

PROTOS

Final Report

STUDY ON IWRM LEGISLATION

APRIL, 2005

Summary

This report articulates the legislation covering Integrated Water Resource Management in Uganda. The purpose is to provide a basis for PROTOS to design an IWRM programme for the Lake George Basin, based on an institutional framework that will effectively involve all sector actors including central and local government civil society and the private sector. It is set out in two main parts:

The first is a detailed account of the objectives and strategies adopted, to address Integrated Water Resource Management in Uganda. These were formulated under the auspices of the Water Action Plan carried out by GoU in 1993-1994. The roles and responsibilities of all sector players are also set out in this section. It will assist PROTOS to understand the water and sanitation sector in Uganda, and make the critical decisions on whether to start the programme or not based on the conformity or similarity in goals.

The integrated water resources management sub-sector is undergoing reform, with several objectives geared towards improving service delivery whilst ensuring preservation of the environment. Key objectives in this reform process are outlined in the third chapter, and an account of the progress based on activities towards its achievement given. This will enable PROTOS to design her programme around the current thinking, and activities within the national context, thereby increasing its acceptability, and adoption.

List of Acronyms

DEAP: District Environment Action Plan

DWD: Directorate of Water Development

HIPC: Highly Indebted Poor Countries

HQ: Head quarters

HRD: Human Resources Development

IWRM: Integrated Water Resources Management

MAAIF: Ministry of Agriculture, Animal Industry and Fisheries

MoFPED: Ministry of Finance, Planning and Economic Development

MoLG: Ministry of Local Government

MWLE: Ministry of Water Lands and Environment

NEMA: National Environment Management Authority

OP-5: Five year Operational Plan for the Rural Water and Sanitation Sector

SIP15: Fifteen year Strategic Investment Plan for the Rural Water Sector

WES: Water and Environmental Sanitation

WPC: Water Policy Committee

WRM: Water Resources Management

WRMD: Water Resources Management Division

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1. Introduction

1.1 Background

PROTOS a Belgian NGO active in the drinking water projects since 1972 and active in Uganda since 2000 is launching an Integrated Water Resources Management (IWRM) programme in Uganda in the Lake George Basin of southwestern Uganda. The purpose is to improve livelihoods through the preservation of the ecological environment; improve access to drinking water supplies using appropriate technology; promote effective sanitation and good hygiene practices, work with civil society and the private sector and ensure effective local management by actively involving the districts, which are served by the basin so that benefits are sustained. In order to achieve all this, a clear understanding of the institutional framework is vital.

1.2 Purpose, outcome and outputs

The purpose of this study is to outline the current legal framework for IWRM to enable PROTOS design its IWRM programme, in agreement with the prevailing policies in the Ugandan water and sanitation sector.

The outcome is the development and adoption of an effective and sustainable IWRM programme by PROTOS in the Lake George Basin.

The output consist of this report which records the study process and outlines the key tenets that drive the sector, to be used to guide programme formulation, with in depth analysis and recommendations for private sector participation.

1.3 Terms of Reference

PROTOS has engaged the Interface Consulting to carry out the study. The Terms of Reference are in Appendix 1.

1.4 Objectives

The objectives of the study can be considered as follows:

Institutional Framework

Situation analysis: outline the legal framework and policies driving the water and sanitation sector in Uganda, generally, and specifically for IWRM. Identify the institutional roles, responsibilities and communication lines for the various policy stakeholders including MWLE (NEMA, Water Resources and Water Supply Departments), MoH, MoLG(local governments), MoES, MAAIF, NGOs, the private sector and the Uganda Wild life Authority.

Standards and best practices

Situation analysis: description of national and local standards used to choose technology, and highlighting new insights and good experiences on similar projects in Uganda.

1.5 Methodology

Because of the limited time, the study was based on a literature review of key sector documents, and consultation of key sector institutions on any unclear issues.

2. Background to Water Policy in Uganda

Uganda's freshwater, like else where internationally, is a vital for life sustenance, socio economic development and preservation of the environment. The resource is limited and is vulnerable to pollution and degradation from both natural and human causes. That is why IWRM interventions need to be implemented within a framework in which priorities are established and the protection and optimal use of water resources is planned and assured. Moreover there is concern that at the current coverage statistics of water and sanitation services in Uganda estimated at about 52.3% and 54% Ugandans are among the least served in the world. This coverage is characterised by variation between districts and towns as well as ineffective use and non-sustainability of services. In the rural areas, over 30% of water systems are not working and the current average water use per capita is half the minimum recommended amount of 20 litres per capita per day, due to long walking distances to water points. In addition, the water handling and storage is often unhygienic, resulting in water from a safe source becoming contaminated by the time it is consumed. In the urban areas, the current average water use per capita is half the minimum recommended amount of 40 litres per capita per day from stand post within a distance (maximum 500m) and 80 litres per day from a yard-tap or in-house connections, due to intermittent services and crowding at water points.

2.1 Legislation relevant to IWRM

Up to the 1990s, legislation for the regulation of the water sector was inadequate, outmoded and scattered under different laws. GoU initiated a water sector legislation study, which led to the preparation of a new water statute, which was enacted in November 1995. Concurrently, the government also took steps and carried out a Water Action Plan (WAP) study from 1993-94, through which key water resources management issues were identified, and guided the development of the requisite water sector policy and legislative framework. The national water policy addresses water management issues and adopts objectives and strategies formulated under the Water Action Plan. The policy and strategies have been set in the context of GoU's overall goals for social and economic development under the **Poverty Eradication Action Plan**. In addition, the policy is synchronized with the objectives contained in the **National Environmental Management Statute (1995)** and policy and is in line with the provisions of the constitution of Uganda. The policy guides water resources management, and development efforts aimed at achieving the maximum net benefit for Uganda from her water resources now and for future generations whilst promoting the role of the private sector, user communities and sustainability of public facilities and services. **The National Water Policy, The Water Action Plan (1995)** and **The Water Statute** now form the framework for the development, management, and sustainable use of water resources and provision of safe water supplies.

