



**REPUBLIC OF KENYA**  
**MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES**  
**DEPARTMENT OF WATER DEVELOPMENT**

# **COUNTRY STRATEGY ON WATER AND SANITATION SERVICES**

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## **FINAL DRAFT PAPER**

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Harmonised with the Water Bill 2001 - Final Document

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## FOREWORD

In keeping with the changing global trends in the water sector, the Government launched Sessional Paper No.1 of 1999 on the National Water Policy primarily to restructure and improve performance of the water sector deemed as one of key pillars of the economy. Prior to this launching, the sector had been steered through strategies that often resulted into unsustainable water utilities, and ultimately, poor service. Following the National Water Policy which has heralded a new era for the water sector, the Ministry has prepared the *Country Strategy on Water and Sanitation Services* that aims to further develop the Policy aspirations and define an implementation framework.

The main problems facing water services delivery have tended to revolve around lack of clarity with regard to the institutional framework, unsustainability of services and inadequate financing. This *Strategy*, has therefore, been developed with a focus on specific roles of the various actors clearly defined in an institutional framework that underscores separation of service delivery from regulation. Two key institutions to be established as part of this new framework are the Water Supply and Sanitation Services Boards and the WSS Regulatory Board that underpin this separation and ensures fair play among various actors. The new institutional framework also underscore the need to place water and sanitation services under single utilities in view of the close linkages in operations, maintenance and commercial aspects. This is in contrast to past practice where the two utilities have been managed separately.

In line with the *Strategy*, the Water Bill 2001 has been prepared to implement the new institutional framework. The *Strategy* emphasizes an increased role for the Private Sector in service delivery taking into account the need to ensure that the commercial principles that drive PSP do not undermine Government's aspirations as defined in the *Poverty Reduction Strategy Paper* by limiting access of the poor. The *Strategy* emphasizes more than ever before, the role of communities in service provision by refining a framework that will enhance the communities' role, and access to finance as well as technical support.

Above all, the *Strategy* has proposed a well-structured transition process that will ensure systematic establishment and operationalization of the new institutions. This is a necessary interface that will ensure the smooth transfer of responsibility and systems to new service providers. A closely related issue is the status of the assets for which the Ministry has proposed a detailed study to determine value and future ownership based on financial and other Government regulations.

In conclusion, it is the sincere hope of the Ministry that actors within the sector will recognize the opportunity offered by the *Strategy* and the enabling liberalized environment and provide financial and other resources for development and management of sustainable water and sanitation services.

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## ACRONYMS

AM	Aide Memoir
GoK	Government of Kenya
GTZ	German Agency for Technical Cooperation
IMC	Inter-ministerial Committee
IPRSP	Interim Poverty Reduction Strategy Paper
KEWI	Kenya Water Institute
KWS	Kenya Wildlife Services
LAs	Local Authorities
LBDA	Lake Basin Development Authority
MENR	Ministry of Environmental and Natural Resources
MoA	Ministry of Agriculture
MoH	Ministry of Health
MoLG	Ministry of Local Government
MoR&PW	Ministry of Roads and Public Works
NWCPC	National Water Conservation and Pipeline Corporation
NWMP	National Water Master Plan
NWP	National Water Policy
NGO	Non-Governmental Organisations
O&M	Operation and Maintenance
OP	Office of the President
PSP	Private Sector Participation
SHG	Self Help Groups
SIDA	Swedish International Development Agency
SSiPs	Small Scale Independent Providers
TARDA	Tana and Athi Rivers Development Authority
TNA	Training Needs Assessment
WAB	Water Apportionment Board
WB	World Bank
WRM	Water Resource Management
WSRU	Water Sector Reform Unit
WSS	Water Supply and Sanitation
WSSB	Water Supply and Sanitation Services Board
WSSP	Water Supply and Sanitation Services Providers
UfW	Unaccounted-for Water
UWS	Urban Water Services

## DEFINITIONS

Water Services	Water Supply and Sanitation Services
Syndication	Merging service provision of two or more Local Authorities/supply areas under one WSSB
Sanitation	Sewerage and on-site excreta disposal

