ecosystems;
- \$ To ensure that renewable resource user practices are in accord with the regenerative capacity of coastal ecosystems;
- \$ To use non-renewable resources in a manner that optimises the public interest and retains options for alternative and future uses;
- \$ To rehabilitate damaged or degraded coastal ecosystems and habitats;
- \$ To fulfil international and trans-boundary responsibilities, whilst retaining South Africa=s sovereignty.

At present, the policy is in an early stage of development. The Wetlands Conservation Programme of the Department of Environmental Affairs and Tourism will participate actively in the policy development process in order to ensure that wetland issues are adequately addressed in the final product. Other organisations and individuals involved in wetland-related

work will also be encouraged to contribute.

Environmental Management Frameworks

The Department of Environmental Affairs and Tourism has developed a product that pro-actively identifies areas of potential conflict between development proposals and critical and sensitive environments. Known as the Environmental Management Framework (EMF), it was developed in response to the lack of a spatial framework within which to define the sensitivity of the environment. EMFs will support the Integrated Environmental Management (IEM) procedure, published in 1992 by the Department of Environmental Affairs and Tourism, by identifying the issues which should be addressed during the decision-making process and making this information available in the initial stages of the IEM procedure. EMFs thus help to focus environmental impact assessments or other decision-support instruments on the really important issues, and pro-actively >red flag= areas of high environmental sensitivity.

The EMF is essentially a framework of spatially represented information (maps) connected to parameters. The level of sensitivity of the environment determines these parameters. The parameters in turn provide a framework within which development should proceed in order for it to be environmentally sustainable. The EMFs are developed on a comprehensive base of information as well as socio-economic priorities. The sensitivity ratings for geographic areas produced by EMFs will have a legal basis, being incorporated into the Environmental Management Bill currently before Parliament.

The environmental data input into the EMF is composed of various layers of spatial information, of which wetlands and hydrology are one. Each feature in each layer has a set of parameters attached to it which define the nature and extent of development which can take place without significantly affecting the feature in question. For example, rivers and wetlands have a 50 m buffer zone around their boundaries. The EMFs operate on a national scale, and include all wetlands and hydrological features delineated on 1:250000 topographical maps, as well as other wetland datasets supplied by provincial authorities. Clearly the development of the EMFs adds more urgency to the need for a comprehensive national wetland inventory, which will provide a standardised set of spatial wetland information for the entire country. As inventory data becomes available, it will be incorporated into the EMFs so that wetlands are adequately considered in any decision-making and planning processes.

National Water Act

In terms of water resource planning, protection is afforded wetlands under the recently promulgated National Water Act, under one of its fundamental principles where:

the quantity, quality and reliability of water required to maintain the ecological functions on which humans depend shall be reserved so that the human use of water does not individually or cumulatively compromise the long term sustainability of aquatic and associated ecosystems

This water which is required to sustain ecological functioning is referred to as the Reserve@ and enjoys priority of use by right. Workshops to determine the reserve for rivers, estuaries and palustrine wetlands are being run over the next six months.

The National Water Act also makes provision for the progressive development of integrated catchment management strategies for designated catchments. Such strategies must take into account:

\$ The significance of water resources within the catchment, according to the national

- classification system;
- \$ Resource quality objectives;
- \$ The Reserve for the water resources;
- \$ Water allocation plans.

b. provincial

c. local

2.7 Have there been any publications produced, or practices documented, which could assist other countries to promote and improve the application of the Ramsar Wise Use of Wetlands Guidelines? Yes/No

If Yes, please provide details and copies.

A large number of publications have been released in South Africa, which promote the wise use of wetlands. Some of these are:

- Chutter, F.M., 1998. *Research on the rapid biological assessment of water quality impacts in streams and rivers*. WRC Report No 422/1/98
- Dallas, H.F., Day, J.A. Musibono, D.E. and Day, E.G., 1998. Water quality for aquatic ecosystems: tools for evaluating regional guidelines. WRC Report No 626/1/98
- Department of Water Affairs and Forestry, 1996. *The philosophy and practice of integrated catchment management: implications for water resource management in South Africa*. Water Resource Commission and Department of Water Affairs and Forestry, Pretoria.
- Directorate of Agricultural Resource Conservation. 1996. Manual for the drafting of an operational plan for the cultivation of a vlei for the purpose of harvesting peat. Department of Agriculture. Pretoria
- Kotze DC. 1997. *Wetlands and people: what values do wetlands have for us and how are these values affected by our land-use activities*. WETLAND-USE Booklet 1. SHARE-NET. Wildlife and Environment Society of South Africa. Howick.
- Kotze DC, Breen CM & Klug JR. (In prep). *WETLAND-USE: A management decision support system for South African freshwater palustrine wetlands*. Department of Environmental Affairs and Tourism. Pretoria.
- Kyle R. 1995. Wise use of wetlands by rural indigenous people. The Kosi Bay Nature Reserve: a case study. In: Cowan GI (ed). *Wetlands of South Africa*. Department of Environmental Affairs and Tourism. Pretoria.
- Rogers, K.H. and Bestbier, Regina, 1997. *Development of a protocol for the definition of the desired state of riverine ecosystems in South Africa*. Department of Environmental Affairs and Tourism, Pretoria.
- Roux, D.J. 1997. National Aquatic Ecosystem Biomonitoring Programme: overview of the design process and guidelines for implementation. NAEBP Report Series No 6. Institute for Water Quality Studies, Department of Water Affairs and Forestry, Pretoria.
- Fijen, A.P.M. and Kapp, J.F. 1966. A water management strategy for the Wilderness, Swartvlei and Groenvlei Lakes catchment. Training and Educational Document. Department of Water Affairs and Forestry, Pretoria.
- Wyatt J. 1997. *Wetland Fix: Assessment, Management and Restoration of South African wetlands*. 2nd ed. Rennie's Wetlands Project, Wildlife and Environment Society of South Africa. Johannesburg.
- Vol. 1: Introduction and wetland assessment*
Vol. 2: Wetland burning and grazing guide
Vol. 3: Streambank stabilization and channel plug development
Vol. 4: Indigenous plants suitable for streambank stabilization and channel plug

2.8 Noting COP6 Recommendation 6.14 relating to toxic chemicals and pollution, please advise of the actions taken since then to remedy and to prevent pollution impacts affecting Ramsar sites and other wetlands (Operative paragraph 9).

The following actions have been taken in South Africa to remedy and prevent pollution impacts affecting Ramsar sites and other wetlands:

Environmental Management and Pollution Control Policy

Both the Draft White Papers on Environmental Management Policy and Integrated Pollution Control and Waste Management have set a number of objectives regarding pollution and waste. These include:

- \$ To prevent, reduce and manage pollution of any part of the environment due to all forms of human activity;
- \$ To set targets to minimise waste generation and pollution at source;
- \$ To regulate and monitor waste production and enforce waste control measures;
- \$ To set up information systems on chemical hazards and toxic releases;
- \$ To ensure the protection and proactive management of human health problems related to the environment in all forms of economic activity;
- \$ To promote cleaner production and establish mechanisms to ensure continuous improvements in best practice in all areas of environmental management

National Water Act

The new National Water Act makes use of the following principles relating to water quality:

- \$ Water quality and quantity are interdependent and shall be managed in an integrated manner, which is consistent with broader environmental management approaches;
- \$ Water quality management options shall include the use of economic incentives and penalties to reduce pollution; and the possibility of irretrievable environmental degradation as a result of pollution shall be prevented

The Act makes provision for the Minister to develop water quality objectives for a particular water resource, based upon the significance of that resource according to a national classification system. These objectives may determine the presence and concentration of particular substances in the water, and regulate, control or prohibit in-stream or land-based activities which may affect water quality.

Emergency procedures for responding to pollution incidents are prescribed in the Act, as is the allocation of responsibility for costs arising from pollution incidents. A catchment management agency may order the modification or stopping of any process causing or likely to cause pollution, direct that measures necessary to contain or prevent pollution are instituted, and may order the rectification of any effects of pollution.

Coastal Management Green Paper

The draft policy on sustainable coastal development contains the following goals relating to pollution of coastal ecosystems:

- \$ To implement pollution control and waste management measures in order to minimise and strictly control discharges into coastal ecosystems;
- \$ To ensure that pollution has minimal adverse impact on coastal ecosystems and their ability to support beneficial human uses.

Blesbokspruit Ramsar site

Blesbokspruit was placed on the Montreux Record in July 1996 in response to contamination by large quantities of polluted water discharged from an adjacent gold mine. In order to mitigate the worst effects of the discharge, the Department of Water Affairs and Forestry imposed limits on the pH and concentrations of iron and suspended solids in the water. Compliance with these permit conditions necessitated the construction of treatment tanks by the mine, in order to improve the quality of the water before discharge. While the permit has by no means solved the problem, it has brought about an improvement in effluent quality and has doubtless reduced the impact of the discharge on the ecology of the Ramsar site. In the meantime, a permanent solution to the problem, in the form of a desalination plant, is being investigated.

2.9 Describe what steps have been taken to incorporate wetland economic valuation techniques into natural resource planning and assessment actions.

Southern African sub-regional study

At the Southern African Sub-regional Ramsar Meeting held in Pretoria in February 1998, participants endorsed the following recommendation:

Recognizing the low profile that wetlands enjoy in both national and regional planning processes; and
 That most of the major catchments in the Subregion are shared systems;
 The Southern African Sub-regional Ramsar Workshop recommends that the Bureau considers the following proposal for funding:

- C A programme to establish the valuation of wetlands in the SADC be initiated;
- C The results of this programme be used to promote the wise use of wetlands in both national and regional planning in the Sub-region;
- C The Ramsar Bureau consider the possibility of providing seed funding for immediately starting the implementation of this proposal.

To implement this recommendation a programme proposal has been made by the IUCN Regional Office for Southern Africa, the goals of which are to:

- \$ Conduct a valuation of wetland systems within the region;
- \$ Influence policy, planning and utilisation of wetlands in the region; and
- \$ Enhance regional cooperation.

