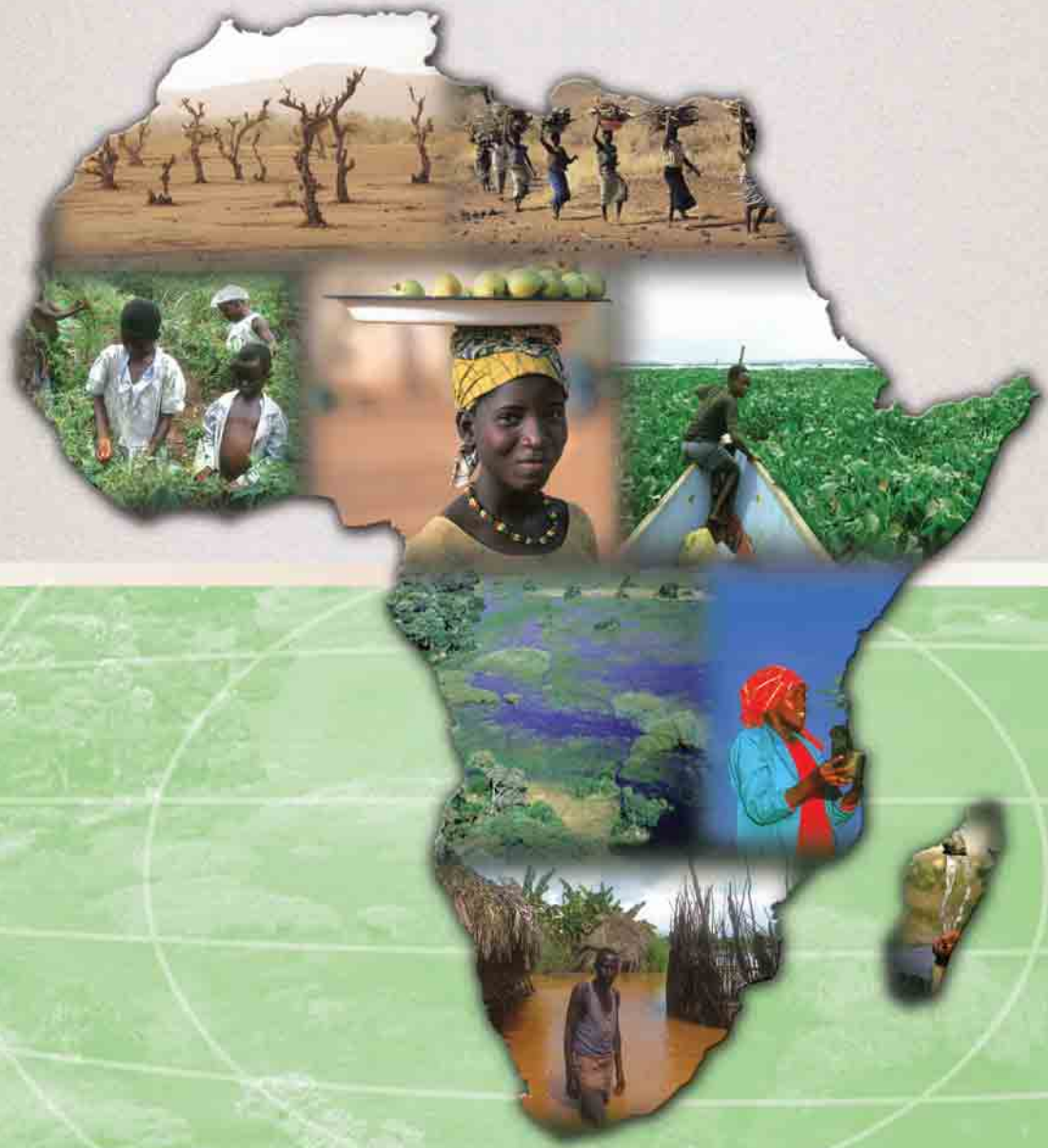


Development of an Action Plan for the Environment Initiative of NEPAD



Programme Area 2

Conserving Africa's Wetlands

**DEVELOPMENT OF AN ACTION PLAN FOR THE
ENVIRONMENT INITIATIVE OF THE NEW
PARTNERSHIP FOR AFRICA'S DEVELOPMENT
(NEPAD)**

**PROGRAMME AREA 2
MANAGING AFRICA'S WETLANDS**



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PREFACE

The New Partnership for Africa's Development (NEPAD) is an historical initiative aimed at promoting sustainable development for the benefit of present and future generations. The sustainable use of African natural resources and the protection of the environment are an important component for achieving such objective.

To this end and following the adoption of NEPAD, the African Environment Ministries under the leadership of the African Ministerial Conference on the Environment (AMCEN), embarked on a large consultative process aimed at preparing an Environmental Action Plan for the implementation of the Environment Initiative of NEPAD.

At its ninth session, the AMCEN adopted a framework of the Action Plan and decided to convene nine thematic workshops with a view of finalizing the Action Plan and identify eligible projects.

Accordingly, the following NEPAD thematic workshops were held: Desertification (19-20 January 2003, Algiers, Algeria); Invasive Species (23-24 January 2003, Pretoria, South Africa); Poverty and Environment (23-24 January 2003, Bamako, Mali); NGO Consultation (1 February 2003, Nairobi, Kenya); Wetlands (10-11 February, Nairobi, Kenya); Forest (13-14 February 2003, Yaounde, Cameroon); Health and Environment (17-18 February 2003, Dakar, Senegal); Marine and Coastal Environment (24-25 February 2003, Abuja, Nigeria); Climate Change (26-27 February 2003, Rabat, Morocco).

The results of the NEPAD thematic workshops are contained in the respective brochures especially prepared to this effect.

The AMCEN has played a leading role in the preparation of the Action Plan and will continue to play its role during the implementation phase of this unique endeavor.



Klaus Töpfer
Executive Director

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H. E. Mr. Ruhakana Rugunda
President of AMCEN

A handwritten signature in black ink, appearing to read 'Ruhakana Rugunda'.

THE NEPAD ENVIRONMENT INITIATIVE PROJECT

The development of the Environment Initiative of NEPAD is a consultative process led by African experts and based on a sound methodology for the prioritisation of the root causes of environmental degradation, and the identification of the most effective interventions, from an environmental, institutional, and financial perspective. Furthermore, it incorporates environmental and technical, as well as socio-economic considerations, and addresses cross-cutting/transboundary issues. It provides regional and external partners with a unique opportunity for working jointly with African stakeholders on sustainable projects with a high degree of national ownership.

The UNEP/GEF Medium Sized Project (MSP) of US\$ 300,000 on the Development and Implementation of the Environment Component of the New Partnership for Africa's Development (NEPAD) was adopted on 26 July 2001 immediately after the OAU Summit held in Lusaka, Zambia, in July 2001. The main objective of the MSP was to develop a framework of an Action Plan for the implementation of Environment Initiative of NEPAD. Chapter 8 of NEPAD entitled the "Environment Initiative" identified the following eight areas of focus: Combating Desertification, Wetland Conservation, Invasive Alien Species, Coastal Management, Global Warming, Cross-border Conservation Areas, Environmental Governance, and Financing.

To this end a Steering Committee of the project comprising the members of the Bureau of the African Ministerial Conference on the Environment (AMCEN) and the representatives of the five initiating countries of NEPAD was established. At the kind initiative of the Government of South Africa, the first meeting of the steering committee was held in Pretoria, South Africa on 17 January 2002. At the kind invitation of the Government of Algeria, the second meeting of the steering committee was held in Algiers, Algeria on the 11-12 March 2002. At the kind invitation of the Government of Senegal the third meeting of the steering committee was held in Dakar, Senegal on 12 and 13 June 2002 at the level of experts and on 14 June 2002 at the level of ministers. The ministerial segment of the meeting endorsed the Framework of an Action Plan for the Environment Initiative of NEPAD and recommended its adoption to the ninth meeting of AMCEN. The minister submitted the Framework to the President of Senegal at a meeting also held on 14 June in Dakar.

The ninth meeting of AMCEN held in Kampala, Uganda from 1 - 5 July 2002 endorsed the Framework and mandated the President of AMCEN with the President of Senegal, who also attended the meeting, to submit the Framework to the Summit of the African Union, held in Durban, South Africa from 8-11 July 2002. The ministers mandated the steering committee of the MSP to further elaborate the Framework with a view of submitting a detailed Action Plan to a meeting of AMCEN to be held in June 2003. It was agreed that lead countries of the steering committee would take the responsibility of co-ordinating the further development of each programme area, building on the elements identified in the Framework of the Action Plan. In fulfilling their tasks, the lead countries worked in close co-operation with relevant sub-regional, regional and international institutions, the GEF, and the secretariats of the relevant conventions to undertake a mapping exercise of on-going programmes, initiatives and activities. Their aim will be to identify gaps and priorities, and to develop project proposals with clear time frames, targets, cost estimates and mechanisms for implementation and monitoring. To this end a GEF Medium Sized Project of US\$ 300,000 was adopted on 30 September 2002 with a view of finalising the Action Plan for the Environment Initiative of NEPAD.

It was agreed that the following thematic workshops will be convened: Desertification (Algeria), Poverty and Environment (Mali), Invasive Species (South Africa), Forests (Cameroon), Marine

and Coastal Environment including Fresh Water (Nigeria), Health and Environment (Senegal), Climate Change (Morocco), Wetlands and NGO Consultative Meeting (Kenya).

As an outcome of the assessment, characterisation and selection of the fundamental causes/sources of the environmental problems and the scale of their impacts, concrete action plans containing specific project interventions were developed by the Thematic Working Groups.

In addition to the thematic workshops, the Fourth Meeting of the Steering Committee of the UNEP/GEF MSP on NEPAD was convened on 23-25 April 2002, in Maputo, Mozambique. The Draft Action Plan of the NEPAD Environment Initiative was presented to the ministers and experts for review, together with 216 project interventions that have been identified, targeting priority areas for action. The background thematic papers were also made available to the meeting. Subsequently, a Special Session of AMCEN was convened. A Meeting of Donors will be held in December 2003 to ensure continued bilateral/multilateral financial and institutional support for specific projects.

SECTION 1: REPORT OF THE THEMATIC WORKSHOP ON WETLANDS FOR THE FINALIZATION OF THE ENVIRONMENT INITIATIVE OF THE NEW PARTNERSHIP FOR AFRICA'S DEVELOPMENT (NEPAD)

Nairobi, Kenya 10-11 February 2003



1.1 Introduction

According to the programme of work adopted by the steering committee of the project, the thematic workshop on wetlands for the finalisation of the Action Plan for the Environment Initiative of the New Partnership for Africa's Development was held in Nairobi, Kenya on 10-11 February 2003.

The meeting had before it the following documents: The Framework of an Action Plan for the Environment Initiative of the New Partnership for Africa's Development as adopted by the ninth meeting of AMCEN, a draft action plan for the management of Africa's wetlands, the report of a workshop organised by the Ramsar Convention Bureau and the UNEP prior to Ramsar COP8, Valencia, Spain, 17 November 2002.

The following participants attended the meeting: Abdoulaye Ndiaye (Africa Regional Office, Wetlands International, Senegal), Abou Bamba (NESDA), Anada Tiega (Ramsar Bureau),

Anderson Koyo (Kenya Wildlife Service), Chris Gordon (Centre for African Wetlands, Ghana), Daniel Jamu (WorldFish Centre), Davy Siame (Zambian Ministry of Tourism, Environment and Natural Resources), H.E. Min. Imeh Okopido (Nigerian Federal Ministry of the Environment), Kelly West (East African Regional Office, IUCN), Maina Karaba (IGAD Secretariat), Manikchand Puttoo (Mauritian Ministry of Agriculture, Food Technology and Natural Resources), Namory Keita (Direction National des Eaux et Forêts, Guinea Conakry), Paul Mafabi (Ugandan Ministry of Water, Lands and Environment), Tabeth Matiza-Chiuta (Southern Africa Office, IUCN, Zimbabwe), Prof. Yaa Ntiamoa-Baidu (WWF), Rashid Oyewole (Nigerian Federal Ministry of Water Resources). The complete list is contained in Annex 1

1.2 Opening of the Meeting

The meeting was opened by the Director of UNEP DGEF, Mr. Ahmed Djoghlaflaf, who welcomed all the participants and thanked them in advance for their contribution. He also thanked H.E. Min. Imeh Okopido for attending the meeting and for being instrumental in the development of the NEPAD Environment Initiative in general and the Phase II activities in particular. He introduced Mr. Sekou Toure, the Director of the ROA, who has had a leading role in backstopping NEPAD activities. In addition, Mr. Djoghlaflaf gave a brief introduction on the thematic workshops being convened and part of the NEPAD Environment Initiative programme of action and role of the participants in this process. He added that the results of the workshop would be presented at the meeting being convened for the finalisation of the Action Plan to be adopted by the special session of AMCEN, which will be held in Kampala, Uganda in June 2003. Subsequently, the Action Plan will be submitted for adoption by the second Assembly of the Heads of State of the African Union to be held in Maputo in April 2003. In this regard, Mr. Djoghlaflaf emphasised the importance of producing a concrete action plan, supported by viable project proposals, for the sustainable management of Africa's wetlands.

Mr. Sekou Toure thanked the President of AMCEN and the Director of UNEP, Klaus Topfer and highlighted their personal contributions to the NEPAD Environment Initiative. He also reiterated the importance of the Action Plan for NEPAD and AMCEN as the first major effort from the NEPAD Secretariat.

H. E. Min Imeh Okopido, Minister of State for the Environment of Nigeria, also made an opening speech. He thanked the co-ordinators of the meeting and participants of the workshop and reiterated the importance of capitalising on the current commitment by African leaders to alleviate poverty in Africa. He highlighted the commitment of the President of Nigeria, Olusegun Obasanjo, and the other Heads of States of Algeria, South Africa, Egypt and Senegal to the process. He briefly discussed the importance of the role of wetlands in Nigeria and the need for comprehensive, sustainable wetland management practices.

The meeting elected Ms. Sheila Aggarwal-Khan and Mr. Anada Tiega, Regional Co-ordinator for Africa, Bureau of the Ramsar as Chair and Co-chair. Mr. Mohamed Sessay, the GEF Task Manager for this NEPAD Environment Initiative, invited the participants to be innovative in their approach and to take this opportunity to ensure that their expertise is included in the development of the action plan and the conceptualisation of project ideas. This was followed by a presentation by Mr. Tiega on the NEPAD wetlands strategy and action plan.

The participants adopted the following agenda:

Workshop Agenda: Thematic Group on Wetlands

Monday 10 February, 2003

9.00-10.00am	Introduction to the NEPAD wetlands strategy and action plan (by Mr. Anada Tiega)
10.00-11.00am	Final review of revised strategy and action plan on Management of Africa's Wetlands
11.00-11.15am	Coffee Break
11.15-1.00pm	Discussion on potential areas of project intervention and agreement on working groups
1.00-2.00pm	Lunch break
2.00-6.00pm	Break out into Working Groups to develop project interventions (with Tea/Coffee Break at 4.00pm)

Tuesday, 11 February 03

9.00-11.00am	Plenary discussion to present proposals on project interventions
11.00-11.15am	Coffee Break
11.15-1.00pm	Break out into Working Groups to revise proposals in line with comments from Plenary
1.00-2.00pm	Lunch Break
2.00-3.00pm	Discussion in Plenary on revised proposals
3.00-4.00pm	Plenary discussion on financing plan for securing funding to implement the plan of action. Discussions to include focus on <i>potential partners and their responsibilities and an implementation plan</i> .
4.00-4.15pm	Tea/coffee Break
4.15-6.00pm	Plenary discussion on roles and responsibilities for follow up of action plan and project financing and implementation.

1.3 Final Review of the Strategy Action Plan for Management of Africa's Wetlands

Under this agenda item, the participants reviewed the *Draft Action Plan on Management of Africa's Wetlands* with a view towards identifying major omissions and orienting the strategy in a manner to make full utilisation of existing programmes. A number of comments were made that are reflected in the action plan (see Section 2 for the final revised action plan). There was general consensus on the structure of the document and the participants agreed that the main elements were embodied in the strategy. The discussion started with consensus on having a mission statement on wetland management, which would be incorporated into an *Africa Wetland Vision*. The need to build this action plan on other existing programmes such as that of Ramsar, AMCoW and others was also highlighted as was the targets that have been set to date such as the Millennium Development Goals.

Major Challenges is a section outlined in the action plan and there was general agreement by participants that the whole issue of poverty cannot be addressed effectively if the link between wetlands, water and its functions and services to the public and particularly for local livelihoods are not understood. Without a clear understanding of these linkages, the management of water and its associated wetlands will not be factored into poverty alleviation programmes thus leaving at risk the fact that such programmes do not fully achieve their intended objectives.

One prominent issue that was raised several times was the importance of wetlands in water management and development related issues. It was thus emphasized that there is a need to ensure that the principles underlying the NEPAD action plan on wetlands was in synergy with that on Water and Sanitation which may not be factoring in wetland management issues into its

management planning. The need to ensure that AMCoW integrates wetland conservation issues into its forums was also underlined in this context.