## EXECUTIVE SUMMARY

### 1. THE CURRENT SITUATION

Through various policy documents<sup>1</sup>, the government has expressed commitment to improve the provision of water and sanitation services. In the past, attempts have been made aimed at providing water services to a majority of urban and rural inhabitants, especially driven by the motto of "water for all by the year 2000". There have been attempts to re-organise the Ministry in charge of water services to steer water sector activities towards improved efficiency and expanded services to as many citizens as possible. Despite these attempts, access to improved water services has been deteriorating. Many water schemes developed by the government are in dire need of rehabilitation while others need renewal. Projects managed by communities and private providers are not fairing any better and are unable to meet the growing demand for services. Water quality has also been deteriorating as quality control is hardly practiced; and schemes are run on supply driven approaches leading to poor cost recovery.

The institutional framework has been identified as being weak and requires strengthening. Some of the functions performed by institutions involved in water service provision are either unclear or conflicting. Poor co-ordination of sector institutions, inadequate institutional capacity and lack of adequate skills on the part of managers have been identified. The Water Act cap 372, the Local Government Act Cap 265 and other legislations that touch on WSS have defects and sometimes conflict. These areas need to be addressed in order to improve and enable sustainable water service provision.

With regard to capacity building, studies indicate that the sector has many skilled personnel who are poorly remunerated. Lack of incentives and facilities have had adverse effects in the provision of water services. Participation by the private sector has been limited to contractors, consultants and in a few cases, management contracts. PSP participation in direct service provision has been hampered by administrative and WSS Regulatory Board powers that vests service provision in the hands of the Government.

Financial resources channeled to the water sector, particularly public financing has been decreasing. Maintaining current service levels and increasing coverage has therefore been hampered. External Agencies have also reduced funding to the sector. It is estimated that some US\$ 250 billion will be required for investment in the sector in the next 10 years if anticipated results<sup>2</sup> are to be achieved.

Currently, provision of water services does not adequately address the unique circumstance of the poor. In Urban informal settlements consumers pay higher tariffs for unreliable water services as compared to wealthier customers in formal settlements. In poor rural areas, access to safe water services is estimated at 30% and declining.

### 2. PROPOSED STRATEGY

The preparation of this Strategy paper has involved a cross section of key stakeholders including participants from MENR, NWPC, MOLG, LAs, and members of the private sector. There have been high-level consultations through consensus building workshops bringing together a wide spectrum of stakeholders in the sector. The drafting work started in the mid year 2000 resulting in a first draft in December 2000. This draft was presented and discussed at a workshop held in mid December 2000 involving a big number of stakeholders including donors and a WB mission, which was in the country at the time conducting a survey on WSS status. Recommendations made at the workshop led to a further work by the drafting team, starting in January 2001, resulting in a revised document in March 2001. This revised document was presented and discussed in another high-powered workshop, representing all sector stakeholders, in May 2001. Conclusions

<sup>1</sup> Such as Sessional papers No.1 of 1965, No. 1 of 1986 and No.1 of 1999

<sup>2</sup> The water policy, After Care Study on NWMP and Aide Memoir of Dec. 2000 envisage 100% access by the year 2010.

and recommendations made at this workshop have been incorporated in this document to produce the Final Draft Paper.

In order to address the current weaknesses and problems facing the water sector and to achieve sustainable development and management, the Government has prepared *Sessional Paper No.1 of 1999* the National Policy on Water Resources Management and Development. This Strategy Paper on water services has been prepared in order to fully operationalize the National policy on Water Resources Management and Development.

This Strategy Paper proposes institutional reforms that separate water resources management from water services provision and outlines separation of policy, WSS Regulatory Board and implementation functions within the sector. Under the proposed arrangements, the ministry in charge of water services will be responsible for policy formulation. A WSS Regulatory Board will regulate the provision of services by registered water service providers through the proposed Water Supply and Sanitation Service Boards (WSSBs). WSSBs will be established under the Water Act, Cap 372, charged with the responsibility of providing water services. The Boards, apart from exceptional situations, will not be required to provide the services directly but through contracted WSS Providers to be appointed through a competitive process. The WSS Providers will be required to operate the schemes on a cost recovery basis and at the same time comply with quality standards and set service levels.

