



Malawi Government

Ministry of Irrigation and Water Development

National Water Policy

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FOREWORD

The Government of the Republic of Malawi, realizing the dependency of the economy on water resources and its impact on poverty reduction, considers the conservation, management, development and utilization of water resources as one of the priorities on its national development agenda which require supportive policies and legislation.

The Ministry of Irrigation and Water Development has come up with policies and guidelines for proper implementation of various activities in the Water and Sanitation Sector. The sector faces a number of challenges and threats and equally it has a number of opportunities. The National Water Policy outlines strategies on how to tackle these issues in an integrated manner in order to effectively contribute towards achieving the National Development Agenda.

The Water and Sanitation Sector faces a number of challenges which include the degradation of water resources, inadequate service coverage, inadequate financing, increasing water demand as a result of increasing population, HIV and AIDS prevalence, insufficient capacity, lack of integrated approach to water resources management and development, climate change and climate variability, lack of mitigation measures for water related disasters and inadequate promotion of hygiene and sanitation. On the other hand, the sector has opportunities such as availability of relatively abundant water resources, political will, active women and youth, donor support, willingness of private and public sectors' participation, existence of regional and international initiatives such as the Johannesburg Declaration of the World Summit on Sustainable Development (WSSD) 2002 and SADC Protocol on Shared Watercourses.

The Government will ensure improved coverage of equitable access to safe and potable water through the provision of new water facilities, in a transparent and accountable manner. However, it is necessary to put in place mechanisms for conservation and management of water resources, operations and maintenance of the facilities. Such mechanisms include the Integrated Water Resources Management (IWRM) and Community Based Management (CBM). Government is also encouraging active participation of local service providers and operators into the Water and Sanitation Sector. The Government, therefore, will ensure that the set standards and guidelines advocated by this policy are adhered to in the whole process of conservation, management, development, provision and utilization of water resources, and disposal of wastewater.

The Government further strongly recognizes the initiatives of the international and regional communities and will continue to cooperate with them in order to achieve the 2015 Millennium Development Goals. At national level, the central policy of Government continues to be that of poverty reduction and economic prosperity as addressed by Malawi Poverty Reduction Strategy Paper (MPRSP) and Malawi Economic Growth Strategy (MEGS), which is derived from Vision 2020 and is refined in the National Strategy for Sustainable Development (NSSD).

I would like to acknowledge the contributions and support rendered by all stakeholders in the development of this policy.

Hon. Sidik Mia MP.

MINISTER OF IRRIGATION AND WATER DEVELOPMENT

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CBM	Community Based Management
CMA	Catchment Management Authority
DRA	Demand Responsive Approach
EIA	Environmental Impact Assessment
GIS	Geographical Information System
HIV	Human Immune Virus
IWRM	Integrated Water Resources Management
MBS	Malawi Bureau of Standards
MDGs	Millennium Development Goals
MEGS	Malawi Economic Growth Strategy
MERA	Malawi Energy Regulatory Authority
MoIWD	Ministry of Irrigation and Water Development
MPRSP	Malawi Poverty Reduction Strategy Paper
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organisation
NSSD	National Strategy for Sustainable Development
NWRA	National Water Resources Authority
PHAST	Participatory Hygiene and Sanitation Transformation
SADC	Southern Africa Development Community
UFW	Unaccounted-for-water
UN	United Nations
UNCED	United Nations Conference on Environment and Development
VLOM	Village Level Operation and Maintenance
WSSD	World Summit on Sustainable Development

DEFINITIONS

- Aquaculture** : All activities aimed at producing fish in restricted areas, processing and marketing aquatic plants and animals from fresh, blackish or saline waters.
- Buffer Zone** : A strip of vegetated or bare land along a river bank/shoreline of a watercourse, which acts as a screen for protecting the water body or a receptor from environmental degradation.
- Catchment Area** : An area that receives precipitation and naturally drains into a watercourse.
- Cost Recovery** : The extent to which users are charged for goods and/or services to generate revenue to cover the costs of supply.
- Demand Driven Approach** : Strategy through which communities are empowered to operate and manage their water services including aspects of water related hygiene during the course of project implementation.
- Demand Responsive Approach** : A strategy that empowers a community to initiate, choose and implement a water project that it is willing and able to sustain and that which elicits the appropriate response from the sector actors and stakeholders.
- Discharge or Disposal** : The continuous or intermittent release of wastes/effluent.
- Economic Good** : Any commodity, or service which yields “utility” to an individual or community and which must be paid for in money terms in a monetary economy, or “in kind” in a non-monetary economy.
- Effluent** : Wastewater or other fluid originating from a domestic or an agricultural or industrial activity, whether treated or untreated and whether discharged directly or indirectly into the environment.
- Groundwater** : All waters which are beneath the surface of the ground; and not visible on the land concerned; and includes waters in wells and boreholes.
- Human Settlements** : For the purposes of this policy human settlement shall be those habited areas that support integrated planning and management involving incorporation of water supply and sanitation, land use, housing, waste management, employment, education and healthcare services, and transport and other infrastructure, through a rights driven approach in their design and development.
- Monitoring** : The continuous or periodic assessment of the actual and potential impact of any activity on the environment.
- Participatory Approach** : A planning approach in which all stakeholders, and in particular the envisaged beneficiaries are part of the decision process.
- Pollutant** : Any substance whether in a liquid, solid, or gaseous form which directly or indirectly
- (i) Adversely alters or destroys the quality of water or

environment; or

- (ii) Is dangerous or potentially dangerous to public health, plant or animal life.

Polluter-Pays Principle	:	Refers to the concept that the producer of any pollution should meet the full cost of treatment, monitoring and management of water resources to reduce pollution loads to acceptable standards that will not cause environmental damage or loss of beneficial use to others.
Pollution	:	In relation to water, this means such contamination or other alteration of the biological, chemical, physical properties of the water, including changes in colour, odour, taste, temperature or turbidity; or such discharge of any gaseous, liquid, solid or other substances into any water or public stream; as will, or is likely to, create a nuisance or render the water as the case may be, detrimental, harmful or injurious to the health, safety welfare of the public or any section thereof or any consumer or user of the water or birds, fish or other aquatic ecosystems, livestock or wildlife.
Poverty	:	Is the situation facing those in society whose basic social and material needs are least satisfied.
Protocol	:	An instrument of implementation of the SADC Treaty, having the same legal force as the Treaty.
Riparian Country	:	A country through or along which portion of a transboundary river flows or a common water body lies.
Sanitation	:	Refers to the hygienic disposal of solid and liquid waste. At the household level, this includes excreta, kitchen rubbish, waste water from cooking, bathing and clothes washing, and any other discarded items.
Social Good	:	Water as a commodity to which social value is attached, arising from the fact that water is an essential building block for life.
Stakeholder	:	Organisation, group or individual that is concerned with or has an interest in water resources and that would be affected by decisions on water resources management and Development.
Strategies	:	Are tools developed for the implementation of policies and these constitute the general framework of activities to be undertaken through time to meet previously defined objectives.
Surface water	:	All water found on a public stream and includes water in storage works, permanent pools, marshes, springs, swamps and lakes forming the source of or found on the course of a public stream.
Unaccounted-for-water	:	Is the difference between water produced and consumed. It refers to all physical water losses.
Wastes	:	Unwanted products or by-products in liquid, gas or solid form.
Water-area	:	Means the area declared under section 4 of the Water Works Act

as being an area serviced by a water utility.

- Watercourse** : A system of surface and ground waters consisting by virtue of their physical relationship a unitary whole normally flowing into a common terminus such as the sea, lake or aquifer.
- Water Resources Management** : Refers to water resources development, apportionment, utilization, conservation, protection and control that incorporate physical, social economic as well as environmental interdependence.
- Water Supply** : For the purpose of this policy, water supply implies human uses of water such as drinking water, water for livestock use, water for industrial use, and water for municipal use.
- Wetlands** : Areas of marsh, fen, peat land, or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, blackish or salt including areas of marine water the depth of which at low tide does not exceed six meters.
- 100-year Flood** : Is a flood that on the average can be equalled or exceeded once in every 100 years time frame.

1.0 BACKGROUND

1.1 Situation Analysis and Evolution of the Water Sector Policy

Malawi is endowed with a variety of natural resources which include vast expanses of water systems. This includes Lake Malawi (28750 km²) Africa's third largest freshwater lake, Lake Malombe (303 km²) an inflation of the Shire River which form part of the great East African Rift Valley, Lake Chilwa (683 km²) an inland basin lake and a dense network of perennial rivers. These water systems cover over 21% of the country's territorial area. There are also widespread groundwater sources whose occurrences are associated with two major aquifers namely the basement complex aquifers which are extensive but low yielding ranging from 0.2 to 4 litres per second (and covering the plateau areas, Shire Highlands, the Upper Shire River Valley, Lilongwe to Kasungu Plain and the South Rukuru River catchment). The alluvial aquifers (which are localized to Lakeshore plains and the Shire Valley) are high yielding with recorded yields in excess of 10 litres per second. The intensity and methods of utilization of these resources can, if not properly managed and regulated, result in their serious deterioration and/or depletion.

Although the country is endowed with relatively vast amount of water resources, it is currently encountering a number of growing competing demands and challenges. Some of these demands and challenges include the following: high population growth resulting in increase for demand for water for domestic, industrial and municipal uses, agriculture/irrigation, tourism, mining, manufacturing, water transport/navigation, energy/hydropower, and ecological sustenance. For instance, deforestation and environmental degradation due to increase in the use of wood energy may pose serious challenges to water resources while trans-border movement of tourists facilities such as boats and dinghies cause serious problem of introduction of exotic aquatic plants into the country's water systems causing severe infestation of the systems. Also the extraction of natural resources for the manufacture of import substitutions has had an adverse impact on the environments, which in turn has affected water as a resource.

