

CHAPTER 1: THE POLICY

The National Water Policy promotes a new integrated approach to manage the water resources in ways that are sustainable and most beneficial to the people of Uganda. This new approach is based on the continuing recognition of the social value of water, while at the same time giving much more attention to its economic value. Allocation of both water and investments, in water using schemes, aims at achieving the maximum net benefit to Uganda from its water resources now and in the future.

The basis on which the policy has developed is the “Water Action Plan (1995)”, which was a review of the water resources management issues and which provided the foundation for the subsequent water policy and legislation.

The future framework, within which the water sector now is set to function, consists of the National Water Policy (1997), the Water Statute (1995). To a large extent, the policies reflect the socio-economic, development and financial fabric prevailing in present-day Uganda; but with foresight to the future.

The policy has been developed under two distinct categories, namely: -

- (I) **Water Resources Management;** Covering the policy objectives, principles and strategies for the monitoring, assessment, allocation and protection of the resources and management framework. This is inherently a State responsibility as the custodian of this vital resource as enshrined in the Constitution (1995) and Local Government Act (1997). The necessary legislation, the Water Statute (1995) and regulations, have been developed for the purpose, are in place.
- (II) **Water development and use:** - Covering the policy objectives, principles and strategies for the development and use of water for:

- a) Domestic water Supply as defined in the Water Statute 1995.
- b) Water for agricultural Production.
- c) Other water uses including industry, hydropower, recreation and ecosystem needs.

This policy sets the framework for the water resources management and development and guides development efforts through:

- (i) Promoting better provision of urban and rural water supply and sanitation,
- (ii) promoting water for agricultural production,
- (iii) promoting water for hydropower generation,
- (iv) promoting water for industrial use,
- (v) promoting rational, optimal and wise use of the resources for all Ugandans and all sectors,
- (vi) promoting measures for controlling pollution,
- (vii) promoting the gathering and maintenance of reliable water resources information,
- (viii) promoting viable management options for the resources management and provision of services at all levels,

The policy is deliberately designed to be of a broad-based charter, which must be made known to all concerned parties and sector actors, and be adopted by all projects and programmes - whether public or private.

Due to the priority status of the domestic water supply sector within the broader context of water resources, a set of specific policies and strategies have been elaborated for this sub-sector as an integral part of the

present policy document, including linkages to sanitation, sewerage and health/hygiene aspects.

Equally important is water for production for which strategies and guidelines are described in detail with special focus on the provision of Water for Agricultural Production.

Specific detailed strategies and guidelines for provision of water for other water resource uses, (industry, power generation, tourism, mining etc.) must be developed by the responsible sector agencies, respectively, in harmony with the principles and stipulations presented in this document.

The policy is, among other things, to balance equity within and between generations (for example in assessing optimum use it must be recognised that short term economic benefits may be outweighed by long term social and environment costs).

The water policy is dynamic and evolving. It is created to serve the people and it will regularly be re-assessed to ensure that it is performing its role in pace with new experiences gained and changed circumstances in the society.

The process of balancing social and economic benefits as well as of determining environmental objectives should involve those affected, or their representatives, in weighing up the options on an informed basis. This should take place within the guidelines of national policy and within a national framework. The public trust role requires the Government to establish systems which achieves this result.

CHAPTER 2: BACKGROUND AND RATIONALE FOR POLICY

2.1 Main Water Resources Issues

Uganda's freshwater is a key strategic resource, vital for sustaining life, promoting development and maintaining the environment.

Rapid population growth, increased agricultural, urbanization and industrial activities, and the poverty in rural and peri-urban areas and habits of "environmental carelessness", are causing a serious depletion and degradation of the available water resources. Forests are cut down, soils are eroded, wetlands are drained, water resources dry up, channels and reservoirs are silted, and water bodies are polluted.

In addition, water resources management relies ineffectively on single-sector and top-down strategies, without proper holistic concerns and sense of partnership and shared responsibilities. An example is the prevalent poor or non-existent integrated land and water management practices.

Although Uganda is usually considered as being well endowed with water resources the country is, at an increasing rate, confronted with the following concerns: The seasonal and spatial variability of the water resources, increasing water demand, variation between distinct wet and dry years, considerable variations in the timing of the onset of seasons, variations in the amount of rainfall and stream flow.

There are increasing number of cases of water quality degradation caused both by natural and human factors. For example, the deterioration of the water quality of Lake Victoria is attributed to the direct industrial and municipal waste discharge, which has also lead to the spread of the water hyacinth. In general, the poor state of existing sewerage and sanitation facilities is a cause of great concern.

Human activities have an increasing impact on the availability and conservation of water. Increasing population pressure leads to deforestation, drainage of wetlands, overgrazing and intensive cultivation of the land. Changes in vegetation and in cultivation practices may lead to land degradation, soil erosion and siltation of water bodies, and may affect the hydrology and the water balance

with the risk of inducing unfavorable micro-climatic changes (droughts and floods) and desertification trends.

Potential conflicts are developing between upstream and downstream users. Locally, upstream riparian may use the water in ways, which, for instance, make the water quality unsuitable for the downstream users. Examples can be found where sewage is discharged upstream of points where water for human consumption is collected and used untreated.

Uganda fully lies in the River Nile basin and all Uganda's surface water resources are part and parcel of the transboundary watershed. The projected demands of the riparian countries will exceed the available resources and there are no formal agreements for protection of the water quality by upstream countries and its equitable utilisation, which may limit Uganda's unhindered access and use of water resources within her territorial boundaries.

There are many agencies dealing with water related issues and hence different policies regarding water use. There is therefore need for a holistic approach to water development and use, and hence this overall water policy to guide multi-disciplinary and multifaceted use of the resource.

2.2 Role of Water Resources in Development

The water resources of Uganda play an important role in the country's overall development efforts. The water supply sector is under expansion and small scale irrigation is being promoted and may in the future be of increased importance. The power supply of Uganda is almost totally dependent on hydropower. Sewerage and sanitation service requirements increase in step with improvements in water supplies and have important health implications. Fishing in lakes and rivers is a major component of the country's economy, and fish ponds along water courses are fast increasing in importance and numbers. Development of tourism is a high priority area

and is dependent on the natural beauty and quality of the environment.

Improved water supply and sanitation services have major social, economic and health impacts on life in general. Some of the benefits from water supply and sanitation also have a positive effect on investments in other sectors, such as education and industry.

In summary: Water is a key factor of production in e.g. manufacturing industry, power generation, mining and agriculture. It sustains the natural environment, and therefore it is not only the quantity of water available, which is critical, but also its quality - its fitness for use. For this reason, economic activities which can pollute water and render it unfit for other uses must be controlled.

2.3 Scope and Purpose of the Policy

Water is a key resource in the socio-economic fabric of our society and an important factor in the development potential of the nation. It is, therefore, imperative that proper water resources management procedures and structures are established. Through appropriately instituted mechanisms for water resources management, priorities can be established and optimal use of the nation's water resources planned.

The Water Action Plan (1995) has provided a framework that outlines policy options and guidelines for the protection and development of Uganda's water resources as well as recommends a structure for their management.

For many years, the legislation for the proper use of water and regulation of the water sector was inadequate, outmoded and scattered under different statutes and acts. The Government, therefore, initiated a water sector legislation study, which led to the formulation of a new comprehensive Water Statute (1995).

The preparation of the Water Action Plan and the water legislation study identified key policy issues and general principles, which have been

refined and summarized in a coherent manner as presented in this document.

The purpose of the policy document is to:

- (i) provide the background and explain the approach which guided the policy formulation,
- (ii) put forward the basic policy principles and strategies,
- (iii) outline the management structure, including roles and functions at the various management levels, i.e. at central, district and local levels,
- (iv) outline the major issues to be addressed, and ways and means by which they will be addressed,
- (v) outline the strategies for provision and management of domestic water supply and sanitation services,
- (vi) provide overall strategy principles for allocation of water for other purposes (industry, agriculture, power generation, etc.), and
- (vii) outline strategies for policy implementation.

The National Water Policy is intended to assist decision-makers and resource users in determining "who does what" and "how", and in making priorities in the national context as well as at the sectoral, e.g. private sector, local community and individual levels.

CHAPTER 3: POLICY FORMULATION CONTEXT

3.1 The International Agenda

The broad objectives of the International Drinking Water Supply and Sanitation Decade (IDWSSD), and its continuation in

the form of the Global Forum for Water Supply and Sanitation, have been endorsed by the Government of Uganda, since the inception of IDWSSD in 1980.

Likewise, the declarations and guiding principles emanating from the international fora on water resources management, which culminated in the UN Conference on Environment and Development (UNCED) in Rio de Janeiro (June 1992), have been endorsed by the Government of Uganda, especially Agenda 21's chapter 18 on freshwater resources.

This National Water Policy embraces these international resolutions, declarations and guidelines for the improvement of the water sector situation at country level.

The new mode of thinking on improving water resources management, endorses an integrated, multi-sectoral approach in the prevailing socio-economic context, including (a) treating water as a social and economic good; (b) relying on markets and pricing to determine water allocation among various sectors and user groups; (c) involving the beneficiaries and the private sector in managing water at the lowest appropriate level; and (d) recognizing that water is a finite resource that contributes to economic development and supports natural eco-systems.

On this basis the Government embarked on the much required task to define and introduce a comprehensive framework for proper water resources development and management as described further in the following chapters.

3.2 Regional Obligations

Uganda is by virtue of her location, both a lower and upper riparian in the Nile Basin. Ugandan interests lie within securing her equitable share of the water resources of this basin. Furthermore, it is in Uganda's interest to ensure that the good water quality in the water bodies within the national boundaries is maintained for sustainable use.

