

National Wetland Policies -- Uganda

The Republic of Uganda



National Policy for the Conservation and Management of Wetland Resources

Ministry of Natural Resources

1995

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FOREWORD

Wetlands, commonly known as swamps in Uganda, are a resource of considerable importance, just like forests, rangelands, arable land, and open water resources.

Wetland resources in Uganda have traditionally been utilized by the people as a source of materials for construction, crafts, furniture, and as hunting and fishing areas. Traditionally seasonal wetlands and margins of permanent wetlands have been used for grazing cattle, growing crops and as a source for domestic water. In addition, they are a major habitat for wildlife resources. Despite these values, wetlands have hitherto been regarded as "wastelands" and many have been reclaimed and degraded.

When the National Resistance Movement Government came to power in 1986, it inherited a chaotic situation in the social, economic, political as well as in environmental spheres, including wetlands. However, within eight months after taking power, the Government took decisive steps to halt the destruction of wetlands. In September 1986, Government issued administrative guidelines to curtail the devastation of wetland resources. In particular, a ban on large-scale drainage schemes was imposed until such time that a more elaborate, scientifically proven and socially harmonious policy was put in place. The purpose of this was to provide the basis for environmentally sound management and rational utilisation of the wetlands resources.

Over the last few years, the Ministry of Natural Resources, in consultation with all stakeholders has prepared a National Policy for the Conservation and Management of Wetland Resources. The policy has now been approved by government. It is, therefore very gratifying that I present to

you the National Policy for the Conservation and Management of Wetland Resources.

The policy aims at curtailing the rampant loss of wetland resources and ensuring that benefits from wetlands are sustainable and equitably distributed to all people of Uganda. In this respect, therefore, the wetlands policy calls for:

- no drainage of wetlands unless more important environmental management requirements supersede
- sustainable use to ensure that benefits of wetlands are maintained for the foreseeable future;
- environmentally sound management of wetlands to ensure that other aspects of the environment are not adversely affected;
- equitable distribution of wetland benefits;
- the application of environmental impact assessment procedures on all activities to be carried out in a wetland to ensure that wetland development is well planned and managed.

In order to put the policy goals and objectives into practice and to provide a legal framework for implementing the policy, wetland related issues have been adequately incorporated into the National Environmental Statute 1995. The Wetlands policy will be strengthened by a supplementary law specifically addressing wetland concerns.

The government of Uganda would like to extend her sincere thanks and appreciation to the Norwegian Agency for Development Cooperation (NORAD), the Government of the Netherlands and IUCN-the World Conservation Union for their financial and technical support which has facilitated the formulation of the wetlands policy. The government is further grateful to all the people of Uganda for their cooperation and participation in formulation of the policy.

With the Wetlands Policy now in place, Government wishes to assure all people of Uganda of her continued commitment to sustenance of wetlands for the present and future generations.

The onus is now on us to ensure that we conserve the wetland resources in the best way possible.

Henry Muganwa Kajura

Minister of Natural Resources

EXECUTIVE SUMMARY

Wetlands cover about 10% of Uganda's total land surface area and provide a wide variety of bio-physical and socio-economic functions. However, these benefits are in jeopardy due to poor management practices. The importance of wetlands to national development and the threats to their continued existence were recognised in 1986, when the government banned further large scale drainage and instituted the National Wetlands Conservation and Management Programme within the Department of Environment Protection to analyse existing activities and assess the full range of functions and values provided by wetlands. In addition, the programme concurrently carried out a sensitisation and awareness campaign and consultations to enlighten the public on the values and functions of wetlands and the need for their conservation and sustainable use.

Government has adopted the National Policy for the Conservation and Management of Wetland Resources to promote their conservation in order to sustain their values for the present and future well being of the people

In support of this aim, the National Wetlands Policy sets five goals:

- to establish the principles by which wetland resources can be optimally used now and in the future;
- to end practices which reduce wetland productivity;
- to maintain the biological diversity of natural or semi-natural wetlands;
- to maintain wetland functions and values;
- to integrate wetland concerns into the planning and decision making of other sectors.