Water is a finite resource. Its conservation, allocation, and utilization must therefore be guided by a strong policy framework and strategies to achieve the policy objectives. To this end, in May 1994 the Government of Malawi developed the first coherent Water Resources Management Policy and Strategies to guide the country in the sustainable use of water and sanitation.

However, the 1994 Policy largely focused on the water service delivery whose major outcome was among other things, the creation of the Ministry responsible for Water and three regional water boards, namely; Northern, Central and Southern Region Water Boards and the reconstitution of the Water Resources Board, Blantyre and Lilongwe Water Boards. The 1994 Water Resources Management Policy and Strategies was therefore revised and approved by Government in 2000, to strengthen the management aspect of the water resources, which was considered weak in the 1994 Policy.

1.2 The Need for Revision of the 2000 Policy.

The then Ministry of Water Development, through the National Water Development Project, carried out a number of studies from the period 1996 to 2003, and among these was the Strengthening of the Water Resources Board. This study carried out a critical review of the Policy, which was found to be too verbose, and in some parts vague. Furthermore, the Policy did not clearly articulate the issues which it was trying to advocate.

The global and regional trends are now pointing towards a collective and participatory approach to the development and utilization of water resources in order to achieve the UN Millennium Development Goals (MDGs) and the World Summit on Sustainable Development targets of 2015.

The international community has also adopted principles of equitable allocation of shared water resources and their management. The result of this has been the formulation of a number of initiatives to address these issues. Some of these initiatives are New Partnership for Africa's Development (NEPAD), United Nations Conference on Environment and Development (UNCED), the Dublin Principles on Integrated Water Resources Management (1992), World Summit on Sustainable Development (WSSD) 2002, Southern African Development Community (SADC) Protocol on Shared Watercourses and Regional Water Policy, and the World Water Forum III (2003). The Government of the Republic of Malawi as a member of the Regional and International Community recognizes these initiatives.

Since some of Malawi's water resources are shared with the neighbouring countries and are part of the Zambezi River Basin, the management of these trans-boundary waters will have to conform to the regional and international agreements and protocols without compromising the country's sovereignty, security and territorial integrity.

The country is currently facing a number of problems and challenges in water resources management. These include serious water resources degradation in catchments, inadequate water supply and sanitation services coverage, increasing water demand as a result of increasing population pressure, lack of integrated approach to water resources development, lack of capacity within the sector, inadequate promotion of hygiene and sanitation, recurrent riparian issues and HIV and AIDS prevalence.

Furthermore, the extreme climatic events such as excess precipitation and inadequate rainfall resulting in flooding and drought respectively, have had adverse effects impacting on food security, existing infrastructure, domestic water supply, and the availability of water resources.

These problems, which are increasingly threatening the country's water resources, need to be addressed urgently through appropriate and clear policies on water resources management in conjunction with other natural resources management policies through adoption of Integrated Water Resources Management approaches.

Further, there exist a number of conflicts among the natural resources statutes of the various institutions responsible for managing the natural resources in this country. There is therefore strong need, to review and harmonize these statutes in line with the revised policies.

1.3 The National Water Policy, 2005

The National Water Policy as reflected in its new title is meant to address all aspects of water including resource management, development and service delivery. The policy has articulated a new water sector vision of 'Water and Sanitation for All, Always.' The new vision embraces and reflects the Government's overall development objectives of poverty reduction and economic prosperity, and at the same time aims at conforming to the regional and global trends and the requirements as reflected under the UN Millennium Development Goals (MDGs) and the World Summit on Sustainable Development targets of 2015.

The Policy comprehensively covers areas of water resource management and development, water quality and pollution control, water utilization, disaster management and institutional roles and linkages. The Policy, among other issues, aims at:

- Achieving sustainable and integrated water resources management and development that make water readily available and equitably accessible by all Malawians in pursuit of their socio-economic development and for environmental sustenance;
- To ensure water of acceptable quality for all the needs in Malawi;
- Achieving sustainable provision of water supply and sanitation services that are equitably accessible and used by individuals and entrepreneurs for socio-economic development at affordable cost;
- Promoting efficient and effective utilization, conservation and protection of water resources for sustainable agriculture and irrigation, fisheries, navigation, eco-tourism, forestry, hydropower and disaster management and environmental protection;
- Undertaking the rehabilitation, upgrading, extension and construction of water infrastructure;
- Promoting international cooperation in the management of trans-boundary and cross-boundary waters without compromising the country's sovereignty, security and territorial integrity;
- Dealing with challenges facing water resources management which include the need to adopt Integrated Water Resources Management (IWRM) Principles, the need to conform to current regional and international agreements and protocols on shared water resources, catchment protection and management, and water resources monitoring;
- Promoting the participation of the private sector in water resources development, management and service delivery;
- Strengthen and building capacity in the water sector; and
- Clarifying the roles of the Ministry for Water Affairs and other stakeholders in the water sector.

To this end, the Government of Malawi has developed this Water Policy to guide the country in the management and development of its water resources using the IWRM principles, improving the institutional and legal framework, ensuring sustainable delivery of water supply and sanitation services, effective involvement of the private sector, protection of the environment and conformity with the regional and international conventions and agreements in the management of shared water resources.

2.0 VISION

The Vision of the Water and Sanitation Sector is '*Water and Sanitation for All, Always*'. This vision is based on the country's central policy of poverty reduction and economic prosperity and the fact that water is potentially the engine for social and economic development in Malawi. This vision endeavours to ensure that every Malawian has equitable access to water and sanitation services for sustainable socio-economic development and enhancement of the country's natural ecosystems.

3.0 POLICY GOALS, OBJECTIVES AND GUIDING PRINCIPLES

3.1 Overall Policy Goal

The overall national water policy goal is sustainable management and utilization of water resources, in order to provide water of acceptable quality and of sufficient quantities, and ensure availability of efficient and effective water and sanitation services that satisfy the basic requirements of every Malawian and for the enhancement of the country's natural ecosystems.

3.2 Specific Policy Goals

Based on the overall national water policy goal, the specific policy goals are:

3.2.1 Water Resources Management and Development

To achieve sustainable and integrated water resources management and development that make water readily available and equitably accessible to and used by all Malawians in pursuit of their human development and socio-economic advancement, and enhancement of the country's natural ecosystems.

3.2.2 Water Quality and Pollution Control

To ensure water of acceptable quality for all the needs in Malawi.

3.2.3 Urban, Peri-Urban and Market Centres Water Services

To achieve sustainable, commercially viable provision of water supply and sanitation services that are equitably accessible to and used by individuals and entrepreneurs in urban, peri-urban and market centers for socio-economic development at affordable cost.

3.2.4 Rural Water Services

To achieve sustainable provision of community owned and managed water supply and sanitation services that are equitably accessible to and used by individuals and entrepreneurs in rural communities for socio-economic development at affordable cost.

3.2.5 Agriculture Services

To promote efficient and effective utilization and conservation of water resources for sustainable agricultural development in relation to the relevant policies.

3.2.6 Irrigation Services

To promote efficient and effective utilization and conservation of water resources for sustainable irrigation development.

3.2.7 Navigation Services

To ensure proper development and management of navigation services that do not adversely affect water resources.

3.2.8 Fisheries

To ensure proper management and development of fisheries services that do not adversely affect water resources.

3.2.9 Hydro-Power Generation

To promote effective and efficient utilisation and conservation of water resources for sustainable hydropower generation.

3.2.10 Eco-Tourism and Recreation

To control and regulate development of eco-tourism infrastructure adjacent to water bodies and on their recreational use.

3.2.11 Forestry

To promote effective participation of the Forestry Sector in water resources catchment protection, conservation and management.

3.2.12 Disaster Management

To establish preparedness and contingency plans for water-related disasters and emergencies as an integral part of water resources management.

3.2.13 Policy Monitoring and Evaluation

To assess the performance of policy implementation and its impact on the overall socio-economic development of the country.

3.3 Overall Policy Objectives

Based on the national water policy goals, the overall policy objectives are to:

- 3.3.1 Achieve sustainable and integrated water resources development, conservation and management that provides equitable access and use of water to all individuals and entrepreneurs;
- 3.3.2 Ensure the existence of strategic and contingency water resources development and management plans that guarantee availability of water in cases of droughts, floods and population pressures;

- 3.3.3 Ensure that all persons have convenient access to sufficient quantities of water of acceptable quality and the associated water-related public health and sanitation services at any time and within convenient distance;
- 3.3.4 Promote the empowerment of user communities to own, manage and invest in water resources development;
- 3.3.5 Promote public and private sector participation in water resources management, development, supply, and conservation;
- 3.3.6 Participate in the enactment and implementation of local, regional and international obligations and agreements with regard to exploitation and management of water resources taking due regard of national integrity, security and sovereignty;
- 3.3.7 Facilitate and initiate scientific investigations and research in the occurrence, development, utilization of water resources and disposal of wastewater in order to use the information for sustainable exploitation of water resources;
- 3.3.8 Promote and advocate water and sanitation services' pricing and charging systems that recognize water as both a social and economic good in order to institute cost recovery principles;
- 3.3.9 Promote the mainstreaming of HIV and AIDS, and Gender activities in the water and sanitation sector;
- 3.3.10 Facilitate development and regular review of policies and regulations that promote water resources development, conservation, management, protection and utilization; and
- 3.3.11 Promote user-friendly technologies to enable easy access to water and sanitation services by all manner of people.