Based on the Government's overall policy of good neighborliness and promotion of regional cooperation for optimal resource use, Uganda's policy principles in the regional context adhere to the various currently accepted principles of international law on the use of shared water resources. Further, Uganda's participation in international, regional and basin-wide bodies of cooperation, like the Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile Basin (TECCONILE), Inter-Governmental Agency for Drought (IGAD), Kagera Basin Organization (KBO), Lake Victoria Fisheries Organization (LVFO) provides the basic policy framework.

3.3 Water Resources in the National Policy Setting

In addition to the various guiding principles adopted from the international experience outlined above, a number of policy initiatives at national level have been fundamental in shaping the water sector policy as presented in this document. The cornerstones in this process are (a) the new Constitution, (b) the decentralization and privatization policies, and (c) the Environment Management Policy and Statute.

Brief information about on how these broader policies relate to the water sector is given in the following sub-sections.

3.3.1 The Constitution

The Constitution for the Republic of Uganda (1995) includes basic policy statements related to the water sector as stipulated in the following quotations:

General social and economic objectives (Objective XIV)

The State shall endeavor to fulfill the fundamental rights of all Ugandans to social justice and economic development and shall, in particular, ensure that all Ugandans enjoy

rights and opportunities and access to education, health services, **clean and safe water**, work, decent shelter, adequate clothing, food security, and pension and retirement benefits.

Clean and safe water (Objective XXI)

The State shall take all practical measures to promote a **good water management system** at all levels.

The environment (Objective XXVII)

The State shall promote sustainable development and public awareness of the need to manage land, air and **water resources** in a balanced and sustainable manner for the present and future generations.

3.3.2 Decentralization and Privatization

In its efforts to revive the economy, the Government is spearheading a vigorous campaign to attract investment as well as privatizing public enterprises to encourage private management. Further, the public service is being restructured and rationalized to increase efficiency.

The Local Government Act

The enactment of the Local Governments Act of 1997, has defined roles for the different levels of governance in the provision and management of water related services and activities.

Especially the provision of water services and maintenance of facilities is the responsibility of local councils in districts and urban centres with the support and guidance of relevant central government agencies.

The Act aims at providing for a continuous process of decentralization, whereby functions, powers and services are devolved and transferred from Central Government to Local

Governments in order to increase local democratic control and participation in decision making, and to mobilize support for a development relevant to local needs.

National Environment Management Policy (1994) and Statute (1995)

The National Environment Management Policy and subsequent Statute include a key policy objective on water resources conservation and management as follows:

"...to sustainably manage and develop the water resources in a coordinated and integrated manner so as to provide water of acceptable quality for all social and economic needs...."

In addition, the environmental policy puts forward a number of more specific policy objectives, which have relevance to water resources management.

This present water policy has been developed in full harmony with and guided by the various policy and strategy statements contained in the National Environment Management Policy (1994) and the complementary National Policy on the Conservation and Management of Wetland Resources (1995).

The Water Statute, 1995

The Water Statute and related regulations provide for the use, protection and management of water resources and supply; and provides for the constitution of water and sewerage authorities; and facilitates the devolution of water and sewerage undertakings.

The objectives of the Statute are:

- (i) to promote the rational management and use of waters of Uganda,
- (ii) to promote the provision of a clean, safe and sufficient supply of water to domestic purposes to all persons,

- (iii) to allow for the orderly development and use of water resources for purposes other than domestic use, such as, the watering of stock, irrigation and agriculture, industrial, commercial and mining uses, the generation of hydroelectric or geothermal energy, navigation, fishing, preservation of flora and fauna and recreation, in ways which minimise harmful effect to the environment,
- (iv) to control pollution and to promote the safe storage, treatment, discharge and disposal of waste which may pollute water or otherwise harm the environment and human health.

The National Water & Sewerage Corporation Statute, 1995

The Statute provides for a corporation that shall operate and provide water and sewerage services in areas entrusted to it under the Water Statute, 1995. The main objectives are:

- (i) to manage the water resources in ways which are most beneficial to the people of Uganda,
- (ii) to provide water supply services for domestic, stock, horticultural, industrial, environmental and other beneficial uses,
- (iii) to provide sewerage services, in any area in which it may be appointed to do so under this Statute or the Water Statute 1995,
- (iv) to do anything connected or incidental to the above,
- (v) to develop the water and sewerage systems in urban centres and big national institutions throughout the Country.

The Ugandan Plan of Action for Children (UNPAC) 1992.

Following the World Summit for Children, New York September 1990, Uganda developed the Uganda National Plan of Action for Children (UNPAC), which was completed and published in 1992 by the Ministry of Finance and Economic Planning.

The Cabinet adopted the UNPAC as its policy document in the area of child survival, development and protection upon which government restructured resource allocations required to make the provision of basic social services a priority. The goal of UNPAC is:

“To establish survival, protection and development goals related to children and women for the 1990s that build on existing Government policies and sectoral plans.”

Strategy: Provision of basin minimum social services to as many Ugandans as possible in the fields of:

- primary health care
- clean water and basic sanitation
- primary education and adult literacy
- community care of children in need of help.

CHAPTER 4: WATER RESOURCES MANAGEMENT

4.1 Policy Objective

The overall policy objective of the Government for the water resources management is:

To manage and develop the water resources of Uganda in an integrated and sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs of the present and future generations with the full participation of all stakeholders.

4.2 Guiding Principles

The **Uganda Water Action Plan (WAP)** which was prepared during the period 1993-94 adopted and operationalised the guiding principles for water resources management as they emanated from the Dublin-Rio de Janeiro (UNCED) process and Agenda 21's Chapter 18 on freshwater resources.

The WAP adopted these guiding principles recognizing: -

- (i) freshwater as a finite and vulnerable resource, essential to sustain life, development and the environment,
- (ii) management of water resources at the lowest appropriate levels,
- (iii) the role of Government as an enabler in a participatory, demand-driven approach to development,
- (iv) the recognition of water as a social and economic good,
- (v) the integration of water and land use management,
- (vi) the essential role of women in the provision, management and safeguarding of water,
- (vii) the important role of the private sector in water management.

Preparation of the Water Action Plan was a process of identifying and analyzing water resources issues that needed attention, assessing potentials and constraints as well as identifying necessary short, medium and long term management needs and functions.

The Water Action Plan has provided the Government with guidelines and strategies for the protection and development of Uganda's water resources and a structure for their management at national, district and local levels.

The Water Action Plan has provided important inputs to the new water legislation and to formulation of this policy document.

4.3 Strategies

The water resources management strategies, which have evolved from the overall policy objective, are grouped within those supporting an enabling environment, those guiding institutional development, and those supporting an upgrading of planning and prioritization capacities.

A summary of the main strategies are as follows:

4.3.1 Enabling environment

Government as an enabler in a participatory, demand driven approach to development by:

- (i) legislation to support the policy,
- (ii) regulatory control only in response to need and at enforceable levels,
- (iii) regulatory controls combined with economic incentives,
- (iv) Water Action Plan process to provide dynamic management framework.

4.3.2 Institutional development

- (i) cross-sectoral coordination mechanism, with DWD as the lead agency,
- (ii) integrated approaches to project development,
- (iii) management functions delegated to lowest appropriate level,
- (iv) private sector involvement,
- (v) women's participation,
- (vi) water resources management capacities developed at all levels.

4.3.3 planning and prioritization

- (i) domestic demands to have first priority,
- (ii) allocation to other uses including water for production (agriculture, industry, hydropower) to be based on economic, social and environmental values of the water (most beneficial use),
- (iii) sustainable use to be a key element in planning,
- (iv) water quality and land use links recognized,
- (v) environmental impact assessments as planning tool,
- (vi) "polluter pays" principle recognized,
- (vii) economic incentives applied with regulatory instruments to avoid water wastage,
- (viii) regional cooperation for the shared water resources,
- (ix) wetlands to be recognised as an integral part of water resources systems,
- (x) holistic approach to water resources management, development and use.

4.3.4 Data collection and Data Dissemination

The Government shall promote public information and awareness by:

- (i) establishing and sustaining a monitoring and assessment system for water resources,
- (ii) establishment of a management information system (MIS) at all levels,

- (iii) dissemination of relevant information for planning, development and use of water resources,

4.4 Water resources management Functions

Considering the requirement of balancing the need for management at the lowest appropriate level, against the need for central monitoring and regulation, the key water resources management functions are as follows:

(i) International water resources issues

Uganda needs a coordinated strategy regarding international water resources issues, in particular related to the utilization of the Nile waters and safe guarding of the water quality of the lakes; Victoria, Kyoga, Albert, George and Edward. This is a national level function.

(ii) Policy making, planning and coordination

The integrated management of water resources and land-related issues requires policies and plans to be made both at the national and district levels. At the national level, policies will be formulated, regulations prepared, national drinking water quality standards set, and project activities in the sector coordinated. Based on the guidelines from the relevant sector agencies, the districts will set local priorities, by-laws and annual action plans regarding the use of water resources such as fish ponds, irrigated areas, livestock watering, rural and urban domestic water supplies. Major uses like hydropower generating and other uses with transdistrict and or transboundary implications will be dealt with at the national level but with full participation of the stake-holders.

The existing extension staff in the districts - who work in several sectors - will be coordinated in order to promote integrated and uniform information regarding the sustainable use of water and land resources.

Local level groups, within the framework of national and district policies, can manage the use of the resources, through local decision-making bodies such as the Village (LC1) and Sub-County Committees (LC3). The full participation of the communities must be promoted and ensured.