Three principles apply in pursuit of these goals

(a) Wetland resources form an integral part of the environment and their management must be pursued in the context of an interaction

between conservation and the national development strategies and activities.

(b) Wetland conservation can only be achieved through a coordinated and cooperative approach involving all the concerned people and organisations in the country including the local communities.

(c) It is of vital importance for wetland conservation and management that the present attitudes and perceptions of Ugandans regarding wetlands be changed.

Thirty six specific policy statements are made on how the goals will be achieved, and a preliminary set of guidelines for wetland resource users is annexed.

In particular, the policy aims at:

- ensuring no drainage occurs unless more important environment management requirements supersede;
- ensuring that only non-destructive uses are carried out in and around wetlands;
- ensuring that wetland developments are subject to environmental impact assessment and audit;
- maintaining an optimum diversity of uses and users and consideration for other stakeholders when using a wetland.

The need for enacting a national law to regulate the management of wetlands resources is highlighted.

Finally, the role of the district authorities in controlling activities within wetlands is defined and procedures to be followed in dealing with applications from prospective wetland resource developers are outlined.

OVERVIEW

Wetlands, commonly known as swamps in Uganda, are a natural resource of considerable importance like forests, rangelands, arable land and fisheries.

The term "Wetlands" refers to an area where plants and animals have become adapted to temporary or permanent flooding by saline, brackish or fresh water.

For our purposes these include permanently flooded areas with sedge or grass swamp, swamp forest or high altitude mountain bog, as well as seasonal flood plains and depressions without flow ('Mbuga' or Dambo).

All wetlands are characterised by impeded drainage, but vary in detail depending on the period of flooding, depth of water, altitude, fertility of the surrounding soil and other environmental factors. They are nevertheless all characterized by having distinctive plants and animals which are adapted to flooding.

Uganda's rich endowment in wetlands, which accounts for about 10% of the land area, is mainly due to her geological past. Many wetlands originated with the upwarping of land associated with the formation of the Rift Valley. The warping was spread over a wide area impending and even reversing river flow.

The wide distribution of wetlands means a large proportion of the population have access to the utilization of wetlands, resulting in extensive degradation of the wetlands. This calls for particular urgency in their efficient management and sustainable utilization.

Wetland resources in Uganda have traditionally been used by the people as a source of building materials, for crafts, furniture and as hunting and fishing areas. Seasonal wetland margins have been used for grazing cattle, growing arable crops, and for domestic water. Wetlands provide important habitat for wildlife.

The high productivity and economic potential of wetlands in Uganda has barely been tapped and experience so far shows it will not be easy. Many attempts at conversion to farmland have failed because fertility was

dependant upon an inflow of organic matter and sediment or on retaining a high water table.

1.0 FUNCTIONS AND USES OF WETLANDS

The functional aspects of wetlands can be divided into those which are 'natural' i.e., those which would exist even with no human manipulation (referred to herein as ecological), and those which are created by human exploitation (referred to herein as socio-economic). These functions are itemised below and are not in order of importance because this varies depending on location and many of the functions are inter-related.

1.1 ECOLOGICAL FUNCTIONS

(i) Maintenance of the water table

The impeded drainage allows the water to stay in one place long enough to maximize infiltration This helps to recharge the water table. A high water table means that in the immediate surroundings of the wetland there is access to water supplies for plants.

(ii) Prevention of erosion

If it were not for the retarded flow of water, the region downstream of the wetland would receive the full erosive force of storm events, resulting in soil and stream bank degradation.

(iii) Reduction in extremes of flow

Wetlands act like leaky dams, ponding back water when they receive it and subsequently letting it flow through slowly. This results in maximizing the area of land which can be kept moist for productive purposes, as well as the lengths of time during the year for such activities.

(iv) Sediment traps

Material eroded from the surrounding catchment by rivers is sedimented out when the flow is slowed upon entering a wetland. Sediment retention prevents downstream resources of dams, farmland, rivers and lakes from being silted up.