To attain these objectives several products are envisaged:

- \$ Publication on wetland values and threats, targeted at various audiences=
- \$ Regional workshop report;
- \$ National capacities in wetland valuation created;
- \$ Analysis of wetland values and threats carried out

The programme is still in the early stages of planning.

South African pilot studies

The Department of Environmental Affairs and Tourism is soliciting funding for two planned pilot studies:

- \$ To examine the usefulness within a South African context of established methodologies for determining the economic value of wetland ecosystems with emphasis on peat wetlands. It is anticipated that once sound methods for assessing wetland value have been established, the way will be open for cost-benefit analyses to be conducted on development proposals affecting wetlands. These studies will enhance the capacity of regulatory authorities controlling development to be able to make informed decisions;
- \$ To determine the multifunctional values of the wetlands in the upper Klip River, and the development of a model to predict the changes in these values under different management and development scenarios.

2.10 Is Environmental Impact Assessment for actions potentially impacting on wetlands required under legislation in your country? Yes/No

Regulations governing activities which may have a detrimental effect on the environment

In terms of regulations published under the Environmental Conservation Act in September 1997, it is no longer permissible to undertake certain activities in wetlands without first assessing the environmental consequences of those actions. The regulations were promulgated with the aim of integrating environmental impact management and development activities, in order to ensure responsible and environmentally sensitive development.

Activities which may have a substantial detrimental effect on the environment and which require some form of environmental impact assessment are listed in the regulations. Several listed activities relate directly to wetlands:

- \$ Construction of canals and channels, including diversions of the normal flow of water in a river bed;
- \$ Construction of dams, levees or weirs affecting the flow of a river;
- \$ Reclamation of land below the high-water mark of the sea and in inland water including wetlands;
- \$ Schemes for the abstraction or utilization of ground or surface water for bulk supply purposes.

The impacts of any of the other listed activities, such as the construction of roads and pipelines, should they have the potential to detrimentally affect wetlands, should also be taken into account in environmental impact assessments.

Project proponents are required to submit a scoping report to the regulatory authority, either a national or provincial government environmental department, should they wish to undertake activities which are listed in the regulations. Evaluation of the scoping report by the authority determines whether the project can proceed on the grounds that it will not have a substantial detrimental effect on the environment, or whether a comprehensive environmental impact assessment (EIA) is required. The evaluation of the EIA by the authority determines whether the project may proceed, and if mitigation measures are required.

The definition of wetlands used in the regulations, and published in a guideline document by the Department of Environmental Affairs and Tourism in April 1998, states that:

wetlands are those areas transitional between terrestrial and aquatic systems, where the water table is usually at or near the surface or the land is periodically covered with shallow water; or are deep water habitats which are permanently flooded.

This definition and the definitions of Asea@ and Ariver@ used in the regulations cover all habitats which would be considered wetlands in terms of the Ramsar definition.

National Water Act

The National Water Act specifies procedures required for authorisation to undertake activities in or adjacent to watercourses, or activities intercepting water. There is considerable overlap between the relevant provisions of this Act, and the EIA regulations described above.

2.11 Is wetland restoration and rehabilitation considered a priority in your country? Yes/No.

If Yes, describe the actions that have been taken to identify wetlands in need of these actions and to mobilise resources for restoration or rehabilitation.

A number of actions have been taken to restore and/or rehabilitate wetlands in South Africa. The criteria used to determine the need for such actions vary widely, depending on the agency taking such actions. Some of the recent actions include:

St Lucia System - determination of a procedure to establish the fresh water requirements of the lake

Under the auspices of the St Lucia Scientific Advisory Committee (SCADCO) a model has been developed to determine the fresh water requirements of Lake St Lucia under the full range of salinity regimes occurring in both wet and dry periods. This hydrological model was developed with a view to ensuring the minimum fresh water requirements were met for a range of indicator species at key points in the system. A number of alternative methods of ensuring this fresh water reaches the system are being explored at present.

Wetland rehabilitation and conservation in the north eastern Free State

A wetland rehabilitation programme currently being implemented in Free State Province is a joint venture between the Free State Department of Environmental Affairs and Tourism (FSDEAT) and the water supply utility, Rand Water. This collaboration was initiated with the rehabilitation of the Seekoeivlei wetland near the town of Memel in the north eastern Free State.

Seekoeivlei, designated to the List in 1996, is one of the largest wetlands on the South African highveld (plateau), and as such is an important component of one of the tributaries of the Vaal River, which provides water to the highly industrialized and densely populated Gauteng Province. Despite its hydrological importance, the wetland has been severely damaged over the years by drains dug for agricultural purposes. Presently approximately two thirds of the wetland is protected as a provincial nature reserve managed by the FSDEAT, and in 1996 it was designated by South Africa to the List of Wetlands of International Importance.

A R2,5 million (approximately US\$0,5 million) project carried out by Rand Water and FSDEAT together with local residents aimed to rehabilitate the damage, and thereby manage the water catchment area more efficiently, resulting in high quality water flowing into the Vaal River system and eventually into people=s homes. Rehabilitation involved the plugging of drainage channels by building weirs, anti-erosion walls and gabion baskets, thereby raising the water level and flooding the drained wetland areas. These tasks occupied a work force of 300 people for a period of approximately 15 months. Over time it is expected that Seekoeivlei=s

original habitat will re-establish itself, allowing the conservation authority to re-introduce indigenous fauna and flora.

However important Seekoeivlei may be, it is only one of many wetlands within the catchment of the Vaal System, all of which are collectively responsible for water storage and purification. This awareness of wetland hydrological values has led both Rand Water and FSDEAT to extend their commitment towards wetland conservation and rehabilitation from Seekoeivlei towards the greater catchment. This involved implementing wetland rehabilitation programmes on privately-owned land. Within the partnership, FSDEAT is responsible for collecting, analysing and interpreting the necessary field information. The results are consequently submitted in the form of a project proposal to Rand Water, which makes a decision on whether to proceed with the rehabilitation projects.

The catchment chosen for initial implementation was selected on the basis of the hydrological importance of the wetlands within this area, its relative closeness to modern infrastructure for effective and efficient implementation, the positive social contribution that such a project would have towards the communities within the area, and cooperative land owners. The first stage of the project involved conducting surveys of wetlands in the area, with the assistance of several government departments and NGOs. A scoring system was developed by FSDEAT to assist in identifying those wetlands in need of structural rehabilitation and to prioritize these wetlands on the basis of a cost-benefit analysis. Eight wetlands were identified as being in need of structural rehabilitation and were revisited with the aim of investigating the most effective means of rehabilitating the different types of disturbance. Implementation of the project has commenced, with labour-intensive methods being used in order to provide employment for local communities. In providing employment, emphasis has been placed on creating opportunities for previously disadvantaged communities, and especially women.

Blesbokspruit Ramsar site restoration

(See also points 2.8 and 5.3) In order to reduce the effects of the discharge of large quantities of polluted water into Blesbokspruit Ramsar site from an adjacent gold mine, clarifying tanks to remove certain contaminants have been built at a cost of R15 million (US\$3 million). This is however considered a temporary solution and desalinization is being assessed with a view to treat the water to potable standards and divert it for consumption.

Restoration of the Orange River Mouth Ramsar site

Orange River Mouth Ramsar site is one of two South African Ramsar sites listed on the Montreux Record (see also 5.3). The authority responsible for the management of the site, Northern Cape Nature Conservation Service, has prepared an application to the Global Environment Facility for funding with which to begin restoration of the site.

Saving a wetland and a marine mussel resource impacted by bacterial toxins

The Wildevoelwei wetland, situated close to Cape Town, is a shallow 25 ha system comprising two interconnected basins. The wetland receives between 4 and 7 megalitres of treated wastewater effluent per day and, as a consequence, is perennially hypertrophic. It is further threatened by the uncontrolled inflows of three large urban runoff carriers. As a consequence of this regulation, the wetland has lost both its seasonal character, and the beneficial effects of intermittent tidal ingress.

During late 1997, a partial collapse of the sago pondweed (*Potamogeton pectinatus*) community in the Wildevoelwei wetland resulted in a dense bloom of the cyanobacterium *Microcystis aeruginosa*. Shortly after the onset of the bloom, toxins originating from the cyanobacterium were detected in algal extracts, and subsequently in the tissue of mussels

collected from the reef adjacent to the wetland outflow to the sea. An immediate ban was placed on the collection of shellfish by a community relying on this resource for both food and income, and a bold initiative was launched to eradicate the responsible micro-organism.

In order to eradicate the bloom, an initiative was launched to temporarily enhance the salinity of the eastern basin of wetland through the addition of coarse rock salt. Alternative options to pump seawater were neither practicable nor feasible. Experience gained from other coastal lakes and estuaries in the region indicated that *M. aeruginosa* has low salinity tolerance, while the other, desirable components of the wetland biota could withstand an elevation of salinity levels to between 7 and 10 ppt for a short period.

After lowering the water level of the wetland, 600 tonnes of salt was added to approximately 50000 m³ of water in the eastern basin. The salt was applied, in two 300 ton batches, seven days apart, as a solid using aerial application from a purpose-built pallette transported by a helicopter, and in dissolved form via one of the clarifiers in the adjacent wastewater treatment plant. For the duration of the operation, effluent outflows from the wastewater treatment plant to the wetland were curtailed.

Salinities rose to 3.5 ppt after the first application, and to 8 ppt after the second. There was an immediate decline in the abundance of *M. aeruginosa*, followed by a bloom of *Kirchneriella* sp., followed by a clear water phase, dominated by chlorophytes and diatoms, together with the zooplankton *Daphnia longispina*. Salinities started to decline after 14 days, once it became necessary to once again release effluent to the wetland. By the end of April complete depuration of the mussels had occurred to the extent that the restrictions on harvesting could be safely be lifted by the end of May. By this time, the ambient salinity of the system had also returned to zero.

The bold use of artificial salinity enhancement on this scale demonstrated the value of this environmentally sensitive technique for use in coastal lakes and estuaries where site-specific characteristics and logistics allow. The short-term elevation of the ambient salinity of this, previously-estuarine, system resulted in the rapid and total eradication of the toxin-producing cyanobacterium, and the concomitant alleviation of the risks to human and animal health in both the freshwater and marine environments. The application further highlighted the intrinsic value of retaining estuarine character and tidal interaction in coastal lake systems which have been modified through catchment development.