Key points raised on the 'guiding principles' for action on wetlands under this plan included:

- clearly state poverty reduction as the overarching management goal;
- the need to recognise the importance of wetlands to human livelihoods in Africa;
- the role of water basin authorities in regional and sub-regional co-operation to be clearly stated due to the transboundary nature of water and its intimate relation to wetlands;
- address the issue of equity and gender;
- include the development of Public-Private partnerships;
- the need for Environmental Impact Assessments (EIAs) to be clearly stated. This should also include environmental audits, particularly in cases where there are pre-existing projects that are impacting wetlands. Currently EIAs tend to be cumbersome technical documents that are seldom read and should be translated into simple documents that are applicable to all stakeholders;
- the need for increased awareness and training and sharing resources/expertise to be recognised;

The meeting discussed and agreed that the link between this action plan and the other NEPAD plan on water and that on invasive species cannot be handled in total isolation from one another given the explicit linkage between wetlands and water, and wetlands and invasive species. On *Priority Programme and Policies*, under the NEPAD action plan on wetlands, the meeting agreed to a rearranging of the priorities in line with the rest of the action plan. The importance of valuation of wetland functions and services was highlighted as one deserving separate attention while the other draft sections of the action plan were agreed to with some changes. Of particular note in this discussion was the need to bring in institutions dealing with water management and utilization as wetlands cannot be managed effectively in isolation of decisions and actions taken by those in the water sector. Thus, river and Lake Basin authorities should serve as important players in the implementation of the NEPAD action plan on wetlands.

It was noted that the following issues should be given priority under the action plan:

- The issue of urban runoff and its large negative impacts on water systems. The value of wetlands for water supply should be quantified and appropriate water quality indicators developed in order to ascertain the levels needed to maintain ecosystem function.
- the demonstration of best use practices resulting in poverty alleviation;
- conflict management in the context of wetland management;
- management of coastal wetlands, particularly for SIDS; and,
- the need for information management tools and capacity and the harmonisation of measurement protocols and communication methodologies in order to facilitate effective wetland management across subregions in Africa.

The meeting also discussed the issue of transboundary versus national wetlands and agreed that the management of transboundary wetlands can be extremely difficult. This action plan will therefore initially emphasize the management of wetlands of national importance in the initial implementation stages of the action plan. Sharing of experiences between the countries will serve as the regional element that binds countries' actions together.

1.4 Development of Proposed Project Interventions

Under this agenda item, the group identified three key areas under which project priorities should fall and corresponding working groups as follows:

- (i) Developing capacity in Africa for managing Africa's wetlands, strengthening the information base, education and public awareness;
- (ii) Restoration and rehabilitation of wetlands; and,
- (iii) Support to African countries to review, formulate and implement appropriate policies and strategies to ensure effective wetland management and harmonise policies to ensure effective management of shared wetlands.

The three working groups were to discuss and agree upon the project proposal outlines for interventions according to the project fact sheet format based on their wetland expertise and experience in working in the region on the subject.

The groups and tasks were assigned as follows:

Working Group 1:

(Abou Bamba, Abdoulaye Ndiaye, Chris Gordon, Namory Keita, Davy Siame)

- 1) Developing capacity in Africa for managing Africa's wetlands with a focus on:
 - Economic valuation of wetlands;
 - Management planning;
 - Water quality assessment;
 - Wetland inventory;
 - Wetland assessment and monitoring.
- 2) Strengthening information base and opportunities for lessons learning for the management of Africa wetlands
 - establishment of networks
 - exchange visits/secondments
 - documenting & disseminating lessons/case studies
 - production of appropriate materials
- 3) Support for ratification of Ramsar Convention
- 4) Communication, Education and Public awareness (curriculum development, journals, newsletters etc)

Working Group 2:

(Sarah Humphrey, Anderson Koyo, Daniel Jamu, Yaa Nitiamao-Baidu, Rashid Oyewole, Kelly West)

- 1) Restoration and rehabilitation
 - 3 pilot demonstration projects
 - building capacity for wetland restoration and rehabilitation
- 2) Integrated coastal areas and river basin management
- 3) Integrated management of major wetland ecosystems in at least 6 major river basins in Africa.

- 4) Wetlands and community livelihoods: demonstrating best practices in sustainable management of wetlands to enhance livelihood sources for communities living within and around selected wetland sites.

Working Group 3:

(Maina Karaba, Paul Mafabi, Tabeth Matiza-Chiuta, Manikchand Puttoo, Anada Tiega)

- 1) Support African countries to review, formulate and implement appropriate policies and strategies to ensure effective wetland management and harmonise policies to ensure effective management of shared wetlands.
- 2) Economic valuation of Africa wetlands to demonstrate contribution of wetlands to national economic agenda and to inform development decisions and policies
- 3) Support African countries to carry out inventory of their wetlands, (to inform wetland conservation and development agendas)
- 4) Capacity developed in Africa for monitoring and tracking changes in functions and values of key wetland sites (with systems and adequate resources to ensure long-term monitoring)

1.5 Presentation of Project Proposals

In the afternoon of the second day the participants reconvened in plenary to present and discuss the project concepts.

Working group 1 presented the following project concepts:

- a. Capacity Building for Wetlands Assessment, Planning, Management, Monitoring in Africa.
- b. Strengthening the information base and the opportunities for sharing experiences for the management of wetlands in Africa.
- c. Communication, Education and Public Awareness for wetlands in Africa

Working group 2 presented the following project concepts:

- a. Restoration and Rehabilitation
- b. Integrated Management of Major Wetland Ecosystems in Major Lake/River Basins in Africa
- c. Wetlands and Community Livelihoods: Demonstrating best practices in sustainable management of wetlands to enhance livelihood sources for communities living within and around selected wetlands sites
- d. Support for the Sustainable Management of Coastal and Estuarine Ecosystems

Working group 3 presented the following project concepts:

- a. Assessment and monitoring of Africa's freshwater ecosystems
- b. Improving Africa's Freshwater Ecosystem Governance and Management
- c. Valuing Africa's wetlands ecosystems for economic development and poverty alleviation
- d. During the course of the presentations, numerous suggestions were made to improve and amend the concepts. The Chairs of each working group was charged with liaising with his group via electronic mail to refine the concepts further taking into consideration the need to build on relevant programmes and institutions that already exist. The complete text of the concept notes can be found in Section 3.

1.6 Roles and responsibilities for follow up of action plan and project financing and implementation

Each working group was given a deadline of 21 February, 2003 to refine the project concepts and submit to the Division of UNEP GEF Co-ordination. It was agreed that Chris Gordon would incorporate the comments into the action plan and the document would then be disseminated to the participants for final comment.

1.7 Closure of the Meeting

Mr Ahmed Djoghlaif thanked all of the participants for their contributions to this important meeting and encouraged them to continue to give their input. He also thanked his staff for their support, Mohamed Sessay and Clarice Wilson and Sheila Aggarwal-Khan.

H.E. Min Okopido closed the meeting by stressing his belief that the time is now for us to make a change on the continent. He highlighted the importance of the meeting to the process of moving from rhetoric to the creation of tangible products and thanked the participants for their hard work. He emphasised the need to synergise the efforts of the meeting with the upcoming workshop on freshwater, marine and coastal environments on 24-25 February 2003, in Abuja, Nigeria and extended an invitation to all the participants. He reiterated the need to mobilise Africa's own resources and continue to look for solutions to the poverty challenge from within the continent. Finally, he thanked Ahmed Djoghlaif and all the sponsors of Phase II of the NEPAD Environment Initiative and ensured the participants that their work over the last two days will be valuable to the outcome.

The meeting was officially closed 1715 HRS.

SECTION 2: ACTION PLAN ON MANAGING AFRICA'S WETLANDS AS REVISED BY THE THEMATIC WORKING GROUP ON WETLANDS



2.1 Summary

This Wetland Strategy and Action Plan is one of the six elements of the Environment Initiative of the New Partnership for Africa's Development (NEPAD). The strategy and action plan is the result of a consultative process whose origins date back to the launching of NEPAD by the Africa Heads of States in Abuja, Nigeria, on 23 October 2001. Opportunities have been provided for seeking the views of interested stakeholders in the strategy/action plan development process. This has included a special session on the NEPAD wetlands action plan development at the Eighth Conference of Parties to the Ramsar Convention, held in Valencia, November 02 and a meeting of a thematic expert working group on wetlands held again in Nairobi in February 02. In addition, an NGO consultation held in February 02 was also an opportunity for NGOs to feed their views and perspectives into the development of the action plan.

The Wetland Component of the NEPAD Environmental Initiative is intended to enhance the contribution of wetlands in the economic and social development of Africa. The 2002 Ramsar Convention Conference of Parties (COP8) endorsed the framework NEPAD action plan on wetlands. NEPAD has a number of water related goals that should be compatible with the NEPAD Wetland Strategy and Action Plan in order to achieve an overall success. The Wetland Strategy and Action Plan could complement the goals of the other NEPAD elements such as Water and Sanitation given that several of these NEPAD elements have not factored into their plans the importance of wetland functions and values such as water supply and self purification and functions.

This NEPAD Wetland Strategy and Action Plan is based on the principle that the success of wetland conservation and wise use of wetlands will enable a good supply of clean water, facilitate sanitation and reduce poverty and contribute to the attainment of the long term objectives of food security plans. The main objective of this strategy is to “promote and attain a healthy and productive environment in which African countries and their people have wetlands and watersheds that can support fundamental human needs such as clean water, appropriate sanitation, food security and economic development”. The strategy therefore aims to maintain and/or improve the ecological integrity of wetland ecosystems that enables the best use of wetland

The document is structured in such a way as to present an overview of the current status of wetlands in Africa, their values and functions. It then goes on to present the threats that hinder the ability of wetlands to provide the services and functions that African nations depend upon such as clean water, food security and economic development. The priority areas that guide the actions to be taken under this strategy are outlined followed by the action plan itself. The Action Plan encompasses a series of actions with specified targets which include the development of National Wetland Policies and Plans where relevant, the application of impact assessment to developments potentially affecting wetlands, the establishment of Subregional Wetland Networks, the development of wetland inventories or rapid national wetland appraisals, the demonstration of integrated approaches to wetland management which includes demonstration of the value of managing wetlands for their multiple functions. It also includes wetland restoration and rehabilitation, communication, education and public awareness raising and capacity development.

The project concepts serve as the way forward for initiating implementation of this action plan. A plan developed and approved does not necessarily mean its transformation to the implementation phase and the project concepts are developed through the participatory process noted above so as to assist in the transformation of this plan into implementation.

2.2 General Introduction

Based on the criteria of the Ramsar Convention (see Box 1), three main types of wetlands are identified in Africa. These are marine/coastal, inland and man-made. Marine wetlands include the open coasts not subject to the influence of river water and lagoon systems. It extends to marine waters, the depth of which at low tide does not exceed six metres. These wetlands are all over coastal Africa extending from the Gambian coast in the west, through the Congolese coast in the central, the Kenyan coast in the east and the Tunisian coast in the north.

Inland wetlands are mainly freshwater ecosystems. They occur wherever groundwater, surface springs, streams or run-off cause saturated soils, frequent flooding or create temporary and/or permanent water bodies, including rivers, lakes, inland deltas, peatlands, swamps, marshes, geothermal springs, oasis and subterranean hydrological systems. Among the most well known inland wetlands in Africa are the Inland delta of the Niger in Mali, the Sudd of the Nile, Lake Chad, the Okavango floodplain in Botswana and Lake Victoria. The Ramsar Convention also recognises four categories of man-made or artificial wetlands. These are wetlands constructed for aquaculture, agriculture, salt exploitation, water storage as well as urban/industrial purposes. Examples of such man-made wetlands in Africa include the Volta Lake in Ghana, the Kainji Lake in Nigeria and the Aswam dam in Egypt.

Box 1 Ramsar Definition of Wetlands

The Ramsar Convention has adopted the following formal definition of a wetland; “Wetlands are areas of marsh, fern, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six metres.”

In addition, the Convention (Article 2.1) provides that wetlands:

“may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands.”

Realising the immense value of wetland to Africa, “Conserving Africa’s Wetlands” was one of main programme areas selected by NEPAD under its Environmental Initiative. Several of the proposed activities or actions to be developed under this programme area aim at improving implementation of Africa’s commitments under the Ramsar Convention on Wetlands The activities would include the following:

- a. Integrate the sustainable use and conservation of wetlands into African planning processes and environmental strategies and action plans.
- b. Establish wetland conservation areas such as nature reserves.
- c. Encourage research and the exchange of data regarding wetlands and their flora and fauna as well as their traditional use and management.
- d. Enhance the sharing of information and experience in integrated wetland management.
- e. Strengthen national sub-regional and regional capacities for information and data management.
- f. Strengthen national, subregional and regional capacities for the formulation and implementation of joint programmes/projects on integrated transboundary management plans
- g. Support sub-regional and regional scientific assessment of status of wetlands with the participation of all stakeholders concerned including civil society organisations.
- h. Build regional network of representative system of protected wetlands.
- i. Enhance education and and public awareness raising on the ecological and socio-economic importance of wetlands.
- j. Promote the application of best practices of wetlands conservation, targeting unique ecosystems such as dambos and mangroves.

PART I

STATUS OF AFRICA’S WETLANDS

2.1 Introduction

While Africa uses only about 4% of its renewable freshwater resources, water is becoming one of the most critical natural resource issues. Africa has abundant freshwater resources in large rivers and basins. The continent has more than 50 significant international river basins, more than any other continent and it Africa harbors the second largest freshwater lake in the world, Lake Victoria. For 14 African countries, their entire territory falls within international river basins. The region has more than 160 lakes that are larger than 10 square miles. Most of the lakes are located around the equatorial region and the sub-humid East African Highlands within the Rift Valley.

There are 83 river and lake basins in Africa with the following distribution: Northern Africa 11, Western Africa 29, Central Africa 8, Eastern Africa 20, and Southern Africa 15. With over 50 major international water basins in Africa, two or more countries share watercourses.

Agriculture is the largest user of water in Africa, accounting for 88% of the total water use. It is estimated that 40 to 60% of the region's irrigation is currently lost through seepage and evaporation. Groundwater resources are also crucial for many countries in Africa. However, the rate of exploitation is causing increasing threats. The continent is one of the two regions in the world facing serious water shortages. More than 300 million people in Africa still lack adequate access to safe water, and the demand for water is increasing rapidly due to population growth and economic development. As a result, Africa's share of water on a per capita basis is estimated to have declined by as much as 50% since 1950. Currently, 14 countries in Africa are subject to water stress or water scarcity, with those in Northern Africa facing the worst prospects. A further 11 countries will join this category of countries in the next 25 years, bringing the number to more than half of the African countries. It has been estimated that by 2025 more than 230 million people (16% of Africa's population) will be living in countries facing water scarcity, and more than 460 million (32% of Africa's population) will be living in water-stressed countries. As noted above, about 50 rivers in Africa are shared by two or more countries, and access to water from shared rivers may be a source of political tension if the situation is not addressed. It must be noted that for the first time, environmental refugees are now in greater number than those caused by conflicts. In addition, water quality is also decreasing at an alarming rate owing to industrial pollution and lack of adequate water treatment, thus causing major and persistent health problems. Issues of water quantity and water quality are indeed the most pressing environmental issues in Africa.

In adopting the Declaration of the African Ministers responsible for Water Resources at the International Conference on Freshwater held in Bonn, Germany in December 2001, the African Ministers stressed that water is the key natural resource throughout Africa. The Ministers decided to focus their efforts on: governance of the water sector; intergovernmental policy dialogue for water security; financing for the development of the water sector; building capacities for the management of the water sector; transfer of technology; meeting the water needs of Africa's urbanizing centres; guaranteeing adequate water, sanitation and hygiene services; strengthening the role of women in the management of water resources and the provision of adequate sanitation services; linking the freshwater environment with the coastal and marine environment.

The Abuja Ministerial Declaration on Water: a Key to sustainable development in Africa adopted in April 2002 establishes the African Ministerial Conference on Water (AMCOW) which will adopt at its first substantive session, to be held in 2003, an African Regional Programme of Action on freshwater. It also decided to:

- Develop a regional implementation support programme to strengthen the on-going water sector reforms in Africa;
- Seek support for the establishment of a Regional Water Technology Collaborating Center for Africa;
- Develop a regional strategy and plan for technical/advisory services with regard to policy, legal and other instruments for the efficient management of freshwater resources in Africa;
- Promote actions which will translate into reality the African Water Vision;
- Designate the existing African Water Task Force to play the role of a "Regional Water Watch" to be entrusted with the responsibility of providing scientific, information, expert advice and early warning on the changes in the water situation in Africa.

Inland wetlands cover about 1 per cent of Africa's total surface area, and are found in every country, forming a rich tapestry of ecosystem diversity. The largest wetlands include: the Congo River swamps, the Sudd in the upper Nile River, the Lake Victoria basin, the Chad basin, the Okavango delta, the Bangweulu swamps, the Lake Tanganyika basin, the Lake Malawi/Nyasa/Niassa basin, and the floodplains and deltas of the Niger and Zambezi rivers.

Wetlands yield a number of goods and services. Most coastal wetlands in Africa support mangrove forests, which extend from Senegal to Angola on Africa's west coast and from Somalia to South Africa on the east coast. Wetlands also enhance diverse and rich production in fisheries, including crustaceans, fish, and molluscs. Fisheries in estuaries and lagoons, for example, contribute to national economies, accounting for over three-quarters of fishery landings in Africa. Artisanal fishing activities are also an important source of income for coastal communities, and fish is an important source of protein for many African populations, especially the poor.

Despite their high value and contribution to livelihood support systems, wetlands in Africa are faced with the danger of desiccation emanating from drought as a result of climate change due to natural and human causes. The *El Niño* phenomenon and spells of prolonged drought which the continent experienced in the 1970s, the 1980s and the 90s are the main natural threats, while human threats include bad practices like deforestation and inappropriate land use leading to desertification, introduction of alien invasive species, over-exploitation, pollution from domestic, industrial and agricultural wastes, as well as oil spills.

