THE REPUBLIC OF RWANDA

MINISTRY OF NATURAL RESOURCES

National Policy for Water Resources Management

December, 2011

Abbreviations

EAC	East African Community
EPDRS	Economic Development and Poverty Reduction Strategy, 2008-2012
IWRM	Integrated Water Resources Management
MDGs	Millennium Development Goals
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Finance and Economic Planning
MINEDUC	Ministry of Education
MINIRENA	Ministry of Natural Resources
MININFRA	Ministry of Infrastructure
MINISANTE	Ministry of Health
MIDIMAR	Ministry of Disaster Management and Refugee Affairs
MINADEF	Ministry of Defence
NBI	Nile Basin Initiative
NEPAD	New Partnership for Africa's Development
PRSP	Poverty Reduction Strategy Paper
RURA	Rwanda Utilities Regulatory Agency
SWAP	Sector Wide Approach
UNDP	United Nations Development Program

Contents

Foreword

Water is the most precious of the natural resources of Rwanda. Water sustains life, including human life and ecosystems' health, and supports all sectors of the national economy. It is a unique substance with no known substitute. Its proper management, accordingly, is a high priority for the Government of Rwanda.

In recognition of the strategic nature of water resources, and its vulnerability to depletion and pollution in the face of global climate change, rising population and growing economic development; and committed to the principles of sustainable development, the Government of Rwanda has made substantial efforts over the years to put in place a robust framework for the conservation, protection and management of the country's water resources. This resulted in the formulation of the water and sanitation policy of 2004 and the Water Law No 62 of 2008.

The National Policy for Water Resources Management (2011) is the latest development in Government's consistent and continuous efforts to strengthen the water resources management sub-sector. It replaces the 2004 policy whose revision became indispensable due to its ill-alignment with the Water Law No. 62/2008. The later embodies many modern and cutting-edge principles of sustainable water resources, which are not reflected in the 2004 water policy. Additionally, the Government has been introducing reforms in the water sector that have significantly changed the context for water resources management and rendered the 2004 policy out of date.

The development of the 2011 policy, in keeping with the ideals of stakeholder participation, included a process of consultations with experts, senior managers and opinion leaders from different agencies and walks of life in the water sector.

Through the National Policy on Water Resources Management, Government is outlining its vision for the water resources management sub-sector. With a suite of eight policy statements and thirty one strategic actions, the Policy firmly puts Rwanda on the path for sustainable water resources management. The policy together with its Strategic Action Plan will make it possible for Government to embark on systematic development of the water resources management sub-sector, further enhancing its supportive role to other sectors of the economy.

I call upon all relevant Government institutions and other development partners to embrace the guiding principles reflected in this policy to support the sustainable socio-economic development of Rwanda.

Lastly, I wish to appreciate the invaluable contribution of all our Partners in the formulation of this policy and look forward to their continued collaboration in its implementation.

Ambassador Stanislas Kamanzi
Minister of Natural Resources

Glossary

Comprehensive Water Resources Management

This involves taking account of all the activities that use water (water supply, irrigation, hydropower, etc.) irrespective of mandate.

Integrated Water Resources Management (IWRM)

IWRM is a water resources management approach that addresses the interdependence of the different uses and users of water resources.

Riparian Country /Countries:

A country /countries through or along which a portion of a transboundary river flows or on which a common water body lies.

River Basin

A geographical area described by a water system including surface and underground water flowing into a common terminus.

Sanitation

This represents issues related to the management of waste water including both on-site and off-site water dependent sanitation systems.

Stakeholder

Organization, group or individual that is concerned with or has an interest in water resources management and that would be affected by decisions about water resources management.

Strategies

Tools developed for the implementation of policies and to meet objectives. These constitute the general framework of activities to be undertaken through time to meet previously defined objectives and endorsed policies.

Transboundary waters

Refers to regional or international water bodies traversing adjacent countries or shared by riparian neighbouring States.

Water Resources Development

Physical activities to improve the beneficial use of water for different purposes.

Water Resources Management (WRM)

Water resources development, utilization, conservation, protection and control that incorporates physical, social, economic as well as environmental interdependence,

Water Resources Planning (WRP)

This refers to the process of development, protection, conservation, control and allocation of a scarce resource (sectoral and inter-sectoral), matching water availability and demand, taking into account the national objectives, constraints and the interests of stakeholders.

Watershed Management

This refers to a set of actions taken in a given geographic area by taking into account human, natural and ecological factors surrounding a water body to achieve desired social economic objectives.

Wetlands

Areas of marsh, fen, peat and/or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt including areas of marine water less than six meters deep at low tide.

1. Introduction

The water resources in Rwanda face growing challenges arising from pressures of rapidly changing demographic patterns, the demands of intensified socio-economic development, degradation resulting from unsustainable and inappropriate land use practices; and the uncertainties created by climate change, among others. At the same time, the water resources are relied upon to meet many conflicting demands and play its full role in facilitating the achievement of the country's 2020 development vision. Meeting the above challenges requires a sound policy and legal framework supported by robust institutions that are adequately resourced and staffed by technically competent personnel.

2. Issue

The water resources management is governed by the existing water and sanitation policy developed in 2004. In 2008, the Law number 62/2008 on the use, conservation, protection and management of water resources was adopted. The water law incorporates many cutting edge principles of sustainable water resources management, which will continue to be relied on in the foreseeable future to support the efforts to manage Rwanda's water resources sustainably. The 2008 water law:

(a) provides an institutional framework for the coordination of water resources management, a key ingredient of integrated water resources management;

(b) devolves water resources management functions to District based and user organizations, as required by the principle of stakeholder and user participation; and

(c) provides for charges to be levied on the use of water, which is an important tool for giving effect to the widely accepted principle that water has an economic value.

The Government has also, in recent years embarked on significant institutional reforms, which have substantially changed the context for managing water resources. These include the separation of the institutional arrangements for water resources management from those for the provision of water supply services and infrastructure in line with the decentralisation policy and the creation of the Rwanda Natural Resources Authority (RNRA) through Law No 53/2010 with the overall mandate of managing natural resources composed of land, water, forests and mines and geology. The sector wide approach (SWAP) was introduced to ensure an integrated and participatory monitoring and evaluation of EDPRS core programs.

These institutional changes have transformed the framework for managing water resources in Rwanda, but they are not reflected adequately in the 2004 water and sanitation policy. Therefore, a gap has arisen between the policy on managing water resources and the vision and aspirations of the country for its water resources sub-sector. This gap ought to be bridged by urgently formulating a new water resources management policy and consolidating the institutional arrangements as a framework for addressing the challenges facing the sub-sector. Such a policy would need to take into account international best practices in water resources management.

Accordingly, the Government has formulated this policy on WRM which underpins its approach on the way that the water resources of the country will contribute to the achievement of the overarching national policy objectives as stipulated in Vision 2020, the EDPRS and other similar high level national policies, and breaks them down into concrete principles, objectives and statements.