(v) Wildlife habitats and centers of biological diversity

Wetlands provide habitat for a variety of plants and animals, some of which depend entirely on wetlands for their survival. They are natural habitats for the Sitatunga and the Shoe Bill, among other species. The Crowned Crane, Uganda's national bird breeds in wetlands with a preference for seasonal grass swamps.

1.2 SOCIO-ECONOMIC FUNCTIONS

(i) Plant products

Papyrus and similar plants have been traditionally harvested for everyday necessities such as thatching, mats, baskets while the palms and smaller-sized trees are used as structural building materials

(ii) Fishing

Wetlands harbor a substantial population of fish, which have traditionally been caught as an important food item in many parts of Uganda which are far away from the main lake fisheries.

(iii) Cattle grazing

The marginal parts of wetlands, where the soil is permanently or seasonally moist, have for long been used as grazing areas for livestock especially during the dry season.

(iv) Water supply

Wetland plants have the capacity to take out impurities from the water thus filtering it. Because of this function, it has been possible for rural communities to obtain a pure water supply at no cost.

(v) Nutrient and Toxin retention

Because wetland vegetation will strip out nutrients from the in-flowing water, this protects the quality of water down stream. They also have the ability to strip toxic substances from in-flowing water.

(vi) Tourism

The diversity of wetland biological communities have a potential for earning tourism income.

2.0 WETLAND RESOURCE PROBLEMS

These problems derive from two sources. Firstly, there has been a traditional lack of recognition of wetlands as anything but unusable wastelands. In previous times when there was enough and easily cultivatable land, the extra work required to exploit waterlogged areas was too great to bother with. This has led to the second general problem, that the exploitation has often been unbalanced, excessive, and inappropriate for the resources. The results have frequently been an irretrievable loss of an important source for sustainable production.

It is important to appreciate that the problems do not arise because of development as such, but because of development which does not take all the requirements of a community into consideration.

The following are among others, the specific problems

(i) Water loss

Wetlands have commonly been drained to enlarge the area of farmland. But drainage of wetlands causes loss of valuable water which would otherwise be available for plant growth.

(ii) Reduced runoff control

If drained, the ability of wetlands to control water flow is lost, as is also the downstream erosion prevention, as well as the seasonal spread of the moist areas for fast-maturing crops and for grazing

(iii) Soil deterioration

Exposure of wetland soils to drying can frequently lead to their acidification, caused by the conversion of sulphide in the original wetland to sulphuric acid. The soil can shrink upon drying and become too thin and friable for good agriculture.

(iv) Traditional use loss

Traditional harvesting of natural vegetation or fishing and hunting as well as a good water supply will be lost if wetlands are completely converted to large-scale exploitation, such as cash crop farming which is a mono-culture activity.

(v) Restricted ownership of the resource

Although conversion to cash agriculture may yield a great amount in the short term, such production tends to be restricted to one or few investors, while reducing or eliminating the various type of production which previously went to many individuals in the community.

(vi) Reduced economic flexibility

Reducing the diversity of productive activity limits the options for adjusting to new economic conditions when they occur later on.

(vii) Crop pest risks

Large areas of monoculture, such as rice growing, are always susceptible to pest invasions. While this in principle might be dealt with by agricultural control methods, these can be expensive and difficult to manage, and beyond the capacity of the wetland developer.

(viii) Health problems

When people come into increased contact with static and unpurified water, as in rice-growing or many other farming practices, an increase in the incidence of bilharzia infections can be expected. This would have a grossly debilitating effect on the community using the wetland calling for unnecessarily heavy investment in health facilities that would have otherwise been avoided.

3.0 GOVERNMENT RESPONSE

Although wetlands conservation and management is a shared responsibility for all Ugandans, Government has a leading role to play. The various functions and related problems of wetlands enumerated above are critical for their sustainable use and the general socio-economic development of the nation.

It is also an international responsibility of government to conserve wetlands and sustainably utilize them under the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, of which Uganda is a signatory and Contracting Party.

To carry out these shared responsibilities with respect to the country's wetlands, Government has outlined broad aims which are also supported by a number of specific goals. Further, guiding principles will be presented to govern the manner in which the National Policy for the conservation and management of wetland resources will be implemented.