2.4 Overview of Africa's Wetlands by Region

Tunisia and Zambia are the only African Ramsar Contracting Parties that reportedly have a national comprehensive wetland inventory though some additional fieldwork is needed to make it complete. Kenya, Nigeria, South Africa and Uganda are undertaking a national wetland inventory and they expect to cover their respective territories over the next two years. Fourteen additional Contracting Parties are working on wetland inventories, having in some cases inventories with partial coverage. Below is an overview of Ramsar implementation from country to country within six regional blocks of Northern, Western, Eastern, Central Africa and Southern Africa, together with the Small Islands States of the Africa Region.

Wetlands of international importance (Ramsar sites) as one of the operational tools for wetland conservation and wise use in North Africa			
Country	Number of sites	Total area (ha)	Designation of new sites
Algeria	13	1,866,340	10 sites underway and 30 other sites are planned
Egypt	2	105,700	
Libya	2	To be identified through a national wetland inventory	Not specified
Morocco	4	14,350	10 sites planned
Tunisia	1	12,600	4 sites planned
Total	23	1,998,990	54 additional sites by the end of 2005

North Africa

Precipitation is generally low and highly variable in North Africa ranging from a low of 18 mm/yr in Egypt to about 1600 mm/yr in southern parts of Sudan. In general only 5.6% of the precipitation is available for renewing stream flows and for recharging shallow groundwater aquifers. The rest is mainly lost by evaporation, transpiration and seepage. Per capita water availability ranges from 26 m³/yr in Egypt to 1 058 m³/yr in Morocco (UNDP and others 2000).

Inland waters depend upon drainage from the Atlas Mountains with rivers that are mainly intermittent, with a discharge either to the coast or to the interior into salt pans or sand dunes. South of the Atlas Mountains, all streams discharge into salt pans or disappear under the sand.

Oasis, oued, sebkha, foggara, chott and guelta are particular types of inland wetlands in the Sahara desert of this subregion.

The main issues of concern with regard to wetlands of Northern Africa are the effects of rapidly developing tourism and industrial activities along the coast combined with rapid population growth. These pressures are beginning to have impacts on the quality and stability of the physical and biological coastal environment. There are also serious concerns over the potential impacts of climate change, particularly the vulnerability of coastal settlements and natural habitats to sea level rise and saltwater intrusion.

West Africa

The sub-region has a diversity of wetlands including rivers, lakes, dams, marshes, and coastal wetlands. It is drained by three major basin systems. The Niger basin drains an area of 2 million km². Other important basins are: the Senegal basin, shared by four countries; the Gambia basin,

Wetlands of international importance (Ramsar sites) as one of the operational tools for wetland conservation and wise use in West Africa			
Country	Number of sites	Total area (ha)	Designation of new sites
Benin	2	139,100	1 site underway and 3 additional sites planned
Burkina Faso	3	299,200	
Cote d'Ivoire	1	19,400	4 sites planned
Gambia	1	20,000	2 sites planned
Ghana	6	178,410	2 sites planned
Guinea	12	4,779,061	5 sites planned
Guinea Bissau	1	39,098	1 site underway
Mali	3	162,000	4 sites planned, including the whole Niger Inner Delta
Niger	4	715,302	8 sites, including 6 underway
Nigeria	1	58,100	14 sites
Senegal	4	99,720	
Sierra-Leone	1	295,720	5 sites
Togo	2	194,400	3 sites
Mauritania	3	1,231,100	3 sites
Total	47	8,230,611	55 additional sites by the end of 2005

shared by three countries; the Bandama basin in Côte d'Ivoire; the Comoe basin, shared by four countries; and the Volta basin, shared by six countries.

Wetlands ecosystems and their resources in West Africa are diverse, including abundant mangrove forests, lagoons, other coastal and inner water resources, and plentiful fisheries. It is estimated that over half a million people in Mauritania, Guinea-Bissau and Senegal depend directly on fisheries for incomes and food supply. There are approximately 6.5 million hectares of mangroves (mainly *Rhizophora spp.*) along the coast of Benin, Côte d'Ivoire, Ghana and Nigeria, providing habitat for fish, crustaceans, molluscs and water birds.

Six Western African countries are expected to experience water scarcity by 2025, namely: Benin; Burkina Faso; Ghana; Mauritania; Niger; and Nigeria. Climate change is predicted to bring about reduced rainfall and increased evaporation in the areas to the north, advancing the rate of desertification in the Sahel Countries in the coastal zone may experience more intense rainfall and increased run-off. Combined with existing high rates of deforestation and degradation of vegetation cover, this could have serious consequences for soil erosion and agricultural productivity.

Central Africa

With the exceptions of the deserts of northern Chad and the Sahelian parts of northern Cameroon and central Chad, the central Africa region is well endowed with wetland resources. The Congo basin receives the highest amount of precipitation in the continent and supports extensive inland wetland resources. The Lake Chad basin is a depression forming a freshwater lake (the Conventional Basin), which is shared by Cameroon (9 per cent), Chad (42 per cent), Niger (28 per cent) and Nigeria (21 per cent). Lake Chad is an important source of water and economic activities, including agriculture and fisheries.

Drought poses a serious threat in northern Cameroon and Chad. Due to persistent low rain in and around Lake Chad, the lake is known to have shrunk considerably over the past 30 years, and is now 5% of its former size.

Wetlands of international importance (Ramsar sites) as one of the operational tools for wetland conservation and wise use in Central Africa			
Country	Number of sites	Total area (ha)	New Sites
Chad	2	1,843,168	3 sites underway and 3 planned
Congo	1	438,960	5 sites planned
DR Congo	2	866,000	
Gabon	3	1,080,000	
Total	8	4,228,128	11 additional sites by the end of 2005

East Africa

Eastern Africa, on the whole, is fairly well endowed with freshwater and hence inner wetlands. This subregion drains in substantial part the Nile, the whole Lake Victoria basin, Lake Turkana, Lake Natron, and well-known deltas and swamps such as the Rufiji delta in Tanzania and the Sudd in Sudan. It is also known for the remarkable *Cyperus papyrus* swamps.

The region has a total average renewable freshwater resources amounting to 187 km³/yr and Uganda has the largest share of this, with 39 km³/yr (1 791 m³/capita/yr), whilst Eritrea has the least, with 2.8 km³/yr. The Eastern African coast supports a diversity of wetland ecosystems including floodplains, freshwater and saltwater marshes, mangrove forests and lagoons. These in turn support a rich and diverse resource base, including fish, construction materials, energy sources, wildlife habitat and tourism opportunities, as well as industrial and transportation activities.

Wetland sites of Ramsar implementation in East Africa		
Country	Number of sites	Total area (ha)
Kenya	4	90,969
Uganda	1	12,600
Total	5	103,569

The threats facing the coastal wetlands of East Africa are erosion and pollution of coastal and marine environments, as well as harvesting pressures resulting from rapid population growth in the coastal zone and expansion of the tourism industry. Rises in sea level and in temperature resulting from global climate change are also emerging as issues of concern.

Concerns have also been raised in recent years about declining water quality and, in particular, about the infestation of Lake Victoria with water hyacinth (*Eichornia crassipes*).

Southern Africa

With the exception of the Cuanza and Cunene (Angola), all the principal rivers systems go across national boundaries. The most important basins in this regions are: the Zambezi basin, the Okavango basin, the Orange basin, the Limpopo basin, the Lake Malawi/Nyasa/Niassa basin, the Lake Chiuta basin, the Lake Chilwa basin, the pan systems of Namibia and a number of artificial impoundment systems.

The Southern African coastline extends includes Angola on the west (Atlantic) coast to Tanzania on the east (Indian Ocean) coast. The coast is rich in fish, seafood, mangroves and mineral deposits.

Wetlands of international importance (Ramsar sites) as one of the operational tools for wetland conservation and wise use in Southern Africa			
Country	Number of sites	Total area (ha)	New sites
Botswana	1	6,864,000	4 sites planned
Malawi	1	224,800	1 site planned
Namibia	4	629,600	
South Africa	17	498,721	
Tanzania	3	4,271,516	3 sites
Zambia	2	333,000	5 sites and 2 extension underway
Total	28	12,721,637	15 sites by the end of 2005

The major issue for countries of Southern Africa is the depletion of fish stocks by unsustainable levels of harvesting. There are also increasing incidences of pollution from activities on land and from oil spills and potential impacts from sea level rise including inundation of major coastal settlements with associated damage to ecosystems, infrastructure and displacement of populations. It should however be noted that on the positive side, Southern Africa contains some key wetland site which are well protected such as the Greater St Lucia Wetlands World Heritage Area, a trans-national conservation area with important wetlands as well as the Cape West Coast Biosphere reserve which is also a Ramsar site.

Mangrove forests in Southern Africa provide important nursery grounds and habitats for crustaceans and fish, exploited by artisans and commercial fishermen alike. Estimates of the value of the shrimp fisheries of the Sofala Bank (Mozambique), for example, are as high as US\$50–60 million per year, a significant amount of the country’s net foreign exchange earnings. The mangrove forests also protect the coastline from storm surges and other natural hydrological influences such as high-amplitude tidal ranges and disturbances resulting from currents.

Small Island States of Africa

The island states of Africa are endowed with wetlands. There are many rivers natural and human-made lakes, and considerable groundwater resources in Madagascar, Mauritius and Comoros, although these have not been evaluated or exploited thoroughly. Wetlands are also important habitats on all of the islands in the sub-region, providing breeding grounds for large numbers of waterfowl. To date, Madagascar has declared two wetlands as Wetlands of International Importance under the Ramsar Convention, and Mauritius and Comoros have each designated one Ramsar site.

Wetlands of international importance (Ramsar sites) as one of the operational tools for wetland conservation and wise use in Island Sates of the Africa Region			
Country	Number of sites	Total area (ha)	New sites
Comoros	1	30	1 site
Mauritius	1	(unknown)	
Madagascar	2	45,604	7 site, including 1 underway
Total	3	75,604	8 sites by the end of 2005

The Wetlands of the Island States are however coming under pressure for land development, especially in the smaller islands, where tourism and population growth are driving the demand for housing and industry. In addition, land- and marine-based sources of pollution, associated with rapidly growing coastal populations, development of tourism and oil transportation by sea, are a further cause for concern over the state of the coastal and marine environments.

2.5 Value of Wetlands in Africa

Wetlands in Africa sustain rural livelihoods across large parts of the African continent. The combination of wetland functions and products together with the value placed upon biological diversity and cultural/heritage attributes make wetlands highly important to society. The functions that they perform include:

- *maintenance of the water table* by way of facilitating the movement of large volumes of water into the underground aquifers, resulting in the recharge of the water table
- *flood and erosion prevention* through the prevention of surface run-off from moving swiftly and overflowing the river banks downstream thus preventing erosive flood conditions. The freshwater lakes of Africa have a total volume of 30 567 km³, covering a surface area of 165 581 km². Not only are they important in water flow regulation, flooding control and water storage, but also they are also important for meeting human needs. Lake Tanganyika alone could supply water to 400 million people through the annual extraction of less than 1 per cent of its volume
- *storm protection* where forested areas such as mangroves act as windbreaks and help to mitigate the impact of coastal storm surges. Mangroves are especially important features because they protect the coastline by moderating storm and wave impacts and because mangroves stabilize sand and soils, cycle nutrients, absorb and break down waste products, provide wildlife habitat, and maintain biodiversity.
- *water purification* in which case they help in removing sediments, nutrients, toxic substances and other pollutants in surface run-off, thus help to improve the water quality and prevent the siltation of downstream watercourses
- *micro-climate* stabilization where wetlands vegetation may also evaporate or transpire water into the atmosphere, which subsequently falls as rain in the surrounding area and helps to maintain stable climatic conditions
- *provision of habitat* for high concentrations of birds, mammals, reptiles, amphibians, fish and invertebrates species
- *provision of mangroves and other wood products* which are harvested for fuel-wood, timber and medicinal purposes. Rich mangrove forests are also breeding grounds for many species of waterbirds. Along the coast of Kenya and southern Somalia, mangroves support commercial crab, oyster, and mullet fisheries, as well as artisanal harvesting of these and other species. These are extremely important to local economies and to many communities where fish is almost the sole source of animal protein
- Mats, baskets and thatching material are derived from grasses and reeds in the wetlands all over Africa.
- provision of other critical life support elements like pasture for livestock especially during the dry season, and clean and reliable sources of water for human consumption, agriculture and industry.

Natural aquatic ecosystems and the goods they yield sustain rural livelihoods across large parts of the African continent either by direct use value or by indirect use value. Of particular importance are the fish resources of Africa's lakes and rivers that provide food and income to millions of people. The larger floodplains including the Inner delta of the Niger, the Sudd of the Nile, and Lake Chad, each yield up to 100,000 tons per year and generate annual income in excess of US\$ 20-25 million. The combined harvest from these extensive wetland systems, the many hundreds of smaller floodplains that stretch across the continent, and the mainstream of rivers such as the Congo, is currently estimated to exceed 2 million tonnes/year. Lakes and reservoirs yield an additional 1.5 million tons/year, with the largest harvest in Lake Victoria.

Another example of the high social and economic value of freshwater ecosystems in Africa is the inner delta of the Niger River (35,000 km²) in Mali, which is probably the second largest floodplain in Africa after the Okavango delta, Botswana. Depending on the size of the flood, 80,000 fishermen extract 40-130,000 tons annually and provide employment for another 300,000 people active in the fisheries sector that accounts for over 4% of the GNP. Every year once the flood has receded, the inner delta supports 5 million heads of cattle and small livestock during the dry season, and this extensive pastoral production accounts for over 10% of GNP. According to

FAO, the productivity of the delta allows Mali to have twice as much carrying capacity as Burkina Faso in spite of the fact that the two countries have a similar extent of arable land (100,000 km²).

The natural assets of the Eastern African coast and its associated wetlands make it an ideal tourist destination. Kenya's tourism industry is the country's second largest earner of foreign exchange, contributing 19 per cent to GDP (World Bank 2000). In addition, the larger scale fisheries and associated industries provide a valuable source of foreign exchange and make a significant contribution to GDP.

The abject poverty that pertains in most African countries makes issues relating to the existence value of wetlands merely theoretical at present.

2.6 Threats to Wetlands in Africa

The main threats to wetlands in Africa are intimately linked with the lack of availability and inadequate quality of freshwater. The lack of water is the most limiting factor for the development of Africa, constraining food production and industrial activities and contributing significantly to the burden of disease. Close to 50% of wetland ecosystems have already been lost in the developing world and African freshwater bodies are more degraded than terrestrial and marine habitats. The link between wetland ecosystem functions and values, development and poverty alleviation is a challenge that has not been met in the efforts towards alleviating poverty. At the same time, much of Africa is subject to frequent droughts and floods, whose intensity and impact are aggravated by environmental degradation (upstream deforestation, soil erosion) and ill-conceived infrastructure development, which reduce wetland ecosystem resilience and stability. The impacts are greatest for the poor who reside on marginal lands and rely on rain-fed agriculture.

Africa has the highest rate of population growth in the world, and is also one of the regions that is most vulnerable to climate change. The Intergovernmental Panel on Climate Change (IPCC) predicts that average runoff and water availability will decline in the countries of northern and southern Africa, impacting on freshwater ecosystems, and advancing desertification in the Sahelian zone and in northern Africa. In addition, increased frequency of flooding and drought will also stress freshwater systems and pressurize water supply networks. As a result, 25 African countries are expected to experience water scarcity or water stress over the next 20–30 years,

Several countries, particularly those in Northern Africa, the Horn of Africa, and in the Sahel, experience extreme variability and unpredictability in rainfall as well as frequent drought. Global warming and regional climatic change impose an additional possible threat to the already scarce freshwater resources in northern Africa. The Nile basin has a low run-off efficiency index and a high dryness index, rendering it highly susceptible to climate change. Run-off is likely to decrease with global warming, even if rainfall increases, because evaporation rates are so high. Scenarios for the future range from a 30 per cent increase in river flow to a 78 per cent decrease in river flow presenting even greater challenges for international cooperation in water resources management. Northern Africa is already frequently affected by cycles of droughts and flooding and, with climate change, these are expected to increase. In the dry lands, which dominate most of the sub-region, population growth will push people onto marginal land, which is highly vulnerable to desertification, thus exacerbating the impacts of climate change. In particular, the Sahelian zone has experienced a continued decline in rainfall compared to pre-1960s averages, and Lake Chad has shrunk to 5 per cent of its size 35 years ago (NASA Global Earth Observing System). Many of the threats are trans-boundary in nature; for example, the reduction in snow reaching Mt. Kilimanjaro has downstream impact on the Pangani river wetlands in Tanzania and corresponding impact on the local communities.

There has been rapid urban and industrial development and growth in tourism in many areas of Africa without adequate planning, protection, or provision of infrastructure. As a result of this - and of phenomena in the hinterland such as deforestation and soil erosion - coastal erosion is a growing concern, particularly in Western Africa, Eastern Africa, and the Western Indian Ocean Islands. Sea level rise due to climate change is a real and serious threat to the Western Indian Ocean Islands and to low-lying coastal settlements, particularly in Northern, Western and Central Africa. Oil pollution is a major threat, with high levels of oil transportation threatening the eastern and southern African coast and islands, and oil drilling and processing activities causing problems along the northern, western and central African coasts. Rising industrial and urban pollution, the spread of invasive species, salinisation and saltwater intrusion are factors that are all leading to a decrease in both the quality and quantity of surface waters available to African people, especially in rural areas. African groundwater resources are also being overexploited with drastic falls in the water tables from 0.5-5.0 meters/year in some areas. Today, 45-50% of the rural population in Africa lack access to quality water and to sanitation.

Presently 120 species of African fish and amphibians (30% of African amphibian species), and about 50% of freshwater molluscs (332 species), are either endangered or under threat of extinction. A far higher number than was previously known about are being converted or degraded at a rapid rate across the continent. While biodiversity loss (ecosystem diversity, species diversity and genetic diversity) continues in this manner often unnoticed, water quality and supply, loss of fisheries and floods are the more direct impacts felt by the African continent as a result of wetland degradation. These have a heavy consequence for the continent by increasing poverty.