3. Context

3.1 Contextual background

The Water Resources Management (WRM) Sub sector derives from the diverse Environment and Natural Resources Sector (ENRS) encompassing also the sub-sectors of Environment and Climate Change, Lands, Mines and Forestry. The Sector Strategic Plan (SSP) approved and published in 2009 indicates that the management and rational utilization of ENR is critical to optimal performance and productivity of other key socio-economic sectors including health, agriculture, energy, transport, ecotourism, social development, etc. This is the rationale for inclusion of the sector in the Economic Development and Poverty Reduction Strategy (EDPRS). More specifically, the WRM sub sector plays a vital role in many ways towards the sustainable human and socio economic development as outlined in the section below.

3.1.1 Water as a resource

Water is a finite resource, which is essential for sustaining life on earth and is indispensable to human survival and to the ecological functions of plants and animals. Water is also necessary for human and socio-economic development as an input in industrial processing, energy generation, transport, agriculture and tourism, among other commercial activities. However, water can also cause harm to humans, plants and animals as well as to social and economic activities as a result of disasters arising from floods, drought and water borne diseases.

Therefore, water is a resource that must be carefully harnessed, optimally utilised, controlled and managed appropriately in order to obtain maximum benefit from it while minimising its potentially adverse effects. Water resources planning and management must therefore be designed not only to solve problems but also to take advantage of the prevailing opportunities.

As a resource, water has relevance and significance for all sectors. It is therefore appropriately described as a cross-cutting resource. Accordingly, planning and decision making processes regarding water resources must take account of, and give effect to, the implications for all sectors, including the economy, the ecology, and socio-cultural values. This calls for an integrated approach to water resources management, a principle to which this policy will aspire to give effect.

3.1.2 Rwanda's water resources

3.1.2.1 Hydrology

Rwanda is a landlocked country located within the Great Lakes region of the central eastern part of Africa. The Congo Nile Ridge divides the country's waters into two parts: those flowing to the west into the Congo Basin and those flowing to the east into the Nile Basin.

Therefore, Rwanda principally has only two hydrographic basins. The Nile basin (67% of the territory) and the Congo Basin (33% of Rwanda's territory).

The Nile Basin covers the greatest part of the country. Its main rivers, namely the Nyabarongo and the Akanyaru, together with their many tributaries form the River Akagera, which flows into Lake Victoria. Along these rivers are also marshes and numerous shallow lakes forming a network of wetlands of national and global importance as major water reservoirs .

The Congo Basin consists of short rivers which flow into Lake Kivu with Rusizi River as its outflow into Lake Tanganyika. Its principal tributary, the Ruhwa River, forms the border between Rwanda and Burundi in the South, while River Sebeya in the North-West flows into Lake Kivu.

Under the EDPRS, water resources utilization for growth is expected to increase, as more land will be put under irrigation; more hydro-power generation potential will be exploited; and more industrial activities is anticipated (especially the water-intensive washed coffee processing). Strategic natural water bodies will be exploited for recreation including hotels and other recreation facilities. All these potentially imply more water abstraction that requires a rational management regime. These calls for a clear set of guidelines to make sure that the available limited water resources are sustainably managed and developed towards social economic development of Rwanda.

3.1.2.2 Topography

The Rwandan physical landscape is characterized by a topography which gradually rises from the East to the West. In the East, it has an average altitude of 1,250 m above sea level, which increases in a westwards trend with altitudes ranging between 2000 and 3000 m above sea level. The main features of that predominantly mountainous topography are the volcano range in the north-west culminating at 4507 m above sea level, and the Congo-Nile Ridge stretching from south west to north-west and culminating at 2918 m above sea level. This topographical set-up makes the country prone to soil erosion and loss of water, which is further aggravated by the degraded vegetative cover that gradually resulted from inappropriate agricultural and land use management practices[1] as well as deforestation.

3.1.2.3 Climate

Rwanda's climate is subtropical type with specific variants correlative to the topography as follows:

(a) the high altitude region;
(b) the central plateau region;
(c) the eastern plateau; and
(d) the western lowlands.

[1] See genenrally Republic of Rwanda, The National Environment Policy, para 2.1.1.1.

The general climatic pattern reflects two rainy seasons and two dry seasons during the year. The annual rainfall per year stands at an average of 1200 mm. However it varies from region to region as follows:

(a) 700 mm to 1400 mm in the eastern plateau and lowlands of the west;
(b) 1200 mm to 1400 mm in central plateau; and
(c) 1300 mm to 2000 mm in the high altitude region.

The rainfall regime strongly influences the hydrological regime. There are floods during the rainy season, which ordinarily is from March to May and they subside during the long dry season from June to September.

In recent years, the climatic patterns have become less predictable. Rwanda has increasingly been experiencing long periods of drought which tend to be cyclical and persistent interspersed with periods of heavy flooding. These changes could be attributable to the anthropogenic activities and global warming phenomena which have imposed many uncertainties on weather patterns causing vulnerabilities of the people.

3.1.3 Socio-economic situation

3.1.3.1 Population

Rwanda's population in 2008 was estimated at 9,831,501 inhabitants[2] with an annual growth rate of about 3.8%. The population is therefore expected to rise to about 13 million inhabitants by 2020[3]. Given its small land surface area of approximately 26,338 square kilometres, Rwanda is one of the most densely populated countries in Africa, with a population density estimated at 373 inhabitants per square kilometre.

3.1.3.2 Agriculture and related sectors

Rwanda's urban population stands at about 10% of the total population. The majority of the population lives in the rural areas carrying on small scale farming. Rain-fed agriculture remains significant and contributes over 37% to the Gross Domestic Product[4]. It also accounts for more than 80% of the country's export earnings. Given the small size of the country, dependence on subsistence agriculture as the primary mean of livelihood imposes severe pressure on land, with the majority of cultivating households farming less than one hectare of land[5]. Due to severe land pressure, farming activities have been taking place on steep slopes, exacerbating the degradation of the land, and causing massive soil erosion and deforestation.

Government has embarked on an ambitious crop intensification programme with a view to ensuring food security and to improve the socio economic livelihoods of the Rwandan population, as reflected in the EDPRS plan period (2008-2012). While the process will be

2 National Institute of Statistics of Rwanda, statistics yearbook 2009 Edition
3 Vision 2020, p. 14
4 EDPRS, p. 35.
5 EDPRS, para 2.12

driven by sustainability principles, it is unavoidable that it will intensify demand on water resources to support other economic sectors including agriculture productivity whereby irrigation is to be intensified to adapt to the current weather trends relevant to climate change. The quality of water is also likely to be affected by the predicted increase in use of inorganic fertilizers and inappropriate waste management.