Biological control of alien invasives

The red water fern, *Azolla filliculoides*, has invaded a large number of South Africa's water bodies, reducing water quality, increasing waterborne, water based and water related disease, threatening endemic species and negatively affecting water works. The Agricultural Research Council initiated the biological control of the fern with the release of a weevil, *Stenopelmus rufinasus*. A post release evaluation programme to determine the effectiveness of these releases is currently underway.

Working for Water Programme

Forming part of the National Water Conservation Campaign of the Department of Water Affairs and Forestry, the Working for Water Programme aims to enhance available water supplies by clearing thirsty alien invasive plants from catchments and streams. In so doing, water security is enhanced, jobs are created and skills transferred, and ecological functioning and biodiversity is conserved. The budget for the programme reached a high of R250 million (US\$50 million) in 1997. The programme has provided for some 38 000 jobs country wide and formerly depressed communities have benefitted from social upliftment, as well as the by-

products of fuel and timber wood.

Although not directed at wetlands *per se*, the programme's activities have definite benefits for wetland conservation and restoration, in the form of enhanced functioning and greater stability and diversity in ecosystems whose attributes are primarily determined by water. Other government departments, conservation agencies and NGOs are encouraging a broadening of the focus of the programme to include active wetland restoration. The rationale underlying this approach is that the increased runoff resulting from eradication of alien species will be of little use if the water merely flows out of the system and into the sea because the wetlands which would otherwise trap, purify and store this water are degraded. Working for Water is an ideal vehicle through which to effect wetland rehabilitation on a large scale, thereby ensuring that water resource management and conservation are carried out in a holistic manner.

Rennies Wetlands Project

This is the only NGO project in South Africa working nationally outside protected areas on practical wetland conservation. It aims to promote the wise use of wetlands to wetland owners and key decision makers on a national basis. In order to achieve this aim, the Project has several main programmes, one of which includes wetland assessment and rehabilitation. Wetlands in specific catchments are identified from aerial photographs, after which field surveys assessing their condition are conducted. Rehabilitation plans for those that are significantly degraded and whose owners are willing to cooperate, are then developed. In the past two years, this programme has:

- \$ Initiated wetland conservation activities (assessment of wetland condition and wetland rehabilitation in some wetlands) in eleven areas around the country outside protected areas. Many of the people and organisations that participate in the capacity building programme are involved in these activities;
- \$ Surveyed over 400 km of wet grassland, marsh and floodplain wetlands in seven provinces around the country. Rehabilitation projects have already begun in some of these wetlands;
- \$ Been one of the organisations involved in raising a total of R1.75 million (about \$0.35 million) for the rehabilitation of wetlands in five of the working areas.

Forest Industry

The larger forest companies are involved in wetland rehabilitation. Those actions started as far back as 1975 when the rehabilitation of suitable habitat for the endangered Treur River barb (*Barbus treurensis*) was initiated by Mondi. Subsequently this company has spent large amounts of money clearing alien invasives from riverine habitats in the Ugie area (Eastern Cape). During the last triennium, a major part of this company's efforts have been centred around the Sabi-Graskop area (Mpumalanga). The rehabilitation of Hlatikulu Vlei (Kwazulu-Natal), where a crane rehabilitation centre has been established, has also been one of Mondi's projects. SAPPI has been involved with the clearing of alien invasive plant species along the riparian zone on their land for the past ten years, having cleared about 20 000ha. The company has spent a substantial amount of money doing similar clearing in the Natal Drakensberg Park. Both companies are heavily involved with the working for water programme. Both companies are involved with the rehabilitation of the Lenjane Vlei, including the rehabilitation of erosion dongas, alien plant control, and the establishment of grazing and burning programmes

- 2.12 Describe what actions have been taken to encourage active and informed participation of local communities, including indigenous people, and in particular women, in the conservation and wise use of wetlands. (refer to Actions 2.7.1-4 in the Strategic Plan).**

The Kosi Bay Nature Reserve

This reserve, which was designated to the List of Wetlands of International Importance in 1991, contains a series of saline and semi-saline lakes, joined by narrow, shallow channels emptying into the Indian Ocean. Although humans have lived around the system's shores in considerable densities for hundreds of years and have exploited its renewable natural resources, it displays little degradation while yielding large quantities of fish and plant materials to local residents.

Many aspects of the human exploitation of the system have been monitored since 1980, creating a large database. When the area was declared a reserve in 1987, the managing authority adopted a policy of allowing wise and appropriate utilization. Traditional harvesting methods have been investigated in detail and were found to be generally compatible with the wise use concept. Modern methods are controlled by a comprehensive set of regulations aimed at maintaining stocks. Several other methods, often blends of traditional and modern methods without any constraints, have led to over-utilization and have, therefore, been discouraged.

In recent years, several initiatives have been introduced in an attempt to complement extant utilization methods without over-exploiting the resources. Two such initiatives are gill-netting experimentation and controlled utilization of *Juncus kraussii* rushes. These have been set up jointly with the local community (tribal) authority. Daily monitoring of resource utilization in the reserve is carried out by a team of locally recruited and trained people, principally women, who in turn report to a conservation officer. The method is simple in principle, namely employing selected resource users to monitor the offtake themselves.

Traditional fish traps used in the wetland system are considered an important part of the amaTonga culture and are also a tourist attraction. The trap system is controlled by the tribe, relatively stable in effort and evidence suggests that catches are sustainable. Furthermore the nature of the trap system ensures that only a small porportion of migrating fish will be caught and the sustainability of the catch is almost guaranteed.

Recreational angling is an integral part of the wise use of the area and relates directly to local residents' utilization of the fish population. It is considered compatible with traditional fish harvesting while at the same time anglers benefit the area by their cash contribution to the local economy.

In 1990 an experimental netting scheme was initiated in order to establish if it was possible to use gill-netting to target the less exploited fish species in the lakes. Up until this time, gill-netting was illegal and considered unwise as it was seen as not only over-exploiting the fish population but also disruptive to migrations. Permitting gill-netting inside a reserve was a new concept in South Africa and it was decided to allow netting on an experimental basis and closely monitor the results. Local residents, through their community authority, were informed of developments and the selection of candidates to whom permits would be issued was handed over to them. Catches were monitored by the community and, as a result of the initial success of the scheme in catching almost entirely only target species, the number of permits was increased. The gill-netting initiative has done much to improve relations between the reserve managers and its neighbours while remaining within the policy goals set for the reserve. A similar system has subsequently been initiated at Lake St Lucia.

Anyone may harvest the resources within the reserve and entry to locals is free. At present, there are no limits on the number of people harvesting and so this activity acts as a safety net in the local economy for people who otherwise have no means of financial support. Around the Kosi Bay Nature Reserve, resource utilization can therefore be seen as a buffer against rural

poverty. Efforts are continually being made to make it more lucrative for small numbers of people or certain user groups, but the true value is as a supplier of basic foods and materials to a large proportion of the reserve's neighbours. This concept is appreciated by the present authorities who endeavour to hinder the export of large amounts of food or raw materials far from the reserve.

Several lessons have been learned by the scientists and managers of the reserve from resource utilization at the Kosi System. The dramatic increase in the number of people harvesting resources within the reserve in recent years is likely to continue. This reality is of critical importance when management strategies are being devised. It does not help to set bag limits to protect stocks when there is no control on total effort. Wise use of wetlands has many interlinking components that complement as opposed to conflict with each other. It is usually easier to work out wise use in theory than to convince the subsistence fisherman that the affluent recreation angler, catching the same fish, has a legitimate place in the wise use concept. Good communication and full cooperation with the user groups and neighbours of the reserve or wetlands is also of fundamental importance. See also Kyle (1995) under 2.7. *Working for Water Programme*

See 2.11

Mbongolwane Wetland Management Project

The ongoing project, funded by the Department of Environmental Affairs and Tourism, has built on wetland research conducted over several years in KwaZulu-Natal Province which focussed on improving the management of the province's wetlands. It aims to optimize, on a sustainable basis, the direct benefits derived from the Mbongolwane wetland by local people without significantly impacting upon the wetland's indirect benefits to society. The results of this case study will then be examined for their applicability in the rest of the province and in South Africa.

The project is focussed on wetland cultivation within the context of small scale and subsistence farms in communally-owned land. Areas of the wetland are being cultivated mainly for vegetable production, primarily madumbes (*Colocasia esculenta*), a root crop native to south-east Asia which is tolerant of waterlogged conditions. Recommendations for the management of Mbongolwane wetland will be developed in close consultation with local people and extension and environmental workers. The process of developing the management plan will be considered to be just as important as the final product. The plan will be presented to the community, whose leaders will have the responsibility of encouraging the people to implement the plan.

Orange River Mouth Interim Management Committee

The Orange River Mouth Wetland Ramsar site has been listed on the Montreux Record since September 1995, following the collapse of the salt marsh component of the estuary. The rapid degradation of the salt marsh was the result of a combination of impacts, both at and upstream of the wetland. These included adjacent diamond mining activities, flow regulation of the Orange River as a result of dam construction, mosquito control measures and poor management of the mouth.

The Orange River Interim Management Committee (ORMIMC) was formed in 1995 in order to address the situation described above. As the Orange River Mouth wetland system is shared between South Africa and Namibia, and Namibia has designated its part of the mouth to the List of Wetlands of International Importance, both countries are represented on the ORMIMC. Comprising the relevant government departments, local stakeholders and landowners, it aims

to:

- \$ Ensure the Ramsar site is given statutory protected status;
- \$ Serve as a communication forum for affected parties; and
- \$ Discuss matter relating to the management and restoration of the Ramsar site.

The ORMIMC is facilitating the drafting of a plan for the joint management of the site by both countries. The vision for the plan is:

to restore, conserve and enhance the ecological characteristics, and to advocate wise use of, the Orange River Mouth Wetland Reserve.