The National Policy on the Conservation and Management of the Wetland Resources complements the goals and objectives of the National Environment Action Plan (NEAP) process and sectorial policies including those of fisheries, forestry, wildlife, water, land tenure and soils, among others, as well as the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat.

4.0 AIM

The overall aim is to promote the conservation of Uganda's wetlands in order to sustain their ecological and socio-economic functions for the present and future well being of the people.

5.0 GOALS

In support of the above aim, government will strive to achieve the following goals.

- (1) Establish the principles by which wetland resources can be optimally used, and their productivity can be maintained into the future.
- (2) End existing unsustainable exploitative practices in wetlands to avert the decline in their productivity.
- (3) Maintain a biological diversity in wetlands either in the natural community of plants and animals or in the multiplicity of agricultural activity.
- (4) Maintain the functions and values derived from wetland resources throughout Uganda.
- (5) Promote the recognition and integration of wetland functions in resource management and economic development decision making with regard to sector policies and programs such as forestry, agriculture, fisheries, wildlife and sound environmental management.

6.0 KEY PRINCIPLES

The National Wetland Conservation and Management Policy, in pursuance of the above goals, will be based on the following principles:

- (a) Wetland resources form an integral part of the environment and their conservation must be pursued in the context of an interaction

between conservation and the overall development strategies and activities.

(b) Wetland conservation can only be achieved through a co-ordinated and co-operative approach involving all the concerned people and organisations in the country, including the local communities.

(c) It is of vital importance for wetland conservation and management that the present attitudes and perceptions of Ugandans regarding wetland be changed.

These basic policy principles will be brought to bear through the strategies described herein below.

7.0 SPECIFIC POLICY STRATEGIES

All the strategies herein are deemed to be of critical importance for the success of this policy and are therefore not taken in order of priority.

7.1 Drainage of Wetlands

Uganda has experienced massive drainage of wetlands for human development activities. The effects of this drainage are visible in many parts of the country.

Strategy

i) There will be no drainage of wetlands unless more important environmental management requirements supersede.

Explanation: Artificial large-scale removal or exclusion of water from a wetland by whatever means constitutes drainage. This may be by pumping, by excavation of water channels and perhaps combined with excessive growing of trees. Other drainage means may include building of dams upstream of a wetland. Such modifications should be avoided.

7.2 Environmentally sound management

Wetlands, other natural resources and the environment are inter-related. Most users of wetland resources do not take into account other aspects of the environment, leading to adverse effects on the environment.

Strategy

(i) Only those uses that have been proved to be non-destructive to wetlands and their surroundings will be allowed and/or encouraged. These include water supply, fisheries, wetland edge gardens and grazing.

Explanation: A key issue in the management of a natural resource is whether its use causes adverse effects on the environment. For example, the production of bricks from clay soil leads to deforestation around the brick-making kilns, which is environmentally degrading. However, the smoking of fish caught in a wetland, using papyrus (which could be sustainably harvested) for fuel may be environmentally sound and can reduce the exploitation of fuel wood supplies in the area.

7.3 Sustainable use of Wetlands

National economic and social prosperity depends on the maintenance of a high quality environment. There is therefore need to balance development with conservation of the environment.

Strategies

(i) Wetlands may be utilized in such a way that they do not lose traditional benefits presently obtained from them.

(ii) Any decision to use wetlands must consider the requirements of all other users in the community.

Explanation: Sustainable use of a wetland is defined to mean utilization which ensures that the products or services derived from

that use are available at the same level for the foreseeable future. For example, yields from fishing or harvesting of papyrus should be set at a level that can be maintained for the foreseeable future.

7.4 Conservation of Wetlands

Wetlands are important habitats for a variety of biological resources, some of which depend entirely on wetlands for their survival

Strategies

- (i) Government will establish fully "Protected Wetlands Areas" of important biological diversity.
- (ii) Government may also establish certain wetlands which will be used for partial exploitation such as research.
- (iii) No modification, drainage or other impacts will be entertained for the so-protected wetlands.
- (iv) Parts of utilized wetlands will be set aside for conservation activities and/or protected from modification, drainage or exploitation

Explanation: Conservation of some wetlands to protect indigenous species of plants and animals is essential for the future biodiversity of Uganda. Many attributes of wetlands remain to be discovered and therefore, complete protection of certain ecologically important wetlands is necessary. Uganda already has an internationally important wetland at Lake George, and also other important wetlands outside the reserves, e.g. the edges of Lake Victoria need to be protected.