An Inter-Ministerial Water Reform Steering Committee (IMC) will guide the transition process. The committee will establish a secretariat, the Water Sector Reform Unit (WSRU) that will be phased out when the WSS Regulatory Board comes on board. Part of WSRU's mandate is to carry out studies necessary to ensure a smooth transition.

Development of human capital, which involves equipping human resources with the right skills and providing adequate incentives to perform, is key to sustainable development and maintenance of services. It is therefore necessary to develop a comprehensive training programme for the sector personnel. Emphasis has also been laid on the private sector and communities to provide water services directly to the people. Legislation dealing with water services would clarify and streamline the institutional framework to support private sector initiatives.

To meet the financial requirements of the sector, it could be necessary to mobilize local resources and complement them with aid from development partners, increase investment efficiency by assessing demand and prioritizing rehabilitation, develop appropriate tariff structure that ensures cost recovery leading to sustainability; and rationalize financial management systems to increase efficiency, transparency and accountability. This will require that WSS schemes achieve financial autonomy and that financing and pricing policies and mechanisms be restructured. This should help attract foreign capital and technical investment into the sector.

The Poverty Reduction Strategy Paper (PRSP) has identified a strong link between poverty and access to improved water services. This strategy has placed priority on increasing access to WSS services in rural communities and urban informal settlements where the majority of the poor live. Laws, regulations and practices that deny the poor access to WSS services will need to be amended, and all WSS Providers will be required to cater for the poor.

Information crucial here

## 1.0 INTRODUCTION

The water sector in Kenya is facing enormous challenges today. In the last 70 years massive changes in mode of O&M and infrastructural development have taken place. The population has increased from 6 million, at independence in 1963, to 29 million in 1999. The patterns of land use have changed drastically. 86% of the land area is semi-arid, 5% is reserved for natural parks and only 4% of the total land carries over 80% of the population.

65% of the 29 million population is rural and 35% is urban. Of the urban population, over 60% live in unplanned slum settlements, with little in form of infrastructure to enable services to be provided. The water sector has had little investment over the years to meet demand from the burgeoning population and economy. Most of the facilities were constructed twenty to forty years ago. With lack of maintenance and new investment, the facilities have failed to meet water demand for the design population, let alone the more than doubled population.

To address the shortcomings, the government in the past has formulated a series of policies, which have impacted on the water sector both positively and negatively. The first positive step was a water supply driven interventions policy to redress colonial era misallocation of resources. This was followed by a policy that saw numerous schemes put in place by the government and self-help groups. This policy was however not sustainable as it put too much strain in the government budget and as a result has left many utilities performing below expectations.

The definitive policy for the sector was promulgated in April 1999 as *Sessional Paper No. 1 of 1999*. This is the National Policy on Water Resources Management and Development which calls for decentralisation of operational activities from the central government to other actors, including local authorities, the private sector and increased involvement of communities in order to improve efficiency in service delivery. Water Resource Management entails conservation of the water resource base, protection of the water catchment areas from destruction and encroachment, and sustaining the environment through protection of the quality of water bodies. It is therefore closely related to land use, afforestation, environment management and water quality protection by pollution control. To ensure that sectoral needs for utilization of these resources are guaranteed, mainly water for agriculture; which uses over 70% of the resource, water for domestic and commercial purposes; which uses 15% of water, and water for hydropower; a non-consumptive use, water resource management involves creation of storage facilities, allocation between the competing needs and careful mapping of resource availability on long term basis.

*Sessional Paper No. 1 of 1999* also tackled issues pertaining to water supply and sewerage facilities development, institutional framework and financing of the sector. To enable sustainable water supply and sanitation services, there is need to apply alternative management options that are participatory through enhanced participation in the provision of these services and particularly the private sector. The government will ensure an enabling environment through appropriate policies and regulation. It has been clearly identified that there is need to put in place two clear strategies on the management of water resources and provision of water supply and sanitation services relevant and applicable to all stakeholders. As a result MENR established two teams to come up with separate strategies; one on water resources management and the other on water supply and sanitation services provision in line with the policy requirements.