WETLAND-USE decision support system

WETLAND-USE is a wetland management decision support system that has been developed as a tool to assist agricultural and nature conservation extension personnel in providing wetland management and land-use planning guidelines, primarily within an agricultural context. The system has been developed in two phases. The first phase culminated in the publication in 1994 of a decision support system aimed primarily at privately-owned, large-scale commercial farms in KwaZulu-Natal Province. In the second phase, completed in 1998, the prototype system was refined and expanded to make it more widely applicable.

The system was developed in response to the prevailing narrow planning perspectives of those directly using wetlands, which tend to ignore the impacts of land-use activities on indirect wetland benefits to society. WETLAND-USE seeks to overcome this approach, by assisting extension workers in providing sound land-use advice and encouraging wetland owners and users to give consideration to their impacts on indirect benefits provided by wetlands. The system enables non-specialists to undertake wetland assessments provided they have had introductory training and seek specialist input when required.

WETLAND-USE follows the principles of Integrated Environmental Management, which is designed to ensure that the environmental consequences of development proposals are understood and adequately considered in planning and implementation. Decision making is thus informed, accountable and open, involving the relevant authorities and stakeholders; alternative options are considered, as well as biophysical, social, cultural and economic factors. The system produces recommendations aimed at minimising the environmental impacts of the chosen land-use, while maximising the user=s benefits.

Although broad recommendations and reference documents and expertise are listed for a wide range of land-uses, the focus is primarily on agricultural land-uses, for which more comprehensive recommendations are provided. For crops and planted pastures, for instance, recommendations deal with minimizing the impact of activities such as fertilizer application on wetland hydrological values. For the grazing of natural wetlands, stocking rates and timing and frequency of grazing and burning are specified.

Wakkerstroom Heritage Association

An NGO, the Wakkerstroom Heritage Association has done some groundbreaking work in securing a wetland for its habitat value, particularly for water birds. The association comprising local residents, land owners and a number of scientists have leased the site from the town council, implemented a management plan for the site, and encouraged participation in its conservation by the community, while encouraging tourism to the area.

Friends of Nylsvley

An NGO, the Friends of Nylsvley, have adopted the Nylsvley Nature Reserve where they do voluntary work. They have been involved primarily in the clearing of alien invasive plant species and promoting the recreational potential of the reserve including building bird hides.

Catchment fora

In anticipation of the provisions of the Water Act (No 1998), a number of catchment fora have been established. These fora comprise of interest groups within a catchment. Generally their primary aim is informed catchment management and sustainable use of the water resource. It is hoped that this will broaden to all include all the wetland resources within the catchment.

- 2.13 Describe what actions have been taken to encourage involvement of the private sector in the conservation and wise use of wetlands (refer to Actions 2.8.1-4 in the Strategic Plan). Has this included a review of fiscal measures (taxation arrangements, etc.) to identify and remove disincentives and introduce incentives for wetlands conservation and wise use? Yes/No**

No

If yes, please provide details.

Ramsar Strategic Plan - General Objective 3 To raise awareness of wetland values and functions throughout the world and at all levels

- 3.1 Is there a government-run national programme for Education and Public Awareness in your country which focuses on, or includes, wetlands? Yes/No? If yes, what are the priority actions under this programme and who are the target groups? (Refer also to question 9.4)**

The SA Wetland Conservation Programme's thrust on capacity building and awareness is still under development. The present efforts are as follows:

- \$ Until now the primary target group has been those working in wetlands. A list of wetland expertise has been collated and is distributed annually. Final reports of research projects undertaken on behalf of the DEAT are published and circulated to this group.
- \$ An annual newsletter is published and circulated both to this specialist group and to a wider interest group.
- \$ To reach the junior school target group a series of articles was published in the Department's magazine Skipper. These are also available as separate information sheets.
- \$ Use is made of World Wetlands Day to promote wetland conservation. A wide range of organisations across the country are encouraged to hold exhibitions or events. Interest in this has developed substantially over the last two years.
- \$ To reach the widest possible group using modern technology a home page on the internet is open and under further construction. Its address is <http://water.ccrw.ac.za/wetlands/>. At present the contents include information on the SA

- Wetlands Conservation Programme, and a number of key documents. It has numerous links to other home pages both within South Africa and to other related home pages outside the country including the Ramsar and Wetlands International home pages.
- § A more comprehensive national initiative is developed and should be in operation during the next triennium.

Wetland Rehabilitation and Conservation in the North Eastern Free State

See also 2.11. The rehabilitation of wetlands by Rand Water and the Free State Department of Environmental Affairs and Tourism (FSDEAT) is only part of the wetland conservation strategy of FSDEAT. Instilling wetland awareness amongst wetland owners and agricultural and conservation extension officers is one of its other priorities. The greatest obstacle towards implementing this strategy is the lack of human resources.

An effective means of conveying wetland-related information to wetland owners, who are primarily farmers, is the provincial Department of Agriculture. Wetlands are as much an agricultural resource as the grasslands on which the cattle graze. This, together with the fact that most of the disturbances within wetlands are caused by agricultural related land-uses, has led to FSDEAT involving the provincial Department of Agriculture in its wetland conservation efforts. An awareness of the functions and values of wetlands has been created among agriculture extension officers by providing them with systems to assist in providing advice on agriculture/wetland related issues.

- 3.2 Describe the steps taken to have wetlands issues and Ramsar= Wise Use principles included as part of the curricula of educational institutions. Has this been at all levels of education (primary, secondary, tertiary and adult)? Please give details.**

No steps have been taken yet.

**Ramsar Strategic Plan - General Objective 4
To reinforce the capacity of institutions in each Contracting Party to achieve conservation and wise use of wetlands.**

- 4.1 Describe the mechanisms in place, or being introduced, to increase cooperation between the various institutions responsible for actions which can have an impact on the conservation and wise use of wetlands. If one of the mechanisms is a National Ramsar/Wetlands Committee, please describe its composition, functions and *modus operandi*.**

South Africa was one of the first countries to establish a national Ramsar Committee in 1991. Subsequently, in the spirit of rationalisation this committee was incorporated into the Biodiversity Subcommittee of the Committee for Environmental Coordination (CEC). The CEC is a statutory committee in terms of the Environmental Conservation Act (No of 1989) and comprises of the Directors General of the following national departments: Arts, Culture & Technology; Agriculture; Minerals & Energy Affairs; Water Affairs & Forestry; Foreign Affairs; and each of the nine provinces. Representatives of statutory organisations such as the South African National Parks and the National Botanical Institute also sit on the CEC. The CEC=s may, in accordance with the policy referred to in section 2 of the Act:

- § Coordinate actions which are taken by departments and which may have a material influence on the protection and utilization of the environment;
- § Promote cooperation between departments which are concerned with matters which may have a material influence on the protection and utilization of the environment;

- \$ Advise departments which are concerned with matters affecting the environment with a view to pursuing common objectives in respect of the protection and utilization of the environment;
- \$ Investigate the state of the environment.

4.2 Of the following, indicate which have been undertaken:

a. a review to identify the training needs of institutions and individuals concerned with the conservation and wise use of wetlands Yes/No? If yes, please indicate the major findings of the review.

Two reviews to identify the training needs of institutions and individuals concerned with the conservation and wise use of wetlands have been undertaken recently in South Africa:

\$ As part of the SA Wetlands Conservation Programme, it was found that most nature conservation agencies in the country have well trained staff, however, their training has a strong terrestrial ecology bias. Furthermore, South Africa has some 18 universities, of which 16 offer formal courses in aquatic science and related disciplines (including biology, botany, zoology, ichthyology, aquaculture, limnology, geography fluvial geomorphology, hydrology and engineering). The need for a post graduate course(s) which is both interdisciplinary and multidisciplinary, which brings the range of disciplines into perspective with each other is required. Two approaches are being considered: a series of short cross disciplinary courses (eg. hydrology for ecologists) and/or a masters course in aquatic science.

\$ UNESCO and the Department of Water Affairs and Forestry (DWAF) has started a process identifying the educational and training needs of the water sector in South Africa.

b. a review to identify training opportunities for these people both within your country and in other countries. Yes/No?

Yes, the UNESCO/DWAF process include the process of identifying training opportunities. The Department of Environmental Affairs and Tourism stay well informed about courses offered in and outside the country which might be of use.

c. the development of training modules or a training programme specifically for wetland managers. If yes, please give details.

Yes, this options has been investigated and the possibility of developing courses with the cooperation of several Universities exists.

d. people from your country have gained wetland-related training either within or outside the country. Yes/No? If yes, please give details.

The Institute of Water Quality Studies (Department of Water Affairs and Forestry) has run a number of courses in biological monitoring techniques, as part of the River Health Programme. To date some 120 people have participated in this one week course.

Rhodes University has run a course in aquaculture aimed at participants from the SADC.

The Rennies Wetland project (Wildlife Society) has run a number of field training courses in wetland delineation.

One South African has attended the Lelystad Wetland training course.

One South African has attended the IHE (Delft) for a 6-month post graduate training course.

Ramsar Strategic Plan - General Objective 5
To ensure the conservation of all sites included in the List of Wetlands of International Importance (Ramsar List).

5.1 Of the Ramsar sites in your country, how many have formal management plans:
a. being prepared?

Comprehensive management plans including restoration and mitigation aspects are being drawn up for the two Ramsar sites in South Africa which are on the Montreux Record (Blesbokspruitspruit and the Orange River Mouth Wetland).

b. fully prepared?

Formal management plans have been fully prepared for the following eight Ramsar sites:

- \$ de Hoop
- \$ de Mond (Heuningnes estuary)
- \$ Kosi Bay System
- \$ Lake Sibaya
- \$ Ndumo Game Reserve
- \$ Seekoeivlei
- \$ Verlorenvlei
- \$ Nylsvley

c. being implemented?

These management plans are being implemented at all but the Nylsvley site.

Please indicate in the attached table of Ramsar sites which sites these are and what category they fall into.

5.2 Of the management plans referred to above, which ones have included a monitoring scheme or programme to allow changes in ecological character to be detected? Please indicate this in the attached table of Ramsar sites also.