3.4 Guiding Principles

- 3.4.1 All people shall have access to potable water and sanitation services to reduce the incidence of water related diseases;
- 3.4.2 The water services shall be provided using appropriate cost-effective technologies that are sustainable in the urban water services and for the rural areas, technologies shall conform to the VLOM concept.
- 3.4.3 Water resources management shall be based on the concept of decentralization and local participation so that the unit of water resources management shall be the catchment;
- 3.4.4 All water resources programmes shall adopt IWRM principles;
- 3.4.5 Management, conservation, protection and development of water resources shall be undertaken in an integrated manner;
- 3.4.6 Water resources shall be optimally, equitably and rationally allocated and regulated in a transparent and accountable manner to ensure sustainable, optimal economic returns and social enhancement;

- 3.4.7 Water regulation shall be based on reliable continuous data collection, management, and analysis to ensure accurate assessment of water resources and dissemination of information for effective planning of water resources development;
- 3.4.8 Water development programmes shall be based on demand responsive and demand driven approaches, beneficiary participation and empowerment;
- 3.4.9 Pollution control of water resources shall adopt the 'Polluter-Pays' principle in order to ensure water user responsibility;
- 3.4.10 Water demand management approaches shall be adopted in all cases of water resources development and management, and water allocations shall consider ecosystem integrity and bio-diversity including marine and estuarine life;
- 3.4.11 The protection and use of water resources for domestic water supply shall be accorded the highest priority over other uses;
- 3.4.12 Data users shall appreciate that due to the transient nature of the resource and the complexity of the natural environment, any water resources data are best estimations of the natural systems that is dependent on the sophistication of the measuring infrastructure;
- 3.4.13 A water legal framework shall be created to guide implementation of the water policy;
- 3.4.14 Water shall be treated not only as a social good but also as an economic good;
- 3.4.15 All water facilities shall be registered using a numbering system developed and adopted by the Ministry responsible for Water Affairs. The information shall be digitised;
- 3.4.16 Water planning shall incorporate disaster preparedness and management to cope with climate change and climate variability to minimise the impact of such changes on the socio-economic status of the nation;
- 3.4.17 There shall be no agricultural and infrastructure construction activities below the 477-metre above mean sea level contour line along Lake Malawi and below the 100-year flood water level along rivers, except where written authority from the responsible minister is granted; and
- 3.4.18 All major water projects should undergo Environmental Impact Assessment (EIA).

4.0 WATER RESOURCES MANAGEMENT AND DEVELOPMENT

Malawi has abundant surface water and groundwater resources. However, these resources are of variable quality and quantity, unevenly distributed in time and space, and are subjected to poor conservation and management. Therefore, the following policy objectives and strategies are aimed at addressing these challenges.

4.1 Specific Objectives

- 4.1.1 To achieve sustainable and integrated water resources management and development at national, regional and catchment level;

- 4.1.2 To promote water harvesting and conservation to make water readily available throughout the country for sustenance of socio-economic development and natural environment;
- 4.1.3 To advocate effective and efficient utilization and management of water resources;
- 4.1.4 To promote and initiate strategic and contingency water resources developments and management schemes at national and river catchment levels;
- 4.1.5 To promote equitable allocation and apportionment of water to all sectors of socio-economic production and services;
- 4.1.6 To recognize, support and implement international conventions, riparian and regional agreements without compromising the country's integrity, security and sovereignty;
- 4.1.7 To empower communities to effectively and efficiently manage water resources;
- 4.1.8 To promote investments in water resources management in all water related programmes (whether public or private funded);
- 4.1.9 To promote good catchment management to protect and sustain the eco-system bio-diversity and wetlands; and
- 4.1.10 To ensure compliance by all stakeholders with water sector policies, standards and guidelines.

4.2 Specific Strategies

- 4.2.1 Ensuring that the Ministry responsible for Water Affairs has an appropriate structure to fulfil its mandate;
- 4.2.2 Establishing and empowering the National Water Resources Authority to effectively and efficiently manage the country's water resources using IWRM approach;
- 4.2.3 Establishing Catchment Management Authorities and devolving water resources management to catchment level using IWRM approach;
- 4.2.4 Undertaking and promoting efforts towards water resources conservation, harvesting and protection in an integrated manner including development of small community and medium to large multipurpose dams;
- 4.2.5 Promoting local resources mobilisation and project financing that supplement and complement public investments in water resources management and development;
- 4.2.6 Undertaking appropriate integration between surface water and groundwater resources management;
- 4.2.7 Identifying, delineating and protecting water resources conservation areas;
- 4.2.8 Developing and instituting demand management instruments for water user fees and other related charges;

- 4.2.9 Establishing a sustainable groundwater monitoring network and improving a surface water monitoring network including developing water quality maps;
- 4.2.10 Designing and implementing an appropriate water resources assessment methodology including establishment of a computerized networked database;
- 4.2.11 Instituting mechanism for water users to submit prescribed water resources data to the appropriate authorities in accordance with the existing legislation;
- 4.2.12 Conducting comprehensive research and studies to establish surface and ground water resources potential to guide management and development of the resources;
- 4.2.13 Determining the minimum allowable distance from a groundwater source to pit latrines and other similar waste disposal facilities as well as from one source to another on a case-by-case basis depending on the type of aquifer;
- 4.2.14 Promoting applied research in surface and ground water development to determine affordable and appropriate technologies;
- 4.2.15 Reviewing and disseminating procedures, guidelines and regulations governing surface and ground water development activities;
- 4.2.16 Recognising and, where necessary, implementing Malawi's obligations to international conventions, treaties, and agreements which she is signatory to, in planning, development and management of shared water resources, without compromising Malawi's sovereignty, security and territorial integrity;
- 4.2.17 Encouraging the development and adoption of rainwater harvesting technologies in human settlements and infrastructure developments; and
- 4.2.18 Establishing and maintaining a register of all NGOs, the private sector and individuals involved in water and sanitation activities.

5.0 WATER QUALITY AND POLLUTION CONTROL

Surface and ground water quality has been negatively affected by environmental degradation, agriculture (land husbandry practices and agro-chemicals), industrial and mining practices and poor sanitation services. The Malawi Government has instituted water resources conservation and protection measures, which require strong instruments for control and regulation, hence the following policy objectives and strategies:

5.1 Specific Objectives

- 5.1.1 To improve the efficiency and effectiveness in managing the quality of the country's water resources;
- 5.1.2 To advance water pollution control in order to promote public health and hygiene; and environmental sustainability;

- 5.1.3 To develop and disseminate guidelines and standards on water quality and pollution control;
- 5.1.4 To provide technical advice and expertise on water quality and pollution control to Local Governments and other relevant stakeholders; and
- 5.1.5 To restore the quality of surface and ground water.

5.2 Specific Strategies

- 5.2.1 Promoting and undertaking catchment rehabilitation and protection to safeguard, improve and restore the quality of surface water and groundwater;
- 5.2.2 Ensuring and promoting proper management and disposal of wastes;
- 5.2.3 Developing and promoting coherent national sanitation policy, standards and regulations;
- 5.2.4 Establishing an effective and user-friendly water quality database compatible with GIS and establishment and maintenance of water quality and pollution control network systems;
- 5.2.5 Promoting public awareness on guidelines and standards on water quality, public health and hygiene and pollution control mechanisms;
- 5.2.6 Strengthening of institutional arrangements for environmental management;
- 5.2.7 Developing and enforcing regulations regarding water pollution control;
- 5.2.8 Developing skills, technologies and techniques in water quality monitoring and pollution control in the Ministry responsible for Water Affairs, institutions responsible for standards, and other institutions involved in water and environmental sanitation activities;
- 5.2.9 Developing and instituting instruments for determining water quality data fees and other related charges;
- 5.2.10 Promoting private sector participation in water quality and pollution control services;
- 5.2.11 Monitoring and regulating private laboratories involved in the provision of water quality and pollution control services;
- 5.2.12 Facilitating development of self-monitoring systems by all service providers and operators;
- 5.2.13 Preventing the importation and use of substances and aquatic plants including agro-chemicals that have the potential to pollute water resources; and
- 5.2.14 Undertaking and promoting research in water quality and pollution control techniques and technologies.

6.0 WATER UTILIZATION

Sustainable use of water is the underlying principle of water development. The water suppliers and users in Malawi need to adopt the concept of demand management in order to ensure cost effective water use. There is a pressing need for increased and improved water delivery services in the country due to high demand created through the increased number of users in the rural, urban and peri-urban areas, agriculture, irrigation, navigation, fisheries, hydro-power generation, forestry and eco-tourism, and recreation services amongst many other users. The following objectives and strategies which are further explained under the relevant services within this section should therefore guide water users to achieve sustainable water utilisation:

6.1 Urban, Peri-Urban and Market Centres Water Services

6.1.1 Specific Objectives

- 6.1.1.1 To advocate effective and efficient development, management and utilization of water supply and sanitation systems;
- 6.1.1.2 To develop strategic and contingency water supply reserves and sanitation back-up services;
- 6.1.1.3 To strengthen water pollution control in order to contribute to the promotion of public health and hygiene;
- 6.1.1.4 To encourage public-private partnerships in urban, peri-urban and market centers for water supply and sanitation;
- 6.1.1.5 To promote appropriate management arrangements in urban, peri-urban and market centers for water supply and sanitation schemes; and
- 6.1.1.6 To develop suitable management arrangements for improved water supply and sanitation services for the market centers.