The Strategy for Water Supply and Sanitation Services elaborates measures necessary to provide suitable legal and institutional framework in order to achieve decentralisation, injection of efficiency and increase sustainable access to improved WSS services. The other cross-sectoral issues including; agriculture, energy, environment and industry are covered in the strategy for Water Resources Management also under preparation.

The Strategy on Water Supply and Sanitation Services has been prepared based on the principles of the National Policy on Water Resources Management and Development requirements, and comprises seven main chapters including;

- Introduction
- Sector Overview
- Institution Framework
- Capacity Building
- Private Sector Participation
- Finance
- Water for Poverty Alleviation

All the chapters are laid out in a similar manner; the main issues, current situation, problem statement, policy objective and the respective strategies.

Finally the logical framework spells out the various activities, indicators, means of verification and assumptions as necessary for the identified, goal, purpose and results.

The paper also contains a list of reference documents in Appendices A.

## 2.0 SECTOR OVERVIEW

### 2.1 BACKGROUND

In 1963, when Kenya attained independence, the Government launched "*The Sessional Paper No. 10 of 1965 on African Socialism and its application to Kenya*". The Sessional Paper directed the Government Policy towards priority areas for the Africans, which at that time were identified as poverty, illiteracy and disease. This policy broadly meant that major basic services were going to be either provided free or subsidised by the Government. The Sessional Paper also meant that significant involvement of other actors such as the private sector was very minimal.

In the 1970s, the Government realized the crucial role played by the water sector for the country's general economic growth. Therefore in 1974 the Water Department under the Ministry of Agriculture was elevated to a full Ministry of Water Development with a mandate to actively steer the water sector activities. Due to the positive economic growth at that time, the Ministry aimed to increase coverage through its motto of "water for all by year 2000".

A new plan of action was initiated aimed at investing more resources in the water sector to improve efficiency and expand the water services to as many citizens as possible. In order to ensure success of this new move, the Government moved in with an ambitious programme and took over many water supplies, which were previously managed by the local communities, local authorities and other public and private institutions. This ambitious programme was, however, short-lived when the Government realized that the resources for sustaining the services were not forthcoming. This state of affairs was caused by the high rate of the country's inflation level which rose to two digit level in 1985 for the first time since independence and the diminishing of the funding momentum that had been generated during the early period of the International Drinking Water Decade due to global economic recession at the time. It, therefore, became necessary for the Government develop a new strategy.

In 1986, the Government launched "*Sessional Paper No. 1 of 1986 on economic management, and renewed growth*". Under this new policy, the Government was to identify several strategies to reach several goals among them the provision of basic services, which would accelerate economic growth, and reduce inflation to a manageable level. Accordingly, the Government began contemplating cutting back on direct involvement in the development and management of water supplies.

Subsequently, between 1990 and 1992 the government developed a National water Master Plan that set out a long-term plan for the implementation of the much needed reforms in the water sector.

The culmination of the policy developments in the water sector was the publication in 1999 of the Sessional Paper No. 1 of 1999 under the title "National Policy on Water Resources Management and Development". This Sessional paper is premised on the Government's current policy position that economic growth can only be revived if fundamental reforms are implemented in the way in which public affairs are managed, including the provision of rural and urban water supplies.

The *Sessional Paper No. 1 of 1999 on National Policy on Water Resources Management and Development* is the blueprint for guiding legal, administrative and investment reforms in the water sector. It also creates the necessary framework and provides a mechanism for mobilizing resources to safeguard and develop the country's water sector for the benefit of Kenyans.

## 2.2 THE CURRENT WATER SECTOR STATUS

Access to safe water is estimated at 65% of the population varying from 96% in Nairobi to 17% in Northern Province. Accessibility in urban area is an average of 93 % compared to an average of 32 % in rural areas. Sanitation coverage is an average of 50% varying from 70% in Nairobi to 32% in North Eastern Province. Access in urban areas is 65% compared to 40% in rural areas. However, overall coverage has been declining in terms of quality and quantity, reliability and nature of access.

MENR, NWCP and local authorities are the main actors in water service provision. Other actors include authorities, communities, various institutes and NGOs who operate and maintain their own water supply systems. LAs provide sewerage services in municipalities and urban areas. The public institutions are highly centralized and bureaucratic and their organizational arrangements and culture provide little incentive to maintain facilities.