De Hoop Vlei, De Mond, St Lucia System, Wilderness Lakes and Verlorenvlei all have monitoring schemes or programmes to allow changes in ecological character to be detected. Other monitoring activities include:

Langebaan

- \$ The Wader Study Group conducts regular bird counts at Langebaan. This series of counts has been running for a number of years.

\$ A programme of monitoring the population status and dynamics of the island nesting sea birds (eg gulls, gannets, penguins) and colonial breeding birds (eg egrets and herons) is run by the Sea Fisheries Research Institute of the Department of Environmental Affairs and Tourism. Parameters measured include population size, reproductive success, mortality and diet.

Kosi Bay System, Lake Sibaya and Ndumo Game Reserve

Monitoring of all resource use within the Kosi Bay System, Lake Sibaya and Ndumo Game Reserve takes place (this includes drawing up and implementing schemes to monitor all, or a known proportion, of each resource used significantly). Local people, usually from the resource user group, are then paid to collect data on resource use and these data are collated annually for statistical and management purposes.

Although not necessarily a part of the management plans, there are a number of national monitoring actions which contribute to South Africa's ability to detect changes in ecological character of our Ramsar sites. These include:

\$ The Department of Water Affairs and Forestry has a network of continuous water level recorders and stream flow recorders throughout South Africa. In addition they monitor water quality at a number of sites for a range of indicators either monthly or quarterly. These stations are found at St Lucia System, Wilderness Lakes, Lake Sibaya, the Kosi Bay System and Ndumo Game Reserve.

\$ CWAC monitoring waterfowl numbers based on summer (January) and winter (July) counts as part of the African Waterfowl census takes place at the following sites De Hoop Vlei, De Mond, Barberspan, Blesbokspruit, St Lucia System (counts undertaken quarterly), Langebaan, Wilderness Lakes, Verlorenvlei, Orange River Mouth Wetland, Kosi Bay System, Lake Sibaya, Ndumo Game Reserve, Seekoeivlei.

\$ The River Health Programme, initiated by the Institute of Water Quality Studies of the Department of Water Affairs and Forestry, in partnership with the Department of Environmental Affairs and Tourism and the Water Research Commission, aims to establish a national network of monitoring stations on rivers where the state of each system will be determined using biological monitoring techniques. This will supplement the chemical and hydrological monitoring already being done by the Department of Water Affairs and Forestry.

C The Estuaries Health Index, a project being undertaken on behalf of the Department of Environmental Affairs and Tourism by the CSIR, is using a range of physical and

biological parameters to determine the comparable Ahealth@ of South Africa=s estuaries. This index has been established at the Kosi Bay System, the St Lucia System, Wilderness Lakes, de Mond, Verlorenvlei and the Orange River Mouth Wetland.

5.3 Has there been a change in the ecological character (either positive or negative) at any of your Ramsar sites or is this likely to occur in the near future? Yes/No. If Yes, please give details.

Yes, Blesbokspruit and the Orange River Mouth Wetland were both placed on the Montreux Record because of changes in ecological character, caused by serious human threats.

Blesbokspruit

In July 1996, Blesbokspruit was placed on the Montreux Record in response to contamination by large quantities of polluted water discharged from adjacent Grootvlei Proprietary Mines Limited. The water originated from underground workings and threatened to irretrievably flood the mine. Permission for continued pumping was granted by the Department of Water Affairs and Forestry on condition that measures to improve the quality of the water were installed and a permanent solution to the problem, in the form of a desalination plant, was investigated.

Despite these measures, however, the impact of the discharge on the ecological character of the Ramsar site has been severe. The high concentration of dissolved solids and large volumes of water being discharged have impacted on the hydrology and ecology of the wetland to the extent that it no longer fulfills the criteria under which it was designated a Ramsar site in 1986.

The impacts are manifested primarily in two ways. Firstly, water quality has deteriorated, resulting in a decline in the abundance and diversity of aquatic animal species, as well as loss of species at certain trophic levels. Secondly, the seasonal fluctuation in water levels in the wetland has been replaced by permanently flooded conditions. Being in a climatic region characterised by summer rainfall, the system originally displayed a natural regime of high summer flows and reduced water levels in winter. This dynamic fluctuation in water levels maintained habitat diversity and ecosystem productivity. The result of high stable water levels, together with large concentrations of nutrients derived from domestic and industrial discharges upstream of the wetland, is a severe reed (*Phragmites* sp) encroachment problem that has brought about a decline in habitat diversity. This loss of the dynamic habitat mosaic has induced a corresponding decline in diversity of birds and other species depending on the wetland for feeding, roosting and breeding sites.

Since the listing of Blesbokspruit on the Montreux Record, the following developments have taken place:

- \$ Clarifying tanks were constructed by the mine, with government assistance, in order to remove the high levels of iron hydroxides in the water prior to its being discharged. While this has resulted in a visible improvement in the clarity of the water entering the wetland, the high salt loads and large volumes of water continue to impact on the system.
- \$ During 1996 a Joint Venture Committee (JVC) was established, comprising the Department of Environmental Affairs and Tourism (DEAT) and several other government departments. The JVC produced a cost-benefit analysis of a number of scenarios for handling the mine water discharge, and the future management of the Blesbokspruit. From this analysis a number of recommendations were made to the Cabinet, which subsequently recognised that the construction of a desalination plant

was inevitable and that a management committee should be created to co-ordinate the management of the Ramsar site.

\$ An Interim Management Advisory Committee (IMAC), chaired by the provincial authority responsible for managing the Ramsar site, has been established. All major stakeholders are represented on the Committee, whose mandate is to develop a management plan for the wetland. Preliminary goals and objectives have been compiled and drafting of a comprehensive management plan has commenced. The vision for the plan is:

to restore, maintain and enhance the ecological characteristics for which the Blesbokspruit was designated to the List of Wetlands of International Importance, and to provide human benefits compatible with the concept of wise use advocated by the Convention on Wetlands.

\$ The Gauteng Directorate of Nature Conservation has initiated a number of pilot projects aimed at finding a feasible means of controlling reed encroachment.

\$ Public hearings sanctioned by Cabinet and co-ordinated by the Gauteng Directorate of Environment were held during August 1997, in order to elicit feedback from interested and affected parties on the JVC report and to discuss possible solutions and management options for the wetland. A record of the proceedings of the hearings has been produced and will be submitted to Cabinet.

\$ The DEAT and provincial authorities are involved in processes to ensure that the Ramsar site is not further impacted by other developments in the Blesbokspruit catchment. Proposed developments include the construction of a regional sewage treatment works upstream of the wetland and the opening of an opencast coal mine on the site's eastern boundary. The DEAT is opposing any further discharges of effluent into the Blesbokspruit upstream of the wetland, on the grounds that these will further disrupt the flow patterns of the system.

\$ The Department of Water Affairs and Forestry has commenced a study on the Blesbokspruit catchment, with the aim of producing a catchment management plan. Together with the management plan for the Ramsar site, this will provide the authorities with a sturdy framework from which to assess the potential impacts of future developments on the wetland.

\$ Water birds in the Ramsar site are counted twice a year as part of the CWAC programme. Monitoring of the water quality, both chemically and biologically, is conducted by the Department of Water Affairs and Forestry and Rand Water. The quality of Grootvlei's discharge is also closely monitored to ensure it complies with the permitted standards.

Conclusion

The issue of the discharge of water by Grootvlei mine has proven to be highly complex, involving social, economic and political elements. The threat of job and revenue losses following the closure of Grootvlei mine, should it no longer be permitted to discharge into the wetland, has been effectively used at a political level to motivate for the continued discharge of water. It is clearly an issue that will not be easily resolved.

With the increase in development in the Blesbokspruit catchment, it is becoming clear that only an integrated approach to the management of the wetland, which takes into account all major stakeholders, will succeed in restoring and maintaining the ecological character of the wetland. The survival of Blesbokspruit Ramsar site will depend on the sound management of its catchment.

Despite the developments listed above, the primary cause of the degradation of the Ramsar site, Grootvlei mine, is continuing to discharge polluted water into the wetland. As a result, there has

been no improvement in the ecological character of the site, and there is thus no reason to consider the removal of Blesbokspruit from the Montreux Record at this time.

Orange River Mouth Wetland

In September 1995, the Orange River Mouth Wetland was placed on the Montreux Record following the collapse of the salt marsh component of the estuary. The rapid degradation of the salt marsh was the result of a combination of impacts, both at and upstream of the wetland. These included adjacent diamond mining activities, flow regulation of the Orange River as a result of dam construction, mosquito control measures and poor management of the mouth.

The result of the collapse of the salt marsh, and the general decline of the mouth in general, has been a significant decrease in the number of waterfowl utilizing the wetland. This is of serious concern as the mouth was regarded as the sixth most important coastal wetland in southern Africa in terms of the number of waterfowl it supports. The impact of the decline in ecological functioning on fish species utilizing the estuary and salt marsh is unknown. It is however suspected that the loss of such an integral component of the wetland system cannot fail to impact on these species.

Since the listing of the Orange River Mouth Wetland on the Montreux Record, the following developments have taken place:

- \$ The Northern Cape Conservation Service (NCNCS), the provincial authority responsible for managing the site, is currently engaged in efforts to secure statutory protected status for the wetland. The proclamation of the Ramsar site as a nature reserve is essential if the wetland is to be adequately protected and managed. Formal protected status will afford the site the security of a full-time warden. The establishment of the reserve has been made possible by the allocation of funds specifically for the project by the government of the Northern Cape Province.
- \$ NCNCS has, in consultation with various stakeholders, been examining the options for rehabilitation of the site. A rehabilitation plan for the salt marsh has been developed by the Council for Scientific and Industrial Research, but has yet to be implemented. This document has been incorporated into the Environmental Management Programme of Alexkor, the state-owned diamond mining company responsible for much of the degradation of the salt marsh. However, it is claimed that financial constraints have prevented Alexkor from implementing this component of their programme. An application to the Global Environmental Facility for funding to restore the Ramsar site is being prepared by NCNCS.
- \$ The instream flow requirements necessary to sustain the ecological processes and systems at the mouth have been conveyed to the Department of Water Affairs and Forestry as part of the input of the Northern Cape Province to the ongoing Orange River Replanning Study. This study seeks to reassess the allocation of the water resources of the river, which are becoming severely limited.
- \$ Alexkor has undertaken to reroute a road embankment that prevented exchange of water between the salt marsh and estuary. This embankment was one of the factors leading to the collapse of the salt marsh. Work has commenced and a breach several hundred metres long has been excavated in the embankment, which is allowing the influx of water to the marsh.
- \$ The Orange River Interim Management Committee (ORMIMC), which had not met since 1995, has been revived by NCNCS, who are responsible for its co-ordination. This committee will be responsible for developing a management plan for the wetland and addressing potential threats to the Ramsar site.
- \$ Several meetings between officials of the Northern Cape and Namibian governments have taken place with the aim of exploring the possibility of creating a transboundary

Ramsar site. This is highly feasible as Namibia has designated its portion of the mouth a Ramsar site and plans to expand its boundaries upstream. Drafting of a joint management plan for the transboundary site has already commenced.