The area under irrigation is expected to increase from 15,000 to 24,000 hectares. The hillside area irrigated will expand from 130 to 1,100 hectares, while reclaimed marshland will almost triple from 11,105 to 31,500 hectares. The application of inorganic mineral fertilizer will increase from 11% to 40%. Robust water resources management and development frameworks are therefore necessary if the country's vision for its agriculture sector are to be achieved.

Other related economic activities which place a similar demand on water resources, and which must be taken into account in formulating the country's water resources management policy, arise from the forestry sub sector, fisheries and livestock development.

3.1.3.3 Energy

Access to electricity in Rwanda is still very limited. About 85% of households depend on biomass for their energy[6], with associated adverse environmental implications, including forest degradation. Given the pivotal role of energy in development, and in order to realize Vision 2020 targets, Rwanda will have rapidly to increase the level of access to electricity mainly through increasing her power generation capacity, including hydro-electricity, methane gases sources and geothermal energy.

The target under Vision 2020 is that, by 2020, at least 35% of the population will be connected to electricity. Many of the related activities are already underway[7]. The national hydropower Atlas project has identified 333 micro and mini hydropower sites in the country with a combined capacity of 96 MW and the government of Rwanda intends to increase the amount to 1000 MW by 2017.

In this connection, the sustainable management of water resources will be equally critical to support the hydro-electricity sub-sector. At the same time the exploitation of natural gas to meet the country's energy needs will have to be carefully managed to avoid any possible adverse impact on water resources.

3.1.3.4 Water supply

The EDPRS recognizes the central role of water in economic development, stating that:

> *"Over 80% of the diseases that afflict Rwandans are waterborne; so access to safe water is a precondition for improving environmental and personal health. Whereas, the number of people with access to safe water increased between 2000*

6 See Vision 2020, p. 17.

7 Energy Joint Sector review Summary Report FY 2009-10, 5th October 2010, Ministry of Infrastructure.

> *and 2005, there was no change in the proportion of households having access to safe water nor was there any reduction in the average distance a household had to travel to fetch safe water. The EICV2 survey found that of all public services, Rwandans are least satisfied with access to drinking water, while the Ubudehe survey suggests Rwandans would rank water access as highest priority in infrastructure services.*"[8]

Relative to that challenge, the National Policy and Strategy for Water Supply and Sanitation Services stipulates the following objectives:

- Raise rural water supply coverage to 85% by 2012 and 100% by 2020.
- Ensure safe, reliable and affordable urban water supply services for all (100% service coverage)

Moreover, the EDPRS States that

> *"... a high priority of the EPDRS is to ensure sustainable and integrated water resources management and development for multi-purpose use. To this end capacity will be developed and institutions will be built at national and trans-boundary levels, pilot sub-basin committees and local water associations will be established ... while IWRM and governance and investment plans will be put in place for the entire country by 2012. Groundwater and surface water master plans will also be implemented..."*[9]

Therefore there is still a gap in coverage that will have to be filled though further development of water supply. The achievement of this ambitious policy objective is dependent on reliable and well managed water resources, which can be harnessed to meet the water supply requirements of the population.

Accordingly, the growing demand for water supply to meet the requirements of industry, manufacturing, mining, tourism and other commercial sectors forms part of the competing demands which Rwanda must address as part of its policy on integrated water resources management. At the same time, it must be recognized that the proper management of waste water from these sectors is an important national priority; as poor management of waste water and the discharge of untreated waste water into rivers can threaten the quality of Rwanda's water resources.

3.1.3.5 Forestry

The Rwandan forestry policy identifies high population growth rates as a threat to the sub sector's development as population density is a key driver of deforestation and declining land units available for forestry extension. It also highlights the importance of forestry and agro-forestry in agricultural transformation as forestry activities will be important in controlling

[8] EDPRS, para 2.42

[9] Para. 3.39

soil erosion, increasing land productivity, and improving rural off-farm livelihoods through multiple benefits from agro-forestry and biodiversity conservation.

The present water resources policy calls for appropriate actions to improve catchments' management whose effect would be enhanced by protection and conservation of forests as a measure to contribute to the water pollution control. Preventive measures on deforestation are also recommended since it has exhibited a negative impact on hydrological cycle especially precipitations. Further, arising out of the principle of sustainability which is embedded in the policy, the water needs of natural resources, such as forests and wetlands will be assured.

3.1.3.6 Mining

Before 1990, about 10 percent of the country's export earnings came from mineral commodities. The most important minerals are Colombo tantalite, Cassiterite, and Wolfram (National TDA 2006). After a slump in the mid nineties, the sector has continued to grow and it accounted for more than 30% of the country's exports in 2008. In the context of the EDPRS, the National policy on mining puts emphasis on the exploration for minerals, their industrial processing and their value addition as part of exports and national revenue diversification and job creation.

The current mining policy promotes the need to use modern mining techniques that minimise harm to land, forests, water, wetlands and the environment. However, due to inadequate implementation of the policy, mining activities cause deterioration and pollution of water bodies. The WRM policy underscores the need for appropriate minerals' exploration and exploitation techniques to prevent pollution and deterioration of the quality and quantity of water bodies.

3.1.3.7 Industry, investment and eco-tourism

The main objective of the national investment policy is to develop the private sector by attracting industrialists, and strengthening small and micro enterprises and improving the operational environment for the business sector. The policy also recognizes that in order for Rwanda's Water resources and environment to be sustainably managed, there is a need to adopt economic and business approaches that provide incentives for sustainability. This approach is based on the idea that the quality and quantity of available water resources underpins sustainability not only of goods and services but also of eco-tourism on which livelihoods and a big proportion of the country's foreign exchange earnings depend.

3.1.4 The governance, legal and institutional framework

3.1.4.1 National context

Rwanda's water sector is governed under a complex institutional framework, as shown in the table below. The institutions can be categorised into policy and oversight institutions,

management and implementation institutions, service provision institutions and regulatory institutions.