2.1.1 The National Water Policy

The National Water Policy advances an integrated approach to manage water resources in ways that are sustainable and beneficial to the people of Uganda, based on the recognition of the social value of water as well as its economic value. This means that allocation of both water and investments in water use should be geared towards achieving maximum benefit to Uganda from its water resources now and in the future. The basis on which the policy was 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 policy has been developed under two categories:

1. **Water resources management:** covering the policy objectives, principles and strategies for monitoring assessment, allocation and protection of the resources and management

framework. This is naturally a state trusteeship 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 for the purpose are in place.

2. **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 ecosystems

2.1.2 Objectives

The policy is intended to promote the following:

- I. Separation of regulatory powers from user interests
- II. Integrated and sustainable development management and use of the national water resources, with the full participation of all stakeholders
- III. Regulated use of all water, whether public, private or groundwater, other than for domestic use
- IV. Sustainable provision of clean safe water within easy reach and good hygienic sanitation practices, and facilities based on management responsibility and ownership by the users, within decentralised governance
- V. Development and efficient use of water in agriculture in order to increase productivity and mitigate effects of adverse climatic conditions on rain fed agriculture, with full participation, ownership and management responsibility of the users
- VI. Improvement of coordination among the sector stakeholders to achieve efficient and effective use of financial and human resources, follow consistent planning and implementation approaches within the context of decentralisation, and Government policies on private sector participation, the role of NGOs, civil society and beneficiary communities
- VII. Equitable access and use of the Nile waters through the effective involvement of the Government in the Nile waters issues, to secure adequate water for Uganda's needs to day, and for the future
- VIII. Promotion of awareness of water management and development issues and the creation of the necessary capacity for the sector players at different levels.
- IX. Promoting rational, optimal and wise use of the resources for all Ugandans and all sectors
- X. Promoting measures for controlling pollution of water resources
- XI. Promoting the gathering and maintenance of reliable water resources information and data bases
- XII. Promoting viable management options for the resources management and provision of water supply and sanitation services at all levels.

2.2 Policy formulation Context

2.2.1 *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 Sanitation¹, were endorsed by GoU, since 1980. Similarly, the declarations and guiding principles emanating from the international for a 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 government.

The Expert Group Meeting on Strategic Approaches to Freshwater Management² in Harare in 1998 recommended that each country prepare a comprehensive national water policy to ensure efficient and equitable allocation of water resources, and to protect freshwater ecosystems, water quality and human health. The UN Commission on Sustainable Development (CSD) transmitted the recommendation to all governments. A Harare working group made detailed recommendations on the elements of any such policy:

1. Research, monitoring and information management programmes for understanding the quantity and quality of the resource base and its variability in time and space, and the social and economic forces affecting them
2. The principles of allocation of the resource, taking into account the principle that access to safe drinking water and sanitation is essential for satisfying basic human requirements, and that other allocations should be based upon consideration of economic efficiency and equity, and that allocations should be based on both sustainability of the resource base and on ecosystem and environmental protection.
3. Incorporation of health concerns into the freshwater management process through the adoption of explicit health objectives in planning, the use of health indicators in routine monitoring and the assessment of health outcomes in evaluation.
4. Protection of the aquatic environment, including wetlands, from local and diffuse pollution sources and from threats posed by exotic influences to maintain physical and chemical balances and biological integrity.
5. Management of demand should be a key part of the policy, focussing on water conservation through recycling and re-use and where appropriate, driven by pricing policies and by adopting best practices and appropriate technologies.
6. Management of water supply to deal with annual and inter-annual variations, to support food security and other purposes
7. Providing appropriate mechanisms for the management of land and water resources on an integrated basis within natural hydrological and hydro-geological units (river basins and aquifers), and providing for necessary interaction with administrative organisations

¹ Since the 1980s, there has been increased inter-agency collaboration. The Global Water Partnership was formed in 1996 with the aim of facilitating implementation of programmes in the water resources field. It has been looking at gaps in sector knowledge and capacity building needs in the different sectors. Although not policy making, it generates outputs through working groups and networking and is involved in global advocacy.

² Basin management plans are the building blocks underpinning national IWRM strategies, a concept which the UN Commission for Sustainable development recommended to all national governments following advice of the 1998 Harare meeting of the Expert Group on strategic approaches to freshwater management

where provincial, municipal and district boundaries do not coincide with basin or aquifer boundaries.

8. Provision for coping with hydrological extreme events and disturbances, particularly droughts, floods and erosion through the implementation of programmes of drought preparedness, flood protection, and mitigation including adequate monitoring and early warning systems.
9. Substantive co-operation with neighbouring countries in the integrated management of shared surface and groundwater resources within river basin or aquifer system frameworks.
10. Development and sustenance if appropriate institutions, including cross-sectoral water councils, and recognizing needs for capacity building, public information, and education

Current thinking on improving water resources management sanctions an integrated, multi-sectoral approach in the prevailing socio-economic context, including:

- I. Treating water as a social and economic good
- II. Relying on markets and pricing to determine water allocation among various sectors and user groups;
- III. Involvement of beneficiaries and the private sector in managing water at the lowest appropriate level and
- IV. Recognizing that water is a finite resource that contributes to economic development and supports natural ecosystems.

2.2.2 Regional Requirements

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 more Uganda's participation in international, regional and basin-wide bodies³ of cooperation such as the Nile basin initiative, Inter-government Agency for Drought (IGAD), Kagera Basin Organisation (KBO), Lake Victoria Environmental Management, provides the basic framework.

2.2.3 The National Context

Numerous policy initiatives have influenced the water sector policy. These include the following:

1. The new constitution
2. The Decentralisation policy
3. The Environment Management Policy and Statute

The Constitution

Objective XIV of the Constitution of the Republic of Uganda (1995) states "the state shall endeavour to fulfil the fundamental rights of all Ugandans to social justice and economic development and in particular ensure that all Ugandans enjoy rights and opportunities and access to education, health services, **clean and safe water...**"

Like wise under objective XXI, the constitution requires the state to take all practical measures to promote **good water management system** at all (social and administrative) levels.

³ Bodies that manage programmes for specific river or lake basins which may involve districts within one country, or 2-3 countries such as the Nile Basin Initiative

Objective XXVII states that 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.