(iii) Water abstraction regulation

The use of water resources will be regulated through the administration of permits for water abstraction that specify the types of uses that need to be regulated as well as the abstraction fees to be charged. This function will initially be the role of Central Government through DWD. In the long term, when the districts have the capacity to make assessments of the impact of abstractions within their district boundaries, they will administer the application and permit procedures. The central level authority, i.e. the Directorate of Water Development (DWD), will carry out assessment of cross-boundary sources, and on this basis distribute block allocations of water rights to the districts concerned – which, at that juncture will then administer a permit system for the allocated amounts.

(iv) Wastewater discharge regulation

The management of a wastewater discharge permit system will be a permanent national function (under DWD in consultation with NEMA) because of the detailed technical expertise required, and because of the need to ensure adherence to international and national standards. The districts will comment on applications from their areas, organize public hearings and assist in monitoring that the rules governing permits are being followed. Penalties on waste discharge and effluent into open water bodies and river courses will be introduced. Environmental statements, audits and impact assessments in adherence with NEMA guidelines will be required as appropriate.

(v) Monitoring, assessment and Forecasting

The Government will be obliged to collect data and disseminate it for public knowledge, awareness and socio-economic development.

DWD will retain a national level role in: monitoring, assessment and forecasting of water resources and water quality; managing surface water, groundwater and water quality data banks; and disseminating data on water resources to relevant agencies and users. The Government will build the necessary capacity in DWD to carry out these functions.

The Meteorological Department is responsible for weather and climate data. The Department will collaborate with DWD in providing climate data for the water resource management.

In pace with the decentralization process the districts will gradually take over the tasks of checking that by-laws, regulations and permits are being followed, monitoring groundwater quality for domestic uses, and monitoring groundwater abstractions in relation to recharge.

Community groups and Local Committees will monitor activities having local impact on water resources, such as use of wetlands, forests and dumping of wastes - and they will report to the districts.

Monitoring and evaluation of the general trend in sector development efforts and water supply coverage levels will be established in DWD and appropriate capacity established at district and lower levels of governance.

(vi) Enforcement

Enforcement of standards, regulations and by-laws will be undertaken by DWD and the district administrations as appropriate, through the imposition of stipulated penalties and use of the judicial system.

(vii) Mediation

Village elders and the local government chief system will be used first for mediation. The

LC system, as appropriate, including the LC Courts, are the other structures which will be used for mediating disputes between individuals and groups regarding access to water resources and abstractions that do not require permits. All of these structures already function as mediators. Appeals can be handled administratively by the district committee responsible for water and the judicially by Magistrates Courts. At the national level, the Minister responsible for water will be the final administrative appeal possibility; while the judicial system will also have an appeal channel.

(viii) Capacity building

The Government through DWD will build the capacity to monitor and forecast seasonal variations in water resources as they are related to climatic variations. Capacity to objectively analyze water quality will be developed and sustained.

Continuous public information activities will have to take place in order to ensure sustainable management of water resources. DWD will have a pivotal role in this endeavor, and at the district level the integrated extension services will be trained to be able to disseminate information to the various users of water resources.

4.5 Management Structure

The existing institutional and management arrangements are not adequate to address the management of water resources in the country given its trans-boundary nature, the demand on the resources for development activities, the increasing pollution treats and the decentralization and devolution of powers to lower levels of Government. There is therefore need to streamline the management arrangements for water resources management as proposed in this policy and supported by the Water Statute, 1995.

The structure at **national, district and local levels** for handling the water resources

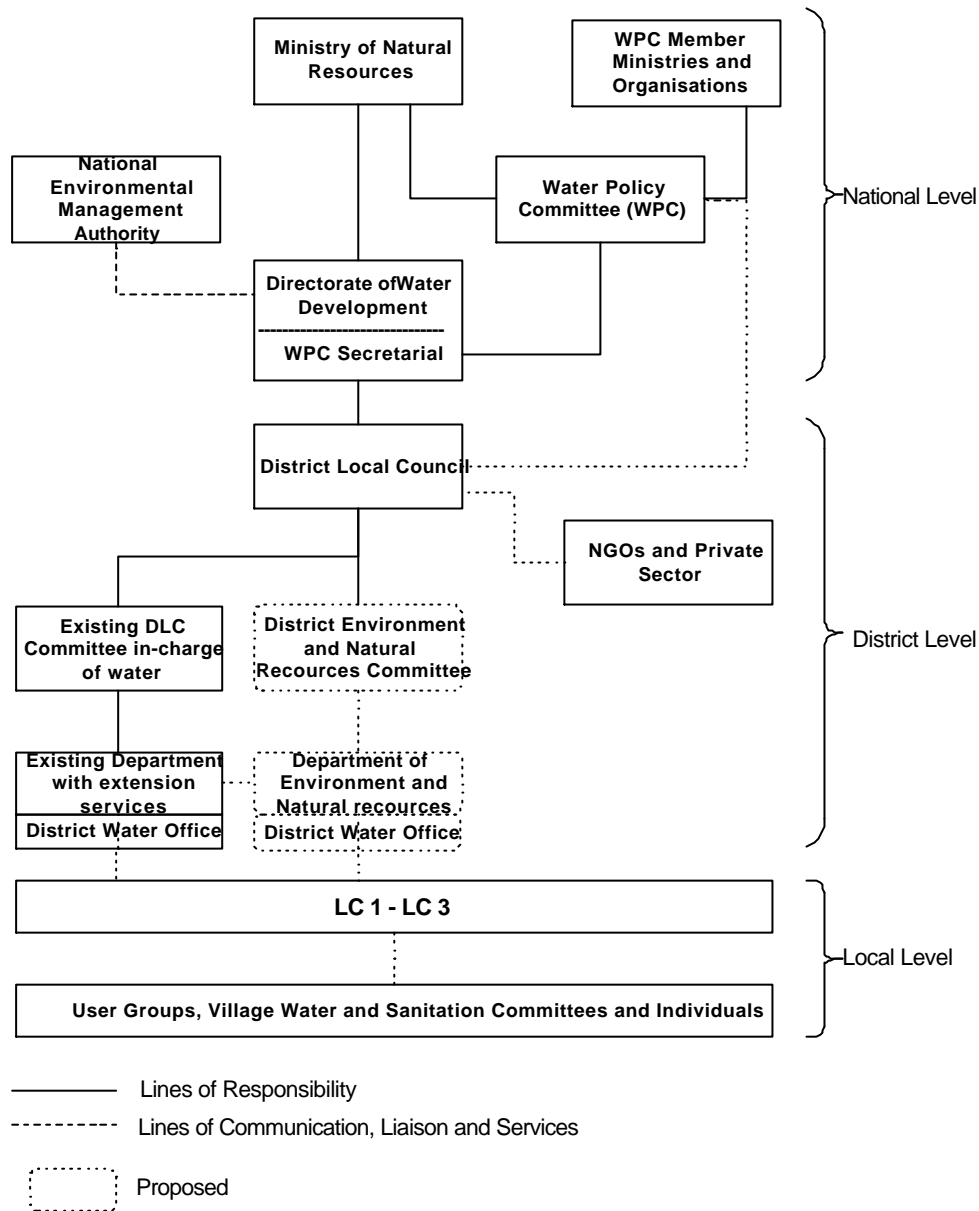


Figure 1, Organisational Structure for Water Resources Management

management functions outlined above is illustrated in **Figure 1**. The responsibilities are explained further in the following paragraphs:

(i) National level

The Minister for Natural Resources has overall responsibility for initiating the national policies, setting standards and priorities for water resources management in the country. The Water Policy Committee (WPC), will advise the Minister on the above functions and will initiate revisions to legislation and regulations and coordinate sector ministries' plans and projects affecting water resources. The

WPC will also coordinate the formulation of an international water resources policy.

Members of the WPC will come from relevant government ministries and departments, and will include representatives from district administrations, private sector and NGOs. The Chairman will be the Permanent Secretary of the Ministry of Natural Resources, and the Directorate of Water Development (DWD) will provide the Secretariat for the WPC. The functions and composition of the WCP are stipulated in the Water Statute (1995).

(ii) District level

It is recommended that District Councils form a District Environment and Natural Resources Committee and a Department with the same name comprising water, environment, forestry and meteorology. This structure should ensure coordinated management of natural resources and the environment. The districts should coordinate existing extension staff in the areas such as water, community development, health, agriculture, fisheries and livestock - to ensure that water resources and environmental aspects form part of an integrated extension strategy.

(iii) Municipal/Urban Council level

The districts, under the Local Government Act (1997), will have responsibility for water supply services. However, municipalities or town councils being large stakeholders in the water supply systems will play a leading role in partnership with the water user groups/associations/ authorities to operate, maintain and manage urban supplies for domestic and industrial use.

The urban councils will also handle licensing of industries, solid and sewerage waste disposal and drainage systems.

Every development of new water infrastructures, as well as making water available for a specific group of users, also offers an opportunity to promote the broader goals of water management e.g. a request by an industry to take water from a river provides an opportunity to review its waste disposal practices as well as its water requirement. The municipal and urban councils, therefore, will have an increasing role to play in the management and protection of water resources.

(iv) Sub-County level

Under the Local Government Act, the Sub-County is a legal entity and will have responsibilities in the areas of provision of water and sanitation services and protection of natural

resources including water, with the assistance of the extension staff.

(v) Local level

Water user groups will manage, operate and maintain point water sources. Community associations may also be formed for the purpose of managing resources such as a wetland area, a fishpond or an irrigation scheme when such a need arises. The existing Local Councils (LC 1 - LC 3) and local government Chiefs will play a role in setting local priorities and enforcing bye-laws, monitoring and mediating in water management issues.