No.	Institution	Function and responsibilities related to WRM
	Policy and Oversight Institutions	
1	Ministry of Natural Resources (MINIRENA)	Formulation of Water resources management policy, strategic planning, coordination, quality assurance, monitoring, evaluation and capacity building. Put in place legal and regulatory framework.
2	Ministry of Local Government (MINALOC)	Establishment, development and facilitation of the management of efficient and effective decentralized government systems capable of law enforcement and delivery of required services to the local communities.
3	Ministry of Agriculture, Animal Resources (MINAGRI) and affiliated agencies	Development, planning and coordination of the implementation of agricultural development policy in the country including irrigation, fishery and livestock.
4	Ministry of Infrastructure (MININFRA)	Development of institutional and legal frameworks, national policies, strategies and master plans relating to water supply and sanitation, energy and transport subsectors.
5	Ministry of Health (MINISANTE)	Policy formulation and promotion of hygiene and public health.
6	Ministry of Family and Gender Promotion (MIGEPROF)	Coordination of gender, promotion and mainstreaming and family planning activities.
7	Ministry of Education (MINEDUC)	Promotion of education including/capacity building and curricula development relating to water sciences and research on water resources management in schools and other educational institutions.
8	Ministry of Commerce (MINICOM) and affiliated agencies	Policy formulation and promotion of investments by the private sector in water resources management/industries and manufacturing.
9	Ministry of Foreign Affairs And Cooperation (MINAFFET)	Foreign and diplomatic relations including regional and international cooperation over shared waters.
10	Ministry of Disaster Management and Refugee Affairs(MIDIMAR)	Coordination and policy formulation on disasters preparedness including flooding, landslides, droughts.
11	Ministry of Defence (MOD)	Coordination and policy formulation on all issues related to the country security including water resources
	Financing Institutions	
12	Ministry of Finance, Planning and Economic Development (MINECOFIN)	Mobilization and allocation of financial resources for water resources development.
13	Development partners	Provision and mobilization of financial and technical resources for implementing water resources management and development sector activities.
	Regulatory Institutions	
14	Rwanda Environment Management Authority (REMA)	Develop regulations and ensure protection and conservation of the Environment and natural resources across the Country.
15	Rwanda Utilities Regulatory Agency (RURA)	Enforcement of compliance by public utilities with the laws governing their activities.
16	Rwanda Bureau of Standards (RBS)	Provision of standards based solutions for Consumer Protection and Trade promotion for socio-economic growth in a safe and stable environment.
17	Rwanda Natural Resources	Autonomous agency responsible for management of natural

No.	Institution	Function and responsibilities related to WRM
	Authority (RNRA)	resources including water resources management and allocation
	Management/service Institutions	
18	Energy, Water and Sanitation Authority (EWSA)	Autonomous agency responsible for the delivery of water supply and sewerage services in the major towns and large urban centres including provision of oversight and support services to the local communities and other water supply service providers.
19	Rwanda Development Board (RDB)	Facilitation of investment and support services to investors.
20	User Communities	Management of water resources in the course of their productive and consumptive activities on a day to day basis
21	Districts	Implementation of the government policies and laws
22	Private Sector	Design, construction, operation and maintenance of water resources management infrastructure. Conduct training and capacity building for both central and local government staff. Provision of other commercial services.
23	Non Governmental Organizations (NGOs)	Supplement the public sector efforts in water resource management and development.

The institutional framework operates through the sector wide approach, which applies in the planning and budgeting process.

Prior to the promulgation of Law No 53/2010 establishing the Rwanda Natural Resources Authority, the institutional framework lacked a coordinating mechanism and the functions related to water resources management were not fully developed. The role and responsibilities of each sector based institution in regard to water resources management was not clearly articulated, leading to confusion, uncoordinated action and overlaps in implementation. Additionally, there was no institution with overall authority with capacity to regulate the use and management of water resources by other sector based institutions. Capacity gaps arose mainly from limited technical and financial resources available for water resources management. These capacity limitations are even more acute within the decentralised institutions at district level. In consequence there has been a high degree of degradation of water resources arising from activities within the various sectors.

With the promulgation of a law establishing the RNRA with the mandate to lead the management of natural resources across sectors, there is potential to achieve a coordinated approach to water resources management, in line with the Integrated Water Resources Management concept. In order to address the capacity limitations being faced by the sector, it will require concerted efforts in resource mobilisation, human resource development and institutional capacity building.

This policy outlines actions which as they are implemented will guide the development of an effective institutional framework that is capable of contributing to a well managed water resources sub-sector.

3.1.4.2 The regional and international context

Under generally accepted principles of international law, Rwanda**,** as a riparian country within Nile and Congo River basins has a reciprocal obligation to utilise its shared water resources sustainably and equitably. It therefore has to cooperate with its neighbours in the management of the shared water resources, and avoid actions which can degrade the shared water resources and cause significant harm to other riparian States. Rwanda's neighbours must equally respect and give effect to Rwanda's right to utilise the shared water resources for its development needs.

The principles of shared water resources management have been taken on board in key regional instruments to which Rwanda subscribes, including the East African Community Treaty and its Protocol for the Sustainable Management of Lake Victoria and its Basin, 2003, and the evolving Nile Basin Cooperative Framework.

National water resources management policy must accordingly provide a framework for the sustainable and equitable management of Rwanda's shared water resources on the basis of reciprocity with its neighbours in the shared basins, and give effect to the growing inter-dependence of the countries in the region.

4. Analysis

4.1Sub-sector opportunities and challenges

The water resources sub-sector has a number of opportunities of which advantage has been taken of in articulating the present policy. At the same time it faces a number of challenges which must be addressed by sound policy actions and clear strategic plan. Those opportunities and challenges are outlined as follows:

4.1.1 Subsector opportunities

Opportunities in WRM sub-sector which can contribute to the national socio-economic development include:

(a) Good climatic conditions with high rainfall and a dense hydrological network;

(b) Political commitment to the proper management and sustainable utilization of the water resources of Rwanda.

(c) Well defined and well articulated flagship national policies which guide and provide strategic direction for national economic development, among them Vision 2020 and the EDPRS;

(d) Well defined sector specific policies and overall sector strategic plan for environment and natural resources management, agriculture development, energy, water supply and sanitation.

(e) An institutional framework with mandates and functions covering various sectors and sub-sectors relevant for water resources management;

(f) The establishment by law of an institution with a mandate to coordinate natural resources management activities across the sub-sectors of land, forests, mines and water.

(g) Growing synergies and partnership between Government agencies and other stakeholders, including water users, non-governmental organizations and development partners;

(h) An evolving regional cooperative framework for the management of shared water resources based on common interest and shared values.

4.1.2 Subsector challenges

There are several challenges that would need to be overcome to facilitate the sustainable management and development of water resources in Rwanda. These are discussed below.

(a) The increasing negative impact of climate change that affects quantitatively and qualitatively water resources.

(b) A significant threat of depletion of water resources due to various factors including high levels of land degradation due to permanent pressure on land coupled with inadequate farming techniques, inadequate use of wetlands, deforestation and increased siltation among others.

(c) Inadequate human and technical capacity within institutions responsible for water resources management and development.

(d) Weak data collection to understand the water balance, meteorological observation, current and future abstraction, long-range climate observation, and research to support water resources related planning and development.

(e) Lack of water data and information exchange mechanisms between regional river basin riparian countries.

In light of these sub-sector opportunities and challenges, the present policy paper provides clear vision, mission, objectives and policy actions to be pursued in achieving sustainable water resources management. The policy objectives and actions take advantage of the opportunities while aiming to address the challenges with the overall objective of contributing to sustainable national development.