Decentralisation

Decentralisation aims to "...[encourage] good governance, increased participation in an informed decision-making process by the people through devolution of powers to the appropriate level of Governance" (MoFPED, 2000c). The 1997 Local Government Act paved the way for full devolution of powers to the popularly elected local Government.

The Local Government Act

The Local Governments Act of 1997 defines roles for the different levels of governance in the provision and management of water related services and activities. 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 (DWD). The Act emphasises decentralisation, where 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 mobilise support for development relevant to local needs.

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

The National Environment Management Policy and subsequent Statute includes objectives on water resources conservation and management "...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..."

2.2.4 The Water Statute 1995

The water statute⁴ 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:

1. To promote the rational management and use of waters of Uganda
2. To promote the provision of a clean, safe and sufficient supply of water for domestic purposes to all persons.
3. To allow for the orderly development and use of water resources for purposes other than domestic use, such as 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
4. 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.

2.2.5 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:

1. To manage the water resources in ways which are most beneficial to Ugandans

⁴ A statute is the law governing an issue in this case water resources. A policy operationalizes the law (statute).

2. To provide water supply services for domestic, stock, horticultural, industrial environmental and other beneficial uses.
3. To provide sewerage services, in any area in which it may be appointed to do so under the Water Policy or Water Statute.
4. To do anything connected or incidental to the above.
5. To develop the water and sewerage systems in urban centres and big national institutions through out the country.

2.2.6 The Uganda Plan of Action for Children (UNPAC), 1992

Following the World Summit for Children, New York September 1990, GoU developed the Uganda National Plan of Action for Children (UNPAC), which was adopted by Cabinet as the 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 sector plans”

The strategy is to provide basic minimum social services to as many Ugandans as possible in the fields of

- o Primary health care
- o Clean water and basic sanitation
- o Primary education and adult literacy
- o Community care of children in need of help.

2.3 Water Resources Management

The overall policy objective of the GoU for 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 the stakeholders”

Guiding Principles

The Uganda Water Action Plan (WAP)⁵ which was prepared during the period 1993-1994 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. They recognize that:

- a. Freshwater is a finite and vulnerable resource, essential to sustain life, development and the environment
- b. Management of water resources at should be done at the lowest appropriate levels,

⁵ The WAP was a study commissioned by GoU in 1993-94, which identified and analysed water resource issues that needed attention, assessing potentials and constraints as well as identifying necessary short, medium and long term management needs and functions. The WAP provided GoU 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 as well as important inputs to the new water legislation and policies.

- c. The role of government as an enabler in a participatory, demand driven approach to development
- d. Water is a social and economic good
- e. Water and Land use management should be integrated
- f. The role of women is essential in the provision, management and safeguarding water
- g. Private sector has an important role to play in water management

Guidelines

Guidelines for IWRM are shown in **Table 2.1**

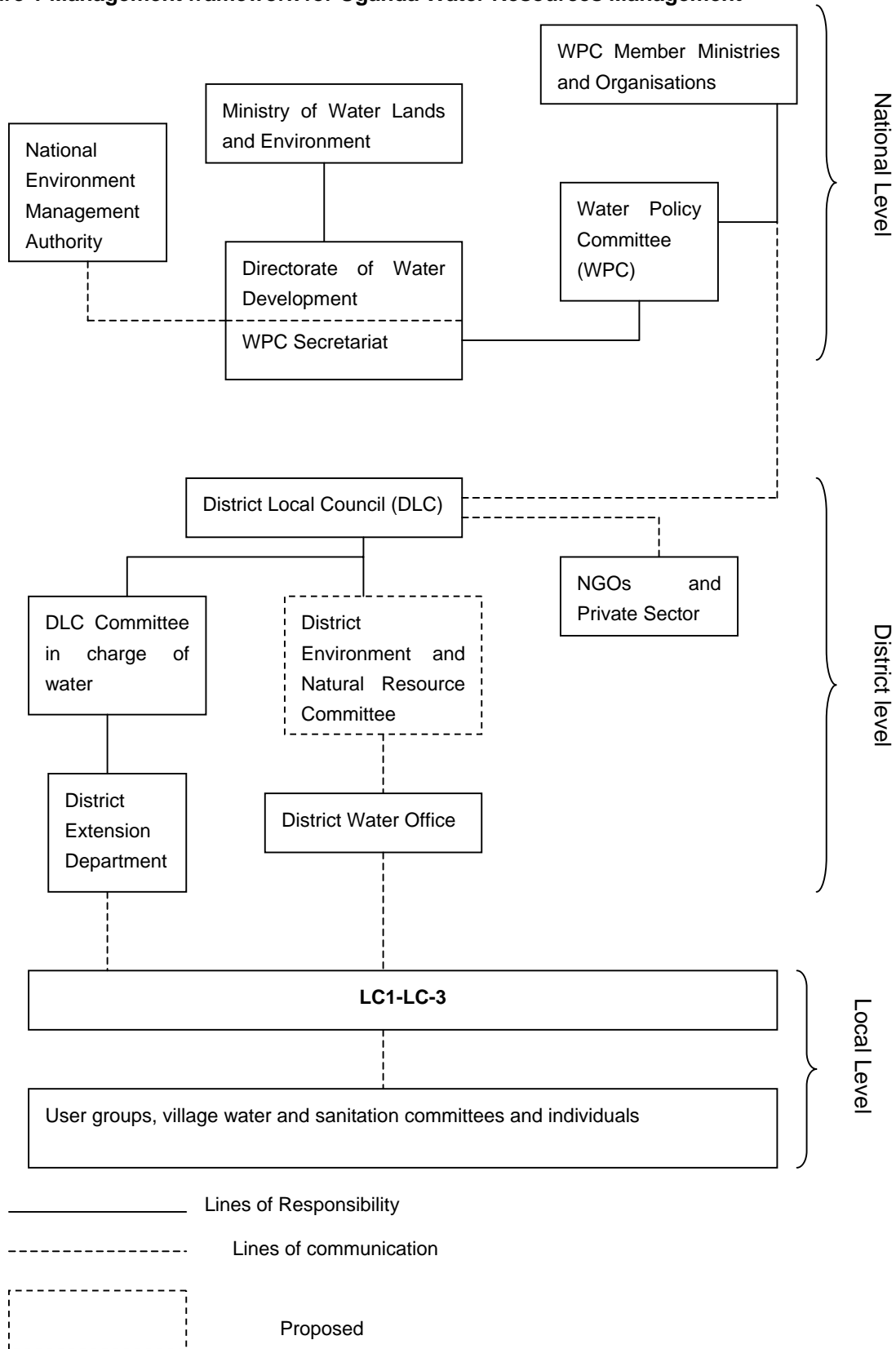
| Aspect | Guidelines |
|---|---|
| <i>Enabling Environment~</i> | <p>Government is an enabler of the participatory demand driven approach to development by providing:</p> <ol style="list-style-type: none"> I. Legislation to support the policy II. Regulatory control only in response to need and at enforceable levels III. Regulatory controls combined with economic incentives, IV. A dynamic framework through the WAP process |
| <i>Institutional Development</i> | <ol style="list-style-type: none"> a. Cross sector coordination mechanism with DWD as the lead agency b. Integrated approaches to project development c. Management functions delegated to the lowest appropriate level d. Private sector involvement e. Women participation f. Water resources management capacities developed at all levels |
| <i>Planning and prioritisation</i> | <ol style="list-style-type: none"> 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 water(most beneficial use) III. Sustainable use to be a key element in planning IV. Water quality and land use links recognised V. Environmental Impact Assessments as a 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 |
| <i>Data collection and dissemination~</i> | <p>GoU shall promote public information and awareness by:</p> <ol style="list-style-type: none"> I. Establishing and sustaining a monitoring and assessment system for water resources II. Establishment if a management information system (MIS) at all levels III. Dissemination of relevant information for planning, development and use of water resources |