6.1.2 Specific Strategies

- 6.1.2.1 Providing water in sufficient quantities and acceptable qualities to all users;
- 6.1.2.2 Promoting water conservation and catchment protection for sustainable development;
- 6.1.2.3 Developing and expanding raw water sources for sustainable water supply services;
- 6.1.2.4 Incorporating local governments and communities in planning, development and management of water supplies and sanitation services;
- 6.1.2.5 Rehabilitating the existing infrastructure to ensure sustained services to existing consumers and to reduce production costs through reduction of unaccounted-for-water;
- 6.1.2.6 Creating an enabling environment for public-private partnerships in water supply and sanitation activities;

- 6.1.2.7 Promoting community based participatory, DRA, value based investment and consultative approaches;
- 6.1.2.8 Strengthening and supporting Water Utilities through establishment of effective institutional and governance arrangements, and major infrastructure developments;
- 6.1.2.9 Undertaking rehabilitation and reduction of unaccounted-for-water of existing urban, peri-urban, and market centers as a priority;
- 6.1.2.10 Establishing appropriate water supply and sanitation systems using demand responsive and demand driven approaches to enhance socio-economic development activities in the market centres;
- 6.1.2.11 Promoting and instituting economic incentives and opportunities to encourage the participation of small-scale water and sanitation service providers;
- 6.1.2.12 Advocating plans that incorporate appropriate safety nets/mechanisms that take into account social considerations of low income and vulnerable communities; and
- 6.1.2.13 Promoting water recycling and re-use.

6.2 Rural Water Services

6.2.1 Specific Objectives

- 6.2.1.1 To promote demand responsive and demand driven approaches in rural water supply and sanitation services;
- 6.2.1.2 To encourage user participation in catchment protection, water conservation and sanitation related activities;
- 6.2.1.3 To promote water pollution control in order to contribute to promotion of public health and hygiene;
- 6.2.1.4 To promote community based management in rural water supply and sanitation programmes in consultation with Local Governments;
- 6.2.1.5 To promote integrated approaches to rural water supply and sanitation services;
- 6.2.1.6 To promote active participation of youth, women, persons with disabilities and vulnerable persons in planning and implementation of rural water supply and sanitation activities;
- 6.2.1.7 To ensure smooth transfer of all devolved functions of the rural water supply and sanitation services; and
- 6.2.1.8 To promote appropriate management arrangements in rural water schemes.

6.2.2 Specific Strategies

- 6.2.2.1 Undertaking rehabilitation and reduction of unaccounted-for-water of existing

- community water supply schemes (gravity-fed water supply schemes and boreholes) as a priority;
- 6.2.2.2 Promoting the diversification of appropriate technologies for the provision of water and sanitation services to the rural communities in line with prevailing standardization policy;
 - 6.2.2.3 Promoting the use of alternative energy sources of supplying piped water in rural areas such as solar, wind, mini-hydro, wave action etc;
 - 6.2.2.4 Adopting demand responsive and demand driven approaches in the provision of water and sanitation services;
 - 6.2.2.5 Encouraging professionalism in management of water supplies and sanitation at community level;
 - 6.2.2.6 Improving public health through integration of rural water supply and Participatory Hygiene and Sanitation Transformation (PHAST);
 - 6.2.2.7 Encouraging participation of women, youths, persons with disabilities and vulnerable persons in water and sanitation activities;
 - 6.2.2.8 Facilitating the creation of water management arrangements such as cooperatives, trusts and water user associations;
 - 6.2.2.9 Advocating shared responsibilities amongst stakeholders and partners;
 - 6.2.2.10 Advocating cost-recovery principles in the operation and maintenance of rural water and sanitation services;
 - 6.2.2.11 Promoting private sector participation in the delivery of goods and services for rural water supply and sanitation;
 - 6.2.2.12 Developing and disseminating standards and guidelines for rural water supply and sanitation in liaison with Local Government;
 - 6.2.2.13 Creating awareness on devolution of water and sanitation services;
 - 6.2.2.14 Encouraging private connections in rural water supply piped schemes at a fee; and
 - 6.2.2.15 Promoting and instituting economic incentives and opportunities to encourage the participation of small-scale water and sanitation service providers.

6.3 Agriculture Services

6.3.1 Specific Objectives

- 6.3.1.1 To promote participation of agriculture services in Integrated Water Resources Management (IWRM);
- 6.3.1.2 To encourage the agriculture sector to provide its water needs and demands; and
- 6.3.1.3 To harmonise policies that are relevant to natural resources management.

6.3.2 Specific Strategies

- 6.3.2.1 Improving data collection, storage and dissemination;
- 6.3.2.2 Creating awareness on natural resources management; and
- 6.3.2.3 Harmonising and mutually enforcing natural resources legislations to protect water resources from degradation and pollution.

6.4 Irrigation Services

6.4.1 Specific Objectives

- 6.4.1.1 To promote participation of irrigation services in Integrated Water Resources Management (IWRM);
- 6.4.1.2 To encourage the irrigation sector to provide its water needs and demands; and
- 6.4.1.3 To harmonise policies that are relevant to natural resources management.

6.4.2 Specific Strategies

- 6.4.2.1 Improving data collection, storage and dissemination;
- 6.4.2.2 Creating awareness on natural resources management; and
- 6.4.2.3 Harmonising and mutually enforcing natural resources legislations to protect water resources from degradation and pollution.

6.5 Navigation Services

6.5.1 Specific Objective

To prevent marine pollution resulting from navigation vessels and plants.

6.5.2 Specific Strategies

- 6.5.2.1 Conducting regular inspection and monitoring of waste disposal systems on navigation vessels and plants;

- 6.5.2.2 Collecting, storing and disseminating information on water resources required for navigation services;
- 6.5.2.3 Preventing oil spillages and leakages into existing water bodies;
- 6.5.2.4 Inspecting and regulating all marine vessels at point of entry to prevent the importation of alien invasive weeds and hazardous materials of any kind;
- 6.5.2.5 Ensuring having appropriate environmental safeguards at ports to prevent pollution of water bodies; and
- 6.5.2.6 Managing and developing navigation waterways that do not encourage cross-transfer of aquatic life.

6.6 Fisheries

6.6.1 Specific Objectives

- 6.6.1.1 To adopt IWRM in planning, development and management of fisheries; and
- 6.6.1.2 To promote aquaculture in small water bodies and reservoirs, and other water courses.

6.6.2 Specific Strategies

- 6.6.2.1 Providing data and information on water resources required for fisheries; and
- 6.6.2.2 Harmonising and mutually enforcing fisheries and water resources legislations for protection of water and fisheries resources from pollution and degradation.

6.7 Hydro-Power Generation

6.7.1 Specific Objective

To encourage the energy sector to invest in water resources development and participate in the integrated water resources management, and conservation.

6.7.2 Specific Strategies

- 6.7.2.1 Providing data and information needs/requirements for efficient operation of hydropower generation;
- 6.7.2.2 Participating in investment of multi-purpose water resources development; and
- 6.7.2.3 Participating in catchment management.

6.8 Eco-Tourism and Recreation

6.8.1 Specific Objectives

- 6.8.1.1 To ensure that waste disposal systems of the recreation facilities such as hotels etc., comply with water resources and environmental guidelines and standards; and

6.8.1.2 To ensure that eco-tourism infrastructure developments comply with water resources and environmental guidelines and standards.

6.8.2 Specific Strategies

6.8.2.1 Conducting regular pollution control inspections and monitoring on waste disposal facilities; and

6.8.2.2 Institutionalising water resources and environmental guidelines and standards in the approval processes for eco-tourism infrastructure development plans.

6.9 Forestry

6.9.1 Specific Objective

To promote effective participation of the Forestry Sector in integrated planning, development and management of the water resources catchment areas.

6.9.2 Specific Strategies

6.9.2.1 Harmonising and mutually enforcing natural resources legislations to protect water resources from degradation and pollution; and

6.9.2.2 Adopting IWRM in development and management of the forestry resources.

7.0 DISASTER MANAGEMENT

Malawi has faced an increasing frequency of water-related disasters in the form of droughts and floods. There is also an increasing threat resulting from pollution and invasive aquatic weeds. The impact of the disasters is reflected in severe socio-economic hardship, cultural disruption and dislocation facing the most vulnerable population of the affected communities, whose well being is at risk. Most local governments in affected areas do not have adequate contingency plans or capacity to mitigate the impact of the water-related disasters. Therefore, the objectives and strategies will guide timely, coordinated and effective response to such disasters:

7.1 Specific Objectives

7.1.1 To improve assessment of impact of water-related disasters and undertake effective response to prevent mortality and reduce morbidity and suffering among affected communities;

7.1.2 To ensure timely provision of potable water and sanitation for vulnerable communities especially children, women and persons with disabilities during water-related disasters;

7.1.3 To provide basic requirements of potable water supply to all affected areas; and

7.1.4 To ensure availability of relevant information to the public and riparian states on floods and droughts.

7.2 Specific Strategies

- 7.2.1 Compiling basic data required to analyse and plan, including mapping of likely population displacements, logistics capacities, potential partners using Geographic Information Systems;
- 7.2.2 Developing systems for early warnings on floods, droughts, and disaster caused pollution;
- 7.2.3 Formulating mitigation measures to reduce the impact of climate change and climate variability as a means of disaster preparedness and management;
- 7.2.4 Promoting coordination with other institutions on disaster management;
- 7.2.5 Providing contingency budget for timely mobilization;
- 7.2.6 Providing emergency water supply systems including boreholes, hand-dug wells and portable treatment units; and
- 7.2.7 Undertaking reforestation of degraded water catchment areas.

8.0 POLICY MONITORING AND EVALUATION

Monitoring and evaluation of the Water Policy is a critical ingredient in ensuring that the Policy is being implemented as planned. Monitoring would ensure that any changes experienced, or any problems encountered are addressed and corrected. Evaluation would enable Government and its partners assess to what extent policy implementation is achieving its goals and objectives.

The Ministry responsible for Water Affairs will be the lead institution to undertake the monitoring and evaluation's activities of the implementation plan of this policy.

8.1 Specific Objective

To monitor and evaluate the performance of the implementation plan of the policy with the view of assessing whether the objectives and outputs are being realized.