Records from MENR database indicate that currently, there are over 1500 water supplies under the management of various agencies. MENR runs over 600 rural water supplies out of which 200 schemes are gazetted for revenue collection, while NWCP runs over 48 water supplies 45 of which are gazetted. Communities combined with self-help groups and NGOs run more than 500 schemes and LAs run a total of 8 schemes. More than 9,000 boreholes have been registered with the Water Apportionment Board (WAB) Approximately 57 million m<sup>3</sup> are abstracted annually for various purposes of which more than 50% is to be used for domestic and livestock water supplies while the rest is used for irrigated agriculture. Dug wells sustain 12% of the total households in Kenya. In most of these schemes there is no flow control and metering systems are very low causing low recovery and water charges. Water quality control is hardly practiced. In general staffing for operation and maintenance is not adequately provided contributing to intermittent operation of schemes

The direction advocated in the National Water Policy is to transfer responsibilities for operation, maintenance and development to LAs, communities and PSP. The issues raised in the NWP will ensure problems of limited finances, manpower, and legal framework population growth and water sources are addressed. This strategy is being developed from this Policy with the aim of defining implementation measures to be undertaken by various stakeholders led by the Government in the water and sanitation sector to achieve the Policy goals.

Summary of the current status in the sector is provided in Tables 2.1, 2.2 and 2.3 below:

**Table 2.1 Number of Water Supply Facilities by Provider**

Provider/Supplier	No.
Ministry of Environment & Natural Resources	628
National Water Conservation and Pipeline Corporation	48
Community	356
Self-help Schemes	243
Local Authorities	8
Non-Government Organizations	266
<b>Total</b>	<b>1549</b>

Source: - Aftercare Study on NWMP, 1 Aide Memoir Dec. 2000

Table 2.2 Capacities of Water Supply Facilities

Service Area	Supply System	Quantity (m <sup>3</sup> /day)
Urban	Urban water	708,783
Rural areas	Large	448,602
	Small	300,754
	Roof catchment	4,220
	Subtotal	753,567
<b>Total</b>		<b>1,462,350</b>

Source: - Aftercare Study on NWMP

Table 2.3 Urban Centres With Sewerage Facilities

Pop. Range (000's)	Number of Urban Centres with sewerage	Number of Urban Centres without sewerage	Total
300<P	2	0	2
300>P<100	8	0	8
20>P<100	16	8	24
P<20	4	177	181
<b>Total</b>	<b>30</b>	<b>185</b>	<b>215</b>

Source: - Aftercare Study on NWMP

## 2.3 POLICY OBJECTIVES AND PRINCIPLES

### 2.3.1 Overall Goal

The Strategy aims at creating a framework for improving health, social and economic well being of the populace, by ensuring equitable the provision of adequate water and sanitation services to all competing users at affordable cost, on a sustainable basis.

### 2.3.2 Objectives

The accomplishment of this goal requires the achievement of the following sector objectives:

- a) Service delivery levels and coverage appropriate to the requirement of different consumers.
- b) Sustainability of service delivery in the long term through:
  - i. Enhancing financial viability of the sector, i.e. its organizations' ability to meet the full costs of providing the required levels and coverage of service
  - ii. Cost recovery policies which achieve financial viability and social equity (lifeline tariffs and internal cross-subsidies).
  - iii. Appropriate and conserved utilisation of water services detailed in pricing, regulatory and investment regimes.
- c) Financing mechanisms that enable investments in extension of improved and sustained access.
- d) Improvement in efficiency of service delivery and effective use of funds through:
  - i. An appropriate institutional and legislative framework;
  - ii. Clear definition of responsibilities between sector organizations.
  - iii. Coordination of sector actors.

- e) Participatory approach to policy formulation, development, implementation, operation and maintenance.
- f) Increased emphasis on the provision of appropriate sanitation services to overcome past neglect.
- g) Development of human resource capacity and capability for the sector.