(vi) River basin/catchment level

In the present Ugandan context, it has not been found necessary - and therefore it has not been elaborated on further in this policy document - to create river/lake basin management authorities, catchment boards or similar bodies. The Government will take the necessary steps if in future the requirement will arise for the creation of a river or lake basin management agency within Uganda where there are specific problems that can only be solved through such a management structure.

4.6 Role of the Private Sector & NGOs

In the previous sections, the policy outlined, related to the responsibilities and roles to be taken up by the various central government, district and local level authorities/user groups as part of the institutional structure for water resources management.

However, in order to achieve the objectives of Uganda's national development efforts and, more specifically, to implement the strategies set out in this water policy, all sections or interest groups of the Ugandan society - whether formal or informal - will have to be involved in partnership with the Government at the various operational levels.

Their development activities will abide by the basic tenants and requirements of good water resources management practices and standards.

4.7 Data and Information

Data and information is key to the rational and optimal management and use of the water resources. All developers and providers of water services shall provide data and information including abstraction records, drilling logs, installation records as well as information on equipment and techniques used for implementation and development of water resources. The Government shall, through DWD, collect, collate, analyze, archive and disseminate such information and data for public use and management of water resources.

CHAPTER 5: DOMESTIC WATER SUPPLY

5.1 Context

Domestic water supply, (As defined in the Water Statute, 1995) covers the provision of water to meet domestic demands for basic human needs including irrigating subsistence garden, watering subsistence livestock and for a subsistence aqua-culture.

One of the main problems facing the population is low accessibility to safe water facilities which currently stands at about 35% coverage level for rural areas and 60% for urban areas. It is also estimated that only about 45% of the population has reasonable sanitation facilities.

As stated previously the key criteria for water resources allocation is that: -

- First priority will be the provision of water in adequate quantity and quality to meet domestic demands; allocation of water to meet other demands (irrigation, livestock, industrial) will be done considering the economic, social and environmental value of water.

The intention of the policy with respect to water supply and sanitation is to enable the Government to meet the target goals set in the Uganda National Plan of Action for the Children UNPAC (1993).

The water supply sub-sector in this context incorporates (a) water supply in rural and urban areas, (b) sanitation and sewerage services, and (c) health and hygiene promotion.

5.2 Policy Objective

The supreme law of Uganda, the Constitution, states that every person is entitled to clean and safe water. With a balanced view to the national development efforts in other spheres of society, the Government's stated policy objective in the water supply and sanitation sector is:

"Sustainable provision of safe water within easy reach and hygienic sanitation facilities, based on management responsibility and ownership by the users, to 75% of the population in rural areas and 100% of the urban population by the year 2000 with an 80%-90% effective use and functionality of facilities".

5.3 Guiding Principles

At the end of the International Drinking Water Supply and Sanitation Decade (IDWSSD), the Global Consultation on Safe Water and Sanitation for the 1990s was held in New Delhi, India (September 1990) to draw conclusions from the lessons learnt during the Decade, and, on this basis, outline principles and strategies to guide the future sector development efforts internationally as well as nationally.

The "New Delhi Statement" under the main theme **"SOME FOR ALL - RATHER THAN MORE FOR SOME"** provides a set of overall guiding principles which have been adopted as part of Uganda's national

sector policy for provision and management of domestic water supply services.

The six principles are:

- (i) Protection of the environment and safeguarding of health through the integrated management of water resources and liquid and solid waste.
- (ii) Institutional reforms promoting an integrated approach, including changes in procedures, attitudes and behavior and the full participation of women at all levels in sector institutions and in institution making.
- (iii) Community management of services, backed by measures to strengthen local institutions in implementing and sustaining water and sanitation programmes.
- (iv) Financial viability of public utilities should be assured through sound financial practices, achieved through better management of existing assets, and widespread use of appropriate technologies.
- (v) Provision of services through demand driven approaches in which users are fully involved and contribute to the cost of facilities and services to promote ownership and sustainability.
- (vi) Allocation of public funds for water supply development activities will take into account that priority is given to those segments of the population who are presently inadequately served or not served at all, and who are willing to participate in planning, implementation and maintenance of the facilities.

5.4 Strategies

Against this background the strategies for implementation, provision and management of water supply, sanitation and sewerage services are as detailed in sections 5.4.1 to 5.4.5 below grouped under the five main headings, respectively:

- **Technology and Service Provision.**
- **Financing, Subsidies and Tariffs.**
- **Management and Sustainability Aspects.**
- **Private Sector Participation**
- **Coordination and Collaboration**

5.4.1 Technology and Service Provision

(i) Service level criteria

In rural areas, the basic service level for water supply means provision of 20 to 25 litres per capita per day from a public water point (protected spring, handpump equipped shallow well or borehole, or tap stand on gravity-fed scheme), preferably within 1,500 metres of all households. The service level in built-up areas and peri-urban zones, where public water points are introduced, is also 20 to 25 litres per capita per day, however, with a maximum walking distance not exceeding 200 metres.

Each public water point should not serve more than 300 persons. The difference in elevation between a household and the water point should not exceed 100 metres.

A demand-driven negotiation approach should lead to a level of service chosen with due consideration to walking distance, number of users per outlet, access to alternative water sources, as well as social barriers and affordability.

If users choose service levels above the basic level, they will be required to meet the added costs of such services. For urban water supplies, design figures in excess of 80 litres per capita per day for house connections are not considered justified for houses without waterborne sewerage.

(ii) Technology-water supply

Appropriate low-cost technologies should be selected, offering good possibilities for community participation in decision making and in physical implementation, inclusive of operation and maintenance of completed facilities, without compromising the role of water as a vital infrastructure for socio-economic development.

For rural and sparsely populated peri-urban communities preference should be given to point sources such as protected springs, handpump equipped shallow wells or boreholes, and gravity-fed piped schemes.

Motor or engine-driven pumps should normally only be used for water supply in urban areas where availability of regular power and trained operation and maintenance staff are ensured.

Only well-known and tested technologies and hardware, preferably locally made/available, should be used. Standardization of equipment, e.g. handpumps, will be applied only as a means of safeguarding the community-based maintenance system through easy access to spare parts, repairs, etc. on the open (private) market. Therefore, the types of pumps should be limited, and the technical specifications should be available in the "public domain" to avoid monopoly situations and over-dependence on donor preferences.

In accordance with the Uganda National Bureau of Standards (UNBS), the U2/U3 handpump (Uganda version of the India Mark II and III pumps) is the standard equipment to be used in deep groundwater settings (boreholes deeper than 20 m). In shallow groundwater settings three types, the U3 light-handle

pump, the TARA direct-action pump, and the NIRA AF 85 are to be field tested and monitored in order to select at most two models to be the standard equipment.

(iii) Drinking Water Quality standards

Until national water quality guidelines and/or standards are put in place, WHO guidelines for drinking water quality should be used with due consideration to specific local conditions and water use habits as reflected in the National Interim Rural Water Quality Guidelines (1995).

(iv) Technology-sanitation and sewerage

Sector programmes should always assess the need and plan for sanitation facilities and drainage of excess water in connection with provision of water supply. When found necessary, provision of such facilities should be part of the projects.

The community should be involved in choosing sanitation technology and emphasis should be put on acceptability (culturally and financially) by user communities. Preference should be given to low-cost on-site methods (improved household latrine including use of concrete slab, sanplat, and ventilated improved pit latrine).

In rural towns and peri-urban areas piped sewerage systems should only be considered (i) if the nature of the community is such that on-site sanitation would not be viable or would be environmentally damaging, and (ii) if a piped sewerage system is an inherent result of a chosen service level for the water supply. In this case treatment by waste stabilization ponds should be the preferred method.

Solid waste management and storm water drainage systems should be taken into account mainly in densely populated areas such as growth centres and peri-urban (slum) areas.

The National Sanitation Guidelines issued by Ministry of Health (1992) or the latest revised version should be used where applicable.

The regulations under the Water Statute (1995) on sewerage should be adhered to.

(v) Health and hygiene Education

Information should be disseminated on the correlation between safe drinking water and a decrease in water-related diseases, and be an integral part of any water supply and sanitation project.

In sector interventions, emphasis should be made on the importance of linking low-cost sanitation with the provision of new water supplies, and accompanying both with appropriate health and hygiene education. Schools are important vehicles for disseminating the key health messages, and projects should, wherever appropriate, include construction of latrines in schools, and the provision of educational materials.

Women's involvement in health promotion should be promoted, recognizing their important role in improved health of their families and in changing the behavior of children.

5.4.2 Financing, Subsidies and Tariffs

On a national basis, investment and development efforts in the water supply and sanitation sector should follow an equitable share principle, with a rational view on urban versus rural interventions. Selection of areas most in need of sector improvements will be based on need-related criteria. Generally, financing of new installations should have low priority where maintenance of similar installations in the same areas is neglected.

However, at present, the Government will continue to offer subsidy to the majority of water supplies until adequate financial and management capacities are developed at the districts and urban councils.

Financial viability of public utilities should be assured. In urban areas focus should be on assuring sustainable services for the poorest sections of the community. Tariff structures with cross-subsidies where appropriate should ensure that services can be reliably maintained including public stand posts or other facilities for the urban poor.

The tariff structure in larger urban schemes (utility-operated water supplies) should be designed to cover repayment of construction loans, depreciation of technical installations, i.e. replacement costs, and full cost of operation and maintenance.

Cross-subsidization (within a utility's jurisdiction) should be promoted through the scaling of water tariffs, thereby ensuring a basic minimum consumption at reduced rates, and larger consumption at increased rates, and discouraging wastage and excessive consumption.

Mechanisms should be in place to allow tariffs to be regulated concurrent with the rise in costs.