8.2 Specific Strategies

- 8.2.1 Developing procedures for monitoring and evaluation of the policy implementation;
- 8.2.2 Undertaking periodical reviews of the specific programmes of the implementation plan; and
- 8.2.3 Conducting participatory consultative meetings with the relevant stakeholders in order to assess the impact of the programme.

9.0 INSTITUTIONAL ROLES AND LINKAGES

The management of water resources requires an integrated approach involving a number of stakeholders, which include Ministry responsible for Water Affairs, National Water Resources Authority, Water Utilities, Local Governments, Ministry responsible for

Agriculture, Ministry responsible for Irrigation, Ministry responsible for Natural Resources, Ministry responsible for Health, Ministries responsible for Gender, Youth and Community Services, Ministry responsible for Education, Ministries responsible for Lands, Physical Planning and Human Settlements, other public holders, NGOs, Civil Society, private sector, Universities and other training institutions. The following shall be the institutional roles, responsibilities and linkages for these stakeholders' institutions:

9.1 Ministry Responsible for Water Affairs

The roles of the Ministry shall be to:

- 9.1.1 Provide policy direction and coordinate water sector programmes;
- 9.1.2 Monitor (in terms of quality and quantity), assess, plan, develop, conserve, allocate and protect water resources for utilisation in the social and economic sectors of production and services;
- 9.1.3 Manage and disseminate water resources and sanitation information;
- 9.1.4 Invest in sectoral planning, development and construction of water infrastructure, including multi-purpose dams;
- 9.1.5 Promote and adhere to regional and international obligations and agreements without compromising the country's sovereignty, security and territorial integrity;
- 9.1.6 Develop systems for early warnings on floods and droughts and pollution;
- 9.1.7 Undertake policy formulation reviews, and enforcement;
- 9.1.8 Establish standards, guidelines and inspectorate;
- 9.1.9 Develop and regulate water utilities in terms of tariffs and financing; and
- 9.1.10 Undertake training and capacity building within the water and sanitation sector.

9.2 National Water Resources Authority

The Authority's roles shall be to:

- 9.2.1 Co-ordinate and harmonize the activities of Catchment Management Authorities and all other stakeholders;
- 9.2.2 Advise on prescribing and determining the establishment of water users associations, especially for rural water supply schemes and any other schemes (for domestic, irrigation or fisheries) owned and operated, maintained and managed by rural communities or required by entrepreneurs;
- 9.2.3 Determine and collect fees related to water abstractions and discharges;
- 9.2.4 Approve any developments and/or improvements related to water resources;
- 9.2.5 Ensure that water resources buffer zones are properly managed;
- 9.2.6 Declare water catchments as water controlled areas;
- 9.2.7 Control and apportion water use in the country; and
- 9.2.8 Issue water abstraction and discharge licences.

9.3 Water Utilities

The roles of water utilities shall be to:

- 9.3.1 Operate and manage waterworks for the delivery, distribution and management of potable water supply;
- 9.3.2 Develop and implement minor water-works infrastructures;
- 9.3.3 Collect, transport, treat and dispose of or recycle and re-use wastewater and promote sanitation services;
- 9.3.4 Enforce Waterworks by-laws related to the construction of delivery and connection facilities of services for water supply and sanitation in declared water areas;
- 9.3.5 Implement investment programmes, tariffs and compensations related to the development and management of water supply and water borne sanitation facilities and services;
- 9.3.6 Monitor water quality within the water supply systems and promote catchment management and pollution control;
- 9.3.7 Collect, process, analyse and disseminate relevant data and information to all stakeholders within the water sector; and
- 9.3.8 Promote private sector participation in the delivery of water supply and sanitation services.

9.4 Local Governments

The roles of the Local Governments shall be to:

- 9.4.1 Plan and co-ordinate the implementation of water and sanitation programmes at local assembly level;
- 9.4.2 Solicit funding for implementation of water, sanitation and environment programmes;
- 9.4.3 Collect, process, analyse and disseminate relevant data and information to all stakeholders within the water sector; and
- 9.4.4 Promote private sector and NGO's participation in the delivery of water supply and sanitation services.

9.5 Ministry Responsible for Agriculture Services

The roles of the Ministry shall be to:

- 9.5.1 Promote and ensure that good land husbandry practices are followed in all land use and cultivation endeavors to prevent water resources degradation and pollution from soil erosion and agrochemicals;
- 9.5.2 Promote collaboration with NWRA so that good watershed management and catchment protection practices are followed in controlled areas and along river banks;
- 9.5.3 Promote agriculture practices that improve food security and poverty reduction;
- 9.5.4 Encourage and promote on-the-farm water harvesting and conservation;

- 9.5.5 Collect, process, analyse and disseminate relevant data and information to all stakeholders within the water sector; and
- 9.5.6 Provide water demand requirements for agricultural developments to the Ministry responsible for Water Affairs.

9.6 Ministry Responsible for Irrigation Services

The roles of the Ministry shall be to:

- 9.6.1 Promote collaboration with NWRA so that good watershed management and catchment protection practices are followed in controlled areas and along river banks;
- 9.6.2 Promote irrigation practices that improve food security and poverty reduction;
- 9.6.3 Encourage and promote on-the-farm water harvesting and conservation;
- 9.6.4 Promote and regulate irrigation development and practices to ensure poverty reduction, efficient utilization of water and prevention of pollution and water related diseases in irrigation fields;
- 9.6.5 Promote water resources development for irrigation in order to increase food security and enhance economic welfare while taking due consideration of mitigating environmental damage;
- 9.6.6 Collect, process, analyse and disseminate relevant data and information to all stakeholders within the water sector; and
- 9.6.7 Provide water demand requirements for irrigation developments to the Ministry responsible for Water Affairs.

9.7 Ministries Responsible for Natural Resources (Mines, Forestry, Fisheries, Lands, Environment, and Parks and Wildlife)

The roles of these institutions shall be to:

- 9.7.1 Facilitate the delineation of regulating areas, planning, zoning and developments in controlled water areas;
- 9.7.2 Control land allocation and ensure fragile and marginal areas are not used for agriculture activities and that there are no permanent settlements in areas planned for reservoir and dam developments;
- 9.7.3 Improve conservation and protection of catchment areas of all public water bodies;
- 9.7.4 Promote the protection and rehabilitation of river catchment so as to restore favourable ecosystem environment and its development;
- 9.7.5 Contribute to eradication of noxious aquatic weeds and control their spread;
- 9.7.6 Co-ordinate all cross cutting environmental activities required for water resources management and water services;
- 9.7.7 Facilitate identification of water resources issues to be included in the state of the environment report;
- 9.7.8 Enforce pieces of legislation and implement policies on natural resources management; and

- 9.7.9 Provide water demand requirements on natural resources developments to the Ministry responsible for Water Affairs.

9.8 Ministry Responsible for Health

The role of the Ministry shall be to:

- 9.8.1 Ensure proper management and disposal of clinical and hospital wastes to avoid pollution of the environment;
- 9.8.2 Promote health and hygiene education in water and sanitation services;
- 9.8.3 Monitor and provide guidance concerning the quality of drinking water;
- 9.8.4 Provide appropriate intervention to prevent the prevalence of water related diseases;
- 9.8.5 Provide research in water-related health issues;
- 9.8.6 Provide guidance on HIV and AIDS mainstreaming efforts to the water and sanitation sector; and
- 9.8.7 Provide water demand requirements for public health institutions.

9.9 Ministry Responsible for Meteorological Services

The roles of the Ministry responsible for Meteorological Services shall be to:

- 9.9.1 Provide relevant meteorological data for development and management of water resources; and
- 9.9.2 Provide information relating to weather and climate forecasts.

9.10 Non-Governmental Organizations and the Civil Society

The roles of these institutions shall be to:

- 9.10.1 Assist in empowering communities to have community based water services and water resources management in planning, implementation, operation and maintenance;
- 9.10.2 Encourage communities to manage their water supply systems, community dams and catchment protection;
- 9.10.3 Participate in the provision and investment in rural water supplies and community dam development consistent with the prevailing Government policies and guidelines on such investments;
- 9.10.4 Assist in mobilization and securing funding for rural and low income communities for water and sanitation projects;
- 9.10.5 Assist in community sensitization on water, sanitation, catchment management and conservation;
- 9.10.6 Liaise between rural low-income communities and Government/Donors and other co-operating partners through Local Governments;
- 9.10.7 Assist in the provision of water supply and sanitation services in rural areas and to low-income groups within urban centres;

- 9.10.8 Collect, process, analyse and disseminate relevant data and information to all stakeholders within the water sector in accordance with national statistics guidelines and standards;
- 9.10.9 Consult the Ministry responsible for Water Affairs on issues related to water and sanitation developments; and
- 9.10.10 Ensure compliance with national policies and regulations governing water and sanitation activities, including registration with the Ministry responsible for Water and Sanitation and other relevant authorities.

9.11 Private Sector

The roles of the Private Sector shall be to:

- 9.11.1 Invest in water resources development and water supply and sanitation services;
- 9.11.2 Assist community based water management activities by providing, on commercial basis, necessary inputs to CBM like sale of spare parts and skilled maintenance services for water supply systems;
- 9.11.3 Provide capacity for consulting and contracting services in the water, sanitation and related industries;
- 9.11.4 Conduct research, develop and promote local manufacturing capacity for water and sanitation related services;
- 9.11.5 Collect, process, analyse and disseminate relevant data and information to all stakeholders within the water sector in accordance with national statistics guidelines and standards;
- 9.11.6 Ensure compliance with national policies and regulations governing water and sanitation activities, including registration with the Ministry responsible for Water Affairs and other relevant authorities;
- 9.11.7 Consult with the Ministry responsible for Water Affairs on issues related to water and sanitation development; and
- 9.11.8 Provide capital for investment in water and sanitation developments.