### 2.3.3 Principles

The Government has defined the following basic principles, which provide the foundation for efficient provision of water supply and sanitation service:

- a) Separation of management of water resource from water supply and sanitation services.
- b) Separation of policy, WSS Regulatory Board and implementation functions.
- c) Devolution of responsibilities, for WSS services provision, from the MENR, NWCP, and others to WSSBs, local authorities, communities, private sector and other actors.
- d) Establishment of a pricing policy that meets equity, economic and financial and environmental objectives.
- e) Human resources development/redeployment leading to more effective institutions.
- f) Increase public spending and budget allocation to the sector.
- g) Reduce the levels of unaccounted for water and place priority on demand management.
- h) Assess demand in relation to consumers' willingness to pay.
- i) Apply technology and standards appropriate to local conditions.
- j) Establish competition to minimize costs/optimize services.
- k) Regularize the provision of services by NGOs, Self Help Groups, SSIPs and other Institutions to fall in line with proposed institutional arrangements.
- l) Management of water supply to be combined with sanitation and other related environmental functions.

### 3.0 INSTITUTIONAL FRAMEWORK

#### 3.1 CURRENT INSTITUTIONAL ARRANGEMENTS

There are many organizations currently involved in water supply and sanitation development and management in the country. The key sector organizations include the Ministry of Environment and Natural Resources (MENR), as lead agency, NWCPC, Local Authorities and communities. Some are mainly concerned with policies, others with implementation, operation and maintenance and others have multiple roles, which has led to conflicts in the sector. The other actors involved in the sector include: MoLG, MoA, MoH, KEWI, TARDA, LBDA, KWS, NGOs, self-help groups/community groups and private companies. The main functions currently performed by the various institutions are summarized in the Table 3.1 below:

Table 3.1 Current Roles of the Various Actors in the Sector

Ref	ACTORS	ROLES
1	MENR	<ul style="list-style-type: none"> <li>• Lead agency in water affairs through Cap 372</li> <li>• Appointment of water undertakers</li> <li>• Water conservation</li> <li>• Development of water supply systems</li> <li>• Setting and approval of standards</li> <li>• Regulation</li> <li>• O&amp;M</li> <li>• Policy formulation</li> <li>• Water quality/pollution control</li> <li>• Research</li> <li>• Registration of professionals</li> <li>• Apportionment</li> <li>• Sharing of international waters</li> <li>• Sector Coordination</li> <li>• Approvals of Water Tariffs, levies, rates and charges</li> <li>• Manpower training and development for the sector e.g. KEWI</li> </ul>
2	NWCPC	<ul style="list-style-type: none"> <li>• Manage and develop Water supplies as specified by the Minister.</li> <li>• Supply water in bulk to such water undertakers as the Minister may designate by legal notice</li> <li>• Supply water in bulk or otherwise (retailing)</li> <li>• Setting tariffs for the Minister's approval</li> <li>• Assisting Government in policy formulation and execution</li> </ul>
3	MoLG	<ul style="list-style-type: none"> <li>• Lead agency, in relation sewerage, in Cap 265</li> <li>• Policy formulation</li> <li>• Monitor performance of Local Authorities</li> <li>• Implementation of Local Government Act</li> <li>• Approval, coordination of Local Authorities development planning and budgets</li> <li>• Providing Technical Assistance tendering, TORs, supervision of contract</li> <li>• Initiate financing proposals-development</li> <li>• Monitor service quality</li> <li>• Obtain funds, annual/supplementary budget; and liaison with partners.</li> </ul>
4	LAs	<ul style="list-style-type: none"> <li>• Provide sewerage services</li> <li>• Discretionary powers to provide water services</li> <li>• Monitor service quality</li> <li>• Set tariffs, rates</li> <li>• Set by-laws and regulations</li> <li>• Enforce regulations, and by-laws</li> </ul>

Ref	ACTORS	ROLES
		<ul style="list-style-type: none"> <li>• Plan and develop infrastructure</li> <li>• Financing</li> <li>• Acquisition of land for easement, way leaves etc) for services provisions</li> </ul>
5	SHG/NGO	<ul style="list-style-type: none"> <li>• Service provision</li> <li>• Financiers</li> <li>• Own facilities</li> </ul>
6	MoH	<ul style="list-style-type: none"> <li>• Service provision</li> </ul>
7	MoALD	<ul style="list-style-type: none"> <li>• Service provision</li> </ul>

### 3.2 PROBLEM STATEMENT

#### 3.2.1 General

The main problems in the water sector are attributable to institutional weakness caused by: lack of clear allocation of responsibilities aggravated by limited national economic growth; poor organizational structures; lack of autonomy and unclear definition of roles leading to conflicts. In particular, the current role of MENR as primary service provider and principal regulator has undermined the performance of the sector. Other weaknesses include:

- Poor coordination between sector institutions leading to wastage of resources and duplication of efforts
- Lack of adequate skills to manage and operate water supplies commercially
- Inadequate logistical and institutional capacity for effective maintenance, material supply and cost recovery to operate systems.