2.7 The Future of Wetlands in Africa

The outlook for wetlands in Africa is bleak, unless significant actions are taken at local, national and subregional levels, including sound policies/strategies, effective legislation and regulations, enhanced capacity of wetland managers and improved ability of local communities to undertake steady and solid wise use programmes of water and wetlands. The lack of direction, the poor and often contradicting policies, and the lack of commitment by governments have created a situation where virtually all wetlands in Africa are under some degree of threat.

In order to sustain Africa's wetlands for the future, various reforms to wetland policies and management strategies are required. The most important of these are: political commitment and support at the grassroots level, together with openness and accountability in decision making; enhanced information gathering and dissemination; regional cooperation and decisive action; and sustainable financing and cost recovery methods. These requirements have all been identified as part of the NEPAD process.

The role of Integrated Water Resources Management (IWRM) for the wise use of wetlands is imperative. This multi-stakeholder approach to meeting the challenges of water supply by curbing demand from certain user groups and encouraging re-use and recycling, as well as management of aquatic ecosystems such as wetlands and making provision for environmental water requirements. Although there is increasing recognition of the need for, and benefits of, adopting such an approach in African countries, implementation will only be effective if it is supported by adequate finances, and by trained personnel with adequate facilities. Coordination between government departments responsible for water supply and use must be brought in line with the common goal of sustainable use of resources. A key element of this Wetland Strategy and Action Plan is to address these requirements.

Most African countries are party to a wide variety of relevant international conventions and have national plans, policies and regulations for water management, sustainable coastal development and use of marine resources. These plans, policies and regulations are, however, wide-ranging in nature and require considerable resources such as trained personnel, equipment, financial resources, and more effective policing, monitoring, administration and enforcement. Lack of coordination between government departments and between countries is an additional constraint on their effectiveness. Coordination at national and sub-regional levels should be strengthened.

PART II

STRATEGY FOR THE MANAGEMENT OF AFRICA'S WETLANDS

2.8 Introduction

This Wetland Strategy and Action Plan is one of the six elements of the Environment Initiative of the New Partnership for Africa's Development (NEPAD). The document is the result of a consultative process lead by UNEP on behalf of the African Union.

Noting that NEPAD was launched by the Africa Heads of States in Abuja, Nigeria, on 23 October 2001, to put the region on the track of sustainable development, the Wetland Component of the NEPAD Environmental Initiative is intended to enhance the contribution of wetlands in the economic and social development of Africa. This has been more recently reiterated by the 2002 Ramsar Convention Conference of Parties (COP8), which endorsed the framework NEPAD action plan on wetlands and methodology for its further development.

Recent regional assessments such as the Africa Environment Outlook developed by UNEP show that the conditions of natural habitats and fragile ecosystems had deteriorated, leading to the reduction of biodiversity. There were high levels of exploitation of resources such as freshwater, forests and coastal and marine resources that continued to be used at rates that exceeded their viable replenishment rate. The degradation of soils and natural or man-made environmental disasters as well as invasive species continued to pose serious problems in Africa. On the whole, environmental degradation compromised the prospects of combating poverty, economic growth and sustainable development in Africa. Measures aimed at boosting the region's economies and at eradicating poverty should therefore promote environmental sustainability.

NEPAD has put into place and adopted an Environment Initiative to face up to the environmental challenges of the region while simultaneously reducing poverty. A regional Environmental Action Plan for the first decade of the twenty-first century had been established to respond to the call under the initiative. The Action Plan is being developed according to a consultative and participatory process under the aegis of the African Ministerial Conference on the Environment (AMCEN), with the collaboration of the co-ordinator of the environment component of NEPAD. This plan is also Africa's response to meeting the Millennium Development Goals particularly MDG number 1 on eradicating poverty, MDG number 7 on environmental sustainability, and MDG number 8 on developing a partnership for development as well as the general principles of Agenda 21.

The overall objectives of the Environmental Action Plan are to complement the ongoing African processes to improve environmental conditions in Africa. This will contribute to the realisation of economic growth and poverty eradication; develop Africa's capacity to efficiently implement international and regional environmental agreements and to effectively face up to environmental challenges within the overall context of the implementation of NEPAD. The priority areas of intervention and activity programmes are;

- the control of degradation of soils, drought and desertification,
- the conservation of wetlands in Africa,
- the prevention and control of invasive species,
- the conservation and sustainable use of coastal and marine resources,
- the fight against the negative impacts of climate change in Africa, and
- the conservation and management of transboundary natural resources – freshwater, biodiversity, forests and plant genetic resources.

2.9 Major challenges

Current trends indicate that, by 2025, Africa's population will reach 500 million, 60% in urban centres. Maintaining food imports at current levels (40% of the needs) would require achieving a 3%-5% annual growth in food production, mainly through a vast increase in irrigated agriculture. Thus, conservative projections indicate that water needs in Africa may increase by at least 54% to reach 337 km³/year in 2025.

In order to cope with growing human and water needs and avert further destruction of ecosystems, the challenge is mainly to adopt a new approach – the *ecosystem approach* to river basin and water management – in which equitable sharing and peoples' participation play a central role in planning and decision implementing through *co-management*. This approach advocates that restoring and caring for *ecosystem functions* and services must go hand in hand with development.

NEPAD will be successful only if the African peoples united in their diversity, including national governmental institutions, voters, local communities, local business and suppliers of capital own the process. Similarly, the Wetland component of the Environmental Initiative will be successful only if African governmental agencies and the African civil society own it.

The success of the Wetland Strategy depends heavily upon the overall success of NEPAD. In this regard there is a need to ensure that at a minimum, an **enabling environment** is in place so as to set the ground rules. The Wetland Strategy will have to become part of the overall enabling policy environment and feed into the national planning process of each African country.

Actions should be taken in relation to the following *internal* factors:

- Ensuring continued and growing political support to wetland and water issues, especially with regard to the contribution of natural systems in the efforts to provide clean water supply to the poor;
- Establishing a multiple and effective communication approach that nurtures good working relationships between sectoral agencies responsible for water issues and environmental matters including the African Ministerial Conference on Water (AMCOW);
- Improving the ability to collect, analyse and process information on wetland values and functions through the development of local capacity and the strengthening of the knowledge base;
- Developing and strengthening the ability to identify and address the root causes of wetland and watershed degradation;
- Developing the ability to identify existing strengths and weaknesses and build on a more solid partnership between institutions;
- Mobilising relevant expertise and adequate funding at national level for wetland conservation and wise use; and
- Establishing and strengthening effective partnerships between national institutions and

- local organisations to promote common goals through collective action at the regional scale;
- Developing technical capacity to undertake restoration and rehabilitation of degraded wetlands

Actions to be taken in relation to *external* factors include:

- Mobilising funding and expertise through international co-operation;
- Developing a transboundary approach to wetland and river basin management
- Assessing and mitigating climate change and predicting its impacts upon wetlands and people.

2.10 Africa Wetland Vision

NEPAD has a number of water related goals that should be compatible in order to achieve an overall success. The Wetland Strategy and Action Plan should endeavour to complement the goals of the other NEPAD elements such as Water and Sanitation given that several of these NEPAD elements have not factored into their plans the importance of wetland functions and values e.g., water supply and self purification and functions. The success of wetland conservation and wise use of wetlands should enable a good supply of clean water, facilitate sanitation and reduce poverty and contribute to the attainment of the long term objectives of food security plans.

The vision for this action plan on wetlands:

“African countries and their people have healthy and productive wetlands and watersheds that can support fundamental human needs (clean water, appropriate sanitation, food security, and economic development)”.

2.11 Objectives of the Wetland Strategy and Action Plan

General Objective:

The main objective of this strategy is to “*promote and attain a healthy and productive environment in which African countries and their people have wetlands and watersheds that can support fundamental human needs such as clean water, appropriate sanitation, food security and economic development*”. The strategy therefore aims to maintain and/or improve the ecological integrity of wetland ecosystems that enables the best use of wetland values and functions in the long term. It also presents the requirements that would improve and maintain these natural assets and enable the sustenance of the total economic values and functions of wetlands. The main objective and the following specific objectives are guided by overarching principles as contained in Box 2.

Specific objectives and links with other programme areas of NEPAD:

The Strategy and Action Plan also provide for synergy and integration with NEPAD’s other objectives and thematic action programmes through the following specific objectives:

- **Wetland wise use**
 - o to reduce poverty and improve food security in close co-ordination with the NEPAD Poverty and Environment component, by the implementation of best management practices and the transfer of environmentally sound technologies under NEPAD;
 - o for sustainable economic and social development through the formulation and implementation of innovative projects; including through promotion of sectors

- o compatible with conservation of wetlands, such as sustainable tourism in close co-ordination with the NEPAD Poverty and Environment component;
- **Wetland protection**
 - o by pollution control at the basin scale with the involvement of cities and industries; related to NEPAD’s work on Water and Sanitation as well as the UN Habitat Programme on Water Conservation in African Cities, and the Global Environmental Sanitation Initiative (GESI);
 - o and restoration by wise management of watersheds, including the hydrological regime of watercourses, soils and forests; as well as water quality and other watershed constituents through institutional partnerships, and in close co-operation with other relevant NEPAD programmes including Infrastructure and Agriculture and the NEPAD “Programme area 1 Combating land degradation, drought and desertification”;
 - o by the prevention, control and or eradication of wetland invasive species in close coordination with the NEPAD component on Invasive Species, and to further develop the Aquatic Invasive Species Programme, the Targeted Awareness Programme on Invasive Species and the Island Invasive Species programme as well as the Global Invasive Species Programme (GISP);
- **Wetland conservation,**
 - o rehabilitation and restoration with the view of integrated ecosystem management for the sustainable use of wetland resources including biodiversity under NEPAD “Programme area 6: Cross-border conservation or management of natural resources”;
- **Wetland management**
 - o by contributing to the development and implementation of integrated coastal zone management (ICZM) in close collaboration with the NEPAD thematic working group on Conservation and sustainable use of Coastal and Marine resources;
 - o by the systematic development of local capacity through training, education and institutional development in close collaboration with the NEPAD Capacity Building Initiative and the Strategic Plan for Capacity Building for Africa (SPCB) with stress on the support of networks and regional centres of excellence; and,
 - o by the development and implementation of transboundary joint initiatives that enhance desertification control and mitigate the negative effects of droughts and climate change, in arid areas, such as, the Sahelian region under NEPAD “Programme area 1 Combating land degradation, drought and desertification” and NEPAD Programme area 5 “Combating climate change in Africa”.

The specific objectives of the Wetland Strategy have been designed to address several key specific objectives of the Action Plan for the Environment Initiative for NEPAD, i.e.;

- Promote the sustainable use of Africa’s natural resources;
- Enhance the human and institutional capacities;
- Promote the integration of environmental considerations into poverty reduction strategies;
- Foster regional and sub-regional cooperation to address environmental challenges; and
- Build a network of regional centres of excellence in environmental science and management.

Given that 30% of the first decade of the 21st Century has already passed, there is a great urgency to translate the various objectives into concrete actions that will address in a

Box 2: Guiding principles for Wetland Management in Africa

Conservation and the Precautionary Approach

The protection, maintenance, and rehabilitation of wetlands, their habitats, and interconnected life support systems, should take precedence in managing wetlands, to ensure ecosystem sustainability and biodiversity. Management decisions should err on the side of caution. However, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective interventions. All developments affecting wetlands should take into account environmental auditing and environmental impact assessment results, paying especial attention to dams and any important infrastructures that could destroy the hydrological and other important values of wetlands and watersheds.

Integrated and Adaptive Management

Wetland management decisions should integrate relevant local knowledge, together with appropriate ecological, social, and economic information, for continual improvement of management decisions. Management options should consider integrated water resource interventions that improve the role of wetland ecosystems as providers of goods and services to a wide range of stakeholders

Participation, Information and Education

Wetlands management needs to be based on a participatory and negotiated approach to water allocation and to establishment of appropriate infrastructure and institutions. Measures that clarify and promote the accountability of stakeholders should be a priority. Relevant information that is accurate and pertinent should be used to help raise political awareness, build political support and generate political and public commitment on wetland issues through education at all levels.

Sustainability and Equity

Sustainability is the use of wetlands such that the ecological, social, and economic factors are considered and balanced, while ensuring that current activities do not affect the potential for future generations to sustain themselves. Wetland resources are used by a wide variety of people. Wetland management strategies should ensure the equitable distribution of benefits to local communities, particularly women and the youth from the wise use of wetlands resources, given the importance attached to poverty alleviation by the continent

Inclusivity and Benefits

Local communities and other persons and bodies affected by wetland management should have an opportunity to participate in the formulation and implementation of integrated wetland management decisions to ensure that environmental objectives are integrated with social and economic objectives upon which depend those people living in the watershed. Wetlands offer significant opportunities for economic diversification and the generation of wealth for the benefit of all, and in particular for local communities and private partners. Internal and external costs and benefits (including social, ecological, and economic) should be appropriately considered when making decisions related to wetlands.

Flexibility and Feasibility

Wetland management is a continuous process. Administrative structures and processes should be flexible and expected to evolve, and grow, to accommodate the management process. Select activities that are focused on feasible and realistic objectives.

Economic Valuation of functions and attributes

Wetlands in performing their hydrological and other functions save a tremendous amount of money especially ecological filtering capabilities. Management needs a good combination of natural systems and infrastructures to enhance the conservation and sustainable use of wetlands. The impairment of functions by pollution from urban areas, from agriculture, and from industries

comprehensive manner the viscous cycle between poverty and the degradation of the environment.

One key element of the Wetland Strategy is to contribute to the Water and Sanitation objectives of NEPAD by ensuring wetlands are maintained in a state that enables them to supply their water supply services and values, i.e.:

- To ensure sustainable access to safe and adequate clean water supply and sanitation, especially for the poor;
- To plan and manage wetlands and water resources to become a basis for national and regional co-operation and development;
- To systematically address and sustain ecosystems, bio-diversity and wildlife at basin scale;
- To co-operate on shared rivers, shared lakes and shared coastal areas among member states;
- To effectively address the threat of climate change and mitigate the negative impacts of droughts and floods; and,
- To ensure enhanced sound irrigation and rain-fed agriculture to improve agricultural production and food security.

2.11 The Strategy: Priority Programme Areas

A. Wetland Policies, Strategies and Action Plans

This strategy supports the development of National Wetland Policies/Strategies for those countries that have a significant percentage of their population dependent on wetlands. In addition, each country will assess whether it needs a National Wetland Action Plan. The development of such plans will include discussions on how to include and/or adapt the latest Ramsar resolutions on e.g. participatory management, water, dams, climate change, invasive species and agriculture. Such national wetland policies and action plans will need to be integrated into other strategic or planning processes and documents, particularly focusing on other sectors as fisheries, water management, land tenure and use as well as addressing threats such as pollution and habitat destruction while considering the economic valuation of wetlands.

National Wetland Policies need to be based on, a review of national legislation affecting wetlands¹. Following from this review, the next step requires amending or modifying legislation and institutional procedures to preclude unwise and non-sustainable use of wetlands. Such legislation should include the integration of Environmental Impact Assessments and Audits of policies, programmes and plans that may impact in any way upon wetlands. Countries will need to develop specific projects on legislative review that incorporates decentralised regulations, including by-laws at district level and the detection of traditional regulations that conserve wetland ecosystems.

Given the fact that so many river basins in Africa are trans-boundary, the various national policies, strategies and action plans, when created would need to be integrated regionally so that the various national interventions would be carried out in a coherent manner, achieving synergy and possible economies of scale.

B. Wetland Inventory/Appraisal, Monitoring and Assessment

National wetland inventories are the basis for informed decision making, in their absence, rapid national wetland appraisals can also serve as a first step to gather information and decide on national priorities for management and appropriate actions. Rapid national wetland appraisals are easier and less expensive to carry out than comprehensive national wetland inventories and

countries will decide on their preferred option, judging the costs and benefits from each approach. A rapid appraisal would not preclude a detailed inventory. Standardised wetland inventory or appraisal methodologies should be used for carrying out the inventories. National wetland inventories or rapid appraisals should document hotspots as well as sites that are of special significance for reasons of water supply, coastal protection, flood defence, food security, poverty alleviation, cultural heritage, tourism development, and/or scientific research. National wetland inventories or rapid appraisals should also cover the economic valuation of goods and services.

National wetland inventories or rapid appraisals would be used as a basis for assessing change, the ecological character of wetlands and the vulnerability of wetlands to change in ecological character, i.e., the impacts of climate change, sea-level rise, dams, invasion by alien species, and agricultural practices. At the regional level, these inventories or rapid appraisals will be useful for informed decision making on those wetlands that deserve urgent attention. The development of appropriate regional indicators for wetland monitoring, are an important element of this strategy.

For wetland monitoring, there is clearly a lack of information, particularly long time series of hydrological data, and a lack of research on tropical African wetlands, including seasonal variations that affect productivity and biodiversity. The strategy therefore aims to also include a component to build a body of research on wetland functions and values and on restoration methodologies that will contribute to improved wetland management in Africa.

C. Demonstration of Approaches to Wetland Management

Wetland Management cannot be carried out in isolation from global concerns so management actions relating to other sectors need to be incorporated into all interventions, given the fact that wetlands provide functions and products that are utilized by these sectors such as water, fisheries, flood control, and others. The traditional approach of protecting sites based solely on biological importance will be thus only one aspect of this strategy. Another facet of this strategy will focus on integrated management that takes into account broader issues of land use planning and decision making as relevant to wetlands.