9.12 Other Public Stakeholders

- 9.12.1 Ministries responsible for Commerce, Industry, Science and Technology shall regulate the development and operations of industries and trade that can contribute to over-exploitation and pollution of public waters, through conditional licensing of industries and trading operations;
- 9.12.2 Ministry responsible for Transport shall control and regulate navigation, roads, railways and airport development plans and protect water from pollution. It shall also co-ordinate its navigational plans and development with the Ministry responsible for Water Affairs to ensure the operations are accommodated in the water resources development and management plans;
- 9.12.3 Ministries responsible for Lands, Physical Planning and Human Settlements shall coordinate and provide policy and regulatory environment to promote sustainable

- human settlements and development in both urban and rural areas in relation to water and sanitation;
- 9.12.4 Ministries responsible for Gender, Youth and Community Services shall liaise with Ministry responsible for Water Affairs in community mobilization for community based management training, advocacy, awareness and gender mainstreaming;
 - 9.12.5 Ministry responsible for Education shall liaise with Ministry responsible for Water Affairs in curriculum development and capacity building programmes that would support efforts in water resources management, development and utilization and should also provide water demand requirements for its institutions;
 - 9.12.6 Malawi Bureau of Standards shall liaise with the Ministry responsible for Water Affairs in setting standards of treated and untreated water supply services, and effluent that can be discharged into the environment;
 - 9.12.7 Local universities and other local training institutions shall promote research and undertake capacity building in the water and sanitation fields; and
 - 9.12.8 Malawi Energy Regulatory Authority (MERA) shall liaise with the Ministry responsible for Water Affairs on issues relating to the development of hydropower.

OVERALL POLICY GOAL:

Sustainable management and utilization of water resources, in order to provide water of acceptable quality in sufficient quantities, and ensure availability of efficient and effective water and sanitation services that satisfy the basic requirements of every Malawian and for the enhancement of the country's natural ecosystems.

A. WATER RESOURCES MANAGEMENT AND DEVELOPMENT

Goal: To achieve sustainable and integrated water resources management and development that make water readily available and equitably accessible to and used by all Malawians in pursuit of their human development and socio-economic advancement, and enhancement of the country's natural ecosystems.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
1 To achieve sustainable and integrated water resources management and development at national, regional and catchment level	1.1 Establishing and empowering the National Water Resources Authority to effectively and efficiently manage the country's water resources using IWRM approach.	Act and Authority	MoIWD & NGOs	By 2007
	1.2 Establishing Catchment Management Authorities and devolving water resources management to catchment level using IWRM approach.	3 catchment management authority in place (CMAs)	MoIWD, DAs & NGOs	By 2009
	1.3 Establishing a sustainable groundwater monitoring network and improving a surface water monitoring network including developing water quality maps.	Groundwater network and Water Quality maps	MoIWD, DAs & NGOs	By 2007
	1.4 Designing and implementing an appropriate water resources assessment methodology including establishment of a computerized networked database.	MIS manuals	MoIWD, DAs & NGOs	By 2007

	1.5 Strengthening of institutional capacity in the water sector.	Improved performance and trained personnel	MoIWD, Water Utilities, NGOs & Private Sector	Ongoing
2. To promote water harvesting and conservation to make water readily available throughout the country for sustenance of socio-economic development and natural environment	2.1 Undertaking and promoting efforts towards water resources conservation, harvesting and protection in an integrated manner including development of small community and medium to large multipurpose dams.	Improved catchment areas and dams.	MoIWD, DAs & NGOs, Water Utilities, Communities, Forestry Department and the Private Sector.	Ongoing
	2.2 Identifying, delineating and protecting water resources conservation areas.	Conservation of 4 catchment areas.	MoIWD, NWRA & Water Utilities	By 2008
	2.3 Encouraging the development and adoption of rainwater harvesting technologies in human settlements and infrastructure developments.	Rainwater Harvesting technologies adopted.	MoIWD, MoA & RHAM, NGOs, Communities	On going
3 To advocate effective and efficient utilization and management of water resources	3.1 Institutionalisation of Integrated Water Resources Management (IWRM) plans.	Integrated Water Resources Management Plans.	MoIWD, MWP	By 2006
	3.2 Reviewing and disseminating procedures, guidelines and regulations governing surface and ground water development activities.	Updated Guidelines & regulations.	MoIWD, NWRA, DAs & NGOs & Private Sectors	By 2007
	3.3 Establishment of a water sector resource centre.	Resource Centre	MoIWD	By 2007
	3.4 Developing and instituting demand management instruments such as water user fees and other related charges.	MoU for Rural Conservation Charters revived regulations.	MoIWD, NWRA, Water Utilities, Communities.	By 2007

4	To promote and initiate strategic and contingency water resources developments and management schemes at national and river catchment levels	4.1 Empowering the National Water Resources Authority to effectively and efficiently manage the country's water resources schemes at national and river catchment levels using IWRM approach.	Management System in place	MoIWD, MoF, Private Sector, NGOs	By 2007
		4.2 Developing dams	Dams Development	MoIWD, DAs, Privates Sector & NGOs.	By 2010
5	To ensure equitable allocation and apportionment of water to all sectors of socio-economic production and services.	5.1 Instituting mechanisms for water users to submit prescribed water resources data to the appropriate authorities in accordance with the existing legislation.	MIS updated.	MoIWD & NWRA	By 2007
		5.2 Updating of the National Water Resources Master Plan of 1986.	Updated Master Plan.	MoIWD	By 2008
6	To recognize, support and implement international conventions, riparian and regional agreements without compromising the country's integrity, security and sovereignty.	6.1 Recognising and, where necessary, implementing Malawi's obligations to international conventions, treaties, and agreements which she is signatory to, in planning, development and management of shared water resources, without compromising Malawi's sovereignty, security and territorial integrity.	Cooperation Treaties, Agreements recognised.	MoIWD, Ministry responsible for Foreign Affairs, OPC	Ongoing
7	To empower communities to effectively and efficiently manage water resources	7.1 Promoting local resources mobilisation and project financing that supplement and complement public investments in water resources management and development.	Local Communities empowered to manage resources.	MoIWD, DAs, NGOs	Ongoing

8	To promote investments in water resources management in all water related programmes (whether public or private funded)	8.1 Establishing and maintaining a register of all NGOs, the private sector and individuals involved in water and sanitation activities.	Register of Stakeholders, Guidelines developed.	MoIWD	By 2006
		8.2 Conducting comprehensive research and studies to establish surface and ground water resources potential to guide management and development of the resources.	Research Studies and Reports.	MoIWD, University/Research Institutions	Ongoing
		8.3 Implementing water resources development programmes basin development.	No. of development projects implemented, Amount of Investments made.	MoIWD, DAs, NGOs & Water Utilities	By 2010
9	To promote good catchment management to protect and sustain the eco-system biodiversity and wetlands	9.1 Establish and build capacity of Catchment Management Committees.	No of catchment management committees	MoIWD, NWRA, DAs	Ongoing
		9.2 Promote partnerships between various stakeholders of eco-systems biodiversity.	Partnership developed.	MoIWD, NGOs, Water Utilities	Ongoing
		9.3 Advocating public awareness campaigns in water resources management, conservation, and pollution control.	Awareness campaigns & Rehabilitation	MoIWD, DAs, NWRA	Ongoing
10	To ensure compliance by all stakeholders with water sector policies, standards and guidelines	10.1 Revising /amending the Water Resources Act of 1969 and Water Works Act of 1995	High degree compliance	MoIWD,	By 2006

B. WATER QUALITY AND POLLUTION CONTROL

Goal : To ensure water of acceptable quality for all the needs in Malawi.

SPECIFIC OBJECTIVE	STRATEGIC INTERVENTION	MEANS OF VERIFICATION	RESPONSIBILITY	TIME-FRAME
1 To improve the efficiency and effectiveness in managing the quality of the country's water resources.	1.1 Establishing an effective and user-friendly water quality database compatible with GIS and establishing and maintaining water quality and pollution control network systems.	Database and Operational Network.	MoIWD, Water Utilities	By 2007
	1.2 Developing skills, technologies and techniques in water quality monitoring and pollution control in the Ministry responsible for Water Affairs, institutions responsible for standards, and other institutions involved in water and environmental sanitation activities.	No. of trained personnel & Available equipment.	MoIWD, MBS, Water Utilities, NWRA.	Ongoing
	1.3 Strengthening of institutional arrangements for environmental management.	Institutions in place.	MoIWD & EAD, Das.	Ongoing
	1.4 Ensuring inclusion of water quality topics in developed school curriculum at primary, Secondary and tertiary levels.	Developed Curriculum.	MoIWD & University Institutions, Science and Technology.	Ongoing
	1.5 Rehabilitate, construct and equip water laboratories.	Water Laboratories in place.	MoIWD, Water Utilities, Das.	By 2007