Table 2-1 Guidelines for IWRM set out in the Water Policy

2.3.1 Institutional Framework for IWRM

The management framework for water resources , at national , district and local levels is set out in Figure 1.

Figure 1 Management framework for Uganda Water Resources Management



2.3.2 Roles and Responsibilities under IWRM

The Ministry of Lands Water and Environment (MWLE)

Has overall responsibility for initiating national policies, setting standards and priorities for water resources management in the country. The Water Policy Committee (WPC), as stipulated in the Water Statute (1995) advises the Minister on the above functions and initiates revisions to legislation and regulations and coordinates sector ministries' (water, agriculture, and industry) plans and projects affecting water resources.

The WPC

In addition to advising the minister, the WPC also coordinates the formulation of international water resources policy. The WPC, chaired by the permanent secretary of MWLE is composed of members from relevant central government ministries and departments, with representatives from district administrations, private sector and NGOs. The Directorate of Water Development (DWD) provides the secretariat of the WPC.

DWD

DWD is the technical sector manager. It makes plans, and develops strategies and regulates the different actors (NGOs, the private sector and the districts) play. It is responsible for capacity building, setting standards, monitoring and evaluation.

International Water Resources Issues

Strategy regarding international water resources particularly related to the utilisation of River Nile and conservation of the water quality of Lakes: Victoria, Kyoga, Albert , George and Edward is carried out at national level (see Figure 1)

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 districts levels. At the national level, policies are 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 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. The major uses like hydropower generating and other uses with trans-district and or trans-boundary implications are dealt with at the national level but with full participation of the stakeholders.

The existing extension staff in the districts that work in several sectors collaborate in order to promote integrated and uniform information regarding the sustainable use of water and land resources.

Local level groups within the framework of the National Water Policy 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.

Water abstraction regulation

The uses of water resources is 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 is still the role of Central Government through the Directorate of Water Development. 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 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, will then start to administer a permit system for the allocated amounts.

Wastewater discharge regulation

The management of a wastewater discharge permit system is a permanent national function under the Directorate of Water Development in consultation with NEMA, because of the detailed technical expertise required and because of the need to ensure adherence to international and national standards. Districts comment on applications from their areas, organize public hearings and assist in monitoring that the rules governing permits are being followed. Penalties on waster discharge and effluent into open water bodies and river courses were introduced. Audits and impact assessments in adherence with NEMA guidelines are required as appropriate.

Monitoring, assessment and forecasting

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

The Directorate for Water Development has the 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 is responsible for capacity building in the Directorate of Water Development to carry out these functions.

The Meteorological Department is responsible for weather and climate data. The Department works in partnership with the Directorate of Water Development in providing climate data for the water resource management.

As the decentralization process takes root, 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 ground water abstractions in relation to recharge.

Community groups and local Committees have the responsibility to monitor activities having local impact on water resources, such as uses of wetlands, forests and dumping of wastes – which they report to the districts.

Monitoring and evaluation of the general trend in sector development efforts and water supply coverage levels is done at the Directorate of Water Development and at district and lower levels of governance.

Enforcement

The Director of Water Development and the district administrations as appropriate, through the imposition of stipulated penalties and uses of the judicial system undertake enforcement of standards, regulations and by-laws.

Mediation

Village elders and the local government chief system is 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 judicially by Magistrates Courts. At the national level, the Minister responsible for water is the final administrative appeal possibility; while the judicial system also has an appeal channel.

Capacity building

The Government through the Directorate of Water Development ensures the requisite capacity to monitor and forecast seasonal variations in water resources as they are related to climatic variations, as well as the competence to objectively analyse water quality.

Continuous public information activities have to take place in order to ensure sustainable management of water resources. The Directorate of Water Development leads on this, and at the district level the integrated extension services are to be trained to be able to disseminate information to the various users of water resources.

The Districts

⁶The Water Policy (1999) 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. The structure was to ensure coordinated management of natural resources and environment. The districts would 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.

Municipal/Urban Council level

The districts, under the Local Government Act (1997), have responsibility for water supply services. However, municipalities or town councils being large stakeholders in the water supply systems 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 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 the opportunity to review its waste disposal practices as well as its water requirement. The municipal and urban councils therefore have an ever-increasing role to play in the management and protection of water resources.

Sub-County level

Under the Local Government Act, the sub County is a legal entity and has 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.