5. Policy Goal, Objectives and Principles

The overall goal pursued in this policy is

''*to manage and develop the water resources of Rwanda in an integrated and sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs of the present and future generations with the full participation of all stakeholders in decisions affecting water resources management''*

5.1 Policy objectives

The objectives of this Policy are to*:*

(a) Provide a comprehensive and suitable policy framework that will strengthen the Government's ability to conserve and protect Rwanda's water resources

(b) Provide a legal and institutional framework for water resources conservation and management throughout the country and at trans-boundary level.

(c) Promote partnerships, incentives and benefit sharing to enhance water resources conservation and management.

(d) Provide a framework for equitable allocation of water resources and the sharing of benefits derived from that resource.

(e) Promote positive attitudes towards water resources conservation and management

5.2 Policy principles

This section outlines the fundamental principles of water resources management and conservation upon which Rwanda shall base the management of its water resources. The principles derive from internationally established principles of water resources management, as articulated in international legal and soft law instruments, in Rwanda's flagship policy documents as well as in Rwanda's 2008 water law. They provide the key pillars for Rwanda's national water resources management policy. These principles are discussed below.

5.2.1 Water is a finite resource

Water is a finite natural resource. Its use must therefore be based on the principle of sustainability as articulated in the Rio Declaration on Environment and Development, 1992. The principle of sustainable utilization of natural resources is based on the premise that, in utilizing natural resources**,** account must be taken of the needs of both present and future generations to utilize the same finite natural resource.

Equally important is the need to take account of the environmental and ecological services provided by water resources and reserve such amounts as are required for proper functioning of ecosystems.

Sustainable use also imports another important natural resources management principle: the precautionary principle. This is the concept that, in taking decisions about resource use, where there is scientific uncertainty, for instance about impacts of the proposed action, then the path of precaution should be adopted.

5.2 2 The human right to water

International and regional human rights instruments, including the international Declaration on Economic, Social and Cultural Rights, and the African Charter on Human and People's Rights have given recognition to the right to water as a fundamental human right, which must progressively be realized by all countries. This means that in allocating water resources**,** account must be taken of the needs and demands of all water users.

Given that available water resources are limited and that not all demands can be met to the full extent, available water resources shall be shared on the principle of "some for all" (rather than "all for some"),which is an expression of the principle of equitable access among present and future generations. This is one of the "The New Delhi Principles" articulated at Global Consultation on Safe Water and Sanitation for the 1990s**;** New Delhi, 1990.

The human right to water means that everyone is entitled to a share of the limited resources available, with priority being given to uses which give effect to the right of access to a basic supply. This is particularly so because water is essential to sustaining life. In this respect, the National Policy and Strategy for Water Supply and Sanitation Services also clearly states the objective of ensuring that by 2020 all Rwandans will have access to a basic supply of water.

5.2.3 Water resource is an economic good

One of the primary uses of water is as an input into production in agricultural, industrial, mining, tourism and other commercial sectors. In this context, water has an economic value. This is one of "The Dublin Principles" articulated at the International Conference on Water and the Environment**;** Dublin, 1992.–In this regard, account must be taken of the economic value of the water resources to the users of water, more so where the use is for commercial production, ecotourism and other industrial purposes. This justifies imposing a charge on raw water use, including on its abstraction. The revenues collected ought ideally to be used for the management of water resources.

Another principle arising out of the concept that water is an economic good is the principle that the "polluter pays." This simply means that whoever has caused water resources degradation shall be responsible for meeting the costs of remedying the damage caused. This principle can be implemented by charging a penalty for discharges of pollutants into water bodies.

5.2.4 Water is a social good

Water is essential to life, as result; water is not just an economic good but is also a social good. This principle was articulated at the United National Conference on Environment and Development (The Earth Summit)**;** Rio de Janeiro, 1992. It moderates the emphasis on the

economic value of water resources by asserting the importance of the socio-cultural functions of water resources as well.

This principle suggests that in allocating water resources**,** priority must be given to the social functions of water in society. This means, for instance, that domestic uses of water shall be accorded priority in allocation decisions, particularly in times of shortage.

Additionally, although there should be full cost recovery by the entities providing water supplies**,** there should be targeted subsidies to meet the basic needs of the most disadvantaged communities, as well articulated in the National Policy and Strategy for Water Supply and Sanitation, and in line with the World Water Vision, defined in the Second World Water Forum in the Hague, 2000.

5.2.5 Integrated Water Resources Management (IWRM)

Water is a cross-cutting resource phenomenon, affecting and affected by multiple sectors, including domestic consumption, agriculture, commerce, industry, transport and energy as well as ecological functions for environmental conservation such as forests, fisheries and wildlife. The management of water resources is consequently best undertaken within a framework that provides for decision making in an integrated and holistic manner, referred to as Integrated Water Resources Management (IWRM). IWRM is a response to the growing pressure and competing demands placed upon the world's water resources systems.

IWRM is a systematic process for the sustainable management, development, allocation and monitoring of water resources with the aim of achieving socio-economic and environmental objectives. IWRM is a process, not a product. The process provides a framework for considering the different uses and users of water resources and taking decisions and actions which ensure that all relevant factors are taken into account in resource allocation. In relation to this principle and as given effect in the EDPRS, the use of the resource will be considered based not just on natural resource endowments but also the socio-economic and ecological priorities of the country

5.2.6 Participatory management

International best practices in the management of water resources indicate that best results are achieved where decisions regarding water resources managements are made with the involvement and participation of water users and other stakeholders. In this respect water users are those working to conserve and protect water resources. They are also expected to form community of users in various groups as the institutional mechanism for participatory or co-management may indicate.

Consequently, the principle of participatory water resources management has come to be accepted as a key principle in water resources management sector. It was initially articulated in the Global Consultation on Safe Water and Sanitation for the 1990s, New Delhi, 1990 as part of the New Delhi Principles and it is one of "the Dublin Principles."

Complementing the concept of participation is the principle of subsidiarity spelt out in Article 8 of the Conventions on Biodiversity and the Convention on Wetlands of International Importance (Ramsar Convention) which requires, among others, that action ought to be undertaken at the lowest practicable level. This means that in regard to the management of natural resources, including water resources, responsibility ought to be devolved to water resources users, as far as practicable, including communities and the private sector. The role of the Government should ultimately, be that of an enabler and a regulator rather than that of an implementer and a service provider. The EDPRS fully underscores this principle when it States:

> "*Implementation of the EDPRS will occur largely at the local level so that targets for decentralization, citizen participation and empowerment, transparency and accountability are of particular significance…"*[10]

Devolving greater management responsibility to water users takes advantage of the social capital provided by water users and community groups and uses it as an input into the management of water resources. In giving effect to the subsidiarity principle, a balance ought to be struck between devolution of responsibility to lower level structures and the duty of the state to manage resources and provide services to its people. The role of Government agencies ought to be focused on providing technical, administrative and financial backstopping to water users, rather than in primary implementation.

Given the limited capacity of lower-level structures, Government will continue to intervene directly in water resources development until such time that strong institutional structures are established at local levels.