The strategy focuses on a mix of protected area establishing new and strengthening of existing protected areas plus a demonstration of integrated approaches to wetland management. The latter will thus demonstrate how best to integrate wetlands into river basin management or into coastal zone management rather than addressing these aspects as distinct from wetland management. This integration will be done by establishing cross-sectoral working relationships with the responsible national and local agencies for the various sectors. It will also demonstrate the value of managing wetlands for their multiple values and functions ranging from their provision of clean water, groundwater recharge, flood control, maintenance of fishing stocks, and others.

A third element of this priority programmes area, would be to demonstrate the management of wetlands in relation to adaptive management (with full participation from indigenous cultural communities) and mitigation of the impacts from water and energy infrastructure and climate change, particularly in the context of land use, land use change and rising sea levels. These demonstration interventions will be undertaken at specific sites with the view to exchange information and learn for lessons occurring at subregional levels. The aim is to create a representative network of sites where different approaches to wetland management have been carried out and where information can be exchanged across borders and to demonstrate how to retain option values.

D. Demonstration of Approaches for Wetland Restoration and Rehabilitation

The strategy entails the identification of degraded or destroyed wetlands where restoration or

rehabilitation would be cost-effective and yield long-term environmental, social or economic benefits. The strategy focuses on demonstration of wise approaches to wetland restoration and rehabilitation, such as environmental flow assessments and implementation of integrated river basin management. Special consideration will be given to those sites in need of rehabilitation along the African-Eurasian Migratory Waterbird flyways.

E. Local Community participation in the management of wetlands

Given that the main focus of the NEPAD initiative is dedication to alleviating poverty, the strategy strives to involve local community in the management of wetlands promoting the exchange of ideas and knowledge among all stakeholders and actors in wetland management. The full involvement of stakeholders at all stages of management planning will assist greatly in conflict management and resolution where there are multiple users of resources. There is also a need to have real benefit sharing with local communities of wetland resources.

F. Increase Private Sector Involvement in Wetland Management

Currently, the private sector in Africa is not a major partner in wetland management. As part of the strategy, opportunities to involve the private sector will be identified. These opportunities would include seeking private sector participation on National Ramsar/Wetlands Committees, site or river basin management authorities/committees, and outreach activities. The needed incentives to engage the private sector in wetland management would be identified whether these are through private nature reserves or in undertaking other conservation activities that would enhance private sector operations and benefits. It would also entail identifying the impacts of domestic and international trade in wetland-derived products, and working with the private sector towards sustainable harvesting of these products.

G. Communication, Education and Public Awareness

The improvement of communication, education and awareness on and of wetland functions and values is a basic requirement for the success of the Action Plan. The main issue is to increase recognition of the significance of wetland values and functions and the root causes of their degradation as well as building recognition for the losses of wetland functions that can result from climate change.

The use of mass entertainment events as a means of passing on conservation messages is an established tool for public awareness. Improving understanding of the values of wetland functions and products will be the main premise underlying the awareness raising events. Such events such as activities making World Wetland Day (2nd February) should be coordinated not only at the national but also at the sub-regional scale.

H. Communication strategy

Communication on and about wetlands will be heavily dependent on the existing institutional framework. Improvements to the current institutions under the aegis of a Wetland Communication Strategy should aim to ensure effective interaction between governmental institutions and the civil society within NEPAD especially to the development and the implementation of the other components of the NEPAD Environmental Initiative. The communication strategy should also guarantee effective interaction with relevant partners outside NEPAD so as to avoid the reinvention and duplication of existing activities and initiative. An effective communication strategy should include information and decision-making systems, awareness raising, capacity building, incentives, funding opportunities, and the dissemination of results of ongoing research as well as the development of new initiatives

I. Capacity Development

An Africa-wide capacity development initiative for wetland research and management is a critical need, creating economy-of-scale benefits in conducting training, fostering regional co-operation and cross-pollination of ideas and successful experience. The strategy will be multi-pronged involving:

- integrating wetland conservation and wise use into formal education curricula particularly at the tertiary/university level but also by introduction of key concepts at the primary school level;
- developing and strengthening specialists sub-regional centres for training in wetland research and management such as the Centre for African Wetlands in West Africa and the East African Wetland Training Programme; and
- integrating wetland issues into existing non-formal learning such as, museums, aquaria, botanic gardens, and others.

All types of training are needed at appropriate levels.

Specific training courses to be undertaken on the ground should be need-driven and targeted so as to provide specific skills for specific jobs. For example:

- Wetland Inventories (including wetland valuation and wetland functions, threats to wetlands and major uses): training sessions would to be organised using the basin approach for each major basin;
- Wetland and Water Management: for wetland managers and engineers, including government institutions, NGOs and Community representatives; and
- Wetland and Water Policy development: for policy makers

Transfer of know-how through exchange of experiences will be encouraged especially at the local level. Institutional capacity will be developed through national consultations so as to clarify their roles and responsibilities in relation to water management, and wetland biodiversity conservation and sustainable use, River or lake basin organisations are pertinent frameworks for the identification and execution of specific training courses on the ground.

PART III

ACTION PLAN TO IMPLEMENT AFRICA'S WETLAND MANAGEMENT STRATEGY

2.12 Introduction

The strategy proposed in the section above is a long-term strategy and thus entails a wide range of interventions to support the management of Africa's wetlands. It would be too ambitious to attempt to implement the entire strategy all at once. As such, this section is devoted to identifying the first set of actions that will transform the strategy into an implementable plan. Targets are listed with each set of interventions so as to ensure that monitoring of the action plan can be carried out in a more coherent manner than for most other action plans developed to date. The interventions proposed respond to the criteria for project selection agreed to by the NEPAD Steering Committee as listed in Annex 2.

It should be noted that local community involvement, that of the private sector, and of other national sectoral agencies are not dealt with as separate activities as the involvement of these stakeholders is an issue that cuts across each component of the action plan. Thus, for each

element presented below, a strong focus is placed on how best to involve local communities, the private sector, and other national and local sectoral agencies rather than the traditional focus on conservation and wildlife agencies alone.

A. Development of Plans and Policies to Promote Wise Use of Wetlands

Assistance with the development of National Wetland Policies and Plans will be the first step in the plan to implement the proposed strategies in those countries that have a large part of the population dependent on wetlands. In an effort to promote consideration of wetlands into sustainable development planning, site-based projects will be developed to improve awareness of wetland values and functions and the importance of their consideration in sectorally managed issues such as water management, hydropower development, land use planning, and others.

Application of impact assessment to developments potentially affecting wetlands based on the joint work of International Association for Impact Assessment and the Ramsar Convention, will be factored into the work on integrating wetlands values and in other sectoral policies.

TARGET: At the end of three years, the following will have been achieved:

- i) Review of legislation and practices which impact on wetlands carried out in at least 30% of countries in each sub region. These reviews will include a review of legal mechanisms that exist for the conservation and wise use of wetlands in the participating countries;
- ii) At least 30% of countries in each sub region developing National Wetland Plans/Policies. This will include the development of land use policies and water legislation with a view to ensuring the general protection of all wetlands, whether or not they have been given legal protection. Such development of national plans and policies will entail subregional workshops for the sharing of experiences and lessons learned.

B. Establishment of Subregional Wetland Networks

Promote the establishment of North African and West African Wetlands (and other sub-regional) Networks as an initial activity. The second step will entail establishing similar networks for the other sub regions in Africa. Their purpose will be to provide technical assistance and guidance to wetland management interventions under this Action Plan and to assist countries overcome hurdles preventing timely implementation of the Action Plan. Initially, this activity will be carried out by the Thematic Working Group and thereafter be carried out by the subregional networks. The experiences of MedWet in establishing subregional wetland networks to assist in the co-ordination and monitoring of wetland programmes in the Mediterranean and the network dealing with the Zambezi basin will be built upon.

TARGET: At the end of three years;

- (i) All sub regions in Africa would have established Technical Wetlands Networks with clear terms of reference. In particular, the regional organizations such as SADC, ECOWAS, EAC, CILSS, IGAD and others will help develop a wetland network operating in each region. Where these already exist, they will be built upon and strengthened.
- (ii) All existing river or lake basin organizations would have factored wetlands into their decision-making process.

C. Wetland Inventory/Appraisal, Monitoring and Assessment

Develop proposals to establish either wetland inventories or rapid national wetland appraisals.

Wetlands International, Conservation International and IUCN have developed standardised

methodologies which should be used for this element of the action plan. Countries will need to decide whether they wish to have comprehensive national wetland inventories or prefer rapid national wetland appraisals. The wetland inventory or appraisal data can then be used as the baseline to set standards for national and subregional wetland monitoring and assessment programmes. These inventories or appraisals will include information on what should and should not be done with a country's wetlands based on the appraisal carried out. It will thus be used to create an understanding of the uses of wetlands that can be instilled into a given wetland that can possibly be a sustainable use of the resource. The lessons being learned will be shared through targeted workshops among the relevant players at subregional levels in an effort to build upon each country's capacity developed. Data emanating from this process will be fed back into the Global Review of Wetland Resources (GroWR);

TARGET: At the end of three years;

- (i) 30% of countries in the region without a wetland inventory will have embarked on a process to develop either a national wetland inventory or a rapid national wetland appraisal.
- (ii) All sub regions will have a network of representative wetland sites created that are being permanently studied to create a body of long-term data and research on issues such as water flows, seasonal variation, and others and the subsequent relations to human use, valuation, productivity and biodiversity.

D. Demonstration of Integrated Approaches to Wetland Management

The action plan includes the demonstration of integrated water resource management approaches that improve the role of wetland ecosystems as providers of goods and services to a wide range of stakeholders. This entails the following:

- ***Demonstration of the value of managing wetlands for their multiple functions*** ranging from their provision of clean water, flood control, fishing stocks, and others. In doing so, it will establish working relationships with national and local agencies responsible for those sectors.
- ***Demonstration of the value of integrating wetlands into river basin management*** (possibly using Ramsar's guidelines for Integrating Wetland Conservation into River Basin Management), and establishing working relationships with regional basin authorities;
- ***Demonstration of the value of integrating wetlands into coastal zone planning and management*** (utilizing the Guidelines on Integrated Coastal Zone Management);

African countries based on the outcomes of wetland inventories will select the sites and types of demonstration projects and other relevant planning and assessment work already carried out, wetlands requiring priority management interventions will be identified. Land use policies, plans and management impacting on wetland functions at sites selected will be analysed as an integral part of such projects. Site-based work will be selected to demonstrate the values and functions of priority sites. Improving access to reliable supplies of clean water, including through groundwater recharge, and reducing vulnerability to environmental risks such as flooding, landslides and water pollution are key components of strategies to reduce poverty and both require better management of wetlands.

Formation of a regional network of managed wetlands that are representative of all the major types of wetlands found on the continent and of the major functions they provide that form the

basis for economic development. Managers of these wetlands would be integrated into existing regional networks dealing with ecosystem management issues so as to share learning of experiences among the relevant players in the region.

TARGET: At the end of three years

- (i). At least 5 demonstration projects, one per each sub region, developed and funded to increase awareness of wetland values and functions and the mechanisms in place for integrating their values into plans and policies of other sectoral issues for example land use management, river-basin management, etc. These projects may include links to the Global Water Partnership, IWMI, WorldFish Center and the UNEP follow up work on the World Commission on Dams; as well as to other regional initiatives including other sectoral programmes of NEPAD.
- (ii). Fifteen priority wetland projects within priority river basins or coastal zones focusing on conservation and/or restoration. The developed projects with, funding secured and implementation begun will focus on demonstrating the value of managing wetlands for their multiple values ranging from their provision of clean water, flood control, fishing stocks, and others, as well as in providing for new economic activities such as sustainable tourism.

E. Demonstration of Approaches for Wetland Restoration and Rehabilitation

Wetland sites selected for wetland restoration and rehabilitation based on the results of the wetland inventories and on national priorities. Control of invasive alien species, the restoration of environmental flows, wastewater treatment, the removal and prevention of pollution from toxic chemicals and land-based sources of water pollution will feature as elements for demonstration. The control of alien invasive species work is addressed in more detail in the thematic plan on invasive species developed in parallel under NEPAD. Project sites will be selected on the basis of their ability to demonstrate how to restore water flows, to treat wastewater, and prevention of pollution from toxic chemicals or other land based sources of pollution. Project selection will also include extra consideration of SIDS given their unique situation, pressure on coastal wetlands and scarce freshwater resources. National agencies responsible for drinking water, for wetland conservation and wise use, for waste management, for pollution control, for agriculture, fisheries, and others will be fully involved in these demonstration projects

TARGET: At the end of five years

- (i). Projects developed, funding secured and implementation begun for six or more priority wetland sites focusing on restoration and rehabilitation, at least one in each sub region.

F. Communication, Education and Public Awareness

Wetland Communication, Education and Public Awareness Strategy developed to ensure that information of relevance reaches the most appropriate types of stakeholders as different stakeholders will require different types of information and awareness raising. This programme will comprise of objectives and activities that should be integrated into specific projects on awareness raising and stand-alone awareness raising activities. In addition, it will have stand-alone awareness raising programmes targeted to specific audiences. One primary audience will be at policy developer and decision-maker levels on the functions and values of wetlands and their resources. The projects to be developed should identify the economic and development functions and values of selected wetland sites and transform them in a useable form to relevant target audiences. The activities underpinning the projects will encompass debates among stakeholders including policy and decision-makers over their values amidst potentially other national priority uses.

2.13 Summary of Required Actions to Implement Africa's Wetland Management Strategy

<i>Action Area</i>	<i>Main interventions</i>	<i>Targets</i>
Development of Plans and Policies to Promote Wise Use of Wetlands	<ul style="list-style-type: none"> Assist with the development of National Wetland Policies and Plans Application of impact assessment to developments potentially affecting wetlands 	<ul style="list-style-type: none"> Review of legislation and practices which impact on wetlands carried out in at least 30% of countries in each subregion At least 30% of countries in each sub region developing National Wetland Plans/Policies
Establishment of Subregional Wetland Networks	<ul style="list-style-type: none"> Promotion of the establishment of the North African Wetlands Network Establishment of similar networks for the other sub-regions in Africa 	<ul style="list-style-type: none"> Establish Technical Wetlands Networks with clear terms of reference in all sub-regions in Africa All existing river or lake basin organizations have factored wetlands into their decision-making
Wetland Inventory/Appraisal, Monitoring and Assessment	<ul style="list-style-type: none"> Development of proposals to establish either wetland inventories or rapid national wetland appraisals Use of standardised methodologies for the establishment of wetland inventories 	<ul style="list-style-type: none"> At least 30% of countries in the region without a wetland inventory have embarked on a process to develop either a national wetland inventory or a rapid national wetland appraisal A network of representative wetland sites have been created within all the sub-regions
Demonstration of Integrated Approaches to Wetland Management	<ul style="list-style-type: none"> Identification of wetlands requiring priority management interventions. Selection of projects on the basis of forming a regional network of managed wetlands 	<ul style="list-style-type: none"> At least 5 demonstration projects, one per each sub-region, have been developed and funded. Implementation begun for 15 priority wetland sites focusing on conservation and/or restoration Partnerships have been developed with other existing initiatives
Demonstration of Approaches for Wetland Restoration and Rehabilitation	<ul style="list-style-type: none"> Development of strategy for improving communication, education and awareness of wetland functions and values 	<ul style="list-style-type: none"> Implementation begun for 3 priority wetland sites focusing on restoration and rehabilitation.
Communication, Education and Public Awareness	<ul style="list-style-type: none"> Selection of sites for wetland restoration and rehabilitation 	<ul style="list-style-type: none"> Implementation begun for at least one awareness raising campaign Developed at least one awareness raising programme to show the impact of climate change on wetlands
Capacity Development	<ul style="list-style-type: none"> Development of an Africa-wide capacity initiative on wetland management Strengthening of existing training centres or the establishment of new ones to improve the science-based to enhance wetland management 	<ul style="list-style-type: none"> At least one training centre on wetland management and research in operation in each sub-region At least 20 percent of universities in the continent integrating wetland management and wise use of wetlands into their teaching curricula

TARGET: At the end of five years

- (i) Projects developed, funding secured and implementation begun for at least one awareness raising campaign in each sub region or shared, international river basin.
- (ii) At least one awareness raising programme developed to show the impact of climate change on wetlands and some of the adaptive measures that can be undertaken at the national and local.

G. Capacity Development

Gaps in training opportunities in wetland management identified throughout the region. An Africa-wide capacity development initiative on wetland management is thought to be a critical need, creating economy-of-scale benefits in conducting training, fostering regional co-operation and cross-pollination of ideas and successful experience. Given that there are already several sub regionally based training programmes already underway such as the East African Wetland Training endorsed by the Ramsar Convention Bureau and sub-regional centres of excellence such as the Centre for African Wetlands, the first step to implementing this intervention will be carry out a gap analysis to see what structures need to be put in place and what kinds of training material are already in use, which training centres are in operation in the region and what kind of training is available. It will also entail identifying its potential to adequately address the right skills needed for wetland management at all levels from actual wetland management to policy development and awareness raising. Already, a body of work has been conducted on this gap analysis and an inventory of wetland management training opportunities has been conducted².

Strengthening of existing and, establishment of new training centres where needed. The strengthening of existing structures and the establishment of new institutions will be a critical element of the action plan. Without structures in place, the implementation of the action plan is likely to be fragmented, unsustainable and uncoordinated. The training programmes to be run by the centres programmes will include training on how to assess the costs and benefits of maintaining ecosystems and their functions while comparing those with other alternative uses that may change the functions and services of the ecosystems in question. The Training programmes will also include consideration of how to best expose persons working in other sectors to training on wetland functions and values and how wetlands can be used to serve the interests of those sectors.