Local level

Water user groups have the responsibility to manage, operate and maintain point water sources. Community associations may also be formed for the purpose of managing resources such as a wetland area, fishpond or an irrigation scheme when such a need arises. The existing Local Councils (LC1-LC 3) and local government chiefs play a role in setting local priorities and enforcing byelaws, monitoring and mediating in water management issues.

River basin/catchment level

The Water Policy does not provide for the creation of river/lake basin management authorities, catchment boards or similar bodies. However, the government in collaboration with stakeholder

⁶ The function of the district has since changed. In the Sector Wide Approach, districts through the district water offices hire and supervise NGOs, and the private sector, to implement water and sanitation projects

government created the Nile Basin initiative, a diplomatic body that provides the platform to discuss and resolve Nile Basin issues.

The role of NGOs and the private sector

Under the sector wide approach, NGOs and the private sector implement, water and sanitation projects. With the NGOs dealing mainly with software activities whilst the private sector covers the hardware. The NGOs are not specifically mentioned in the policy, although there are efforts towards their inclusion.

Data and Information

Data and information is the key to the rational and optimal management and use of the water resources. The Policy stipulates that all developers and providers of water services 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 through DWD, collects, collates, analyses, archives and disseminates such information and data for public uses and management of water resources.

2.3.3 Domestic Water Supply

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 aquaculture.

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.

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:

“Provision of sustainable safe water supply and sanitation facilities, based on management responsibility and ownership by users, within easy reach of 65% of the rural population by the year 2005 with an 80-90% effective use and functionality of facilities. Then eventually to 100% of both the rural and urban population by the year 2015”

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 principals 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 ALL FOR SOME**’ provides a set of overall guiding principles, which have been adopted as part of Uganda 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 behaviour 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 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 full 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.

Strategies

Against this background the strategies for implementation, provision and management of water supply sanitation and sewerage services are as detailed in sections 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

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, hand pump equipped shallow well or borehole, or tap stand or gravity-fed scheme), preferably within 1,500m 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 distance not exceeding 200m.

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 100meters

A demand driven negotiation approach should lead to a level 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 the urban water supplies, design figures in excess of 80litres per capita per day for house connections are not considered justified for houses without waterborne sewerage.

ii) Technical-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 socioeconomic development.

For rural and sparsely populated peri-urban communities preference should be given to point sources such as protected springs, hand pump 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 assured.

Only well-known and tested technologies and hardware, preferably locally made/available, should be used. Standardization of equipment, e.g. hand pumps, is 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 specification 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 hand pump (Uganda version of the India Mark II and III pumps) is the standard equipment to be used in deep groundwater settings (boreholes deeper than 20m) 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 are being used with due consideration to specific local conditions and water uses 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 uses 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 (slums) 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.

Financing, Subsidies and Tariffs

On a national basis, investment and development efforts in the water supply and sanitation sector should follow an equitable share principal 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 continues 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 unreasonable 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.

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 hand pumps will continue to be the dominating technical choice for providing rural communities with drinking water. Operation and maintenance will follow the principals 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 preventative maintenance and repairs and are in all respect responsible for the maintenance of the installation. Proper arrangements including the uses of bank accounts will be made to safe guard the maintenance funds.

Sub-county level: the privates sector will be responsible for the activities at sub-county level. Private hand pump 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 mechanic. Extension staff and local Chiefs will provide back-up support and supervision.

District level: Although practice varies from district to district, the Policy stipulates that wholesale and retail distribution of spares should take place through district level spare part dealers appointed by the spare part manufacturers. District Water Officers monitor the function of the maintenance system and operate where applicable Borehole Maintenance Units, which undertake rehabilitation and repairs beyond the capacity of the hand-pump mechanics and in some instances the private sector is contracted for this work.

National level: Spare part distributors provide spares and distribute them to private dealers at district level. DWD monitors the general performance of the maintenance system and takes corrective actions at policy level as appropriate. As an interim measure, the Government provides conditional grants for the maintenance services beyond the capability of the community and local pump mechanics (e.g. use of mechanized rig for de-silting or re-drilling). Services are 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 the responsibility of the local communities.

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 in accordance with the water Statute (1995).

For urban water and sewerage systems, due to the heavy investment involved, uncertainty on full modality of management. The system ownership is entrusted to the Central Government. These schemes are entrusted to relevant authorities to manage operate and maintain. The Government ensures that the ownership of these schemes is gradually transferred to the User Association or local councils in accordance with the modalities 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, do so in accordance with stipulations set forth in signed management and performance agreements/contracts. This is 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 are enacted at district, LC3 level and LC 1 level. Monitoring and evaluation activities at the 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 the scheme management and performance is 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.

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 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 mobilizing 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 retained only enough plant and equipment to respond to specific emergency situations and provision of lifeline services. Further, Directorate of Water Development monitors and gives guidelines on ground water extraction and utilization.

Coordination and collaboration

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

The water and sanitation sector is now being managed using the Sector Wide Approach (SWAp), or Sector Investment Programme. In these approaches Government, donors, NGOs and the private sector commit to a collaborative programme of work concerned with the development of sector policies and strategies; projections of resource availability and expenditure plans; the establishment of management systems by GoU and donors to facilitate the phased introduction of common management arrangements; and institutional reform and capacity building, in line with agreed policies. In addition, structures and processes including sector working groups, joint reviews have been established for negotiating strategic and management issues and reviewing sector performance against jointly agreed milestones.

2.3.4 Water for agricultural production

Although agriculture is the mainstay of the Uganda economy, contributing 49% of the GDP (in 2001) 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 the irrigation estimated at over 400,000 Ha has not been significantly developed, and only small-scale irrigation e.g. of paddy rice is practiced in the east and northeast of the country. Such smallholder 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 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 predominantly inhabited by the 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 over grazing and land degradation and made it difficult for the nomadic pastoralists to lead a sedentary life style.

The limited spread of open water bodies (lakes) has seen the development of small to medium scale aquaculture to provide fisheries resources for the increasing population and for export.

Policy Objective

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

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

- i) Promoting proper water resource assessment and planning for agriculture production
- ii) Increasing the capacity of the farmers to access use 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.