Conclusion

The pending proclamation of a protected area at the mouth, towards the end of 1998, will enable NCNCS to begin managing and rehabilitating the wetland. Rehabilitation options for the salt marsh will however be costly and funding for this process has not been allocated by the Northern Cape government. Success in restoring the ecological character of the site will depend on the involvement of the DEAT and NCNCS with management of the river as a whole. While the proclamation of the reserve at the mouth will facilitate the restoration of the wetland, the current ecological character of the site motivates against its removal from the Montreux Record at this point.

5.4 In the case of Montreux Record Ramsar sites where the Management Guidance Procedure has been applied, what is the status of the implementation of the MGP report recommendations? What is the expected time-frame for removing the site from the Montreux Record?

The St Lucia System was removed from the Montreux Record in 1996. This was possible after the Cabinet decided that no mining will be allowed in the area. The Cabinet also decided in favour of an integrated development and land-use planning strategy, for the entire Greater St Lucia Region. This will enable various sectors (such as nature conservation, agriculture, ecotourism, forestry and existing mining) to work collectively toward the common goal of eradicating the regions= poverty and thus promoting sustainable development. It was also decided that an application to register the Greater St Lucia (including the Ramsar sites of the St Lucia System, Lake Sibaya, the Kosi Bay System and the Turtle Beaches and Coral Reefs of Tongaland) as a World Heritage Sites. An SDI (Strategic Development Initiative) under the leadership of the Minister of Environmental Affairs and Tourism, Dr Z Pallo Jordan, has been launched for the entire northern Kwazulu-Natal region. The Ndumo Game Reserve is thus included in this area. The SDI also includes southern MoHambique and south eastern Swaziland.

5.5 For those countries referred to in COP6 Recommendations 6.17.1-4, Ramsar sites in the Territories of Specific Contracting Parties, please provide advice on the actions that have been taken in response to the issues raised at that time.

The three sites (Natal Drakensberg Park, Ndumo Game Reserve and Seekoeivlei) were designated in 1996.

Ramsar Strategic Plan - General Objective 6

To designate for the Ramsar List those wetlands which meet the Convention=s criteria, especially wetland types still under-represented in the List and transfrontier wetlands.

6.1 Has a national inventory of wetlands been prepared for your country? Yes/No.

No, but a directory of some 1300 wetlands has been collated (Cowan 1998).

If no, are there plans for this to be done? Yes/No.

Yes. As the authority responsible for implementing the Convention on Wetlands in South Africa, the Department of Environmental Affairs and Tourism is leading and coordinating the

process of inventory development. The inventory was launched at a national workshop held in November 1997, which was attended by a range of stakeholders including government departments, NGOs, conservation bodies and research institutes.

During the first stage of the inventory, South Africa's wetlands will be mapped and classified by type. Mapping will consist of identifying and delineating wetlands from remotely-sensed images. In order to accomplish this, a wetland classification system has been developed by modifying for South African use the classification successfully used by the United States National Wetland Inventory for almost twenty years.

Aerial photographs will be used as the medium from which wetlands will be identified and delineated. As a general rule, all wetlands conforming to the definition adopted for the inventory and that can be accurately identified and mapped from aerial photos will be included in the inventory. The extent of wetland information generated by the mapping exercise will be limited to delineated boundaries, location and classification for each wetland. Supplementary attribute information necessary to determine the functions, values and condition of each site will be supplied by using existing inventory information and field surveys. A database coupled to a Geographical Information System will be used to store and manipulate the data generated by the inventory. The database will be maintained by the DEAT, and most of its contents will be available to anyone requiring inventory information.

The most useful products of the inventory will be wetland maps covering the entire country at a scale of 1:50000, which will show where wetlands are located, their boundaries and classification. Wetland attribute information contained within the database will be made available in digital format, possibly by means of the internet. A variety of reports will be generated by synthesizing the inventory data. These reports will range from site and attribute-specific outputs to national wetland status and trends reports. These reports will be especially valuable in assessing the effectiveness of wetland conservation policies and programmes.

Following the national workshop in November 1997, where the needs and expectations of stakeholders in the inventory were put forward, several products have been developed which will ensure a firm foundation for the inventory. These are:

- \$ Proceedings of the national workshop, which describes the inventory process in detail and lays out the way forward for the inventory;
- \$ A catalogue of existing inventory information in South Africa. This inventory of inventories was produced with the aim of assisting those in urgent need of inventory information to find available data. It will also provide a reference guide to sources of spatial and attribute information that will assist wetland mapping and population of the inventory database;
- \$ A discussion document describing in detail the proposed wetland classification system for South Africa.

Workshops will take place in October 1998, with the aim of developing lists of wetland plants and hydric soils for South Africa. These lists will support wetland definition and delineation in the inventory, and can ultimately be used to underlie aspects of policy and legislation.

The mapping phase of the inventory will commence once further preparations have been completed, such as the field testing of the classification system and the development of standards and methods for mapping. Funding for the mapping phase is currently being sought by the DEAT.

Where a national inventory exists please provide details of when it was finalized, where it is kept and what information it contains.

The Directory of South African Wetlands (Cowan and van Riet, in press), includes 1334 wetlands, classified according to the Ramsar system (with some adaptations to avoid information loss), their area, level of protection, severity of threat, and a discussion on each of the major wetland classes (marine, estuarine, lagoonal, endorheic, riverine, lacustrine, palustrine and man-made), with descriptions of each type, completeness or shortcomings of the data, and some indication of the values associated with each group. This information is being published, and the data is housed on GIS (ArcInfo) in the Department of Environmental Affairs and Tourism.

A second level of information can be found in the South African Land Cover Mapping Database Project, where two of the broad thematic land cover/use classes are wetlands and water bodies (no subdivisions). This project is to map the whole country at 1:250 000 scale.

6.2 Does there exist a list or directory of important wetlands for your country or region? Yes/No.

No

If yes, please provide details of when it was finalised, where it is kept, what criteria for important were used, and the types of information it contains.

6.3 If it is known, please provide an estimate of the area of wetlands in your country at present and any information on rates of loss or conversion to other activities.

For most of South Africa, the extent and degree of wetland loss have not been determined. There is however evidence to suggest that over 50% of the country's wetland area has been lost (Begg 1988, Breen and Begg 1989, Kotze, Breen and Quinn 1995). This estimate is based largely on detailed wetland surveys conducted in various catchments, and which have been extrapolated to the entire country. For example, a landmark survey of the Mfolozi River catchment estimated that 58% of the original wetland area had been lost, while studies of the Mkomazi and upper Mgeni catchments have yielded wetland area losses of 52% and 66% respectively.

If this information is available, please indicate what definition of wetland was used.

Although no precise definition of wetlands was provided in the study of the Mfolozi catchment, wetlands were delineated on the basis of the form of vegetation, and surrounding topography and geomorphology. The wetlands considered were primarily palustrine wetlands.

6.4 Have any actions been taken in response to the COP6 Resolutions and Recommendations that Contracting Parties should give priority to listing Wetlands of International Importance which:

a. meet the criteria for fish habitat (Resolution VI.2),

South Africa has some difficulty in principle with the fish criteria. Some of the terminology is poor, and it is felt that this criterion tends to dilute the requirements to the extent that too many sites would then qualify. While no direct work has been done using this criterion, the following sites should all meet the fish criteria

:

De Mond, St Lucia System, Wilderness Lakes, Langebaan, Kosi Lakes System, Verlorenvlei, Orange River Mouth Wetland, Ndumo Game Reserve and Nylsvley.

b. meet the 1% criterion for waterbird populations using data provided by the International Waterfowl Census (Resolution VI.4),

Waterfowl are not generally a primary value to South Africa's wetlands, however De Hoop, Barberspan, Blesbokspruit, De Mond, St Lucia System, Wilderness Lakes, Langebaan, Kosi Lakes System, Verlorenvlei, Orange River Mouth Wetland, Ndumo Game Reserve and Nylsvley were all listed using waterfowl criteria.

c. are subterranean karst or cave wetland systems (Resolution VI.5),

South Africa's cave systems (eg Cango, Echo, Sudwala, Sterkfontein), although important from a geomorphological and paleontological point of view have not received much attention as wetland systems. A number of dolomitic eyes in the dry North West Province are important as a water supply (eg. Kuruman Eye, Molopo Eye). A study of the wetlands below these eyes undertaken by the JLB Smith Institute of Ichthyology on behalf of the Department of Environmental Affairs and Tourism have revealed a number of endemic fish and invertebrate species. South Africa's only living tufa on the Kadishi River is possibly the largest in the southern hemisphere, is found within the Blyderivierspoort Nature Reserve. It is a major tourist attraction. However it is under threat due to activities in its catchment which are lowering the pH of its water.

d. are peatland ecosystems (Recommendation 6.1)

Peatland ecosystems (although small) are included in the Kosi System and the St Lucia System

e. are coral reefs and associated systems (Recommendation 6.7)

The Turtle Beaches and Coral Reefs of Tongaland were designated to the List of Wetlands of International Importance in 1986.

f. are under-represented wetland types (which apart from d. and e. above include mangroves and sea grass beds) (Strategic Plan Action 6.2.3)

None

Yes/No? If yes, please describe these actions.