7.5 Water supply and effluent treatment

Rapid population growth and the increasing rate of development require sufficient and steady amount of water supply and discharge of effluent at an affordable cost. Many urban settlements including Kampala City are

dependent on wetlands for water supply, treatment and discharge of effluent.

Strategy

(i) Any wetland serving as a source of water supply or receiving effluent as part of a designated service to any human settlement shall be declared a fully protected wetland from any encroachment, drainage or modification.

Explanation: Wetlands can preserve the purity of water by their filtration capacity. One of the important reasons for this policy arises from extensive draining of wetlands for horticulture where these areas also serve as water purification centres. Such drainage has led to a dangerous situation where farmers and members of the community may come into bodily contact with raw sewage during farming and domestic activities.

7.6 Tenure and use

Wetlands have in many instances been referred to as "wastelands". In order to elevate wetlands from this status and to recognise them as a useful resource, there is need for the Government to continue having control over their management, until such a time that developers have understood the role and importance of wetlands in the environment.

Strategies

(i) All wetlands are a public resource to be controlled by the Government on behalf of the public. There shall be no leasing of any wetland to any person or organisation in Uganda at any given moment and for whatever reason.

(ii) However, communal use will be permitted, but only if environmental conservation and sustainable use principles and strategies of this policy are adhered to. This communal use may be terminated by the Government if it is found that the community or

any person has not adhered to the environmental obligations, principles and strategies of this policy.

(iii) All future land tenure documents including maps and layouts will indicate whether the area contains a wetland and will accordingly exclude these wetlands from tenure.

(iv) The layout will further be advertised in the parish where land is to be given out for a period of 30 days.

(v) Government will include wetland conservation considerations in its national land use plan so as to maintain the ecological character of wetlands.

(vi) Government will issue permits for wetland developers and users. It also reserves the right, for the national and public good, to issue a permit to a single authority for the management of an entire wetland on behalf of the community.

Explanation: Wetlands belong to the public but contrary to what might be expected from this ownership status, the Uganda Land Commission has often leased wetlands. Government consequently lost control of any protective or conservatory requirements. The maps used for the leasing inadequately distinguished wetlands from the surrounding dry land and the layouts were not widely advertised. While there is a necessity to prevent the sequestering of wetland resources into the hands of a few private lessees, this has to be balanced against the legitimate needs of users who will not be encouraged to use long term environmentally sound practices unless guarantees of long term occupation exist and consequently there is freedom from interference by conflicting users.

7.7 Recovery of previously drained wetlands

Many wetlands have been drained or modified especially in South west and eastern Uganda. This has led to loss of many would-be valuable resources before a full assessment has been carried out.

Strategy

(i) Government may require that some wetlands which have already been drained, should be allowed to regenerate. For this purpose, Government aims at restoring the soil hydration so as to re-establish the wetlands vegetation as far as is ecologically possible. Such an operation may range from rehabilitation of wetlands along distance channels in the case of lease holder, to full rehabilitation after the lease has been cancelled or eviction in case of users with no leases.

Explanation: Previous Government policies, especially in the colonial and immediate post-colonial eras, allowed utilization of wetlands in a "planned" way. However, no guidelines were given and in the process that policy has been found to be unsustainable and led to massive drainage especially in Kabale, Bushenyi and Iganga. New schemes (rice) have tended to make people copy such massive drainage and this has led to adverse effects.

7.8 Environmental Impact Assessment (EIA) and Monitoring

Development activities in general tend to impact upon natural resources and the environment in various ways. Assessment and evaluation of such impacts helps to minimize the economic and social costs of preventing damage before occurrence as compared to restoring a degraded wetland.