Guiding Principles

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

- i) The provision of water to meet domestic demands for basic human needs, i.e. irrigating subsistence gardens, watering subsistence livestock and for a subsistence aqua-culture will not require prior authorization 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 motorized 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, bilharzias, guinea worm, etc) and increasing nutritional levels.
- v) Preservation and protection of the environment to ensured through Environmental Impact Assessment, approved 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 shared waters.

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 of water source and water ways, standardization 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 planning

Water resources assessment and planning

Water resources assessment, review of irrigation potential and preparation of strategies and action oriented program for irrigation development. This includes 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 optimize the resources and its protection.

Assessment of water quality for the aqua-culture, 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 hydro-geological regime of the catchment to guide remedial actions.

Technology choice

In planning and development of water supply for irrigation, aqua-culture 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. Standardization 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.

Financing, Investment Subsidies and User Charges

The use of public funds to finance development of irrigation, aquaculture and livestock water supply should mainly be for vulnerable groups (poor farmers, poor house holds, 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 promote/demonstrate appropriate technologies, benefits and best practices in agriculture.

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

All agricultural use of water, which requires prior authorization 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 Directorate of Water Development in accordance with established regulations economic principle shall apply to allocation of scare water resources for agriculture.

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 uses of irrigation and livestock schemes respectively. The Directorate of Water Development of the Ministry of Water Lands and Environment will provide the technical advice in the planning, design, construction and maintenance and operation of the hydraulic works and overall direction on the access, uses and

protection of the resources. Coordination of standards and guidelines for the provision of these services shall be through the Water Policy Committee established under the Water Statute. MAAIF provides guidelines on water management for agriculture, livestock and aquaculture.

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.

The Users Association shall be (in all respects) responsible for the operation and maintenance of any works, subject to 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 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 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 are owned by the Users. In case of hydraulic works for medium and large scale irrigation systems financed by the government, the system ownership is retained by government (because of the investment involved) but the operation and maintenance is 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 association in accordance with modalities established in the performance contract, with full participation of concerned local authorities.

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 are:

- 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 users in better agricultural methods, management and protection of water resources and the ecosystem.
- vii) Training of women and youth targeted to enhance equal opportunity for their participation in management of the schemes
- viii) Review of school curriculum to include status and uses of water in agricultural production.
- ix) Promotion of the participation of the private sector and non-governmental organizations in financing, development and operation of schemes through sensitization, facilitation, support and incentives.

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 association 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) Put in place measures to promote proper live stock watering methods,
- iv) Set up 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 groundwater. All measures shall be taken by the users to minimize 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 resources, especially conservation of its ecological functions. Significant agricultural developments in wetlands shall require environmental impact assessment (EIA).

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-climatologic); institutional and a 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 demonstration especially in dry areas.
- iii) Rehabilitation and/or development of dams and valleys 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 Agriculture 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 for agricultural production.

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

2.3.5 Other water resource uses

Water Demands

As previously mentioned Governments 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 are taken into account. Guidelines for provision of water for these water-consuming sectors are developed by the responsible sector agencies in harmony with the principals stipulated in the Water Policy.

Water for industrial use

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

Water for wildlife and recreation

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

Water for hydropower

The government promotes hydropower generation by:

- i) Supporting efforts to attain self-reliance in energy production and promoting regional co-operation for optimal development of hydropower and for the benefit of the region.
- ii) Promoting the uses of the water resource for small decentralized power-generating systems in remote areas for rural electrification and agreements between the various water users for the protection of catchment areas.

The strategy to attain the policy is by:

- i) Ensuring the rights of other users by regulation of water discharge,
- ii) Minimizing 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 optimize the uses 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.

Transportation

Uganda's lake and river systems also serve as alternative means of transport for the passengers and cargo. A required minimum water level must always be maintained to cater for this service.

2.4 Policy implementation

2.4.1 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) Provision 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) Provision for resource management and environment

Allocation will be reserved to ensure the continued viability of the resource and for the conservation of the environment. Watercourses should include provision of minimum flow to maintain water quality aquatic eco-systems

iii) Water for Production

Allocations should 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-base 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 understating of the available yield less any allocation reserved for domestic needs and the eco-system maintenance. During the transition period leading to the establishment of a market based allocation process, actions are 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 taken with full stakeholder involvement, emphasizing the continued security of existing allocations.

v) Response to emergencies (droughts and floods)

Assessment is made of the response of the water resource in time of the emergencies of the water uses, which draw upon the resource. This indicates whether a detailed strategy in response to emergency situations should be formulated. Such a strategy may involve limiting total allocations of selected categories of users during these periods and in consultation with the relevant sectors. Crises such as drought and floods are managed and coordinated on an interdepartmental basis because multiple efforts are needed to support affected communities. DWD is responsible for data collection data and information and dissemination to the public for awareness and safety.

2.4.2 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 1969 that vests on the 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 uses 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 the 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 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 short, 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; variation and cancellation of water rights; financial provisions; powers and duties; as well as appeals and offences.

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

2.4.3 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 uses 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 Uganda needs. Also through research, feasible technology alternatives should be identified to suit the future needs and ability/capability of both Government agencies and communities in different parts of the country.

As appropriate the research and development activities are sanctioned by the Uganda National Council for Research and Technology and measures are being 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 nations water resources. The department of Meteorology is funded to play its vital role in monitoring, assessment and research in order to provide timely and accurate data and predications on the weather and climate to DWD and other users.

Monitoring and assessment are 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 is made available for users at pre-set and approved charges.

2.4.4 Priority Action Programme

Water Resources Management

In accordance with the grouping of strategies presented in earlier sections, 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 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 condition of water resources can be collected, analyzed and disseminated and
 - Water resources assessment, which evaluates the impact of proposed interventions on the hydrological regime and water quality, such as water abstractions or waste discharges.

Policy implementation involves the successive detailing of policy from level of intent and formulated strategies 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 operational and sustainable water resource management. Successful implementation of this action programme constitutes at the same time the vehicle for implementation of the National Water Policy.

Monitoring of Policy Implementation

- i) To fulfill its monitoring and evaluation role DWD has defined a set of performance indicators to be able to gauge progress and effectiveness of the various strategies put forward in the water policy.