TARGET: At the end of three years;

- (i) At least one training centre on wetland management and research, such as the Centre for African Wetlands are in operation in each sub region;
- (ii) At least one training programme on wetland management and research such as the East African Wetland Management Training Course in operation in each sub region
- (iii) At least 20 percent of universities in the region integrating wetland management and wise use of wetlands issues into their teaching curricula.

PART IV

IMPLEMENTATION PLAN

2.14 Introduction

The Africa Wetland Strategy should be seen as a flexible, long-term framework with the potential to adjust its activities to the evolving needs and requirements of countries and their changing circumstances. It should be considered as a living document and be reviewed on a regular basis.

The implementation mechanism for the Wetland Action Plan shall be the same as that for implementing the overall environmental initiative of NEPAD. It will be implemented under the overall responsibility of AMCEN through its Bureau, which will be assisted by the Steering Committee for the implementation of the Africa Environment Action Plan. The Steering Committee will identify and recommend for adoption to AMCEN through its Bureau a process of identifying relevant capable institutions to develop and implement the proposed activities described above. The Steering Committee will provide guidance to the processes for developing each of the proposed actions based on countries' needs and priorities. It will report on a regular basis to AMCEN through its Bureau on the status of implementation of the Wetland Action Plan.

This action plan will be implemented via individual projects as noted above. Priority Projects have been defined by the Thematic Working Group and are contained in Section 3. The proposed project titles are given below.

Proposed Project Titles

1. Capacity Building for Wetlands Assessment, Planning, Management, Monitoring in Africa.
2. Strengthening the information base and the opportunities for sharing experiences for the management of wetlands in Africa.
3. Restoration and Rehabilitation of Wetlands
4. Integrated Management of Major Wetland Ecosystems in Major Lake/River Basins in Africa
5. Wetlands and Community Livelihoods: Demonstrating best practices in sustainable management of wetlands to enhance livelihood sources for communities living within and around selected wetlands sites
6. Support for the Sustainable Management of Coastal and Estuarine Ecosystems
7. Assessment and monitoring of Africa's freshwater ecosystems
8. Improving Africa's Freshwater Ecosystem Governance and Management
9. Valuing Africa's wetlands ecosystems for economic development and poverty alleviation

Financing

A financing plan will be worked out in more detail by the Steering Committee with a view to putting it into effect no later than one year from the approval of the action plan. While a donor meeting will be the initial entry point to secure financing for the first set of projects identified in the action plan above, government financing will be an important part of the strategy to ensure political commitment on the part of African governments. This financing plan should outline other types of financing that have not traditionally been factored into wetland management interventions in Africa.

Voluntary contributions

As the primary emphasis of this action plan is one developed by Africans for Africa, a fund will be set up for voluntary contributions from African governments. While the private sector, donors and civil society will be invited to contribute to the fund, the primary objective will be to collate

funds from African governments that would then be redistributed among their own projects.

Donations, Sponsorships and Partnerships

Potential opportunities for public-private partnerships that can bring in financial resources will be identified. This could be in the form of private donations, sponsorships and partnerships. One such partnership to be explored will be a partnership with international and national airlines. A first step will be to identify airlines in the region that would be willing to establish a partnership with the organization where passengers can provide 'change for wetlands'. Another such partnership could be with companies producing or selling bottled water given the intricate link between wetlands and our sources of drinking water.

A partnership with commercial banks could also be analysed for its utility towards increasing financial resources for the programme or particular project activities. Recently, commercial banks in Africa are providing financing for local community initiatives and the strategy will be to assess how best to scale up and expand such partnerships.

Events and Activities

One African wide entertainment event will be organized to engulf a major publicity programme on wetlands for the purpose of increasing awareness of wetlands and serve as a fundraising activity.

CONCLUSIONS

Many action plans once developed never get adequately implemented. To avoid this action plan falling into the same fate, and given that the targets presented are of a voluntary nature, at the end of each year, progress towards implementation of the action plan will be monitored. The Thematic Working Group on wetlands has carried out the task of identifying potential projects to implement this action plan. An important task to be carried out alongside this is to then ensure sound monitoring and evaluation of the progress on implementation of this action plan. The credibility of the region is at risk since a plan developed and approved does not necessarily mean its transformation to the implementation phase.

SECTION 3 :

PROJECT CONCEPT NOTES FOR THE WETLANDS COMPONENT OF THE ENVIRONMENT INITIATIVE OF NEPAD



PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

- 1. Thematic Area:** Wetlands
- 2. Project Title:** Capacity Building for Wetlands Assessment, Planning, Management, Monitoring in Africa
- 3. Duration of Project:** Five years
- 4. Timetable (start-end of project):** 2003-2008
- 5. Zone of intervention:** Africa-wide, sub-region by sub-region

6. **Linkages to existing regional and/or international frameworks:** NEPAD capacity-building Initiative, CBD, Ramsar,
7. **Total Estimated Cost:** US\$10 million
8. **Existing level of funding (if any):** US\$ 1,000,000
9. **Additional funding required:** US\$ 9 million
10. **Problem background/rationale:** NEPAD and AMCEN recognise that poor management of wetlands are a contributing cause of poverty and a primary cause of species loss, ecosystem decline and as such pose a threat to sustainable development. In Africa the capacity to manage wetlands within the region at all levels is not well documented but is known to be inadequate. Limited capacity for the management of the wetlands continues to impact negatively on the economic development of the continent and the livelihoods of people. The lack of capacity to manage wetlands is intimately linked to the inability to assess and monitor wetlands as well as the inadequate capacity to develop and implement management plans

Though there are some existing initiatives in the region such as *ad hoc*. Wetlands International (West Africa Office) training courses, the Kenya Wildlife Service Training Institute (wetland management training courses) and specialised centres such as the Centre for African Wetlands, the available facilities for building capacity is limited.

It is therefore urgent that the existing capacity to manage wetlands, and their contribution to people and the environment be built on an Africa-wide scale. This is especially true in the area of wetland valuation, ecological flows and the cultural importance of wetlands.

11. **Project Objective:** To build expertise, strengthen institutions and enhance facilities, (including training programmes) for the assessment, planning management and monitoring of wetlands in African countries so that they can benefit from targeted and well-co-ordinated capacity development.

12. Project Components/Activities

- a. Inventory of existing capacity for wetland management in Africa
- b. Needs Assessment for capacity development in wetland management in Africa
- c. Strategy for Capacity building for wetland management in Africa
- d. Implementation of the Strategy for Capacity building for wetland management in Africa

Activities within the component:

Activity a1: Design a survey protocol for assessing capacity for wetland management in Africa

Activity a2: Conduct the survey of wetland assessment, planning management and monitoring capacity

Activity a3: Compile an inventory of existing expertise and facilities

Activity b1: Sub-regional workshops on gap analysis for wetland management in Africa

Activity b2: Synthesise results of sub-regional workshops into a regional overview

Activity c1: Regional workshop for the development and review of a draft strategy for building the capacity to manage wetlands in Africa, (including a feasible implementation plan)

Activity c2: Distribute the draft strategy to all stakeholders for review

Activity c3: Finalisation of the strategy
Activity c4: Dissemination of the strategy

Activity d1: Consideration of existing curricula
Activity d2: Development of curricula
Activity d3: Development of materials
Activity d4: Training of trainers
Activity d5: Dissemination of materials

13. Project Outputs/results

- a. An inventory of existing expertise and facilities in Africa available for assessment, planning, management and monitoring of wetlands
- b. A needs assessment of the regional requirement for the assessment, planning, management and monitoring of wetlands
- c. A comprehensive strategy for strengthening the capacity for sustainable management of wetlands in Africa
- d. Implementation of the strategy in at least three of the five sub-regions of Africa in at least 5 countries per region

14. Stakeholders involved: Policy-makers, managers and technical staff responsible for land, water, ecosystem and natural resource management, training institutions, research institutions, etc.

15. Existing project documentation: NEPAD Capacity- building Initiative, «NEPAD Draft Strategy and Action Plan for the Management of African Wetlands

16. Suggested or potential focal point/ contact institutions: Ramsar, Wetlands International, WWF, IUCN regional organisations (ECOWAS, SADC/ELMS, IGAD, UMA, EAC, CEMAC, CILSS and COMESA) and specialised organisations CAW, KWSTI

PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

- 1. Thematic Area:** Wetlands
- 2. Project Title:** Strengthening the information base and the opportunities for sharing experiences for the management of wetlands in Africa
- 3. Duration of Project:** Five years
- 4. Timetable (start-end of project):** 2003-2008
- 5. Zone of intervention:** Africa-wide, sub-region by sub-region
- 6. Linkages to existing regional and/or international frameworks:** NEPAD capacity-building Initiative, CBD, Ramsar,
- 7. Total Estimated Cost:** US\$10 million
- 8. Existing level of funding (if any):** US\$ 1.5 million (including in-kind contributions)

9. Additional funding required: US\$ 8.5 million

10. Problem background/rationale: NEPAD and AMCEN recognise that poor management of wetlands are a contributing cause of poverty and a primary cause of species loss, ecosystem decline and as such pose a threat to sustainable development. One of the contributory factors is the fact that the information base on wetlands is weak and that the information that may exist in national repositories is not shared sub-regionally. This leads to unnecessary wastage of scarce resources in project duplication, loss of experience and the poor deployment of staff.

It is therefore necessary that the information base to manage wetlands, and their contribution to people and the environment be rationalised on an Africa-wide scale

11. Project Objective: To establish an information network and promote the exchange of information for the management of wetlands in African countries so that they can benefit from lessons learned.

14. Project Components/Activities

- a. Establishment and enhancement of networks for wetland management in Africa
- b. Sharing of wetland management experience
- c. Establishment and enhancement of sub-regional information hub for wetland management in Africa
- d. Production of appropriate information materials for wetland management in Africa at all levels
- e. Dissemination of appropriate information materials for wetland management in Africa at all levels

Activities within the component:

Activity a1: Design a survey protocol for identifying existing networks for wetland management in Africa

Activity a2: Conduct the survey of wetland networks in Africa

Activity a3: Compile an inventory of existing networks

Activity a4: Sub-regional workshops to identify additional networks needs

Activity a5: Creation of new networks to fill gaps in networks or extension of existing network coverage to fill gaps

Activity b1: Organise workshops to learn and shared experiences on wetland management in Africa

Activity b2: Organise field exchange visits staff/student exchange at all levels within and between sub-regions

Activity b3: Document experiences and lessons learned to strengthen implementation of wetland management

Activity c1: Identify existing institutions holding information in wetland management within the region

Activity c2: Establish mechanisms for information exchange and flow between the identified institutions

Activity c3: Select a sub-regional hub as an information clearing house

Activity c4: Support sub-regional hubs to function

Activity d1: Collate available/existing information (from inside and outside Africa)

Activity d2: Catalogue the collected information

Activity d3: Review the applicability of the information collected

Activity d4: Synthesise the information for applicability

Activity d4: Produce awareness and information materials

Activity e1: Identify relevant stakeholders and decision makers

Activity e2: Develop strategies for promoting the awareness of wetland issues

Activity e3: Implement strategies for promoting the awareness of wetland issues

Activity e4: Disseminate wetland information materials

Activity e5: Evaluate efficacy and impact of information materials

15. Project Outputs/results

- e. At least three of the five sub-regions of Africa with networks established or enhanced
- f. At least 10 staff exchanges between and with in sub-regions per year, five sub-regional workshops
- g. Sub-regional information hubs established or enhanced in all sub-regions by 2006
- h. Information materials produced in all sub-regions
- i. Information materials disseminated in all sub-regions

17. Stakeholders involved: Policy-makers, managers and technical staff responsible for land, water, wetland and natural resource management, training institutions, research institutions, etc.

18. Existing project documentation: NEPAD Capacity- building Initiative, «NEPAD Draft Strategy and Action Plan for the Management of African Wetlands

19. Suggested or potential focal point/ contact institutions: Ramsar, Wetlands International, WWF, IUCN regional organisations (ECOWAS, SADC/ELMS, IGAD, UMA, CEMAC, CILSS and COMESA) specialised organisations such as Centre for African Wetlands, KWSTI, NESDA

PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

1. **Thematic Area:** Wetlands
2. **Project Title:** Restoration and Rehabilitation of African Wetlands
3. **Duration:** 3 years
4. **Planned timetable:** 2004-2007
5. **Zone of intervention:** Sites from within at least six major transboundary river basins from eastern, central, western, northern and southern Africa and Africa's island states

Potential Basins:

- Eastern Africa: Lake Victoria, Tanganyika, Nile
- Southern Africa: Lake Malawi/Nyassa/Niassa, Okavango, Zambezi, Limpopo

- Central Africa: Congo, Chad
- West Africa: Senegal, Niger, Volta
- North Africa: Nile

Site selection criteria:

It is noted that there are a number of existing and ongoing initiatives for water management across Africa. Most of the large, trans-boundary ecosystems have large donor-funded initiatives. This wetland project will rapidly assess these initiatives and determine where it is feasible to establish synergies and add a wetland restoration/rehabilitation component to these existing initiatives.

6. Linkages to existing regional and/or international frameworks: Ramsar Convention, UNCBD, IGAD, SADC, UNCCD, UNFCCC

7. Total estimated cost: \$6 million US (\$1 million per basin)

8. Existing level of funding: to be determined, depends upon the sites selected.

9. Additional funding required: to be determined, depends upon the sites selected.

10. Background/Justification:

Wetlands across Africa are being destroyed at an alarming rate. However, increasingly, communities, local authorities and national governments are realizing the value of their wetland resources and the goods and services provided by them. In such cases, important or vital wetlands³ that have been degraded should be restored. But how?

Much of our knowledge about wetland restoration and rehabilitation is derived from studies and interventions in Europe and North America. Very little work has been done to date on wetland restoration in tropical climates. It remains to be seen whether the principles and guidelines developed for wetland restoration in temperate climates would be appropriate in Africa.

Working at demonstration sites across the continent, this project aims to test the guidelines and principles of wetland restoration established in other parts of the world, to build on these experiences, and to create a set of best practices in wetland restoration that is appropriate for the African context. In doing so, this project will restore selected wetland sites and develop capacity for wetland restoration across the region.

11. Objectives:

- to test existing guidelines and practices for wetland restoration in the African context and determine best practices,
- to demonstrate effective methods for doing restoration and rehabilitation in Africa,
- to restore the integrity of wetland systems for communities and for the environment at selected sites,
- to share experiences across sub-regions to develop a regional perspective on wetland restoration.

12. Activities:

Phase I: (12 months)

1. Convene regional planning and preparation meeting;
2. Identify 1 site in each sub-region;
3. Rapid assessment of identified sites to know the issues, kinds and sources of degradation, and threats to wetlands;
4. Assess institutional capacities;
5. Establish partnerships and political support;
6. Develop intervention/restoration plan.

Phase II: (3 months)

7. Present intervention/restoration at Regional Meeting and receive technical support and advice;
8. Revise intervention/restoration plan.

Phase III: (21 months)

9. Implement intervention plan with technical support as necessary;
10. Share experiences and document best practices and lessons learned through Regional Meeting.

13. Expected Outcomes:

- Increased capacity within countries and subregions for ecosystem restoration;
- Learning and exchange from experiences across the region;
- Development of wetland restoration best practices in Africa;
- 6 restored wetland sites where ecosystem function and productivity is improved;
- Local livelihoods benefit from restored ecosystem function.

14. Stakeholders involved:

- local communities and resource users;
- government departments (water, environment, wildlife, forestry, fisheries and others as relevant);
- private sector (tourism, energy, agriculture and others as relevant);
- relevant research institutions;
- civil society (international and local NGOs);
- development partners.

15. Existing documentation:

Relevant project documentation of existing initiatives

16. Focal Points:

International NGOs, Relevant Basin Authorities.

PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

1. Thematic Area: Wetlands

2. **Project Title:** Integrated Management of Wetland Ecosystems in Major Lake/River Basins in Africa
3. **Duration:** 5 years
4. **Planned timetable:** 2004-2009
5. **Zone of intervention:** Sites from within at least six major transboundary river basins from eastern, central, western, northern and southern Africa and Africa's island states

Potential Basins:

- Eastern Africa: Lake Victoria, Tanganyika, Nile
- Southern Africa: Lake Malawi/Nyassa/Niassa, Okavango, Zambezi, Limpopo
- Central Africa: Congo, Chad
- West Africa: Senegal, Niger, Volta
- North Africa: Nile

Site selection criteria:

It is noted that there are a number of existing and ongoing initiatives for water management across Africa. Most of the large, trans-boundary ecosystems have large donor-funded initiatives. This wetland project will rapidly assess these initiatives and determine where it is feasible to establish synergies and add a wetland restoration/rehabilitation component to these existing initiatives.

6. **Linkages to existing regional and/or international frameworks:** Ramsar Convention, UNCBD, IGAD, SADC, UNCCD, UNFCCC
7. **Total estimated cost:** \$30 million US (\$5 million per basin)
8. **Existing level of funding:** to be determined, depends upon the sites selected.
9. **Additional funding required:** to be determined, depends upon the sites selected.

10. Background/Justification:

Increasingly, African countries are recognizing the importance of wetland resources to the economies of local communities, countries and regions. In some cases, the goods and services provided from African wetlands, e.g. water, fish, bricks, water purification and flood control, may total in the hundreds of millions of dollars/year. However, lack of awareness overall and uncoordinated development threaten the continued provision of these goods and services. Recent MOUs concluded between the Ramsar Secretariat and the Niger Basin Authority and Lake Chad Basin Commission indicate a growing awareness of the importance of wetlands in the context of integrated river basin management, and provide a strong foundation for moving forward with activities in these areas.