Strategies

(i) There will be a requirement that all proposed modifications and restorations on wetlands be subject to an EIA, the result of which will determine whether such restoration or modification should proceed and if so to what extent.

(ii) All planned new wetland developments will be subjected to an EIA process to determine the required environmental controls.

(iii) Those which have been subjected to EIAs will continuously be monitored to assess their impact on the environment and where the

impact is detrimental, Government will require that such a development be halted.

Explanation: An Environmental Impact Assessment (EIA) is a detailed technical document which determines the legally binding environmental management measures to be incorporated into an economic development programme. EIAs are an essential management tool of any environmentally sound development planning in any society.

7.9 Developing public awareness

Very often wetlands are degraded because the public is either not fully aware or do not appreciate the diversity of values and functions of wetlands. Public awareness is therefore essential in creating a commitment and positive attitude towards conservation and sustainable utilisation of wetland resources.

Government will promote public awareness and understanding of wetland resources and actively encourage participation of the public, local government authorities and institutions. This recognises that implementation of this policy depends on whether it is realistic in terms of social acceptability and technical feasibility. In this regard the following measures and strategies will be taken:

Strategies

- (i) Design and deliver a National Public Awareness campaign on wetlands resources in cooperation with other natural resource sectors of the country and target such awareness at the wetland resource users.
- (ii) Ensure that the public awareness campaign is integrated with other resources users' campaigns both at district and national levels.
- (iii) Disseminate awareness on the importance of wetlands through leaflets, posters, radio, television and other media.

(iv) Ensure wide circulation of guidelines for wetlands developers.

(v) Develop specific rural wetland development demonstration projects with the aim of giving local communities better management capabilities of wetland resources.

(vi) Periodically monitor the public response on the need to conserve wetlands in Uganda.

7.10 Research and Inventory

Demand-driven research is critical for understanding natural resources such as wetlands. The fact that wetlands account for about 10% of the total land area justifies the need for research and inventories to be conducted. In addition, not enough research has been carried out on the viability of wetland resources.

Strategies

(i) Carry out research into wetland values and functions so as to determine their capacity to perform their various functions.

(ii) Carry out a full inventory of wetlands to determine their location, status and human values.

7.11 Capacity Building

One of the reasons for the unabated degradation of wetlands has been the inadequate human capacity to manage, understand and give appropriate advice on wetland management. There are indeed very few cadres knowledgeable in the efficient management of wetland resources.

Strategies

(i) Government will re-train extension staff of relevant line ministries at District level to equip them with knowledge and skills to facilitate their supervisory role.

(ii) Government will also establish a mechanism and develop capacity for carrying out Environment Impact Assessments on proposed wetland development projects.

7.12 Promoting International actions

Wetland resources have trans-boundary significance. They serve as habitats for migratory waterfowl and other fauna, and therefore inevitably require regional and global approaches.

Strategies

(i) Government will promote and actively participate in regional and international efforts to conserve and sustainably utilize wetlands and encourage the involvement of other Countries in the conservation of wetland resources.

(ii) Government will continue to promote her participation in the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 1971) and other conventions and treaties which are related to wetlands conservation including designating more areas as wetlands of International Importance.

(iii) In addition, Government will endeavor to promote the conservation and maintenance of the ecological character of Lake George as a wetland of International Importance.

7.13 Wetlands legislation and Institutional arrangements

Wetlands have been marginalised and regarded as 'wastelands'. They therefore, need a strong government institutional arrangement and a sectoral national legislation in order to reverse the high rate of degradation and ensure sustainable management. Since wetlands are a multi-sectoral resource, there is need to create and establish an appropriate institutional arrangement for their management.

Although there are sectoral laws that refer to some aspects of wetlands such as water, or land or prevention of pollution, there is no comprehensive law for management of wetlands as an ecological entity.

Strategies

- (i) Enact a national law for regulating the management of wetland resources
- (ii) Encourage district authorities to make bye-laws for the proper management of wetlands
- (iii) Disseminate the broad guidelines provided herein, to district and urban authorities, as well as wetland users, researchers, academic institutions etc.
- (iv) Establish an inter-ministerial policy implementation institution.