6.5 If your government indicated at COP6 that it would be proceeding to list further specific sites, please advise of the status of this action.

The three sites which were designated, Ndumo Game Reserve, Natal Drakensberg Park and Seekoeivlei Nature Reserve, were all designated to the list in 1996. Two further sites have been proposed: Nylsvley Nature Reserve and Limpopo/Luvuvhu floodplains and pans. The designation procedures for Nylsvley Nature Reserve has been completed and it has been added on the List, but that of Limpopo/Luvuvhu floodplains and pans was held back pending the resolution of a land ownership dispute between local communities and South African National Parks.

6.6 Please advise which of the sites included in the Ramsar List from your country are transfrontier wetlands (Refer also to 7.1).

The Orange River Mouth site is being developed in a transfrontier Ramsar site since Namibia has recently ratified the Convention.

6.7 Describe any plans, or actions being taken for further transfrontier sites to be listed (Refer also to 7.1).

Three sites, the Kosi Bay System, the Turtle Beaches and Coral Reefs of Tongaland and Ndumo Game Reserve, on the border with MoHambique are included in the spacial development initiative (SDI) for northern Kwazulu-Natal, which includes south eastern Swaziland and southern MoHambique. Should these two countries ratify the convention the structure is in place for these sites to become transfrontier wetlands in the political sense, as they are already so in the ecological sense.

Similarly the Natal Drakensberg Park borders on Lesotho, where efforts are taking place for the formation of a transfrontier park.

The proposed Limpopo-Levuvhu site has similar potential with Zimbabwe and MoHambique.

Ramsar Strategic Plan - General Objective 7

To mobilize international cooperation and financial assistance for wetland conservation and wise use in collaboration with other conventions and agencies, both governmental and non-governmental.

7.1 Briefly describe any bilateral or multilateral activities that have been taken, are under way, or are planned for the management of transfrontier wetlands or their watersheds/catchments (Refer also to 6.6 and 6.7).

Orange River Mouth Wetland

Several meetings between officials of the South African and Namibian governments have taken place with the aim of designating the mouth of the Orange River, which forms the border between the two countries, as a transboundary Ramsar site. This is highly feasible as both countries have already designated their respective parts of the mouth as Ramsar sites. Drafting of a plan for the joint management of the site has already commenced.

SADC Protocol

A Protocol on Shared Watercourse Systems developed by the Southern African Development Community (SADC) has been accepted by South Africa, along with 10 other SADC member states. The protocol provides for a balance between resource development and conservation, as well as for information exchange. It commits states to ensure that non-domestic waste discharges will not have a detrimental effect on the water resource before delivering a permit, to notify potentially affected states of emergencies and to take all measures necessary to prevent the introduction of harmful alien species into shared watercourse systems.

7.2 Do you have Ramsar sites that are twinned with others, either nationally or internationally? Yes/No.

No

If yes, please give details.

7.3 Where your country is also a signatory of any of the following Conventions, describe what mechanism(s) exist to assist regular dialogue and cooperative actions between the personnel responsible for their implementation and the Ramsar Administrative

Authority:

- a. Convention on Biological Diversity**
- b. Framework Convention on Climate Change**
- c. Convention to Combat Desertification**
- d. Convention on Migratory Species**
- e. World Heritage Convention**

Besides the Convention on Wetlands, South Africa has ratified the Convention on Biological Diversity, the Framework Convention on Climate Change, the Convention to Combat Desertification, the Convention on Migratory Species and the World Heritage Convention. Responsibility for all of these convention is with the Department of Environmental Affairs and Tourism. The Convention on Biological Diversity, the Convention on Migratory Species and the Wetlands Convention all fall within the responsibility of the Directorate: Natural Environment, where close cooperation exists.

7.4 Is your country cooperating as part of any bilateral or multilateral activities directed at the conservation of migratory wetland species? Yes/No.

Yes

If yes, please provide details.

African-Eurasian Waterbird Agreement

The African-Eurasian Waterbird Agreement (AEWA) established in terms of the Bonn Convention on Migratory Species is the first regional agreement for a vast area of 60 million square kilometres. It covers the entire continent of Africa and Europe, as well as parts of Asia and a few Arctic islands of North-eastern Canada encompassing about 120 Range states. A legal instrument was needed to maintain a favourable conservation status for migratory waterbirds. Hence, the aim of AEWA is to create a legal basis for concerted conservation and management policy by the Range States for migratory waterbird species. In total 170 species of Waterbird are covered by AEWA.

South Africa is hosting the Convention on Migratory Species COP and the first AEWA COP in Cape Town during 1999.

Marine turtles

The Sodwana Declaration, drafted and endorsed by representatives of some nine countries at a resort at the interface of two of South Africa's Ramsar sites (the St Lucia System and the Turtle Beaches and Coral Reefs of Tongaland) summarizes the goals and recommendations of a Marine Turtle Conservation Strategy and Action Plan for the Western Indian Ocean. This is a regional action plan in terms of the Global Strategy for the conservation of marine turtles.

7.5 Are there multilateral and/or bilateral donors supporting projects which contribute to implementation of the Ramsar Convention in your country? Yes/No.

Yes

If yes, please provide details.

The US Fish and Wildlife Service gave financial support to South Africa enabling the Department of Environmental Affairs and Tourism to host the Sub-regional Ramsar meeting.

Further support is being sought for for the implementation of a training programme, the wetland inventory, a monitoring programme and wetlands valuation projects.

7.6 Does your government make an annual budgetary allocation to support the conservation and wise use of wetlands within your country? Yes/No.

Yes

If yes, is this a specific allocation to a wetlands programme or as part of a larger environment or natural resource management budget?

The South African Wetlands Conservation Programme is run as a part of the Department of Environmental Affairs and Tourism=s activities. Its budget is therefore part of the larger environmental management budget.

7.7 If your country has a development assistance programme, does it include funds earmarked for wetland conservation and wise use in other countries? Yes/No. If yes, please give details.

No

7.8 Is there a formal process in place for consultation between the Ramsar Administrative Authority and the development assistance programme in your country, where one exists? Yes/No

If yes, what is that process.

Ramsar Strategic Plan - General Objective 8

To provide the Convention with the required institutional mechanisms and resources.

8.1 Has your government made voluntary financial contributions, other than the invoiced contributions or to the Small Grants Fund, to further the work of the Convention globally? Yes/No.

No

If yes, please provide details.

8.2 If your country is in arrears with the payment of its annual contributions to the Ramsar Convention, please indicate the reasons for this situation and the prospects for paying these arrears in the near future.

South Africa has made its payments.

Optional section - Participation of non-government organizations in the implementation of the Convention

These are optional questions relating to cooperation with and involvement of non-government organizations in the implementation of the Convention.

At COP6 some 42 NGOs made the Brisbane NGO pledge of support for the Ramsar Convention. The Standing Committee agreed that for COP7 there should be an effort made to gauge the level and type of cooperation which is occurring between government Administrative Authorities and the national and international NGOs with an interest in wetlands issues.

In this optional section of the National Report, you are asked to describe the nature of the cooperation and relationship with any other international, regional, national and provincial NGOs operating within your country.

9.1 Approximately how many NGOs have wetlands as part of their regular business in your country?

At least 20

Please break this down between international, regional and national/provincial organizations.

International

Wetlands International

Regional

IUCN
WWF

National

Southern African Society of Aquatic Scientists,
Endangered Wildlife Trust
SA Crane Working Group, SA Crane Foundation,
Wildlife and Environment Society of SA (under which the Rennies Wetlands Project resorts)
Birdlife South Africa,
Environmental Justice Network Forum
Friends of Nylsvley, Grootvaly Blesbokspruit Trust, Wakkerstroom Heritage Association,
Zeekoeivlei Environmental Forum, Save the Vaal Environment
Catchment fora (eg Olifants River, Blesbokspruit, Zwartkops River, Crocodile, Sabi,)

Note: this list is not exhaustive and it excludes any of the recreational user groups (eg SCUBA, fishing, game bird hunting, and boating)

9.2 Is there a regular forum or mechanism through which these NGOs express their views on wetland conservation and Ramsar implementation:

- a. to each other? Yes/No
- b. to the government? Yes/No

No

If yes in either case, please give details.

9.3 Does your government include one or more NGO representatives on its official delegation to Ramsar COPs? Yes/No

No, as Ramsar is an intergovernmental treaty, government officials will normally make up the delegation. A mechanism is in place where should specific expertise not found within the government be required, individuals with such expertise from any NGO can be invited to join the delegation.

9.4 Do any of the NGOs run programmes aimed at Education and Public Awareness about wetlands in your country? Yes/No. If yes, please give details (Refer also to question 3.1).

The Botanical Society, the Endangered Wildlife Trust (through its Crane Working Group), the Wildlife Society and WWF-SA (through the Rennie's wetland project), and the Share-Net programme all run programmes aimed at education and public awareness about wetlands in South Africa.

9.5 Where they exist, do Ramsar site management advisory committees include NGO representatives? If yes, please give details

Kosi Bay System:

\$ The traditional fishtraps are managed by a blend of traditional and modern management. Local traditional authorities decide who should operate traps and where, while the conservation authority makes sure that an adequate channel is kept open between the traps to allow fish migrations to pass from the lakes to the ocean.

\$ A new joint management gillnet fishery has been developed by the conservation authority. Six local communities have formed gillnet committees. These committees obtain permits from the conservation authority and decide who these permits should be allocated to. Control is maintained by joint management committees consisting of the gillnet committees and the authorities.

\$ Sedges, rushes and reeds are important resources and these too are managed by joint management committees. Two of the most important areas have committees in place and these issue their own usage permits. They decide, with the conservation authorities, what methods of collection may be used and where. Local residents receive free permits while outsiders pay to collect these resources.