This has led to:

- Poor service delivery, service levels not adapted to consumer needs, low revenues, poor O&M; high UfW; lack of linkage between water supply and sanitation, low capital investments;
- Low accountability of water-undertakers, inadequate incentive system resulting from heavy centralization and absence of transparency in financial management, overstaffing and wrong deployment of staff;
- Unsustainable operations; and
- Lack of regulation and enforcement.

#### 3.2.2 Institutional and Legal Impediments

The *Water Act Cap 372* in its present form has inherent defects often exploited by some actors. Under the present Act it is not mandatory for service providers to offer or maintain specified service levels. Further, illegal connections and tampering of installations is not criminalised. There are conflicts between Cap 372 and other legislations that touch on water services thus making it difficult to apply or enforce the law in the sector.

On the institutional framework, there has been lack of clearly defined framework apportioning roles and responsibilities. This has left some actors taking undue advantage of the existing weaknesses for example, in the management of water services within the peri-urban areas. In these areas there is lack of clearly defined limits of supply and guidelines on the provisions of water and sanitation services.

### 3.3 POLICY OBJECTIVES

The Government of Kenya (GoK) has recognized that deficiencies exist in the current framework for the sector and has initiated sector reform through the adoption of a National Policy on Water Resources Management and Development (*Sessional Paper No. 1 of 1999*) which envisages a diminishing role of Central Government in direct provision of water supply and sanitation services, handing over operations and maintenance and development of these services to WSSBs, LAs and communities, whilst seeking private sector participation (PSP), and ensuring that tariffs are set to achieve full cost recovery in urban schemes and operations and maintenance costs in rural schemes. This will necessitate revision of the current institution framework.

### 3.4 PROPOSED INSTITUTIONAL ARRANGEMENTS

#### 3.4.1 Principles and Justifications

The policy proposes redefinition of roles of the various actors which will be accompanied by institutional reforms that promote integrated approach, including changes in procedures, attitudes and behaviour and ensuring gender balance in participation at all levels in sector institutions. The proposed institutional reforms will be guided by the following principles:

- a) Separation of water resource management from water supply and sanitation services. The purpose is to avoid potential conflicts of interest between the allocation and management of water resources, including setting of water use and reuse standards, and water supply and sanitation operation and maintenance guidelines and provision of water supply and sanitation services. It is also more efficient to have hydrological surveys, research and water allocation and standard setting, separated from water supply and sanitation services provisions because these activities require different professional disciplines and experience.
- b) Separation of policy, regulation and implementation functions within the water supply and sanitation sector. The purpose is to streamline roles of various actors in the sector, establish a WSS Regulatory Board to monitor the effectiveness of the service providers and take corrective action as and when necessary.
- c) Devolution of responsibilities for services provision to WSSBs, LAs, communities and other actors.
- d) Human resource redeployment and development leading to more effective institutions. Redeployment of existing staff to the proposed institutions will be supported by performance based incentive schemes, promotional policies and competitive salaries and benefits. This is aimed at ensuring the availability of sufficient numbers of qualified staff of all disciplines required by the sector.



- e) The need to provide full autonomy to water services providers to enable them perform without adverse interference.

### 3.4.2 Proposed Roles

The proposed Institutional framework involves a range of agencies the main ones being the ministry in charge of water, a WSS Regulatory Board, WSSBs, LAs and communities. Others include the private sector, NGOs, independent providers and SHGs. The institutional framework is illustrated in chart 1, while Table 3.2 provides the roles for the various actors in the institutional framework.