ANNEX 1

GUIDELINES FOR WETLAND RESOURCE DEVELOPERS

Introduction

These guidelines are intended for persons proposing to use wetlands, for purposes of increasing the production of food and other goods and services. All users of wetlands are reminded that wetlands are a national resource and that the principles of environmentally sound management and sustainable use, as declared in the National Policy for Wetland Resource Management, must be applied to such use, and as defined herein.

No Drainage of wetlands

Drainage may be defined as the artificial large scale removal or exclusion of water from a wetland, which lowers the water table so that it does not rise to the soil surface. This practice radically alters the potential of the wetland

and destroys its function as a natural regulator of water flow and storage. It is recognised that in the interest of the other principles listed, some modifications of water may be necessary.

Definition of Sustainable Use of Wetlands

Sustainable use is defined as the practice of wetland utilisation which will ensure that the production of goods or services derived from that use, are available at the same level in perpetuity. For example, yields from a fishing activity should be set at a level that can be maintained for the foreseeable future, i.e. sustainably.

Environmentally sound Management

A key issue in the management of any resource is whether that management causes adverse effects on the environment.

For example, the production of bricks from clay soil in a wetland leads to destruction and deforestation around the brick-making kilns, which is environmentally damaging and therefore unsound. However, the smoking of fish caught near a wetland, using papyrus briquettes or in semi-dried form, for fuel may be environmentally sound and will avoid the depletion of wood fuel supplies in the area.

Optimum diversity of use and users

Maintaining a diversity of traditional uses, and perhaps adding new uses where appropriate, means that the diversity of fauna and flora are retained in the wetland. This in turn will optimise the harvestable yield and ensure flexibility for later adaptations to changing circumstances.

Development through Environment Impact Assessment.

An Environment Impact Assessment (EIA) is a detailed technical document which determines the legally binding environmental management measures to be incorporated into an economic development programme. EIAs will be carried out by people knowledgeable in practical aspects of wetland management and the relevant economic and sociological aspects

of the development. The administration of EIAs will be an important activity of environmental management.

SPECIFIC GUIDELINES

It should be understood that these guidelines are an on-going process and they will be supplemented as more information becomes available.

1. TRADITIONAL USES AND ACCESS RIGHTS

People living adjacent to a wetland may have been deriving benefits from that wetland for many years. These benefits may include cutting of trees, reeds, water supply, fishing, grazing etc. Any change of use of a wetland must allow those traditional uses to continue, without loss or hindrance of any other user.

2. WATER BALANCE ACTIVITIES

(a) Users of a wetland must ensure that the overall water balance is maintained so that the surface does not dry out.

Ridging and trenching may be performed within the wetland, allowing the growth of crops requiring drier soils, as long as the water level does not fall below about 0.5 metres from the top of the ridges.

A wetland shall under no circumstances be drained.

b) Bunding of fields to control the water level within the wetland must similarly ensure that the water table does not fall below about 0.5 metres of the soil surface.

3. PAPYRUS HARVESTING

Harvesting papyrus is a traditional usage which should always be catered for in the planning of multi-purpose use of wetlands. The frequency of harvesting one area should not be greater than once in every 15 months,

otherwise the rate of growth and the amount which can be harvested will decline

Separate areas should be set aside to be harvested in sequence, so that a continuous supply of papyrus can be maintained.

On no account should papyrus be burnt, as doing so reduces the amount which can be harvested.

4. NATURAL FISH STOCKS

The catching of those species of fish which normally inhabit wetlands should be encouraged. However, to prevent the fish stocks from being overfished, the mesh size of gill nets should not be less than 2 inches (stretch dimension). Traditional catching methods using traps and spears need not be restricted.

It is allowed that the populations of these fish can be increased by constructing channels at the edges of wetlands and by excavating ponds.

5. FISH CULTURE AND FISH PONDS

(a) Fish ponds constructed within a wetland should be constructed on the sloping sides of the wetland. The recommended practice is to make use of gravity flow of water from the spring line which often arises from the soils at the edges of wetlands. Waste water from the ponds may be allowed to flow into the wetland. It is unwise to site a fish pond low in a wetland, as seasonal flooding can cause loss of stock and damage to bunding.