3. Progress on WRM Sub sector reform

3.1 Reform Study

The Water Resources Management Sub-sector is currently undergoing reform, through a study commissioned by DWD with the following objective:

“ To establish an effective framework for water resources management in Uganda to ensure that water resources are managed in an integrated and sustainable manner.”

Immediate Reform Objectives

- Development of a national strategy for the management of trans-boundary water resources
- Review, harmonization and updating of the the existing legal framework for WRM
- Development of strategies and an action plan to promote the active participation of all stakeholders.
- Development of an institutional environment for policy making, planning and co-ordination of WRM at all levels, with emphasis on the decentralisation of WRM
- Preparation of capacity building programme for WRM at all levels
- Determination of the implications of the other sub-sector reform studies and other related developments on WRM
- Preparation of a WRM strategic investment plan with a planning horizon versus 2015

3.2 Strategic Action and Investment Plan (SAIP)

There are ten identified key strategic interventions:

- SAIP1 Framework for Decentralisation of WRM
- SAIP2 Water Resources Planning, Allocation & Permit Management
- SAIP3 Vitalisation of WPC
- SAIP4 Enhancement of DWD-Water Resources Management Division(WRMD)
- SAIP5 Water Resources Monitoring and Information Services
- SAIP6 Water Quality Management
- SAIP7 Human Resource Development Programme for Water Resources Management
- SAIP8 Participation of Stakeholders
- SAIP9 A National Strategy for Management of International Waters
- SAIP10 Harmonised and Updated Legal Framework for Water Resource Management(WRM)

3.2.1 Framework for Decentralization of WRM

Objective

Phased development of a demand responsive and functioning institutional framework for decentralized WRM in Uganda that will meet the country requirements for local WRM

Outputs

The strategic interventions shall meet Uganda’s immediate needs for enhanced local level involvement and capacity and prepare the ground for gradual development of future local water management structure based on needs and lessons learned

Phase 1 (2004-07)

1. Further sensitisation and assessment with relevant authorities and stakeholders of the issues and strategic opportunities to adjust the strategy, direction and scope of this component of the SAIP towards 2015. DWD-WRMD also to decide on its involvement in pursuing the decentralization process in consultation with MoLG, MWLE and donors involvement
2. DWD-WRMD to finalise allocation and mobilising of resources and assigning specific staff at HQ to each Water Management Zone for facilitation of the respective WRM Zone forum.
3. **Establish working relations with Lake Kyoga and Lake George integrated Lake Basin Management Organizations to provided guidance in connection with the development of catchment management structures in the various WRM Zones.**
4. **Arrange follow-up workshops in each WRM Zone to sensitise and prepare the establishment of WRM forums with representatives from CAO, Natural Resources Departments, Works Dept. (DWO), and other relevant district departments, NGO's and CBO's operation within the sector and other stakeholders.**
5. **Plan and prepare for the implementation of immediate cooperation initiatives, such as to: (i) Delegate agreed WRM functions to districts; (ii) Enhance the information flow between the center and the districts; (iii) Harmonize DEAPs; (iv) Facilitate and promote trans/inter-district water management issues and activities; (v) Interact with and give advise to WRMD, NEMA and key stakeholders; (vi) Plan the set up of a Water Management Zone Organization provided the need for a such an authority is agreed**
6. Prepare, plan, and budget for Phase 2 interventions in particular the development of the WRM forums into full-fledged Water Management Zone Organizations provided the authorities and stakeholders see this a viable option for water management

3.2.2 Strategic Action Plan for Water Resources Planning, Allocation and Permit Management*Objective*

Phased development of a demand responsive and functioning water permit operation in Uganda that will meet the country requirements for properly planned and regulated use of water resources for equitable and sustainable water allocation and development.

Outputs

The strategic interventions shall meet the country's immediate and long-term needs for effective regulation of water resources allocation and development. It should be noted that Water quality permitting and control as a measure for water quality management in Uganda will be addressed specifically in Strategic Action Plan 6.

Phase 1 (2004-07)

1. Sensitization and assessment with relevant authorities and stakeholders of the issues and strategic opportunities to adjust the strategy, direction and scope of this component of the SAIP 2015.
2. Approval process of the strategic principles and action plan by the WPC, MWLE, DWD, NEMA and other authorities and stakeholders
3. Organisation and mobilisation of resources, routines, and collaborative arrangements with LGs for effective issuing and monitoring of ongoing and future water licenses
4. Implementation of the agreed actions in Phase 1

3.2.3 Strategic Action Plan for Vitalisation of Water Policy Committee(WPC)

Objective

To activate and update Water Policy Committee functioning on a regular basis according to its mandated role and in line with the requirement of effective, cross-sectoral and recognized WRM

Outputs

An active, up-to-date and functional Water Policy Committee

Phase 1 (2004-07)

1. Further sensitization and assessment with stakeholders of the mandate and composition of the WPC and issues and opportunities of vitalization of the WPC under the auspices of SAIP 2015.
2. Preparation of the Agenda and holding of first meeting meeting to address the findings and recommendations of the WRM Sub-Sector Reform Study and the proposed SAIP 2015 before end of November 2004
3. Review of the experience from the first meeting and messages and suggestions of the participants on the role and mode of operation of the WPC
4. Preparation of guidelines for the regular functioning and procedures of WPC and revised composition before the end of February 2005

3.2.4 Water Resources Monitoring and Information Services

Objective

Water Resources Monitoring and Information Services should be strengthened at district level.

Outputs

Strengthened ground and surface water monitoring systems, information services and cooperation between DWD-WRMD and District Local Governments.

Phase 1 (2004-07)

1. Workshop to clarify the latest development and directions of the ongoing strengthening of WRMD's water resources monitoring and information services under WSPS2 and harmonize the proposed long-term interventions with this program.
2. Establish an agreed basis for re-organization of the joint networks operations in a rational manner including coordinated logistics and data exchange with networks operated by others.
3. Joint action with Strategic Action Plan 1 for cooperation between the centre and the DGs aimed at producing water resource data with a wide coverage and of adequate quality so that it can be relied upon for water resources assessment studies in the Districts.
4. Follow up on the proposed classification of water monitoring networks according to their functions: (i) basic network; (ii) specific networks; and (iii) temporary high-density networks. The finally agreed classification will have bearings on the network operation, data exchange, information dissemination etc.