5.2.7 Catchment-based water resources management

The catchment-based approach is widely recognized as essential to dealing comprehensively with water resources management issues, based on the obvious community of interest for users living within such a geographical area. Indeed water use has impact primarily on users within the same catchment, and vice–versa; including environmental uses. In this connection, water resources institutional and management arrangements ought to be set up at catchment or basin scale.

However, in the Rwanda context with the drive of achieving efficiency, taking advantage of the established administrative set-up, water resources management processes will be effected within local government administrative entities in terms of planning, programme implementation and water users' organizations. The operationalisation of the principle of catchment based water resources management will be further elaborated in the implementation strategy of this policy.

5.2.8 Impacts of climate change on the water resource

Climate change will cause rising temperatures and is likely to affect rainfall patterns that may result in increased flood and drought episodes. Rwanda is currently highly vulnerable to

[10] Para. 3.3.12

climatic variances due to the national reliance on rain-fed agriculture and hydro-power. Such climatic episodes are dependent on the nature of the Inter-tropical Convergence Zone (ITCZ) as it moves from north to south across Sub-Saharan Africa and back again. The rainfall that Rwanda receives has been sufficient to meet its modest demands from simple run-off-river systems. Now Rwanda's hydrological system is being challenged to provide for the growing water needs of its recent development and changing climate. A comprehensive programme to introduce flow control, irrigation and storage is needed. As climatic variability increases over the medium term, decision-makers will be increasingly challenged to manage the water resource as the objectives of different sectors diverge (e.g. choosing between prioritizing of water for agriculture and food security, and prioritizing water for urban development and industry).

The installation of monitoring systems for water management is a key requirement in providing a basis for IWRM decision-making. There is a requirement to develop Rwandan capacity to understand climatology and climatic variability with partner agencies. The importance of this is to provide understanding of regional and local climate change trends and impacts to support self-determined and responsive decision making (e.g. about adaptation and mitigation). Once the internal water management and national climate trends have been dealt with, Rwanda will be better placed to contribute to trans-boundary dialogue on issue of climate change and water resources.

5.2.9 Internationally shared water resources

As highlighted, Rwanda shares its water resources with its neighbours. Therefore, account must be taken of established international principles for the management of shared water resources. They will be given effect in the national water resources management policy on the basis of reciprocity and in the spirit of regional cooperation. Given the international law principle of state sovereignty over natural resources, the policy, legal and institutional frameworks for managing trans-boundary waters resources is necessarily put into effect through national arrangements and is implemented with regard to the water resources within its territorial boundaries. Incorporation of the international law and principles governing the management of shared water resources which the country ascribes to is to be taken account of. Some of the key principles for managing and using internationally shared water resources are set out below.

In the utilization of shared water resources, Countries should strive to maximize and equitably share the benefits. This principle has been distilled from a long series of international arbitral decisions and forms part of the customary international law on the management of shared water resources.

Secondly, there should be prior assessment of the potential impacts of planned measures. This is an evolving principle of the international law on the management of the environment and natural resources, articulated, for instance, in the Rio Declaration of 1992.

Thirdly, States sharing water resources ought to provide information about potential impacts. The premise for such negotiations is the international law obligations on States to avoid actions on their territories which might create potentially significant harm on neighbouring States. Where there is a potential adverse impact arising from planned measures, States should negotiate in good faith to resolve any issues arising from the measure, and avoid conflict.

6. Preferred Options

6.1 Policy statements

Arising out of the above policy objectives and goals, policy statements are presented to guide the implementation and strategic actions have been formulated to facilitate the achievement.

6.1.1 Policy statement on water resources conservation

The water resources of Rwanda will be conserved, protected and managed in order to secure and enhance its availability for, and utility to, the present and future generations.

Strategic actions

For this purpose the Government shall:

a. Monitor and assess water resources to understand the water balance and to support water accounting, identify the spatial and temporal occurrence and distribution in the country;

b. Develop a coherent Rwandan water resources information system and a clearing house for information on the water resources of Rwanda;

c. Formulate a water resources management strategy addressing, inter alia, watershed protection and provides mechanisms for the designation of special conservation and or protection zones;

d. Develop and promote best practices of efficient and appropriate watershed management to maximize water yields and quality.

e. Promote water conservation techniques and technologies, including rainwater harvesting, water recycling and other appropriate technologies;

f. Identify and institute measures to make productive use of all water resources, including thermal water for economic development, such as energy and tourism; and

g. Institute measures for managing water related disasters and stresses, arising from climate change, floods, droughts and demographic trends.

6.1.2 Policy statement on water allocation

The available water resources of Rwanda will be allocated on the basis of comprehensive and integrated plans and optimum allocation principles that incorporate efficiency of use, equity of access and sustainability of the resource.

Strategic actions

For this purpose the Government shall:

a. Develop a national water resources master plan to promote water resources conservation, ensure that abstraction conforms to the sustainable yield and to institute measures to facilitate the conjunctive use of groundwater and surface water;

b. Formulate principles and guidelines for the allocation of water resources;

c. Institute measures to develop and allocate "reserve water" to meet ecological functions and other environmental services;

d. Establish systems for enhancing water security by developing water storage and reservoir facilities and systems; and

e. Develop and implement guidelines for the issuance of permits for water abstractions and wastewater discharges and for compliance monitoring and penalties for non-compliance.

6.1.3 Policy statement on policy, legal and institutional framework

The Government shall establish and operate a comprehensive water resources management policy, legal and institutional framework that incorporates the principle of integrated but decentralised management of water resources.

Strategic actions

For this purpose the Government shall:

a. Establish and operationalize an inter-ministerial coordination committee[11] on water resources to handle water resources issues across all sectors of government;

b. Put in place and operationalize other water resources management organs provided for in the water law;

c. Put in place regulations and operationalize them to give effect to the water law.

d. Support and promote water users associations and ensure their participation in water resources protection and conservation.

6.1.4 Policy statement on shared water resources

The Government of Rwanda shall foster co-operation in the sustainable management and equitable utilization of shared water resources.

Strategic actions

For this purpose the Government shall:

[11] The Interministerial Coordination Committee will be composed by key Ministries that have water component in their programs such as **Minirena, Minagri, Mininfra, Midimar, Minicom, Minigeprof, Minaffet, Minadef and Minaloc**.

a. Implement measures to ensure that shared water resources management is done in compliance with regional and international rules and procedures;

b. Within the overall water resources management strategy formulate a shared water resources management and utilization strategy;

c. Establish and strengthen national institutional arrangements mandated to facilitate co-operation in the management of shared water resources;

6.1.5 Policy statement on climate change resilience

The Government shall establish systems and technology to monitor and observe water resources, to understand the water balance and perform water accounting, improve meteorological services, and observe and respond to climate variance and long term impacts of climate change.