Turtle Beaches and Coral Reefs of Tongaland:

\$ Intertidal resources such as mussels and redbait are run by a joint management committee in the Enkoveni area in the north. The committee is called the *Buhle Bemvelo Joint Management Committee* and consists of 12 community members, the local Induna and three conservation authority members. Resource use is by permit only and local residents, identified by the committee receive permits. The permits exclude limpets, octopus, small ghost crabs and live cowries.

Lake Sibaya:

\$ Two experimental gillnet permits have been issued here and these operators fish and monitor their own catches.

Ndumo Game Reserve:

\$ Reed and rush harvesting as well as fruit gathering is allowed through manned gates

The St Lucia System:

\$ Three gillnet fishery committees which include representatives of the local tribal community and the conservation authority manage the permitting and control of this fishery within the lake

\$ Three liaison committees (two recreational fishing and a SCUBA group) with the aim of participation in the management of these activities

\$ SCADCO, the scientific advisory committee for St Lucia is made up of members with relevant expertise which can and does include NGO members

Wilderness Lakes

\$ The Wilderness Lakes management advisory committee, which did include NGO representation, is no longer formally constituted due to the vested interests which were being promoted to the detriment of the system.

9.6 Describe the themes of the Convention (refer to General Objectives 1-8 of the Strategic Plan) where you perceive the national/provincial NGOs to be most active.

Encouraging the wise use of wetlands and further developing the Ramsar Wise Use Guidelines

Catchment fora encourage the wise use of water resources within particular catchments

Raising awareness of wetland values and functions

Save the Vaal Environment (SAVE) is an association of concerned people who wish to protect and maintain the integrity of the Vaal River and its environs. In particular, SAVE is opposing the proposal to create an open-cast coal mine on the banks of the river, which would, among other effects, result in the destruction of a wetland.

The Rennies Wetlands Project of the Wildlife and Environment Society of South Africa runs a publicity and awareness programme aimed at broadening general awareness of the crucial importance of wetlands. This publicity also plays an important role in indirectly lobbying key decision makers.

Reinforcing the capacity of institutions to achieve conservation and wise use of wetlands

The Rennies Wetlands Project runs a capacity building programme as one of its main aims. This programme aims to inform and train provincial conservation and agricultural extension officers, wetland managers and volunteers from a diverse range of backgrounds to better understand wetland dynamics, and to assess, manage and rehabilitate degraded wetlands. The Project also lobbies key decision makers in order to raise the profile of wetlands and include their management in the work of government departments and the private sector.

Ensuring the conservation of all sites included in the List of Wetlands of International Importance

Friends of Nylsvley is a voluntary organisation dedicated to the conservation and preservation of the Nyl River Floodplain, in the Northern Province. Part of this unique area is a Ramsar site

and has been identified by BirdLife South Africa as an Important Bird Area.

Final comments

10.1 General comments on implementation of the Ramsar Strategic Plan.

10.2 Observations concerning the functioning of, relations with, and services provided by: a. The Ramsar Standing Committee

Very little direct contact has taken place between the African representative(s) on the Standing Committee and South Africa. As such they cannot be seen to represent us. South Africa welcomes the initiative to increase the number of representatives from Africa on the Standing Committee. It is believed that a representative from the southern African Subregion would be beneficial to all our activities and be better able to represent our interests.

b. The Ramsar Scientific and Technical Review Panel

Similarly no direct contact between the African representative on the Scientific and Technical Review Panel and the authority responsible for the Conservation in South Africa has taken place. It is believed that this system requires a major review. (See recommendation under 10.3)

c. The Ramsar Bureau

A good working relationship has developed between the Ramsar Bureau and the South African Administrative Authority.

d. The Ramsar NGO partners

G I Cowan (Ramsar authority) and R M Randall serve as South Africa=s representatives on the Board of Wetlands International and G I Cowan was elected to the Wetlands International Africa, Europe and Middle East Council, therefore active and close contact is maintained with this organization;

It must be remembered that the Convention on Wetlands is an intergovernmental treaty. There is some concern that the NGO partners are in some cases exerting undue influence on some of the activities, and certainly going well beyond their administrative support functions. There is further a perception that the IUCN is using the Ramsar fora to secure funds for projects and contracting parties have no say in the allocation of these funds.

10.3 Any other general observations and/or recommendations for the future.

It is proposed that intersessional meetings be formally constituted. Regional meetings and/or a meeting of scientists along the lines of the SBSTTA of the Convention on Biological Diversity should be considered. Draft recommendations/resolutions could then be prepared for adoption by the COP at these meetings.

The following recommendations from the Southern African Sub-regional Ramsar Meeting, held in Pretoria 2-6 February 1998 are relevant here:

1 On the Convention=s name

Recognizing the importance of wetlands in terms of the full range of ecological, hydrological

and sociological values, especially to the southern African Sub-region; and
That the importance of wetlands as waterfowl habitat is relatively insignificant in comparison to these values in the Sub-region; and
Noting that the term Aespecially as Waterfowl Habitat@ has caused confusion and delay in the recognition of the advantages of countries ratifying the convention; and
Emphasizing that all wetlands have a value and are therefore important:

THE SOUTHERN AFRICAN SUB-REGIONAL RAMSAR WORKSHOP

Recommends that the Bureau includes the following as an item on the agenda of both the Pan African Ramsar meeting and of COP7

- C A process to amend the Convention be adopted at the next Conference of Parties, so as to formally drop the term Aof International Importance especially as Waterfowl Habitat@ from the official name and henceforth be called as AThe Convention on Wetlands@;

2 On participation in the STRP

Recognizing the pivotal role the STRP plays in the development of the convention; and
Concerned at the lack of participation of Contracting Parties in the STRP=s activities;

THE SOUTHERN AFRICAN SUB-REGIONAL RAMSAR WORKSHOP

Recommends that the Bureau bring the following proposal Standing Committee considers the:

- C Each Contracting Party nominate a scientific and technical contact person of recognized stature who will be responsible for coordinating contributions from national experts on the STRP programme;
- C The programme, and working documents of the STRP be circulated to these contact points timeously, requesting contributions, opinions or comments;
- C The contact points ensure that national contributions are forwarded to the STRP six weeks prior to its meetings so that these contributions can be worked into the meeting documents;
- C In order not to limit the costs involved, it is recommended that the working language of the STRP continues to be English

3 On the valuation of wetland systems

Recognizing the low profile that wetlands enjoy in both national and regional planning processes; and
That most of the major catchments in the Subregion are shared systems;

THE SOUTHERN AFRICAN SUB-REGIONAL RAMSAR WORKSHOP

Recommends that the Bureau considers the following proposal for funding

- C A programme to establish the valuation of wetlands in the SADC be initiated; and
- C The results of this programme be used to promote the wise use of wetlands in both national and regional planning in the Sub-region;
- C The Ramsar Bureau consider the possibility of providing seed funding for immediately starting the implementation of this proposal.

5 On raising awareness

Recognizing that there is much valuable information material on wetlands from the Ramsar Bureau and a number of other international organizations; and

Noting that this material by its nature has to be very general;

THE SOUTHERN AFRICAN SUB-REGIONAL RAMSAR WORKSHOP

Recommends that:

- C The Ramsar Bureau, with assistance from the Contracting Parties in the Sub-region, develop and distribute an information package on wetlands, their conservation and wise use relevant to the Sub-region.
- C Funding be sought for this project.

10 On management plans

Recognizing the need to revise the procedure for the development of management plans for wetlands:

THE SOUTHERN AFRICAN SUB-REGIONAL RAMSAR WORKSHOP

Recommends that the Bureau brings the following to the attention of the STRP and includes it as an item on the agenda of the Pan African Ramsar Meeting:

- C That the Ramsar management plan procedure be reviewed to incorporate a step-by-step process to effect the management of the whole system
- C That various tenure systems be considered
- C That the protocol for the definition of the desired state of riverine systems in South Africa be considered as a useful model

11 On a protocol regarding water and wetlands

Recognizing the importance water plays in the maintenance of wetlands ecosystems and their resources;

Acknowledging the ground breaking work in the South African water policy entrenching the environmental reserve

Noting the SADC has already determined a water protocol

THE SOUTHERN AFRICAN SUB-REGIONAL RAMSAR WORKSHOP

Recommends that:

- C The Ramsar Bureau with the assistance of the STRP and the support of the Standing Committee explore the development of a protocol which will ensure an environmental reserve to maintain wetlands throughout the globe.

South African National Report to the Convention on Wetlands (Ramsar 1971)

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Service)

Name of site	date	area	map	RIS	MR	MGP	MR off	Mgt plan being prep	Mgt plan fully prep	Mgt plan impl	Mgt + mon.
Barberspan	12/03/75	3118	T	T							
Blesbokspruit	02/10/86	1858		T	T			T			
De Hoop Vlei	12/03/75	750	T	T					T	T	T
De Mond (Heuningnes Estuary)	02/10/86	1318	T	T					T	T	T
Kosi Bay	28/06/91	8000	T	T					T	T	
Lake Sibaya	28/06/91	7,750	T	T					T	T	
Langebaan	25/04/88	6000		T							
Natal Drakensberg Park	21/01/97	242813	T	T							
Ndumo Game Reserve	21/01/97	10117	T	T					T	T	
Orange River Mouth	28/06/91	2000		T	T			T			
St. Lucia System	31686	155500	T	T	T		T		T		T
Seekoeivlei Nature Reserve	21/01/97	4754	T	T					T	T	T
Turtle Beaches/Coral Reefs of Tongaland	02/10/86	39500	T	T							
Verlorenvlei	28/06/91	1,700	T	T					T	T	T
Wilderness Lakes	28/06/91	850	T	T							T
Nylsvley Nature Reserve		3970	T	T					T		

Legend:	
date	Date of designation as a Ramsar Wetland of International Importance
area	Surface area of the site in hectares
maps	Maps were provided for the site
RIS	Ramsar Information Sheet has been provided for the site
MR	Montreux Record site
MGP	Management Guidance Procedure has been undertaken for the site
MR off	Site has been removed from the Montreux Record
Mgt plan being prep	Management plan being prepared

Mgt plan fully prep	Management plan fully prepared
Mgt plan impl.	Management Plan implemented
Mgt + mon	Management Plan includes monitoring

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