Given the multi-sector nature of wetlands, wetland planning and management cannot be carried out in isolation. The various sectors involved (water, energy, fisheries, land-use planning, environment etc) must be brought together in a co-ordinated planning and management process.

This project will establish effective multi-sectoral wetland planning and management units in selected basins. It will demonstrate ways of integrating wetland management into river basin

management and showcase the benefits of managing wetlands for multiple values, such as the provision of clean water, groundwater recharge, flood control, fish stocks, energy source etc. In doing so, it will demonstrate sound ecosystem management for sustainable livelihoods through multi-sectoral collaboration at local, national and sub-regional levels.

11. Objectives:

- to establish effective multi-sectoral wetland planning and management in selected basins,
- to protect and sustainably manage high-priority freshwater ecosystems for people, agriculture, industry and the environment.

12. Activities:

Phase I: (1 year)

1. Select demonstration sites;
2. Review and collate information from ongoing initiatives and identify opportunities for wetland conservation and management;
3. Assess land use practices and threats to identified wetland (=root cause analysis) e.g. irrigation, hydropower, pesticides/agrochemicals, pollution;
4. Institutional Analysis of basin management and regulatory groups and other relevant groups to manage wetlands;

Phase II: (4 years)

5. Develop a participatory management planning process;
6. Capacity-building as appropriate for basin authorities and other target groups;
7. Develop pilot projects that demonstrate wise-use and best wetland management practices;
 - a. Develop and implement resource management actions;
 - b. Design mitigation measures and restoration where appropriate;
8. Identify opportunities to support wetland conservation areas within the basins;
9. Promote the designation of Ramsar sites, especially highlighting multiple-use values;
10. Awareness programme.
11. Review and harmonisation of sectoral policies affecting wetlands

Phase III: (periodically throughout project)

12. Cross regional exchange of experiences and learning;
13. Experiences documented.

13. Outcomes:

- development of regional partnerships, collaboration, co-ordination
- enhanced capacity to manage wetlands and integrate wetland issues into water management
- effectively managed wetlands
- increased benefits from wetlands to local communities
- wetland resource use rationalised within the basins

14. Stakeholders involved:

- local communities and resource users
- government departments (water, environment, wildlife, forestry, fisheries and others as relevant)
- private sector (tourism, energy, agriculture and others as relevant)
- relevant research institutions
- civil society (international and local NGOs)

- development partners

15. Existing documentation:

Relevant project documentation
National documents

16. Focal points/contact institutions:

Relevant Basin Authorities + ???
International NGOs (WWF, IUCN, WI)

PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

- 1. Thematic Area:** Wetlands
- 2. Project Title:** Sustainable Management of Wetlands to Enhance Communities' Livelihoods
- 3. Duration:** 5 years
- 4. Planned timetable:** 2004-2009
- 5. Zone of intervention:** Sites from within at least six major transboundary river basins from eastern, central, western, northern and southern Africa and Africa's island states

Potential Basins:

- Eastern Africa: Lake Victoria, Tanganyika, Nile
- Southern Africa: Lake Malawi/Nyassa/Niassa, Okavango, Zambezi, Limpopo
- Central Africa: Congo, Chad
- West Africa: Senegal, Niger, Volta
- North Africa: Nile

Site selection criteria:

It is noted that there are a number of existing and ongoing initiatives for water management across Africa. Most of the large, trans-boundary ecosystems have large donor-funded initiatives. This wetland project will rapidly assess these initiatives and determine where it is feasible to establish synergies and add a wetland restoration/rehabilitation component to these existing initiatives.

- 6. Linkages to existing regional and/or international frameworks:** Ramsar Convention, UNCBD, IGAD, SADC, UNCCD, UNFCCC and existing regional programs
- 7. Total estimated cost:** \$6 million US (\$1 million per basin)
- 8. Existing level of funding:** to be determined, depends upon the sites selected.
- 9. Additional funding required:** to be determined, depends upon the sites selected.
- 10. Background/Justification:**

Many communities derive a significant portion of their livelihoods from wetlands resources. Still, many of the threats and negative impacts to wetlands (e.g. encroachment) arise from

local communities who, paradoxically, have the most to lose when wetlands can no longer provide basic products and services.

The success of all wetlands initiatives (planning, management, restoration) depends upon the cooperation and good will of communities. Such interventions cannot be sustainable without the full support of communities. It is imperative that wetland projects: increase awareness about wetland values to local communities, empower communities to manage their wetland resources, and provide communities a voice or forum in basin-level decision-making. These steps will demonstrate that the wise-use of wetlands at the local level can increase wealth, reinforcing the link between well-managed wetlands and poverty alleviation.

11. Objectives:

- Increase awareness among local communities about the benefits of wetland wise-use;
- Empower and enable communities to manage their wetland resources in a sustainable way;
- Establish a forum to integrate community concerns into basin-level management planning;
- Promote sub-regional exchange of experiences and lessons learned.

12. Activities:

Phase I: (1 year)

1. Selection of sites and target communities;
2. Stakeholder analysis to describe current users, governance;
3. Situation analysis to describe current resource use patterns, highlighting unsustainable uses;

Phase II: (2-5 years)

4. Develop wise-use strategies for key resources in a participatory way that includes recommendations for sustainable harvesting, processing and marketing;
5. Identify small-scale livelihood improvement interventions and provide the necessary support to communities in piloting interventions and raising seed monies;
6. Define capacity needs and develop training initiatives;
7. Policy review with an aim to create a forum for communities to participate in basin-level decision-making and benefit-sharing;
8. Exchange visits to share experiences and lessons learned.

13. Expected Outputs:

- Improved understanding and knowledge about wetland use by communities,
- Enhanced income and employment opportunities in local communities;
- Sustainable management of wetland resources contributing to poverty alleviation and food security
- Improved community participation in basin-level decision-making

14. Stakeholders involved:

- local communities and resource users
- government departments (water, environment, wildlife, forestry, fisheries and others as relevant)
- training and extension
- civil society (international and local NGOs)
- development partners

15. Existing documentation:

Relevant project documentation on existing community initiatives

- 16. Focal points/contact institutions:**
NGOs (WWF, IUCN, WI), CBOs

PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

- 1. Thematic Area:** Wetlands
- 2. Project Title:** Management, Restoration and Rehabilitation of Coastal Wetlands
- 3. Duration:** 5 years
- 4. Planned timetable:** 2004-2009
- 5. Zone of intervention:** Sites from within from eastern, central, western, northern and southern Africa with emphasis on Africa's island states. Priority will be given to sites where linkages can be established and results demonstrated in the context of integrated coastal management.
- 6. Linkages to existing regional and/or international frameworks:** Ramsar Convention, Nairobi and Abidjan Conventions, UNFCCC, Indian Ocean Commission, other regional bodies, **African Process**
- 7. Total estimated cost:** \$4 million US (\$0.5 million per intervention, plus co-ordination costs)
- 8. Existing level of funding:** to be determined depends upon the sites selected.
- 9. Additional funding required:** to be determined, depends upon the sites selected.

10. Background

Coastal areas are amongst the most densely populated areas in Africa, and are subject to major historical and ongoing changes as a result of urban growth, and more recently, tourism. Coastal wetlands have been heavily impacted by human activities and are highly vulnerable to degradation as a result of pollution and sediment influx, as well as to conversion for development of ports, housing, and transport and tourism infrastructure. This situation is particularly acute in small islands (SIDS).

At the same time, coastal wetlands are amongst the planet's most productive ecosystems and support coastal and marine fisheries, and provide other goods and services vital to national and local economies and to livelihoods. Coastal wetlands serve as natural shoreline defences and harbour a rich biodiversity. Coastal areas are vulnerable to sea level rise, and increased storminess, and coastal erosion associated with climate change. Healthy and resilient coastal wetlands could play a key role in mitigating the potentially devastating impacts of these changes on coastal infrastructure, settlements, water supplies, and agriculture.

This project will establish effective multi-sectoral wetland planning and management in the context of integrated coastal management. It will demonstrate ways of integrating wetland management into coastal management and showcase the benefits of managing wetlands for multiple values, including coastal defense. In doing so, it will demonstrate sound ecosystem

management for sustainable livelihoods through multi-sectoral collaboration at local, national and sub-regional levels.

11. Objectives:

- to establish effective multi-sectoral wetland planning and management in selected coastal areas
- to protect and sustainably manage high-priority coastal wetlands for people, agriculture, industry and the environment.

12. Activities:

Phase I: (1 year)

1. Select demonstration sites;
2. Review and collate information from ongoing initiatives and identify opportunities for wetland conservation and management;
3. Assess land use practices and threats to identified wetland (=root cause analysis) e.g. irrigation, hydropower, pesticides/agrochemicals, pollution, conversion
4. Institutional Analysis of management mechanisms and structures to manage coastal wetlands;

Phase II: (4 years)

5. Develop a participatory management planning process;
6. Capacity-building as appropriate for coastal management authorities and other target groups;
7. Develop pilot projects that demonstrate wise-use and best wetland management practices;
 - a. Develop and implement resource management actions;
 - b. Design mitigation measures and restoration where appropriate;
8. Identify opportunities to support wetland conservation areas within coastal areas;
9. Promote the designation of Ramsar sites, especially highlighting multiple-use values;
10. Awareness programme
11. Review and harmonisation of sectoral policies affecting coastal wetlands.

Phase III: (periodically throughout project)

12. Cross regional exchange of experiences and learning;
13. Experiences documented and recommendations or guidelines developed for integration of wetlands conservation into integrated coastal management.

13. Outcomes:

- development of regional partnerships, collaboration, co-ordination
- enhanced capacity to manage wetlands and integrate wetland issues into coastal management
- effectively managed wetlands
- increased benefits from wetlands to local communities
- wetland resource use rationalised within coastal zones

14. Stakeholders involved:

- local communities and resource users
- government departments (water, environment, wildlife, forestry, fisheries and others as relevant)
- private sector (tourism, energy, agriculture and others as relevant)
- relevant research institutions
- civil society (international and local NGOs)

- development partners

15. Existing documentation:

Relevant project documentation
National documents

16. Focal points/contact institutions:

Relevant coastal management authorities/bodies
International NGOs (WWF, IUCN, WI)

PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

- 1. Thematic Area:** Wetlands.
- 2. Project Title:** Assessment and monitoring of Africa's freshwater ecosystems
- 3. Duration:** initially 3 years, but the monitoring is ongoing
- 4. Planned Timetable:** 2004-2006
Year 1: Survey and reconnaissance appraisal.;
Year 2: Assessment of selected freshwater ecosystems;
Year 3: Develop and implement a monitoring system
- 5. Zone:** Regional
- 6. Linkages:** Ramsar Convention, CCD Biodiversity Assessment Action plans, Millenium Ecosystem Assessment, World Water Assessment Programme
- 7. Total Estimated Cost:** US\$12million.
- 8. Existing Level of funding:** US\$3million
- 9. Additional Funding required:** US\$9million

10. Project Background & Rationale:

Throughout the African continent, freshwater ecosystems, although extensively utilized, are not fully understood, particularly their role in the maintenance of water quality, as well as the goods and services they provide. It is quite evident that no comprehensive surveys and assessments have been carried out in the region. In addition, there is little monitoring of the ecological character of the region's wetlands. This has generally resulted in poorly conceived management regimes and to wetlands not accorded their rightful importance in economic development and the reduction of poverty. There is clearly a lack of information and research on tropical African wetlands particularly historical information collected and analysed over a long period of time to understand the values of wetland hydrology, seasonal variations, etc that affect productivity and biodiversity.

While developing national wetland inventories can serve as a basis for informed decision-making, national rapid wetland appraisals can also serve as a first step to gather information

and decide on national priorities for management and restoration actions. Standard wetland inventory or appraisal methodologies should be used for carrying out the inventories. National wetland inventories or rapid appraisals should document wetlands which are of special significance for reasons of water supply, coastal protection, flood defense, food security, poverty alleviation, cultural heritage, tourism development, and/or scientific research. Rapid national wetland appraisals are easier and less expensive to carry out than comprehensive national wetland inventories and countries will decide on their preferred option. At the regional level, these inventories or rapid appraisals will be useful for informed decision making on those wetlands that deserve urgent attention.

It is envisaged that the national wetland inventories or rapid appraisals will be used as a basis for monitoring change and assessing the ecological character of wetlands. An assessment of the vulnerability of wetlands to change in ecological character, the impacts of climate change, sea-level rise, dams, invasion by alien species, and agricultural practices will be the next step in this element of the strategy.

In response to the general lack of information and research, the assessment and monitoring will contribute to building a body of research on wetland functions and values and on methodologies to restore them that will contribute to improved wetland management in the tropics

11. Objectives:

- a. Provide managers and decision makers with information for policy development, legislation and wetland management planning
- b. Develop mechanisms and procedures for long term monitoring of wetlands
- c. Establish a representative network of reference sites for monitoring
- d. Improve knowledge and understanding of the value, functions, threats and remedial measures in the management of Africa's freshwater ecosystems.

12. Activities:

- a. Carry out a Rapid appraisal of wetlands.
- b. Carry out survey and mapping of wetland ecosystems
- c. Establish a wetland database.
- d. Establish sub regional level criteria for prioritising freshwater ecosystems.
- e. Apply criteria & select sites.
- f. Prioritise at country and sub-regional level.
- g. Develop monitoring protocol and apply at reference sites, especially through the definition and adoption of water quality standard.
- h. Monitoring water quality in terms of drinking water, fisheries and biodiversity, pollution levels, alien invasive species, change in value & functions, link with groundwater.

13. Expected Outcomes;

- Improved knowledge and understanding of ecological processes and socio-economic values of wetlands
- Improved decision making in sound policy, adequate policies, legislation and good management
- Improved co-operation, collaboration and collective action on priority sites and best management practices.
- Long term monitoring protocols are established and implemented to ensure that water quality is adequately monitored so as to provide safe drinking water
- Wetland managers have the ability to assess the conservation status of wetland functions and values and to propose adequate management options for the conservation and wise use of critical wetlands.

- Vital wetlands at risk, identified and adequate measures taken to restore /rehabilitate their functions and values
- Priorities for wetlands conservation are set at basin scale and at national level.

14. Stakeholders involved:

National government institutions, Ramsar, SADC, IGAD, River and lake basin authorities, Wetlands International, IUCN, WWF. FAO

15. Existing documentation:

The Ramsar Convention has developed and adopted a **Framework for Wetland Inventory**. This Framework provides guidance on a standard approach to designing a wetland inventory program. It includes information on determining appropriate remote sensing techniques to apply, wetland classifications and existing standardised inventory methods, and recommends standards for core data fields and data and metadata recording.

The Framework also provides guidance for designing wetland inventory at multiple scales from site-based to provincial, national and regional. The extent of detail that can be compiled in the inventory will generally decrease as the geographical area of coverage increases, unless large resources can be allocated for the program.

Other available documentation includes: Directory of African wetlands, jointly published by IUCN-The World Conservation Union, UNEP, The United Nations Environment Program, WCMC, The World Conservation Monitoring Centre.

Directory of important bird areas (IBA), published by BirdLife International. Wetlands International database, MedWet, SADC, National inventories of Zambia, South Africa, Uganda and Botswana, biodiversity visions.

16. Focal point/contact institutions:

Subregional bodies, national institutions, international organisations.

PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

- 1. Thematic Area:** Wetlands
- 2. Project Title:** Improving Africa's Freshwater Ecosystem Governance and Management
- 3. Duration:** Five years.
- 4. Planned Timetable:** 2004 to 2008
 Year 1: review of national and regional wetland policies with relevance to all wetlands , including freshwater ecosystems and their links to coastal areas.
 Year 2: Review other sectoral policies that impact wetlands and identify the need for harmonising policies at national and regional levels
 Year 3-5: develop appropriate wetlands policies, strategies and plans
- 5. Zone of Intervention:** Regional and country by country

6. **Linkages to existing frameworks:** National Institutions responsible for Wetlands, water development Agriculture, environment, fisheries and wildlife. Wetland user Groups, River basin organizations, Ramsar Convention, UNDP, UNEP, CBD, etc.
7. **Total estimated costs:** US\$6million
8. **Existing level of funding:** US\$1.5million
9. **Additional funding:** US\$4.5million

10. Project Background & Rationale:

Despite the important role played by wetlands in economic development and the sustenance of community livelihoods, very few countries in the region have formulated necessary policies for managing wetlands. In many cases, information required for sound decision making and policy formulation is not readily available. Policy support to the development and implementation of wetland policies, strategies and action plans is also limited resulting in the exclusion of wetland issues in Poverty Reduction Strategies.

This project will involve support for the development of National Wetland Policies for those countries that have a large percentage of their population dependent on wetlands. Such wetland policies will need to be integrated into other strategic or planning processes and documents, particularly focusing on other sectors as fisheries, water management, land use and on addressing threats such as pollution. In developing National Wetland Policies, a review of national legislation affecting wetlands should be conducted. The Ramsar Convention has developed a handbook to carry out a review of laws and institutions to promote the conservation and wise use of wetlands. Following from this review, the next step should entail amending or modifying legislation and institutional procedures to preclude unwise use of wetlands. Such legislation should include the integration of Environmental Impact Assessments of policies, programmes, and plans that may impact upon wetlands. Countries will develop specific projects on legislative review that incorporates decentralised regulations, including by-laws at district level and the detection of traditional regulations that conserve wetland ecosystems.

National Wetland Strategies and Action Plans will be the next step in this element of the project for those countries that have a large percentage of their population dependent on wetlands. Thus, each country will assess whether it needs a National Wetland Policy. If yes, the development of such policies will include discussions on how to include and/or adapt the latest Ramsar resolutions on e.g. participatory management, water, dams climate change, invasive species and agriculture.