For rural and small towns water supplies community contributions towards construction should be based on technology choice, for instance as a percentage of construction cost (cash or kind), and raised by the community before construction starts. In these areas, operation and maintenance costs should be fully covered by the consumers, unless, due to unavoidable circumstances, unreasonably high costs of supplies and chemicals in certain cases necessitate an outside subsidy to ensure proper running of the scheme.

Subsidies on sanplats for low-cost latrines to the poorest communities, should be fixed at a level which will not discourage commercial latrine (sanplat) construction.

Subsidies should only be regarded as temporary measures and targeted for either behavioral changes or to enable the disadvantaged sections of the community access to basic

services and improvements in their quality of life.

5.4.3 Management and Sustainability Aspects

(i) Capacity building

Sector interventions should provide support to strengthen the capacity of sector organizations through project components for institutional and human resource development.

Capacity at national and lower levels for equitable and sustainable water supply coverage should be developed taking into account the Government's changing role as an outcome of the decentralization process and economic policies.

Capacity, at district and county/sub-county levels in planning, monitoring and technical service delivery to respond to community requests, should be enhanced.

Training of the users should be promoted since they will participate in the choice of water and sanitation systems, the siting of water points, construction activities, and the daily running and maintenance of the scheme.

Women's involvement in design, construction, operation and management of improved water supply and sanitation facilities should be supported through training activities. The key criteria is that women and men should have equal opportunity to participate fully in all aspects of community management.

Mechanisms should be established both to facilitate and support participation of the private sector in the construction and actual provision of services.

(ii) Operation and maintenance (in rural and peri-urban areas)

Protected springs and boreholes/ wells fitted with handpumps will continue to be the dominating technical choice for providing rural communities with drinking water. Operation

and maintenance will follow the principles of CMBS (Community Based Maintenance System) as detailed in the following paragraphs.

Village level: A Water Source Committee (WSC) (minimum half of the members should be women representatives) should be created and at least two caretakers appointed and trained for each source. The Water Source Committees collect funds for preventive maintenance and repairs, and are in all respect responsible for the maintenance of the installation. Proper arrangements, including the use of bank accounts, will be made to safeguard the maintenance funds.

Sub-county level: The private sector will be responsible for the activities at sub-county level. Private handpump mechanics will undertake repairs and half-yearly preventive maintenance of the handpumps. Retail distribution of spare parts will take place through local shops at sub-county level. The role of the LC3 and the Sub-County Water and Sanitation Committees will be limited to selection of handpump mechanics and spare part dealers as well as partial payment for the training of the mechanics. Extension staff and local Chiefs will provide back-up support and supervision.

District level: Wholesale and retail distribution of spares will take place through district level spare part dealers appointed by the spare part manufacturers. District Water Officers will monitor the function of the maintenance system and operate where applicable Borehole Maintenance Units, which will undertake rehabilitation and repairs beyond the capacity of the handpump mechanics and in some instances the private sector will be contracted for this work.

National level: Spare part distributors will provide spares and distribute them to private dealers at district level. DWD will monitor the general performance of the maintenance system and take corrective actions at policy level as appropriate.

As an interim measure, the Government will equip, staff and maintain Borehole Maintenance Units for services beyond the capability of the community and local pump mechanics (e.g. use of mechanised rig for de-silting or re-drilling). Services will be paid for by the user community and Central Government, Sub-County or District may subsidize. In the long run, the private sector will take on this responsibility, and users will pay full costs.

Operation and maintenance of protected springs, open wells and handpumps are well within the capacity of the local communities. Apart from keeping the water collection point clean and tidy, it is basically a question of fencing off areas prone to be a pollution risk for the spring water.

(iii) Sustainability and ownership aspects

Sustainability should be a prime objective of all water supply and sanitation interventions. Sustainability depends on several matters, e.g. system design, ownership, development of institutional capacity at all levels, financial viability, and efficient administrative systems.

No new installations or schemes should be established without, at the same time, establishing ownership of the facility and establish or strengthen the system for operation and maintenance, including methods of recovering recurrent cost to ensure sustainability.

All protected water sources including gravity flow schemes in rural areas belong to the users. In the event that a piece of land is deemed necessary to safeguard the protected source (GFS, springs, shallow wells and boreholes) from the risk of pollution or for the works, it will be the responsibility of the community to secure it and meet any compensation to the affected land owner. Easements to the facility is guaranteed in accordance with the Water Statute (1995).

For urban water and sewerage systems, due to the heavy investment involved, uncertainty on the full modality of management, the

system ownership is entrusted to the Central Government. These schemes will be entrusted to relevant authorities to manage, operate and maintain. The Government will ensure that the ownership of these schemes will be gradually transferred to the User Associations or local councils in accordance with the modalities to be stipulated in the performance contracts.

Water supply schemes run by user committees, i.e. Water User Groups and Associations, or utility-based Water and Sewerage Authorities, as appropriate, shall do so in accordance with stipulations set forth in signed management and performance agreements/contracts. This shall be the case for point sources as well as larger urban water schemes.

Water and sanitation projects should be used as entry points for a number of related activities which will enhance their sustainability, e.g. income generating activities, poverty alleviation and protection of the environment.

To complement the Water Statute (1995) and its subsidiary regulations, appropriate by-laws should be enacted at district, LC 3 level, and LC 1 level.

Monitoring and evaluation activities at central level (sector performance vis-a-vis national goals) and at project level (implementation achievements versus targeted outputs and impacts) as well as monitoring of scheme management and performance should be carried out routinely as part of the overall sector development efforts.

Appropriate monitoring and information systems should be developed at various levels including in the user communities.

5.4.4 Private Sector and NGO/CBO Participation

The Government is committed to the privatization process in the many spheres of the national development efforts, which also includes various aspects of the water sector. The private sector represents a viable resource of increasing importance which must

be addressed to contribute to the implementation of this policy in a variety of areas including: design and construction, operation and maintenance, training and capacity building, and commercial services.

Presently the private sector has only been used in contracted implementation roles. It is the intention of the Government to promote the role of the private sector in mobilising and financing resources for the sector, especially for the development and provision of water and sanitation services through BOO (Build, Own and Operate) or BOT (Build, Operate and Transfer) arrangements, especially in urban centres.

The policy, with respect to borehole drilling, is to encourage future projects to place drilling activities in the hands of the private sector via competitive tendering procedures. DWD will retain only enough plant and equipment to respond to specific emergency situations and provision of lifeline services. Further, Directorate of Water Development will monitor and give guidelines on groundwater extraction and utilization.

The Non-governmental Organizations (NGOs) and Community Based Organisations (CBOs) have played an important role in Uganda over many years. They therefore supplement the efforts of the public sector and help ensuring that the concerns of the underprivileged are incorporated in the national development process.

The Government is committed to work with NGOs and CBOs, particularly in the water supply and sanitation sector. The role of NGOs and CBOs will be determined to a large extent by the communities in which they work. The principle of making the community the client applies to NGOs and CBOs as well as the private "for profit" sector.

In the case of the NGOs and CBOs, the Government will strengthen its relationship through the establishment of a regular forum for information exchange as well as formula-

tion of guidelines for harmonised and coordinated operations.

5.4.5 Co-ordination and Collaboration

Provision of water will, as far as possible, include hygiene education, mobilization, sensitization and educating the users for behavioral change and provision and provision of sanitation facilities or promotion of good environmental sanitation practices for maximum impact of the intervention. This requires the participation of multi-ministrial/agency, multi-donor and multi-disciplinary implementation strategies, necessitating good coordination and collaboration at all levels.

Secondly, the 90's have experienced big shifts in policies, strategies and implementation modalities for water and sanitation programmes with emphasis shifting from physical interventions by external agents to capacity building within beneficiary communities to be "active informed partners" and not "passive and uninformed recipients/beneficiaries" with the aim of making them realize their problems and assisting them improve on their situation. The role of Government has equally shifted in line with the realities of the day and the limited funding, from "provider of services and their maintenance" to "facilitator/enabler"

To ensure consistency in applied policies and approaches to the delivery of water and sanitation services, especially in rural and peri-urban areas, there is need for a competent lead agency for the water sector and for formal coordination and collaboration mechanism for all actors in the sector.

For the last 6 years, an Inter-ministerial Steering Committee (IMSC) composed of Permanent Secretaries, Directors and Commissioners and heads of donor agencies involved in the sector, has provided the overall coordination and collaboration mechanism to ensure consistency and timely address of implementation constraints of

policy and financial nature for the smooth running of programmes. For the IMSC to play its role properly, there is need to formally admit NGOs to participate to streamline its roles and functions and provide the necessary coordination and collaboration in the sector. A technical committee of relevant Government agencies, NGOs and donor agencies will service the IMSC while the DWD will provide overall secretariat facilities and inputs as the lead government agency for the water sector.

The Districts and Sub-Counties will be assisted to establish similar co-ordination and collaboration mechanisms at their levels.

In addition to the coordination role, the IMSC should also mobilize additional resources for the Rural and peri-urban water and sanitation programmes and ensure cost-effective use of available resources.

Steps will be taken to establish linkage for the coordination and collaboration between the IMSC and with the WPC and the RTWSP activities.

The Government shall ensure, partly through the IMSC and using the Water Statute and other relevant legislation, the implementation of water and sanitation activities in the community with this Policy.

All sector players including private sector, donors, NGOs, community based organizations shall be obliged to provide their development plans and to provide relevant reports, data and information on their water activities to the DWD for the use and information of the IMSC.

CHAPTER 6: WATER FOR AGRICULTURAL PRODUCTION

6.1 Context

This chapter deals with the water supply policy and strategy as it relates to crops, livestock and fish production.