(b) No fish species may be cultured that is not indigenous to the wetland without specific permission in writing from the Commissioner of Fisheries in consultation with the Department of Environment Protection (DEP).

(c) Wetland vegetation may only be cleared under approval from the District authorities. Excavation of fish ponds into a wetland must preserve a favourable ratio of surface area to perimeter of

vegetation. Individual ponds should not exceed a size of 1000 square metres (0.1 hectares), and there should be sufficient uncleared vegetation separating the ponds for use by other activities.

6. GRAZING OF CATTLE

(a) Grazing of cattle in wetlands, particularly seasonal wetlands, is permitted but this should be considered as a public amenity to all those who require it, and fencing should not be erected to exclude any user or group of users.

(b) Notwithstanding paragraph 6 a, above, there will be a maximum total number of cattle which will be able to use the productivity of the wetland sustainably. This number will vary from place to place, and so planners should seek specialist advice from the ministry responsible for advice on the best numbers to be kept in any particular wetland. They should also undertake to obtain the cooperation of the cattle owners in this regard.

(c) The practice of annual burning of wetlands is banned unless beneficial management from such activity is demonstrated to the District authorities and is approved.

7. PROTECTION OF THE CATCHMENT AREA

It must be ensured that all areas upstream of a wetland are properly managed to prevent wetland degradation. Wetland plants should also be encouraged to grow at the edges of river banks.

8. CONTROL OF ACTIVITIES IN WETLANDS

The District authorities will control all activities in wetlands by regulating brick-making, requiring that the brick-makers form a voluntary society and be licensed in accordance with the National Policy on the Management of Wetland Resources.

PROCEDURES RECOMMENDED TO BE FOLLOWED BY PROSPECTIVE WETLAND RESOURCE DEVELOPERS

Unless the total area to be developed is less than 0.25 hectares, or as may be determined by the authorities, any developer shall provide an appropriate Environmental Impact Assessment based on the following:

- (a) Identify the wetland on a map at a scale of 1:50,000 and describe the current use of the wetland.
- (b) Describe the intended use of the wetland development by:
 - (i) Stating whether the use is for the benefit of an individual, a private company, cooperative society or a community organisation.
 - (ii) Providing a detailed description of the proposed activity e.g. farming, fishing.
 - (iii) Demonstrating that the proposed activity benefits the community, the economy and that it is both environmentally sound and sustainable.
- (c) The completed application and the E.I.A. should be sent to the District authorities, and copied to the Department of Environment Protection, after approval by the RC1 ,RC2, RC3 committees in the area concerned.
- (d) Any costs involved will be borne by the Developer.

PROCEDURES TO BE FOLLOWED BY THE DISTRICT AUTHORITIES AFTER RECEIPT OF AN APPLICATION

The District Resistance Council (DRC) should satisfy itself that the application has been properly considered by the lower RCs and should consult with the District Development Committee (DDC) on the appropriateness of the application The DRC will as far as possible follow the guidelines herein provided.

- (a) Inspect the proposed site and assess the likely impact of the development upon the environment, other users and the surrounding communities.
- (b) Evaluate the environment impact assessment.
- (c) Consult relevant Government departments for their advice.
- (d) Upon receipt of advice, the DDC may come to a decision and recommend to the DRC that the proposal be accepted, modified or rejected.
- (e) The DRC may direct as to whom will bear the cost of the approval or rejection of the proposal.
- (f) The DRC may impose any other conditions as may be appropriate.

CRITERIA FOR THE DRC IN CONSIDERING APPLICATIONS

- (1) At no one time should the entire area of a wetland be fully developed.
- (2) There should not be "too many" developments within a wetland.
- (3) Some representative wetlands or parts thereof should be left intact in a given area.

The local authorities will exercise reasonable discretion on the exact area of wetlands to be developed in accordance with the National Wetlands Policy and other prevailing policies on natural resources and the environment.

Ministry of Natural Resources