Strategic actions

For this purpose the Government shall:

a. Establish meteorological services to water users, agriculture, industry, and communities to include Early Warning Systems and dynamic information networks;

b. Establish a climate centre of excellence to contribute to water observation and monitoring, and water resource management, planning and decision-making;

c. Prepare water and climate impact risk assessment and hazard mapping as part of District planning and watershed management;

d. Establish a water information management and custodial framework linking meteorological and climate services, agro-meteorology, water balance monitoring, groundwater, supply and abstraction demand.

6.1.6 Policy statement on capacity building

The Government will develop the human, technical and managerial capacity of institutions involved in water resources management at central and local levels so as to provide the necessary capacity for the sustainable management of the country's water resources.

Strategic actions

For this purpose the Government shall:

a. Conduct periodic comprehensive capacity building needs assessment for the water resources management sub-sector at national, provincial, district and local levels;

b. Establish and implement medium- and long-term capacity building plans addressing the human resource knowledge and skills deficit, and institutional

technical capacity weaknesses at national, district and local levels, with a particularly focus on integrated water resources management;

c. Formulate a strategy for research and studies on key emerging issues in the water resources management sector, including the impact of climate change on water resources and necessary adaptation measures;

d. Establish a mechanism to introduce relevant curricula and training on water resources management at school level.

6.1.7 Policy statement on financing arrangements

Financial mechanisms for water resources management will be put in place to ensure availability of adequate funds on a sustained basis.

Strategic actions

For this purpose the Government shall:

a. Streamline resources from Government and development partners, including non-governmental organizations and the private sector for water resources management based on the SWAP approach;

b. Define and apply fees and charges for water abstraction and effluent discharge.

6.1.8 Policy statement on cross-cutting issues

Cross-cutting issues highlighted in Vision 2020 such as on gender equality; protection of the environment, and climate change; and promotion of science and technology will be mainstreamed in programmes and activities of the water resources management sub-sector.

Strategic actions

For this purpose the Government shall:

a. Formulate an approach to ensure that the targets of the cross cutting issues highlighted in Vision 2020 and MDGs are achieved within the water resources management sub-sector.

b. Formulate an approach to enhance the use of ICT in water resources management.

7. Stakeholders views

Water resources management and sustainable use is of great concern to many stakeholders. MINIRENA, which is the institution mandated with natural resources management, initiated a widely participatory process and has collaborated and consulted with key stakeholders in formulating this Policy. The participatory and consultative approach, involved a number of measures aimed at achieving the following objectives:

a. Defining national water resources conservation goals and aspirations;
b. Collecting and analyzing information necessary for making accurate and informed decisions about water resources management;
c. Building consensus among stakeholders and thus establishing public confidence in the formulation process to enhance opportunities for implementation;
d. Establishing synergies and areas of complementarily with other relevant sectoral policies to ensure consideration of cross-cutting issues; and
e. Identifying relevant regional and international water resources management policies and laws and incorporate them in the water resources management policy.

The coordination of the formulation process was coordinated by MINIRENA, while the technical aspects of the policy development were handled by an International Consultant.

The Consultation process included a number of activities:

a. Consultations with relevant institutions and their senior managers including: REMA, MINAGRI, MININFRA, MINECOFIN, MINICOM, MINALOC, MINISANTE, MINIJUST, MIDIMAR, MINEAC, MINEDUC, MINAFFET, MIGEPGROF,MINADEF, Rwanda Development Board (RDB); Rwanda Agriculture Board (RAB), among others.
b. Consultations with individuals with expert knowledge or insights in specific policy components.
c. Consultations at the national level.
d. Focused group meetings with specific experts or partner institutions; and
e. Literature review and use of internet-based resources.

All stakeholders supported the proposal and urgent need to formulate a National Water Resources Policy. The Consultant compiled, collated, analysed and synthesized the information from all the sources and compiled the findings in this policy document.

The Policy therefore takes into account the interests of the diverse stakeholders, in order to avoid conflict and ensure consistency with long-term conservation goals. The policy and legal framework establish mechanisms for regulating and coordinating the various players, interests and activities, in ways that would satisfy contemporary conservation needs and address present and future challenges.

8. Implementation Plan

To ensure that this policy is systematically implemented, a five years strategic plan was developed in a participatory process, involving both Government and non-government stakeholders.

The strategy has been designed to translate the above policy objectives into desired results. It provides a framework for participatory water resources governance, in which all stakeholders, including private sector, civil society and local user communities, will play an active role.

The main results expected with the implementation of the five years strategic plans were identified as follows:

- ✓ An effective framework for water resources governance to be established : The key outputs will include: an institutional structure for WRM; a Water Resources and Development Master Plan; water catchment and sub-catchment management plans and structures; harmonised water-related sector policies and plans; public-private partnership strategies for WRM; sustainable financing modalities for WRM; communication strategy and framework for active stakeholder participation.
- ✓ A cost-effective water resources assessment and monitoring system in place. Main outputs will be updated hydrological database and water resources information system; water quantity and quality status reports regularly published; water quality standards established, communicated and enforced; strategy for assessment, exploitation and monitoring of geothermal resources developed; and a mechanism for effective control of point and non-point source pollution in/along water resources;
- ✓ A plan of critical watersheds and catchments rehabilitated and basic ecological functions restored: To realise this outcome, critical watersheds, catchments and sub-catchments will be mapped and their ecological functioning analysed; micro-catchment and catchment level management rehabilitation plans developed and implemented; economic value of wetlands will be technically established ; a national programme for their conservation and management implemented; and invasive species in aquatic ecosystems will be controlled and monitored.
- ✓ A framework for efficient and equitable water allocation and utilisation to be implemented. Major outputs will focus on formulating and implementing sectoral plans for water demand and utilisation; Catchment-based Water Allocation Master plan reflecting rights and obligations of water users will be developed and implemented; a comprehensive strategy for promoting water use efficiency, will be developed. A key target in water conservation and efficient use will be to ensure that all institutions and at least 75% of households have rainwater harvesting facilities;
- ✓ An effective framework for water-related disaster management, climate change mitigation and adaptation will be put in place and implemented. Key outputs to be achieved, will be related to planning, capacity building, information generation and preparedness.

  Under this outcome, climate change resilience and vulnerability status will be established and regularly updated; early warning systems on extreme weather conditions; National Water Balance and Water Security Plan will be put in place and implemented; operational

safety plans for water ways and water infrastructure installations designed and implemented; and effective National Disaster Management Plan that reflects and prioritises water-related disasters drafted and implemented.