Although agriculture is the mainstay of the Ugandan economy, contributing 49% of the GDP (in 1996) and employing over 80 % of the population, food security and financial benefit to the farmers are still major issues. There are several reasons for this, and one of the most significant is the dependence on rainfed agriculture. Although the country has abundant water resources, it is unevenly distributed in time and space. The situation is exacerbated by lack of an explicit water supply policy for agricultural production. The potential for irrigation estimated at over 400,000 Ha has not been significantly developed, and only small scale irrigation e.g. of paddy rice is practised in the east and north-east of the country. Such small-holder irrigation, if promoted, could make a significant contribution to basic food security in the country and improve the economical base of the farming communities. Other high value crops such as flowers and horticultural crops are being grown under irrigation for export, bringing in foreign exchange. Development of water resources to supplement rainfed agriculture could increase the overall crop, livestock and fish production through increased cropping intensity, forage production and reliable livestock water supply; especially in the semi-arid and drought prone areas.

In the dry areas, surface water resources are generally seasonal and groundwater potential is often limited. In many cases dams and valley tanks have insufficient inflow or have too small a storage capacity to prevent them drying out. These dry areas, also known as the cattle corridor, are predominately inhabited by semi-nomadic pastoralists who keep large herds of cattle. Most of the commercial ranches are also established in the corridor. The scarcity of water has not only limited the livestock production but has promoted nomadism, which has promoted the spread of livestock diseases and in some areas insecurity. It has also contributed to overgrazing and land degradation, and made it

difficult for the nomadic pastoralists to lead a sedentary life style.

In view of the limited spread of the open water bodies (lakes), there is need to develop aqua-culture to provide fisheries resources for vital protein intake for the increasing population and for export.

6.2 Policy Objective

The policy objective with regard to water for production is to:

“Promote development of water supply for agricultural production in order to modernise agriculture and mitigate effects of climatic variations on rainfed agriculture” through:

- (i) promoting proper water resource assessment and planning for agricultural production,
- (ii) increasing the capacity of the farmers to access and use of water for crop, fisheries and livestock production,
- (iii) promoting appropriate water harvesting technologies for irrigation and livestock development,
- (iv) promoting the participation of farmers and the private sector in the financing, planning, development and management of irrigation and livestock water supply systems,
- (v) promoting and supporting, where appropriate, the development of adequate and reliable livestock water supply.

6.3 Guiding Principles

The fundamental principles to guide the planning and allocation of water resources and investments for water for production are:

- (i) The provision of water to meet domestic demands for basic human needs, i.e. irrigating subsistence garden, watering subsistence livestock and for a subsistence aqua-culture will not require prior authorisation under the Water Statute, 1995. First priority will be given to allocation of water for these domestic demands.

Allocation of water for commercial livestock, irrigation and aqua-culture will be done considering the economic, social and environmental value of the water. All developers of water supply for commercial irrigation, livestock development and fish for which the abstraction rates exceed 400 m³/day or from motorised boreholes (as required in the Water Statute, (1995) shall apply for a permit for Water Abstraction.

- (ii) In planning and allocation of public funds for agricultural water development, investment subsidies will be given to vulnerable groups: women, youth, poor farmers, and the disabled, especially in the drought prone areas.
- (iii) Sustainability should be addressed through the full participation of the users who should operate and maintain the infrastructure and services for irrigation and livestock developments.
- (iv) Promotion of public health and nutrition through reducing public health risks in irrigation and livestock water supply systems (malaria breeding habitats, bilharzia, guinea worm, etc.) and increasing nutritional levels.
- (v) Preservation and protection of the environment to be ensured through Environmental Impact Assessment, ap-

proved by the National Environment Management Authority in consultation with the lead agency.

- (vi) Promotion of private sector involvement and user participation in financing, planning, development, operation and maintenance of infrastructure for irrigation, livestock water supplies and aquaculture.
- (vii) Promotion of water use efficiency. (e.g. irrigation system efficiency, economic measures)
- (viii) Promotion of holistic and integrated approach to development of water for households, irrigation aquaculture, and livestock use, taking into consideration the equitable use and protection of available water resources.
- (ix) International obligation in the use of the shared waters.

6.4 Strategies

Against this background the strategies for provision of water for agricultural production and management of the infrastructure are detailed below under the following headings:

- **Water resources assessment and planning.**
- **Technology choice** (demand-driven negotiation approach, community participation, protection of water source and water ways, standardisation of equipment, involvement of women and youth etc.).
- **Financing, Investment Subsidies and User Charges.**
- **Management and Sustainability Aspects** (User Associations, Operation and Maintenance, Ownership, and Sustainability).

- **Capacity building.**

- **Environmental and Public Health Aspects.**

6.4.1 Water resources assessment and planning

Water resources assessment, review of irrigation potential and preparation of strategies and action oriented program for irrigation development. This will include inventory of the existing irrigation covering ownership, operation and maintenance, socio-economic and environmental aspects and promotion of water harvesting for agricultural production.

Improve the reliability of water supply for livestock in the dry areas, through preparation of guidelines for improved design of dams, valley tanks and water conservation measures in the catchment, and through implementation of pilot demonstration schemes for small surface reservoirs especially in the dry areas.

Water resources assessment and siting of dams and valley tanks for livestock water development and aquaculture should be properly done to optimise the resource and its protection.

Assessment of water quality for aquaculture, and impact of effluents from fish farms and fish cage farming on the quality of the receiving water through administration of permits for discharge of such effluent and environmental impact assessment as appropriate.

Monitoring and assessment of the impact of constructed facilities on the environment, hydrological and hydrogeological regime of the catchment to guide remedial actions.

6.4.2 Technology choice

In planning and development of water supply for irrigation, aquaculture and livestock, the basic criterion is that of demand-driven negotiation approach with priority on small-holder technologies.

Appropriate low cost technologies should be selected, offering good possibilities for community participation in decision making, implementation and management of the system, and measures to save water. Only well known tested, appropriate and cost effective technologies, preferably locally made/available should be used. Standardisation of equipment e.g. pumps and sprinklers will be encouraged as means of safeguarding the community based maintenance system, through easy access to spare parts, repairs etc. on the open market.

The Users should be involved in the choice of technology and emphasis should be placed on technology that responds to the farmers needs.

In case of facilities intended for both livestock and human consumption, the design should include measures and technologies to protect the water source against pollution and improve the quality of the water for human consumption and use.

6.4.3 Financing, Investment Subsidies and User Charges

The use of public funds to finance development of irrigation, aqua-culture and livestock water supply will mainly be for vulnerable groups (poor farmers, poor households, women, youth and in schools) in order to provide basic needs for food security, reduce water related health problems, increase nutritional levels, settle the nomadic pastoral communities and protect the environment. Support will also be provided to promote / demonstrate appropriate technologies, benefits and best practices in agriculture.

Those who benefit from irrigation, aqua-culture and livestock water supply facilities financed by the Government shall in return pay part or all of the investment costs and the full cost of the operation and maintenance of such works (including overhead administrative costs). The costs shall be collected and administered by the User Associations organised right from the planning stage of the project.

All agricultural use of water which requires prior authorisation of a water permit under the Water Statute 1995, shall be subject to payments of fees (for processing of the permits) and annual charges (for water resources monitoring and assessment). The fees shall be administered and collected by the Director of Water Development in accordance with established Regulations. Economic principles shall apply to allocation of scarce water resources for agriculture.

6.4.4 Management and Sustainability

The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) through the Directorates responsible for irrigation, fisheries and livestock shall be responsible for planning, advising, supervising and monitoring the management and use of irrigation and livestock schemes respectively. The Directorate of Water Development of the Ministry of Natural Resources will provide the technical advice in the planning, design, construction

and maintenance and operation of the hydraulic works and overall direction on the access, use and protection of the resources. Co-ordination of standards and guidelines for provision of these services shall be through the Water Policy Committee established under the Water Statute. MAAIF may provide guidelines on water management for agriculture, livestock and aqua-culture.

All communal users of irrigation or livestock water supply system financed by the Government must form a Users Association. By-laws of the Association shall be drawn and approved by all the users themselves but shall be submitted to the MAAIF for administrative approval.

The Minister (responsible for Agriculture)-may enter into performance contract with Users Association for i.e. irrigation systems. The ownership of the works, the responsibilities, the extent of the Associations interest in any land or works, the period of the contract, financial arrangements etc. shall be defined in the Performance contract.

Monitoring and evaluation of the performance and management of schemes will be done routinely by the Central Government and districts authorities.

The Users Association shall be (in all respects) responsible for the operation and maintenance of any works, subject to the supervision of the Government. In that respect the Association shall collect funds from the users for preventive maintenance and repairs with clear arrangements for the safe custody and control.

The districts and sub-county councils with the assistance of agriculture and livestock extension staff and the water officers will provide the necessary back-up and supervision of the water users activities.

Sustainability shall be a prime objective of all irrigation and livestock water supply interventions. No new systems shall be established or old systems repaired without at the same time

establishing ownership of the installations and mechanism for O&M of the installations including methods of recovering recurrent cost of the maintenance to ensure sustainability.

The Government, at the request of the users, may create a waterway easement for taking water for irrigation / livestock , for discharge of the drainage water, and for access of users to livestock water sources in accordance with the Water Statute, 1995.. In all cases, the beneficiaries shall be responsible for compensation of the affected parties, if required.

Facilities (e.g. dams and valley tanks) for domestic, livestock and small scale irrigation systems financed by the Government shall be owned by the Users. In case of hydraulic works for medium and large scale irrigation systems financed by the Government, the system ownership will be retained by the Government (because of the investment involved) but the operation and maintenance will be the responsibility of the Users through the Users Association, in accordance with the terms and conditions of service specified in a performance contract. However, the ownership of these large schemes shall also be gradually transferred to the User Associations in accordance with modalities established in the performance contract, with full participation of concerned local authorities.