2	To advance water pollution control in order to promote public health and hygiene.	2.1 Promoting and undertaking catchment rehabilitation and protection to safeguard and improve the quality of surface water and groundwater.	A number of rehabilitated catchment. No. of control orders Improved water quality	MoIWD , DAs, MOA, NWRA & Lands	Ongoing
		2.2 Developing and instituting instruments for determining water quality data fees and other related charges.	Developed/Revised regulations	MoIWD, NWRA	By 2007
3	To develop and disseminate guidelines and standards on water quality and pollution control.	3.1 Developing and promoting coherent national sanitation policy, standards and regulations.	Sanitation Policy, standards, and regulations in place.	MoIWD, Local Government, MoH, MNR&E	By 2007
		3.2 Promoting public awareness on guidelines and standards on water quality, public health and hygiene and pollution control mechanisms.	Public awareness programmes in place.	MoIWD, MoH, NWRA, DAs, Water Utilities	Ongoing
		3.4 Developing and enforcing regulations, guidelines and standards regarding water pollution control	Standards and guidelines developed.	MoIWD & MBS	Ongoing
4	To provide technical advice and expertise on Water Quality and Pollution Control to Local Governments and other relevant stakeholders.	4.1 Monitoring and regulating private laboratories involved in water quality and pollution control services.	Number of monitored laboratories	MoIWD, MBS	Ongoing
		4.3 Undertaking and promoting research in water quality and pollution control techniques and technologies.	Number of research standards undertaken.	MoIWD, University/Research, Institutions, Water Utility	Ongoing
5	To restore the quality of surface and ground water.	5.1 Preventing the importation and use of substances and aquatic plants including agro-chemicals that have potential to pollute water resources.	Legislation in place	MoIWD, MoA, Fisheries Dept, MBS, MRA & EAD & Forestry Dept (DoF)	Ongoing
		5.2 Facilitating development of self-monitoring systems by all service providers and operators.	Self monitoring systems in place.	MoIWD	Ongoing

	5.3 Promoting and undertaking catchment rehabilitation, protection and management.	Catchment rehabilitated. Public awareness campaigns. Improved water quality.	MoIWD, Natural Resources, NRWA, EAD.	Ongoing
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C. WATER UTILIZATION

C.1 Urban, Peri-Urban and Market Centres Water Services

Goal: To achieve sustainable provision of water supply and sanitation services that are equitably accessible to and used by individuals and entrepreneurs in urban, peri-urban and market centres at affordable cost.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTION	INDICATORS	RESPONSIBILITY	TIME-FRAME
1 To advocate effective and efficient development, management and utilization of water supply and sanitation systems	1.1 Promoting water conservation and catchment protection for sustainable development.	Reliable water resources be protected by catchment areas.	MoIWD, DAs, NWRA	Ongoing
	1.2 Establishing appropriate water supply and sanitation systems using Demand Responsive and Demand Driven Approaches to enhance socio-economic development activities in the market centers.	No. of infrastructure approach.	MoIWD, Water Utilities	Ongoing
	1.3 Capacity building in curriculum development in tertiary institutions such as at Mzuzu University and University of Malawi, and other training institutions.	Comprehensive curriculum established.	MoIWD & Universities, other Institutions	Ongoing
	1.4 Establish an accredited water and sanitation institution.	Accreditation documents	MoIWD and Universities, other training institutions.	Ongoing

	1.5 Undertaking installation and construction of water supply and sanitation infrastructure	Constitution and by laws.	MoIWD	Ongoing	
	1.6 Undertaking policy guidance for planning and designing of water supply and sanitation infrastructure.	Standard and Guidelines provided. Rural Water Supply and Sanitation Project. Implementation manual provided.	MoLG & DAs MoIWD	Ongoing	
2	To develop strategic and contingency water supply reserves and sanitation back-up services.	2.1 Developing and expanding raw water sources for sustained water supply services.	National Water Resources Management and Development	MoIWD & Water Utilities	Ongoing
		2.2 Promoting water recycling and re-use.	Master Plan by 2009	WBs, Lands & Housing (Settlements)	By 2010
	2.3 Extending and providing water supply and sanitation services to the unserved population in Malawi, to meet the millennium Development Goals (MDGs) in the medium-term and Vision 2020 in the long-term.	National Water Development Plan II by 2010	MoIWD & Water Utilities	Ongoing	
	2.4 Providing water in sufficient quantities and acceptable qualities to all users.	Number of water related incidences (diseases) reduced.	MoIWD, DAs	Ongoing	
3	To strengthen water pollution control in order to contribute to the promotion of public health and	3.1 Developing a national water and sanitation services regulatory framework.	Water Supply and Sanitation Services Regulatory Secretariat in place by August, 2005.	MoIWD	By 2007

hygiene	3.2 Incorporating local governments and communities in planning, development and management of water supplies and sanitation services.	National Water Supply and Sanitation Services standards and Guidelines, High degree of Compliance.	MoIWD & Water Utilities	Ongoing
4 To encourage public-private partnerships in urban, peri-urban and market centres water supply and sanitation	4.1 Creating an enabling environment for public-private partnerships in water supply and sanitation activities.	National Water and Sanitation Services Regulatory framework by 2006 for PPP	MoIWD, Privatization Commission	Ongoing
	4.2 Promoting community based participatory, DRA, value based investment and consultative approaches.	Review Water Works Act. No. 17 of 1995.	MoIWD, NGOs, DAs	Ongoing
5 To promote appropriate management arrangements in urban, peri-urban and market centres water schemes	5.1 Promoting and instituting economic incentives and opportunities to encourage the participation of small-scale water and sanitation service providers.	National Regulatory framework for Water Sanitation Services for PPP.	MoIWD, DAs, Privatisation Commission	Ongoing
	5.2 Strengthening and supporting Water Utilities through establishment of effective institutional and governance arrangements and major infrastructure developments.	National Water Policy Revised Water Works Act.	MoIWD, DAs, Privatisation Commission	Ongoing

C.2 Rural Water Services

Goal: To achieve sustainable provision of community owned and managed water supply and sanitation services that are equitably accessible to and used by individuals and entrepreneurs in rural communities for socio-economic development at affordable cost.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
1 To promote demand driven and demand responsive approaches in Rural Water Supply and Sanitation services.	1.1 Adopting Demand Driven and Demand Responsive Approaches in the provision of water and sanitation services.	No of projects in which demand driven and demand responsive approached have been used. Communities demand for their Water Supply & Sanitation Services.	MoIWD, NGOs, DAs	Ongoing

2 To encourage user participation in catchment protection, water conservation and sanitation related activities.	2.1 Encouraging participation of women, youths, persons with disabilities and vulnerable persons in water and sanitation.	Increase in proportion of women, youths, persons with disabilities and vulnerable persons in water point committees.	MoIWD, MoYG, NGOs	Ongoing
	2.2 Facilitating the creation of water cooperatives, trusts, water user associations, etc.	No. of Trusts, water users associations.	MoIWD	Ongoing
	2.3 Advocating shared responsibilities amongst stakeholders and partners.	Increased participation of all stakeholders and partners.	MoIWD, NGOs, DAs	Ongoing
	2.4 Rehabilitating and protecting catchment areas for Rural Water Schemes.	No. and size of catchments areas rehabilitated.	MoIWD / NWRA & Forestry Department.	Ongoing
	2.5 Provide alternative sources of water for upper catchment areas.	No. of alternatives provided.	MoIWD & DAs	
	Provide alternative technologies such as agriculture, aquaculture utilizing resources in the catchment.	No. and type technologies provided.	Agriculture, DAs, NGOs.	

	2.6 Rehabilitating and protecting catchment areas for Rural Water Schemes.	No. and size of catchments areas rehabilitated.	MoIWD / NWRA & Forestry Department.	Ongoing
	2.7 Provide alternative sources of water for upper catchment areas.	No. of alternatives provided.	MoIWD & DAs	
	2.8 Provide alternative technologies such as agriculture, aquaculture utilizing resources in the catchment.	No. and type technologies provided.	Agriculture, DAs, NGOs.	

3 To promote water pollution control in order to contribute to promotion of public health and hygiene.	3.1 Improving health through integration of Rural Water Supply and Participatory Hygiene and Sanitation Transformation (PHAST).	Integration materials made available and used.	MoIWD, NGOs	Ongoing
	3.2 Encouraging professionalism in management of water supplies and sanitation at community level.	Standards and guidelines available.	MoIWD	Ongoing
	3.3 Advocating public awareness campaigns in water resources management, conservation, and pollution control.	Public awareness campaigns conducted.	MoIWD, DAs, EAD & NWRA	Ongoing
4 To promote Community Based Management in Rural Water Supply and Sanitation in consultation with Local Governments.	4.1 Developing and disseminating standards and guidelines for Rural Water Supply and Sanitation in liaison with Local Government.	Standards and guidelines made available. Increased utilization of standards & guidelines.	MoIWD, DLG, NGOs	Ongoing
5 To promote integrated approaches to Rural Water and Sanitation services.	5.1 Promoting the diversification of appropriate technologies for the provision of water and sanitation services to the rural communities in line with prevailing standardization policy.	No. of different VLDM pumps/technologies promoted.	MoIWD	By 2008
	5.2 Promoting the use of alternative energy sources of supplying piped water in rural areas such as solar, wind, mini-hydro, and wave action.	Alternative energy sources such as solar, wind, mini-hydro and wave action promoted (No. of alternative sources used in supplying water).	MoIWD	By 2010

	5.3	Conducting research on diversification of appropriate technologies in the provision of water supplies and sanitation services in the rural areas.	Research reports on diversification of appropriate technologies.	MoIWD, Universities, Ministry of Industry, Science & Technology	Ongoing
6 To promote active participation of youth, women, persons with disabilities and vulnerable persons in planning and implementation of Rural Water Supply and Sanitation activities.	6.1	Encouraging participation of women, youths, persons with disabilities and vulnerable persons in water and sanitation.	Advocacy reports on participation of women, youth, persons with disabilities and vulnerable persons.	MoIWD, MoYG, NGOs, Ministry Responsible for Persons and Disabilities.	Ongoing
7 To ensure smooth transfer of all devolved functions of the Rural Water Supply and Sanitation Services.	7.1	Creating awareness on devolution of water and sanitation services.	Devolution messages	MoIWD, Decentralisation Secretariat	Ongoing
	7.2	Developing and disseminating standards and guidelines for Rural Water Supply and Sanitation .	Standards and guidelines disseminated .	MoIWD, MoLG	By 2008
	7.3	Undertaking rehabilitation and reduction of unaccounted- for-water of existing community water supply schemes (gravity-fed water supply schemes and boreholes) as a priority.	Percentage reduction of unaccounted - for-water	MoIWD, NGOs, DAs	Ongoing
	7.4	Building capacity at community & district- level.	No. of DCT members, Ministry staff at district level trained,	University, MoIWD, MoH, Community Services.	Ongoing