3.2.5 Water Quality Management

Objective

To establish an informed, effective and respected water quality management operation

Outputs

Informed, effective and respected water quality management operation in place

Phase 1 (2004-07)

1. Initiation workshop to discuss the recommendations of the study team and make adjustments before launching the Water Quality Approach and Strategy at a WPC meeting to obtain high level views and backing for the implementation of the plan
2. Resolve the water quality regulatory responsibility between DWD-WRMD and NEMA by negotiations and arriving at a solution by the support of the WPC.
3. Concerted actions to register and catch up with the backlog of un-permitted discharges and mobilize the basic regulatory permit issuing and compliance control as a high priority task in close cooperation with the Permit Action Plan under Strategic Action Plan 2
4. Cooperate with Action Plan 1 to contribute to and influence on the long-term process of decentralizing WRM in Uganda

3.2.6 Human Resources Development Program*Objective*

The immediate objective is to create a strategic framework and an associated 15-year action HRD capacity building programme for Water Resources Management

Outputs

A 15-year capacity HRD programme for WRM which will include but will not necessarily be limited to: (i) training needs assessment for both central and local governments to enable them to manage water resources effectively; and (ii) A 15-year HRD program and investment plan (to be incorporated in the overall strategic action and investment plan).

Phase 1 (2004-07)

1. Conduct public awareness campaign on WRM through public media, seminars and workshops
2. Build the capacity of national and private capacity provider institutions
3. Build the capacity of district/lower local government staff and political leadership in WRM
4. Build the capacity of Water Resources Management Department through: Hands-On Skills Development, Performance Improvement Courses, Career Development Courses
5. Identified needs for further analysis related to HRD
6. Funding of HRD and Capacity Building Activities

3.2.7 Action Plan for Participation of Stakeholders*Objective*

To establish an effective framework for stakeholder involvement in WRM in Uganda to ensure that water resources are managed in an integrated and sustainable way

Outputs

The output is to promote active participation of all stakeholders including women and the private sector in WRM including mainstreaming gender issues in WRM for promoting the effective participation of other stakeholders (private sector, NGOs/CBOs etc.) in WRM at all levels and facilitate women's involvement in project activities

Phase 1 (2004-07)

1. Provide awareness and knowledge on WRM issues through sensitization and provision of basic education
2. Involvement of stakeholders in WRM planning and activities' implementation through holding joint planning and monitoring forums
3. Advocacy for resource support and integration of WRM in the mainstream of poverty alleviation programs
4. Advocacy for resource support and integration of WRM into water supply and environment programs
5. Empower women with basic knowledge and skills on water resource management through dissemination of WRM information to existing women organizations
6. Initiate and support education programs aimed at enhancing the capacity of women to actively participate in WRM
7. Support private sector WRM initiatives

3.2.8 Harmonised and Updated Legal Framework for WRM*Objective*

The immediate objective of this component is to review, harmonise and update the existing legal framework for WRM in Uganda

Outputs

This Building Block is aimed at laying down the basis for a harmonised and updated legal framework for WRM comprising: (i) An analysis of the existing legal framework related to WRM including a clear identification of any bottlenecks; (ii) recommendations for harmonisation and updating the various legal instruments related to water resources management;.

Phase 1 (2004-07)

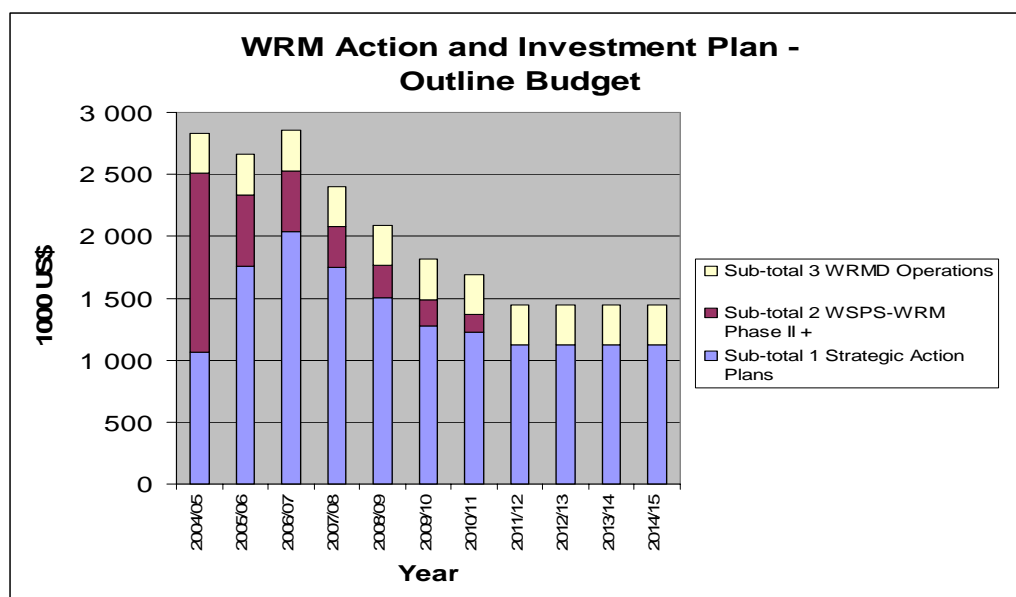
1. Enforce rights and laws
2. Streamline reporting procedures
3. Address the highlighted areas and consider preparation of amendments to Water Act
4. Follow-on 20 critical areas for implementation

3.2.9 Strategic Investment Plan

A strategic investment plan has been developed by DWD, with focus on the following key areas:

- Critical Elements for the SAIP
- Balance between Human Resources needed for Program activities and for regular WRMD duties
- Need for strengthened program administration capacity in DWD-WRMD
- Commitment by Govt. Authorities
- Empowerment of the regulatory functions
- Financial/economic conditions in place

Figure 2 WRM Outline Budget for Action and Investment Plan



3.2.10 Funding

It is envisaged that GOU will increase its funding commitment to the strategy whilst the donors reduce their contributions in the long run. A significant part of the funding will be covered under agreements with international development cooperation agencies especially the long-term cooperation under the different phases of the WSPS