11. Objectives:

- a. Integrate wetland issues into national and sub-regional development of strategies, programmes and plans.
- b. Harmonise policies at national and sub regional levels.
- c. Develop appropriate wetland policies, strategies and plans

12. Activities:

- a. Review existing policies that impact on wetlands
- b. Establish a consultative process

- c. Preparation of national issues papers
- d. Preparation of draft policy and strategy documents
- e. Adoption of policy and strategy
- f. Integration of wetland policies into Poverty Reduction Strategic Papers

13. Expected Outcomes:

- Harmonised policies, strategies and plans
- Improved decision making
- Reduced conflicts
- Enhanced management at basin level
- Role and responsibilities of national institutions are clarified and reinforced
- Role and responsibilities of existing river/lake organisations are clarified and supported by member States
- Effective partnership between national institutions and between countries sharing the same river/lake basins
- National wetland committees are established and with the full support of government to advise decision makers on any serious issue to be considered and addressed
- Clear mechanism are set up for regular consultation on major wetland issues

14. Stakeholder involved:

Government sectoral departments and agencies, Civil society organisations, Private sector, Resource users

15. Existing documentation:

Poverty Reduction Strategic Papers, existing National policies /Strategies such as the Uganda Wetlands Policy and Strategic Plan, The Ghana National Wetland Strategy, National Environment Management Policies and legislation, National Biodiversity Strategies and Action Plans, Vision 2025, Africa vision for water, life and environment 2000.

Ramsar guidelines on:

- **Wise Use of Wetlands**
- **Developing and implementing National Wetland Policies,**
- Reviewing laws and institutions
- New guidelines on **management planning for wetlands**

16. Focal Points/Contact institution:

Government sectoral departments and agencies, Civil society organisations, Private sector, Resource users, National Wetlands Committees, River/Lake basin organizations.

PROJECT FACT SHEET

Wetlands Component of the Environment Initiative of NEPAD

1. **Thematic Area:** Wetlands.
2. **Project Title:** Valuing Africa's freshwater ecosystems in economic development and poverty alleviation
3. **Duration:** Five years.

4. **Planned timetable:** 2004-2008
Year 1: Development of valuation criteria, methodology and guidelines and start on capacity building
Year 2: Conduct valuation activities of representative wetland types
Year 3: Cost benefit analysis and strategic environmental assessment integrated into development planning decisions
5. **Zone of Intervention:**
Sub-regional and basinwide
6. **Linkages:**
Ramsar (guidelines on wetland valuation in preparation);
Dialogue on Food, Water and Environment
7. **Total Estimated cost:** US\$ 15 million
8. **Existing level of funding:** US\$ 4.5million
9. **Additional Funding:** US\$ 10.5million
10. **Project background and rationale:**
Wetlands are acknowledged and recognised as the most productive of the region's ecosystems that provide a wide range of goods and services which sustain millions of people's livelihoods as well as a diversity of wildlife populations.

Despite the acknowledged importance of the functions, products and attributes of wetlands, these systems are increasingly being degraded and lost at alarming rates. The main reason is the unregulated and over exploitation of wetland resources by the ever growing competing demands to satisfy a diversity of needs. The problem is aggravated by the incessant ravages of drought. A compounding effect is the low profile accorded wetlands in developmental decision-making processes due to the non-existence of quantified and articulated wetland values and policy.

Failure to recognise wetland values is a root cause of wetland loss, which is costing countries of the region substantial, if often unseen, amounts through loss of wetland services and functions. At the same time, the economic value of wetlands in terms of their multiple functions - ranging from their provision of clean water, flood control, fishing stocks, and others - are poorly known. Such information is critical to inform decision making regarding the future of wetlands in the context of sectoral and development planning. The establishment of demonstrable wetland values will be used as input to the development of wetland policies, legislation, management plans and the related decision making processes.

The role of "valuation" is to attempt to assign quantitative and qualitative values to goods and services that are provided by wetland resources irrespective of their known and unknown market prices. The main objective of valuation will be to assist management decisions through demonstrable overall efficiency of the various competing uses of wetland resources. Valuation will aid decision making on how best to utilise a given wetland system or the water flowing into it, assuming that the decision makers are aware of the objectives and limitations of valuation. Ultimately, valuation is concerned with the allocation of wetland resources in a manner that improves human welfare while maintaining the ecosystem in a self-sustaining state.

11. Objectives:

To improve knowledge on the direct and indirect economic value of wetland services and functions in order to promote their conservation and wise use as an integral component of sustainable development, food security and poverty alleviation strategies.

12. Activities:

- a. Literature review on methodologies and case studies (Regional)
- b. Workshop of experts to review and finalise draft valuation methodology (Regional /sub-regional)
- c. Training of multidisciplinary country teams in wetland evaluation (national/sub-regional)
- d. Pilot valuations carried out at selected sites within basins (national/sub-regional)
- e. Review of pilot results and revision of methodology (national/sub-regional)
- f. Expansion of evaluations to cover representative sites within priority basins (national/sub-regional)
- g. Publication of methodology and integration into regional training programmes (Sub-regional/regional)
- h. Dissemination of results and case studies (Regional /sub-regional/ National)

13. Expected outcomes:

- a. Improved decision making, policy and legislation on management of freshwater ecosystem
- b. Establishment of wetlands valuation capacity with a core group of experts and practitioners applying common methodology for wetland evaluation in priority basins
- c. Optimising wetland values and functions in poverty alleviation programmes
- d. Appropriate investment in enhancing values of wetlands

14. Stakeholders involved:

Government sectoral departments and agencies- fisheries, agriculture, water, tourism, energy, wildlife etc; Civil society organisations; Private sector; Resource users

15. Existing documentation:

Poverty Reduction Strategic Papers
Uganda Wetlands Policy and Strategic Plan and other examples
National Environment Management Policies and legislation
National Biodiversity Strategies and Action Plans
Vision 2025
Africa vision for water life and environment 2000
SADC Wetlands Valuation Proposal (IUCN)

16. Focal Points/Contact institution.

Government sectoral departments and agencies – Ministries responsible for planning and economic development
National Wetlands Committees
Ramsar
International organisations

ANNEXES

ANNEX 1

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ANNEX 2

CRITERIA FOR THE SELECTION OF PROJECTS UNDER NEPAD

The criteria for project selection and preparation will be guided *inter alia* by the following:

- *Regional, subregional and multi-country projects or regional impact*—Projects developed and selected under the action plan should have a subregional or regional outlook or involve several African countries.
- *Multi-focus*: Projects should aim as far as possible at integrating the three pillars of sustainable development.
- *Participatory nature*: Projects should be developed through a participatory approach with strong ownership with all partners including the government, the private sector, civil society including NGOs and the scientific community;
- *Programmatic approach*: Projects should be integrated in a comprehensive, programmatic as far as possible strategic approaches;
- *Sustainable Development Perspective*: Projects should be designed taking into account the need to alleviate poverty and promote economic growth;
- *Capacity Building*: Projects should integrate capacity development needs as part of their planned activities;
- *Maximise utilisation of African expertise*: Projects should aim at maximising the utilisation of local experts and institutions;
- *High rate of duplication*: Projects should be designed to ensure replication and dissemination of good practices and experiences.
- *Sustainability of activities*: Projects should have activities whose benefits are sustainable beyond the life cycle of the interventions;
- *Fundability*: Only projects likely to attract adequate domestic funding and external support shall be considered.
- *Promote sharing of experiences and learning*: Projects should aim at promoting sharing of experiences, enhancing regional co-operation and collective learning;
- *Performance criteria*: Projects should contain clear objectives, performance indicators and monitoring mechanisms;
- *Thematic balance*: Balance between the thematic areas of the Action plan should be sought;
- *Geographical balance*: Balance between the five Africa subregions should be sought based on the United Nations geographical groupings;
- Ensure gender mainstreaming in all projects.

ANNEX 3

GLOSSARY OF TERMS

AGENDA 21

A comprehensive set of programmes of action to promote sustainable development into the 21st century. Adopted, Rio, June, 1992.

Alien species

A species occurring in an area outside of its historically known natural range as a result of intentional or accidental dispersal by human activities (also known as exotic or introduced species) (UNEP-WCMC glossary)

Biodiversity

A condensed form of biological diversity means “the variability among living organisms from all sources including, *inter alia* terrestrial, marine and aquatic systems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems” (United Nations Environment Programme, 1992, p.27).

Biosphere Reserve

Established under UNESCO’s Man in the Biosphere (MAB) Program. Biosphere Reserves are areas of terrestrial and coastal/marine ecosystems or a combination thereof and area a series of protected areas linked through a global network. Each reserve is through appropriate zoning patterns and management mechanisms intended to fulfil 3 complementary functions:

- A conservation function (to preserve genetic resources, species, ecosystems and landscapes);
- A development function (to foster sustainable economic and human development); and
- A logistic function (to support demonstration projects, environmental education and training, and research and monitoring related to local, national and global issues of conservation and sustainable development.

To carry out the complementary activities of nature conservation and use of natural resources, Biosphere Reserves are organized into three interrelated zones:

- A core area that should be legally established and sufficiently large to meet the conservation objectives.
- A buffer zone which is clearly delineated and which surrounds the core area. Activities do not hinder core area conservation but help to protect it for example through research.
- A transition zone the area of co-operation that extends outwards, and which may contain a variety of agricultural activities, human settlements and other uses.

Benefit sharing

Refers to the sharing of results of bio-prospecting activity and benefits arising from the utilization or commercialisation of the biological or genetic resources fairly and equitably with the indigenous cultural community/local community/protected area/private landowner concerned and the national government by the Principal/Collector. Among the results and benefits that may be shared are payment for access to specimens, royalties, data, technology, capacity building, training, joint research.

CAPACITY BUILDING

Improving and building the technical and managerial skills and resources within an organization (World Bank. Glossary of Municipal Solid Waste Management Terms)

Co-management

The sharing of authority, responsibility, and benefits between government and local communities in the management of natural resources (UNEP-WCMC glossary).

Conservation

Protection from change, loss or damage or protection of valued resources through the protection, management and care of natural and cultural resources (Encarta, 1999).

Convention on Biological Diversity (CBD)

Adopted in Rio de Janeiro, Brazil, June 1992 and came into force December 1993. Signed by over 150 countries. Legally binding agreement with the three key objectives:

- Biodiversity Conservation
- Sustainable use of biodiversity
- Fair and equitable sharing of the resulting benefits

This Convention is the first global, comprehensive binding agreement to address all aspects of biological diversity: genetic resources, species and ecosystems. It requires countries to develop and implement strategies for sustainable use and protection of biodiversity and provides a forum for continuing dialogue on biodiversity related issues through the annual conference of the parties (COP) meetings.

Direct use value

The productive or consumptive values derived from direct use or interaction with a biological resource which may be marketed or non-marketed.

Ecosystem

A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit (Article 2 of the Convention of Biological Diversity).

Ecosystem Approach

It is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is based on the application of appropriate scientific methodologies focused on levels of biological organisation, which encompasses the essential processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of ecosystems.

Adopted by the Conference of the Parties of the CBD, at its Fifth Meeting in Nairobi, 2000, as the primary framework for action under the Convention (V/6). Recommended the application of 12 principles on the Ecosystem Approach.

- *Principle 1:* The objectives of management of land, water and living resources are a matter of societal choices.
- *Principle 2:* Management should be decentralized to the lowest appropriate level.
- *Principle 3:* Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.
- *Principle 4:* Recognising potential gains from management, there is usually a need to

understand and manage the ecosystem in an economic context. Any such ecosystem management programme should:

- Reduce those market distortions that adversely affect biological diversity
- Align incentives to promote biodiversity conservation and sustainable use
- Internalise costs and benefits in the given ecosystem to the extent feasible
- *Principle 5:* Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.
- *Principle 6:* Ecosystem must be managed within the limits of their functioning
- *Principle 7:* The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
- *Principle 8:* Recognising the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.
- *Principle 9:* Management must recognize that change is inevitable.
- *Principle 10:* The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.
- *Principle 11:* The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.
- *Principle 12:* The ecosystem approach should involve all relevant sectors of society and scientific disciplines.

Ecosystem Diversity

The variety of habitats, biotic communities and ecological processes in terrestrial, marine and other aquatic environments in a particular area, together with the processes and interactions that take place within and between these systems.

Ecosystem functions

The processes of production and dynamics of resources (organic matter, nutrients, biomass, elements) and energy through systems. A set of ecological processes responsible for providing an environmental good or service (Gilbert and Janssen, 1998).

Ecosystem resilience or resistance

Determines the persistence of relationships within a system, and is a measure of the ability of these systems to absorb changes in species composition and abundance and still persist without drastically changing the ecosystem performance.

Economic value (valuation)

The value of a good or service placed by an individual or society through his willingness to pay using market price or other indicators (and its measurement).

Endangered species

A technical definition used for classification in the United States referring to a species that is in danger of extinction throughout all or a significant portion of its range. IUCN The World Conservation Union (1994) definition, defines species as endangered if the factors causing their vulnerability or decline continue to operate (UNEP-WCMC glossary).

Environmental Impact Assessment

A method of analysis which attempts to predict the likely repercussions of a proposed major development (usually industrial) upon the social and physical environment of the surrounding area (UNEP-WCMC glossary).

Existence value

The benefit an individual or society receives from merely knowing that a good or service exists.

Society's willingness to pay towards the conservation of biological resources for their own sake regardless of their current or optional uses.

Genetic Diversity

The variation within and between populations of species (i.e. individual plants, animals and micro-organisms), measured in terms of the variations between genes or DNA or amino acid sequences, as well as numbers of breeds, strains and distinct populations.

Genetic Resources

The genetic material of plants, animals and micro-organisms of value as a resource for future social, economic, environmental purposes.

Hotspot

An area on earth with an unusual concentration of species, many of which are often endemic to the area.

Indigenous cultural communities or Indigenous people

Refer to a homogenous society identified by self-ascription and ascription by others, who have continuously lived as community on communally bounded and defined territory, sharing common bonds of language, customs, traditions and other distinctive cultural traits, and who, through resistance to the political, social and cultural inroads of colonization, became historically differentiated from the majority of other people.

Indirect use value

The value of an environment's ecological functions which support or protect the life forms dependent on that environment, or an economic activity.

Integrated Coastal Zone Management (ICZM)

Used to describe a continuous and dynamic process that unites government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the protection and development of coastal systems and resources (GESAMP, 1996).

Non-Governmental Organisation (NGO)

A nonprofit group or association organized outside of institutionalised political structure to realize particular social objectives (such as environmental protection) or serve particular constituencies (such as indigenous peoples). NGO activities range from research, information distribution, training, local organization and community service to legal advocacy, lobbying for legislative change, and civil disobedience. NGOs range in size from small groups within a particular community to huge membership groups with a national or international scope (UNEP-WCMC glossary).

Option value

The potential value of a resource for future (direct and indirect) use by protecting or preserving it today.

Ramsar Convention on Wetlands of International Importance especially as waterfowl habitat

Adopted in Ramsar, Iran February 1971 and came into force December 1975. Legally binding agreement now signed by over 110 countries with the following objectives:

- To promote the wise use and conservation of wetlands
- To make environmental assessments before transforming wetlands

- To establish nature reserves on wetlands
- Through management to increase waterfowl populations in appropriate wetlands

Restoration

The return of an ecosystem or habitat to its original community structure, natural complement of species, and natural functions (UNEP-WCMC glossary). Returning a former mangrove forest area to forest cover through hydrological restoration and either followed by planting of seeds, seedlings or saplings or allowed to naturally recolonize.

Species diversity

The variation of species and subspecies among living organisms on earth.

Stability

The ability of a system to return to the initial equilibrium state following a temporary disturbance.

Stakeholder

An institution, organisation, or group that has some interest in a particular sector or system (WHO. http://www.who.int/terminology/ter/Health_futures.html).
People who use, affect or otherwise have an interest in the mangrove ecosystem.

Sustainable development

“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987) or “the management and conservation of the natural resource base and the orientation of technological change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development (in the agriculture, forestry and fisheries sectors) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable” (FAO, 1988).

Sustainable Tourism

All forms of tourism development, management and activity, which maintain the environmental, social and economic integrity and well being of natural, built and cultural resources in perpetuity (Federation of Nature and National Parks of Europe, 1993, p. 5).

Total Economic Value (TEV)

Comprises direct use value, indirect use value, option value and existence value.

Valuation

The process of placing monetary value on goods and services that do not have accepted market prices (such as biodiversity).

Wetland Assessment:

the identification of the status of, and threats to, wetlands as a basis for the collection of more specific information through monitoring activities.

Wetland Inventory:

the collection and/or collation of core information for wetland management, including the provision of an information base for specific assessment and monitoring activities.

Wetland Monitoring:

the collection of specific information for management purposes in response to hypotheses derived from assessment activities, and the use of these monitoring results for implementing management. The collection of time-series information that is not hypothesis-driven from wetland assessment is here termed *surveillance* rather than monitoring.

ANNEX 4

ACRONYMS

AMCEN	African Ministerial Conference on the Environment
AMCOW	African Ministerial Conference on Water
CAW	Centre for African Wetlands
CBD	Convention on Biodiversity
CILSS	Permanent Interstates Committee for Drought Control in the Sahel
COP	Conference of Parties
EAC	East African Community
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization
GEF	Global Environment Facility
GESI	Global Environmental Sanitation Initiative
GNP	Gross National Product
GroWR	Global Review of Wetland Resources
IGAD	Intergovernmental Authority on Development
IUCN	The World Conservation Union
IWMI	International Water Management Institute
NESDA	Network for Environment and Sustainable Development
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
SADC	Southern African Development Community
SIDS	Small Island Developing States
SPCB	Strategic Plan for Capacity Building for Africa
TWG	Thematic Working Group
UN	United Nations
UNEP	United Nation's Environment Programme