8 To promote appropriate management arrangements in Rural Piped Water Schemes.	8.1 Advocating cost-recovery principles in the operation and maintenance of rural water supply and sanitation services.	Advocacy principles made available.	MoIWD, Finance, NGOs	Ongoing
	8.2 Promoting private sector participation in the delivery of goods and services for Rural Water Supply and Sanitation.	No. of private sector organisations participating.	MoIWD, NGO's, Ministry of Trade and Private Sector.	Ongoing
	8.3 Encouraging private connections at a fee.	No. of Private connections.	MoIWD & MoLG	Ongoing
	8.4 Promoting institutions economic incentives and opportunities to encourage the participation of small scale water and sanitation service providers.	National Regulatory Framework for Water Supply and Sanitation Services in place.	MoF, Ministry of Trade and Private Sector, MoIWD, Das	Ongoing

C.3 Agriculture Services

Goal: To promote efficient and effective utilization and conservation of water resources for sustainable agricultural and irrigation development in relation to the relevant policies.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
1 To promote participation of Agriculture in Integrated Water Resources Management (IWRM)	1.1 Creating awareness on natural resources management	<ul style="list-style-type: none"> • Awareness campaigns on IWRM • Reports 	MoIWD, MoA & NWRA	Ongoing
2 To encourage Agriculture sector to provide their water needs and demands	2.1 Improving data collection, storage and dissemination	<ul style="list-style-type: none"> • Data requests/needs 	MoIWD, MoA & NWRA	Ongoing

3	To harmonise policies that are relevant to natural resources management.	3.1 Reviewing and mutually enforcing natural resources legislations to protect water resources from degradation and pollution	<ul style="list-style-type: none"> • Harmonised Policies and legislation 	MoIWD, MoA & EAD	Ongoing
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C.4 Irrigation Services

Goal: To promote efficient and effective utilization and conservation of water resources for sustainable irrigation development.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
1 To promote participation of Irrigation services in Integrated Water Resources Management (IWRM)	1.1 Creating awareness on natural resources management	<ul style="list-style-type: none"> • Awareness campaigns on IWRM • Reports 	MoIWD	Ongoing
2 To encourage Irrigation sector to provide its water needs and demands	2.1 Improving data collection, storage and dissemination	<ul style="list-style-type: none"> • Data requests/needs 	MoIWD, EAD & NWRA	Ongoing
3 To harmonise policies that are relevant to natural resources management.	3.1 Harmonising and mutually enforcing natural resources legislations to protect water resources from degradation and pollution	<ul style="list-style-type: none"> • Harmonised policies and legislation. 	MoIWD, NWRA & EAD	Ongoing

C.5 Navigation Services

Goal: To ensure proper development and management of navigation services that do not adversely affect water resources.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME	
1. To prevent marine pollution resulting from navigation vessels and plants	1.1.1	Conducting regular inspection and monitoring of waste disposal systems on navigation vessels and plants	Inspection Reports	MoIWD & MoT & PW	Ongoing
	1.1.2	Preventing oil spillages and leakages into existing water bodies	No. of incidences of spillages and leakages	MoT & PW	Ongoing
	1.1.3	Inspecting and regulating marine vessels at point of entry to prevent the importation of alien invasive weeds and hazardous materials of any kind	Inspection Reports	MoIWD in conjunction with MoT & PW	By 2010
	1.1.4	Ensuring having appropriate environmental safeguards at ports to prevent pollution of water bodies	Environmental Guidelines in place	MoT & PW	Ongoing
	1.1.5	Managing and developing navigation waterways that do not encourage cross-border transfer of aquatic life	Facilities in place for controlling cross-border transfer of aquatic life	MoIWD in conjunction with MoT & Fisheries	By 2010

C.6 Fisheries

Goal: To ensure proper management and development of fisheries services that do not adversely affect water resources.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
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1	To adopt IWRM in planning, development and management of water resources	1.1 Harmonising and mutually enforcing fisheries and water resources legislation for protection of water and fisheries resources from pollution and degradation	<ul style="list-style-type: none"> • Harmonised policies and legislation 	MoIWD, & NWRA, Department of Fisheries	Ongoing
2	To promote aquaculture in small water bodies and reservoirs	2.1 Providing data and information on water resources required for fisheries	<ul style="list-style-type: none"> • Data requests/needs 	MoIWD, & NWRA, Department of Fisheries	Ongoing

C.7 Hydro-Power Generation

Goal: To promote effective and efficient utilisation and conservation of water resources for sustainable hydropower generation.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
1 To encourage the energy sector to invest in water resources development and participate in the integrated water resources management, monitoring and conservation	1.1 Participating in investment of multi-purpose water resources development	No. of projects in water resources development.	DoE/ ESCOM	By 2010
	1.2 Participating in catchment management	No. of projects in catchment management implemented.	DoE, NWRA & ESCOM	Ongoing
	1.3 Providing data and information for efficient operation of hydropower generation	Data reports/needs	MoIWD & NWRA in Conjunction with DoE/ ESCOM	Ongoing

C.8 Eco-Tourism and Recreation

Goal: To control and regulate development of eco-tourism infrastructure adjacent to water bodies and on their recreational use.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
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1	To ensure that waste disposal systems and the recreation facilities such as hotels etc. comply with water resources and environmental guidelines and standards.	1.1 Conducting regular pollution control inspections and monitoring on waste disposal facilities	Inspection Reports	MoIWD, EAD & NWRA	Ongoing
2	To ensure that eco-tourism infrastructure developments comply with water resources and environmental guidelines and standards	2.1 Institutionalising water resources and environmental guidelines and standards in the approval processes for eco-tourism infrastructure development plans.	Environmental guidelines and standards in place.	MoIWD & NWRA in conjunction with EAD	By 2007

C.9 Forestry

Goal: To promote effective participation of the Forestry Sector in water resources catchment protection, conservation and management.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
1 To promote effective participation of the Forestry Sector in integrated planning, development and management of the water resources catchment areas.	1.1 Adopting IWRM in development and management of the forestry resources.	Effective Village Natural Resources Management Committees in place.	MoIWD & NWRA	Immediate

D DISASTER MANAGEMENT

Goal : To establish preparedness and contingency plans for water-related disasters and emergencies as an integral part of water resources management

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
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1	To improve assessment of impact of water-related disasters and undertake effective response to prevent mortality and reduce morbidity and suffering among affected communities	1.1 Ensuring that the relevant institutions are provided with adequate information on floods and droughts.	Floods and droughts reports and data made available.	MoIWD, Department of Disaster Preparedness (DDPR)	Ongoing
		1.2 Developing water related natural disasters development plans.	Development contingency plans in place.	MoIWD & DDPR	Ongoing
		1.3 Formulating mitigation measures to reduce the impact of climate change and climate variability as a means of disaster preparedness and management.	Disaster preparedness plans in place.	MoIWD, Department of Meteorology. & EAD	Ongoing
2	To ensure timely provision of potable water and sanitation for vulnerable communities especially children, women and persons with disabilities during water-related disasters.	2.1 Promoting coordination with other institutions on disaster management.	Disaster preparedness plans in place.	MoIWD & DDPR	Ongoing
		2.2 Providing for contingency budgets for timely mobilization.	Contingency budgets in place.	MoIWD, MoF	Ongoing
3	To provide basic requirements of potable water supply to all affected areas.	3.1 Providing emergency water supply systems including boreholes, hand-dug wells and portable treatment units.	Disaster preparedness plans in place.	MoIWD, Water Utilities & NGOs	As required

4	To ensure availability of relevant information to the public and riparian states on floods and drought.	4.1	Compiling basic data required to analyse and plan, including: mapping of likely population displacements, logistics capacities, potential partners using Geographic Information Systems.	Flood zones demarcated and mapped	MoIWD, DDPRR & NGOs	As required
		4.2	Developing systems for early warnings on floods, droughts and disaster caused pollution.	Warning System in place.	MoIWD	Ongoing
		4.3	Demarcating and zoning of disaster prone areas on droughts and floods.	Disaster prone areas demarcated and mapped.	MoIWD	By 2008
		4.4	Vulnerability assessment of the country's water resources to climate change and climate variability.	Assessment reports available.	MoIWD & Dept of Met.	Ongoing

E POLICY MONITORING AND EVALUATION

Goal : To assess the performance of policy implementation and its impact on the overall socio-economic development of the country.

SPECIFIC OBJECTIVES	STRATEGIC INTERVENTIONS	INDICATORS	RESPONSIBILITY	TIME-FRAME
<p>1 To monitor and evaluate the performance of the implementation plan of the policy with the view of assessing whether the objectives and outputs are being realized.</p>	<p>1.1 Developing procedures for monitoring and evaluation of the policy implementation.</p>	<p>Procedures for monitoring and evaluation in place.</p>	<p>MoIWD</p>	<p>By 2005</p>
	<p>1.2 Undertaking periodic reviews of the specific programmes of the policy implementation.</p>	<p>Periodical Review Reports available.</p>	<p>MoIWD</p>	<p>Ongoing</p>
	<p>1.3 Conducting participatory consultative meetings with the relevant stakeholders in order to assess the impact of the programme.</p>	<p>Consultative meetings reports available.</p>	<p>MoIWD</p>	<p>Ongoing</p>