6.4.5 Capacity Building

Government investments in the development of water for agricultural production will include capacity building components for the users and for institutional and human resource development.

The elements and activities proposed for capacity building:

- (i) Capacity of MAAIF, DWD and the districts enhanced to plan, monitor and supervise - through provision of equipment, logistics, transport, and appropriate staff training.

- (ii) Strengthen teaching of irrigation in universities, institutions and schools through e.g. review of curriculum, provision of research grants and demonstration farms.
- (iii) Promotion of exchange of information and experience between farmers.
- (iv) Establishment / strengthening of on farm demonstrations.
- (v) Training of users to enhance their participation in scheme implementation, operation and maintenance through i.e. contact and contract farmers.
- (vi) Train of users in better agricultural methods, management and protection of water resources and the ecosystem.
- (vii) Training of women and youth will be targeted to enhance equal opportunity for their participation in management of the schemes.
- (viii) Review of school curriculum to include status and use of water in agricultural production.
- (ix) Promotion of the participation of the private sector and non-governmental organisations in financing, development and operation of schemes through sensitisation, facilitation, support, and incentives.

6.4.6 Environmental and Public Health Aspects

Development of water for agricultural production shall be subject to environmental impact assessment in accordance with procedures established by National Environmental Management Authority and approved by the authority in consultation with the lead agencies.

In order to adequately protect the quality of the water in dams and valleys tanks, the

Government or the districts through by-laws or the User Associations may:

- (i) set up around such sources an area around which land uses and activities shall be restricted, subject to laws related to easement,
- (ii) provide for service areas for their exploitation,
- (iii) measures to promote proper livestock watering methods,
- (iv) measures to promote the water resources and proper watershed management,

The drainage water from irrigation schemes shall be returned to the source from which the water was taken after ensuring that the quality of drainage water shall be such as not to pollute the receiving water or groundwater. All measures shall be taken by the users to minimise water logging, prevent increase in salinity levels in the receiving waters, to prevent the accumulation of dangerous or toxic compounds in the subsoil, capable of contaminating underground waters.

Subsistence cultivation in wetlands shall consider sustainable use of the resource, especially conservation of its ecological functions. Significant agricultural developments in wetlands shall require environmental impact assessment (EIA).

6.5 Implementation Strategy

The implementation strategy includes:

- (i) Formulation of Action Plan and Strategy for Development of Irrigation covering review and assessment of the technical feasibility for irrigation development (water resources assessment, soils, topography, and agro-climatology); institutional and management study; social, economic, environmental, and public health aspects,

policy and legal review and preparation of action plan.

- (ii) Preparation of Guidelines for improved design of dams and valley tanks and demonstrations especially in dry areas.
- (iii) Rehabilitation and / or development of dams and valley tanks in the dry pastoral areas with full community participation, with priority given to vulnerable groups e.g. youth, women and poor farmers.
- (iv) Aqua-culture Development Program - to promote development of fisheries with due emphasis on fish farming at small-holder level.
- (v) Small Scale Irrigation Development Program involving rehabilitation and or development of medium scale user-based irrigation schemes and with emphasis on demand-driven development and effective farmer participation including financial contribution.
- (vi) Commercial Agricultural Development Credit Scheme for commercial farmers for development of water supply for irrigation, livestock and aqua-culture, which may bring maximum beneficial use of the available water resources.
- (vii) Institutional capacity building program for the Directorate of Water Development, Ministry of Agriculture, Animal Industry and Fisheries and the districts in order to plan, implement, supervise and monitor development of water supply for agricultural production.

The detailed programmes for implementation of this strategy is the responsibility of MAAIF in liaison with MNR. MAAIF is also expected to develop comprehensive agricultural development policies consistent with this Policy.

CHAPTER 7: OTHER WATER RESOURCE USES

7.1 Water Demands

As previously mentioned Government's policy in water resources allocation is to give first priority to meet the demand for domestic water. The statement is unconditional. Water for other uses, prioritization is dependent on several factors and can be made the subject of trade-offs between social, economic and environmental considerations.

In order to meet the various other water demands, the following strategy considerations outlined below should be taken into account. Guidelines for provision of water for these water consuming sectors must be developed by the responsible sector agencies in harmony with the principles stipulated in this Policy.

7.2 Water for industrial use

Adequate and appropriate water supply systems will be identified and developed to meet the current and future industrial water demands. Supply of adequate quantities of water to the major rural towns should be promoted as a means of attracting various economic activities, particularly industrial development. Recycling of industrial water will be encouraged. The discharge of effluent from industrial areas will be subject to a permit in line with the Environment and Water Statutes.

Environmental impact assessment will be required for all industrial developments.

7.3 Water for wildlife and recreation

The water resources within the national parks and national reserves will be conserved and developed to provide water for wildlife and recreational activities - also for use outside the parks. However, this must be done in a manner that will not compromise the wildlife well-being and fragile eco-systems.

7.4 Water for hydropower

The Government will promote hydropower generation by:

- (i) supporting efforts to attain self-reliance in energy production and will promote regional co-operation for optimal development of hydropower and for the benefit of the region,
- (ii) promoting the use of the water resource for small decentralised power generating systems in remote areas for rural electrification, and will promote agreements between the various water users for the protection of catchment areas.

The strategy to attain the policy will be by:

- (i) ensuring the rights of other users by regulation of water discharge,
- (ii) minimising social and environmental impacts through environmental impact assessments (EIA),
- (iii) creation of storage capacity and regulation of reservoirs to mitigate fluctuations from seasonal and annual variations, where feasible,
- (iv) ensuring water resources management plans optimise the use of the resources for maximum hydropower production at potential sites and that these are developed to full capacity.
- (v) ensuring the availability of reliable hydrological data for hydropower development.

7.5 Transportation

Uganda's lake and river systems also serve as alternative means of transportation for passengers and cargo. A required minimum

water level must always be maintained to cater for this service.

CHAPTER 8: POLICY IMPLEMENTATION

8.1 Water Allocation Principles

There are no permanent water rights. All rights on water are vested in the state to protect and manage its use as a common good.

The process for allocation of water should be in accordance with the following principles:

(i) Provisions for domestic needs

First priority in water allocation is to meet the domestic water demand. Therefore, water allocation for the domestic needs of a community should be reserved within the total available from each water resource.

(ii) Provisions for resource management and environment

Allocations will be reserved to ensure the continued viability of the resource and for the conservation of the environment. For water courses will include provision of a minimum flow to maintain water quality and aquatic eco-systems.

(iii) Water for Production

Allocations will consider the socio-economic value of the use and optimal development of the water potential (e.g. hydropower schemes), and the impact on the water resource.

(iv) Market-based allocation principles

Over a period of time a market-based approach to water allocation will be developed. This approach puts to practical use the principle of "water as a social and economic

good". The water available to be allocated in this manner is determined based on an understanding of the available yield less any allocation reserved for domestic needs and for ecosystem maintenance.

During the transition period leading to the establishment of a market-based allocation process, actions will be taken to determine the yield of each resource at its present level of development, and the allocations necessary to provide for domestic needs and for resource management. From this information, the amount available for allocation using a market-based approach shall then be determined. These steps will be taken with full stakeholder involvement, emphasizing the continued security of existing allocations.

(v) Response to emergencies (droughts and floods)

Assessment will be made of the response of the water resource in time of emergencies of the water uses, which draw upon the resource. This will indicate whether a detailed strategy in response to emergency situations should be formulated. Such a strategy may involve limiting total allocations in perpetuity, or reducing the allocations of selected categories of users during these periods and in consultation with the relevant sectors.

Crises such as drought and floods need to be managed and coordinated on an inter-departmental basis because multiple efforts are needed to support affected communities.

The Government shall undertake to collect data and information and disseminate it for public awareness and safety.

8.2 Water Legislation

To implement the National Water Policy appropriate legislation and supporting regulations have been enacted.

The new legislation comprises three new acts: the **Water Statute (1995)**, the **NEMA Statute 1995** and the **National Water and**

Sewerage Corporation Statute (1995).

These statutes are now the legal instruments that govern the regulation, management and utilization of the nation's water resources.

The Water Statute maintains the declaration of the Public Lands Act of 1969 that vests - on behalf of the people - the power to investigate, manage, control and use the water resources of Uganda in the State. More specifically, the objectives of the new water legislation are as follows:

- (i) to promote the rational management and use of the water resources of Uganda,
- (ii) to promote the provision of a clean, safe and sufficient supply of water for domestic purposes to all persons,
- (iii) to provide for the constitution and devolution of water supply and sewerage undertakings,
- (iv) to allow for the orderly development and use of water resources for purposes other than domestic use, such as the watering of livestock, irrigation for agriculture, industrial, commercial and mining uses, the generation of hydroelectric or geothermal energy, navigation, fishing, preservation of flora and fauna, and recreation in ways which minimize harmful effects to the environment, and
- (v) to control pollution and to promote the safe storage, treatment, discharge and disposal of waste which may pollute waters or otherwise harm the environment and human health.

In brief the Water Statute (1995) is the fundamental code from which all aspects of water resources management derive: administration; water resources planning; role of the Water Action Plan; authorization of hydraulic works and uses of water; waste discharge permits; water abstraction permits; variation and cancellation of water rights; financial

provisions; powers and duties; as well as appeals and offenses.

A set of supporting regulations, which operationalise the statutes, are grouped under the following headings:

- (i) Water Resources Regulation.
- (ii) Water Supply Regulation.
- (iii) Sewerage Regulation, and
- (iv) Waste Discharge Regulation.