- ✓ Knowledge management is a special priority for Rwanda, considering that rational decisions cannot be made without reliable information and capacity to utilise the knowledge appropriately. Key outputs will focus on supporting research, documentation and information, improving the hydrological infrastructure network to ensure that reliable water data is regularly collected and analysed.
- ✓ Effective framework for managing shared waters is in place. A framework for transboundary water cooperation will be established. Rwanda will have capacity to actively engage other riparian countries to ensure that water resources are utilised in a balanced and harmonious way

In context of effective implementation of policy and its strategy, four key issues shall be taken into consideration:

- Raising high profile and large awareness on the importance of water resources.
- Highlighting the linkage between water resources with various key sectors including agriculture, water supply, energy, environment, and other aspects of our daily lives.
- Increasing the partnerships, and mechanisms for effective coordination of multiple stakeholders, disciplines and strategies.
- Updating and enforcing the existing regulatory framework and institutional arrangement,

This policy shall be implemented at two levels

Supervisory Level: The supervisory role shall be performed by MINIRENA, the Ministry responsible for Natural Resources. MINIRENA will provide the overall policy guidance and supervision, and monitor how it is being implemented in relation to other national policies. This should be done with the advice and consultation of with arms of government that are responsible for overall national policy, and other relevant sectors such as that manage or have impacts on components of water resources, such as agriculture, mining, environment, forestry among others.

Technical Level: Rwanda Natural Resources Authority (RNRA), the designated implementing agency for Natural Resources in particular the Integrated Water Resources Department, will be responsible for technical Operations, coordination and implementation with other agencies and all relevant stakeholders.

9. Financial Implications

The application of Water Resources Management Policy will be driven by a well tailored strategic plan and road map mainly for improving the water information system, developing a water resources management master plan and protecting water resources. In order to achieve all this, it requires adequate financial resources depicted in an appropriate logical framework. The availability of funds must be achieved through a resource mobilisation mechanism supported by the Government and the intervening in the water sector. The successful implementation of the policy and its strategic plan will require an increase in the budget

allocated to WRM, hence the need for active participation and commitment of stakeholders at various levels. The introduction of water user fees will also generate funds which can be used to finance water resources management programmes.

Therefore, to facilitate the translation of the Policy into concrete actions on the ground, the Ministry of Natural Resources has developed a five-year Strategic Action Plan for the water resources management sub-sector that provides a systematic approach for reaching the Policy objectives. The Strategic Action Plan, whose implementation will be integrated into the Government's planning and budgeting process through the Medium-Term Expenditure Framework (MTEF), will set and strive to achieve relevant medium-term targets of the sub-sector.

The total GOR budget contribution for full implementation of this policy is 39 billions Frws in the five year period, 2011 – 2015. This amount is gross and does not exclude the funds already allocated in the MTEF budget for the same period. The GoR has expressed commitment to prioritise WRM, and some US$ 11.6million (about 18% of the budget) is potentially available through the medium term expenditure framework (MTEF) commitment. Secondly, a number of development partners, notably Netherlands Embassy, SIDA, USAID, UNICEF, UNDP, the African Development Bank (AFDB), World Bank, the European Union and Japan International Cooperation Agency (JICA), International Fund for Agricultural Development (IFAD), the Food and Agricultural Organisation of the UN (FAO), and the German Development Cooperation (GIZ), among others, have expressed interest in supporting Rwanda's WRM programmes, in more ways than one. The policy and its implementation are therefore premised on close collaboration and substantial financial contribution from many stakeholders.

10. Legal Implications

Implementation of this policy will require the review of the current Water Law No. 62/2008 and drafting appropriate decrees in order to provide adequate legal backing and facilitate its smooth implementation**.**

The existing legal framework does not provide clarity on some aspects of Integrated Water Resource Managements such as:

- International and regional conventions that are related to management of water resources,
- Norms and standards relevant to the use and management of water resources;
- Institutional arrangements, and more the responsibilities devolved to various institutions;
- Procedures for acquiring water permits, licences or concessions
- Penalties for water pollution and permits for applying for effluent discharges
- Authorisation for dams constructions, or any other structure on water bodies including canal creation, river beds modifications

The costs implications for developing the legal instruments are incorporated in the budget estimates.

11. Contribution of the Private Sector

Rwanda's sustainable development must be linked on the best use of local natural resources. Water resources and services it generates represent a wonderful natural asset, which has a great potential to create business and opportunities for investment.

This policy is based on the principle that "Water is an economic good". One of the primary uses of water is as an input into production in agricultural, industrial, mining, tourism and other commercial sectors. Consequently, where benefits can be generated without compromising the integrity of the ecosystems, they will be shared equitably.

This Policy advances new strategies, that link protecting water resources with human needs and harness the investment opportunities offered by water resources management to generate economic benefits, which shall be equitably shared.

To achieve the objective, the GOR shall therefore:

1. Develop water resources based investment and business opportunities, especially in developing technologies, water recycling technologies, technologies that are using water more efficiently .
2. Stress and make a better case for the value and economic importance of the conservation and sustainable use of water resources.
3. Support the development and promotion of business and water resources initiatives and provide appropriate incentives to develop public-private partnerships in the conservation and sustainable use of water resources.
4. Provide policy and fiscal incentives for developing business models for marketing water resources services, or more efficient water use technologies.

12. Handling Plan

This Policy is one of government initiative in area of natural resources and it will require a special handling plan, not only to create awareness of its importance, but also to inform and educate stakeholders on its key provisions and the opportunities it creates for their participation.

The following measures are proposed for the dissemination of the policy as soon as it is approved by both Cabinet and Parliament:

1. Ministry to arrange a formal and high-level function to launch the policy. Invite Distinguished Guest to preside over the event,
2. Disseminate copies of the Water resources Management Policy document as widely as possible to relevant stakeholders,
3. Ministry to plan for a one-day seminar for Members of Parliament and other public leaders to discuss the most important components of policy, implementation, funding and their personal roles as public leaders, in promoting the sustainability and conservation ethics,
4. Plan a similar one-day seminar for private sector , civil society, Defences forces, leaders and development partners

CONCLUSION AND WAY FORWARD

Policy endeavoured to set up a comprehensive frame work for the sustainable management of the national water resources. Its implementation will require an integrated approach. The primary responsibility for implementing the policy lies within MINIRENA, which is the Ministry with overall policy mandate over water resources management. However, given the cross-cutting nature of water resources, all State and non State organs will be called upon to contribute to the successful implementation of the policy at all levels. Significant support will be needed from central government institutions including MINECOFIN, MINAGRI, MININFRA, MINISANTE, MINEDUC, MIDIMAR and MINALOC. Their affiliated agencies as well as local governments will also play a key role in the implementation of core WRM programmes in an integrated manner within the coordination framework that this policy calls for.

The policy will need to be reviewed periodically by the stakeholders through Joint Sector Review and Sector Working Group meetings in order to monitor progress in the course of implementation, and to provide a basis for changes, if needed. Reviews will also be necessary at critical points in time, such as in 2012 when the EDPRS expires and changes may subsequently be recommended. During this time, the policy will need to be reviewed to align its objectives with the revised EDPRS and to keep abreast of any emerging developmental issues. This monitoring and review function also is the responsibility of MINIRENA, which should be conscientiously undertaken.