8.3 Monitoring, Assessment and Research

Monitoring, assessment and research activities are important for understanding the occurrence and availability of water resources (surface and underground) and the impact on the resource caused by either natural phenomena or human activities.

Additionally, a variety of technologies are in use within the water sector. Some of these technologies are not necessarily sustainable in the long run, and may not live up to adopted criteria related to efficiency and non-wasteful practices.

Many of the conventional technologies need to be examined critically and selection made of those most appropriate to Ugandan needs. Also through research feasible technological alternatives should be identified to suit the future needs and the ability/capability of both Government agencies and communities in different part of the country.

As appropriate the research and development activities should be sanctioned by the Uganda National Council for Research and Technology, and measures should be put in place to strengthen the existing water research related institutions - whether public or private - to carry out the necessary research and water resources assessment activities to foster sound

management, protection and utilization of the nation's water resources.

The department of Meteorology should be adequately funded to play its vital role in monitoring, assessment and research in order to provide timely and accurate data and predictions on the weather and climate to DWD and other users.

Monitoring and assessment shall be continuous activities, and the data generated should be of good quality and made available for water resources management and development activities. The data covering quantity and quality shall be made available for users at pre-set and approved charges.

8.4 Priority Action Programme

8.4.1 Water Resources Management

In accordance with the grouping of strategies presented in chapter 4, three main components are needed to achieve the policy goal of sustainable water resources management:

- (i) an **enabling environment**, which is a framework of national legislation, regulations and local by-laws for promoting sound management of the water resources and constraining potentially harmful practices,
- (ii) an **institutional framework** that allows for close interaction between national, district and community levels, and
- (iii) **planning and prioritization capabilities** that will enable decision-makers to make choices between alternative actions based on agreed policies, available resources, environmental impacts, and the social and economic consequences. To prioritize and make rational planning decisions, certain tools are crucial:
 - an information system, within which information on the quantity, quality, utilization and environmental condi-

tion of water resources can be collected, analyzed and disseminated, and

- water resources assessments, which evaluate the impact of proposed interventions on the hydrological regime and water quality, such as water abstractions or waste discharges.

Policy implementation will involve the successive detailing of policy from the level of intent and formulated strategies (as given in this document) through the structuring and implementation of actions required to achieve intended policy outputs and impacts.

In the Water Action Plan (WAP) a detailed action programme has been formulated to facilitate an operational and sustainable water resources management. Successful implementation of this action programme constitutes at the same time the vehicle for implementation of the National Water Policy.

8.4.2 Water Supply and Sanitation

The Ministry of Natural Resources with the assistance of the Ministry of Planning and in close co-operation with other line ministries and relevant donor agencies, NGOs and the local authorities, will develop a comprehensive plan and strategy for the sustainable provision of water and sanitation services, incorporating on-going programmes and correcting existing imbalances (inequities) and gaps. The plan will provide a broad water sector vision and will have institutional capacity building and human resource development as its cornerstone.

Sectoral Water Use Policies and Plans

The concerned ministries of Government will develop specific and detailed policies e.g. for agricultural production, energy (hydropower generation), forestry, which must be in consistence and compatible with this Policy. They will also develop relevant policies, implementation and action plans.

8.4.4 Policy Dissemination and Impact

For this policy to be implemented it must be widely disseminated and discussed and all concerned parties made aware of the policy objectives, principles, strategies, procedures and desired impact.

Secondly, the National Water Policy will have no significance if the actions under 8.4.1 - 8.4.3 are not implemented to give it effect.

8.5 Monitoring of Policy Implementation

An important function at central level by the Directorate of Water Development (DWD) will be - whilst devolving implementation and management to the lowest appropriate levels - to ensure that what happens at these levels meets the required standards and follows stated objectives and strategies.

The policy is aimed at opening up the arena for a large number of participants to engage in the tasks of managing water resources and developing basic water and sanitation services. For this to be effective, it will be necessary to monitor and regulate their performance.

Furthermore, to know and assess the impact of the policies and strategies, it is important that a monitoring and evaluation mechanism is established and well functioning. The key monitoring agent will be DWD.

The objective of monitoring and performance auditing is not primarily punitive - but supportive. The objective is to ensure that goals are met, which is best achieved through support

and cooperation, rather than through coercion. Where the reason for non-achievement or non-compliance is attributed to lack of managerial or administrative capacity, DWD will seek to provide assistance to build such capacity.

To fulfill its monitoring and evaluation role DWD must define a set of performance indicators to be able to gauge progress and effectiveness of the various strategies put forward in this document. For this purpose a basic list of monitoring indicators covering the three main components of activities, i.e. supporting the enabling environment, creating the institutional framework, and enhancing planning and prioritization capabilities, is given below.

8.5.1 Enabling environment

Monitoring indicators concerning the provision of an enabling environment by:

- (i) initiation and approval of the necessary legislation bye-laws and regulations at all levels,
- (ii) establishment of management systems and institutions for water supply and resources management functions at local levels,
- (iii) acceptance of responsibilities by local administrations - shown by budget allocations and priorities in committee structures,
- (iv) other sectoral water uses policies established,

8.5.2 Institutional framework

Monitoring indicators for the provision of the institutional framework by:

- (i) setting up of Water Policy Committee (WPC) as stipulated in the Water Statute, 1995.

- (ii) how "water resources interests" are catered for in new committee structures under decentralization; whether or not a Department for Environment and Natural Resources is created, and whether or not an Environment and Natural Resources Committee (or its equivalent) is established,
- (iii) formation/number of Water User Associations and Water and Sanitation Committees and their functioning,
- (iv) gazetting of water and sewerage areas. Creation and licensing of water authorities,
- (v) districts have promoted and operationalised an integrated extension service related to environmental management,
- (vi) training related to integrated extension services taken-up: membership, attendance, quality of participation, and follow-up,
- (vii) sector planning strengthen in DWD and effective coordination mechanisms e.g. IMSC, functioning and effective,

8.5.3 Planning and prioritization

Monitoring indicators for the Government as facilitator of:

- (i) rehabilitation and expansion of water resources information services: reliability of data, speed of processing, and efficiency of dissemination mechanisms,
- (ii) setting up water abstraction and waste discharge permit systems: efficacy of procedures, reactions of permit holders, and impact on affected sources,
- (iii) operation of enforcement and mediation mechanisms: number and types of cases, utilization of agencies (Local Councils, Magistrates Courts, Chiefs, Elders, etc.), and reactions of disputants,

- (iv) improved access to water and sanitation facilities, reduced water -borne diseases and functioning O&M systems,

This list is not exhaustive; it only incorporates indicators related to development of the overall water resources management structure. More specific monitoring indicators have to be defined, e.g. to monitor progress in developing the domestic water supply sector on a national basis vis-à-vis the overall sector goals (coverage level target and functionality of systems).

8.6 Policy Implementation Issues

- (i) Uganda has one of the lowest access to safe water and sanitation facilities in the world. To meet the policy objective and targets, it requires substantial investments far beyond the available resources. A long-term vision Water Sector Development Plan (rural, urban, water resources) is needed to quantify the financial resources needed and to guide the investment in the sector and its sustainability. A similar approach is needed to meet the policy objectives in respect of water for agricultural production.
- (ii) Uganda's water supply sector development is characterized by a strong dominance of foreign financing. Bilateral donors, multilateral agencies and international development banks often have different views and philosophies with regard to implementation as well as operation and maintenance of schemes or water points. Individual activities by non-governmental organizations and private bodies further complicate the issue of securing uniformity in conditions and standards required to make operations manageable on a broad scale.
- (iii) One of the means by which improvement in efficiency can be made, as well as facilitating cooperation and collabora-

tion among the many sector actors, is through the establishment of a sector policy framework accompanied by appropriate legislation as well as standards and guidelines as outlined in this document.

- (iv) The setting of guidelines and standards, however, must be approached with caution. Guidelines are intended to assist decision-making whilst standards are enforceable absolute limits. The rigid application of guidelines or inappropriate standards can have the opposite effect to that intended. An example could be the closure of "sub-standard" water supplies which would force communities to revert to sources of even worse quality.
- (v) Given that they are chosen to be the minimum needed to ensure good health, the levels of service presented in this document should be seen as minimum standards to be applied in publicly funded schemes, unless a relaxation has been specifically approved. This does not mean that higher standards cannot be applied. However, there is a direct correlation between the standard of service and the cost, both in terms of initial capital and operation and maintenance. Therefore, where higher standards of service are to be provided, cost sharing arrangements have to be included in the scheme financing as also stipulated in this policy document.
- (vi) To achieve the policy objectives for integrated water resources management and development, a good understanding of the resources including the meteorological, hydrological and hydrogeological factors is an imperative. Equally, important is the good forestry, agricultural and land use management programmes to protect catchments and the water quality and general survival of the water systems. All these require clear policies and appropriate sectoral laws and well-funded programmes which respect this Water Policy and the Water Legislation.
- (vii) Beyond the national perspective, water resources development in Uganda, espe-

cially hydropower development and operation which is predominantly on the River Nile system may affect and is affected by the development needs and plans of the Upper and Lower riparian countries. Water development plans in neighbouring states may influence the hydrologic regime of Lake Victoria and thereby impact energy generation at the existing and proposed hydropower facilities on the Victoria Nile. Like wise energy generation in Uganda, though a non-consumptive water use, has been constrained by colonial-era agreements on the use of The Nile which do not allow for the regulation of Lake Victoria for optimum hydropower production. There is therefore need to develop plans for regulation of Lake Victoria and other downstream lakes and co-operate with the other riparian states, as appropriate, for the equitable and optimal utilisation of the River Nile water resources.