Chart 1 Proposed Institutional Framework for WSS Service Provision

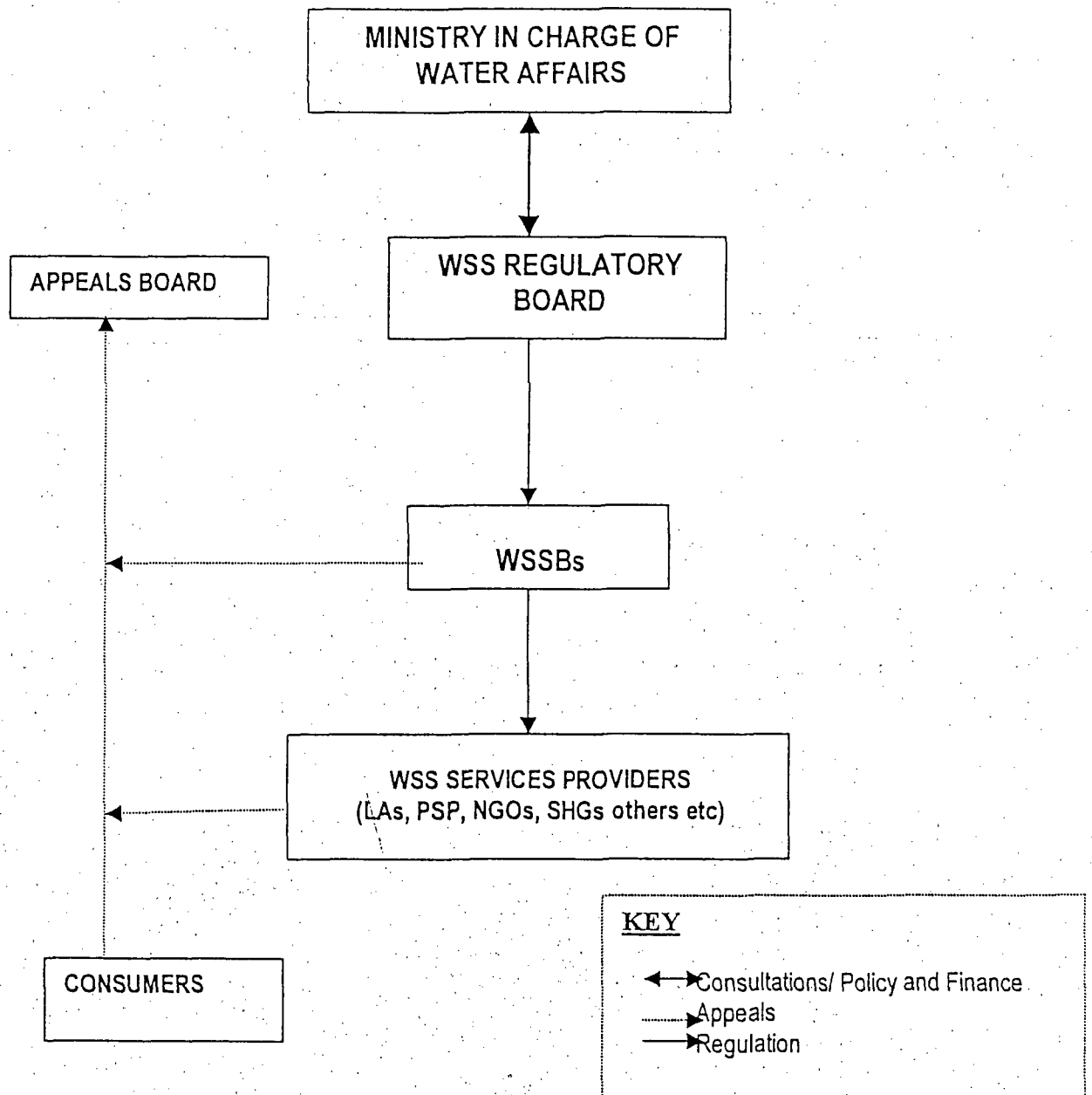


Table 3.2 Proposed Roles for Actors in the Institution Framework

REF	ACTOR	ROLES
1	MENR	<ul style="list-style-type: none"> <li>• Water conservation</li> <li>• Establish independent National Water Board/WSS Regulatory Board</li> <li>• Policy formulation/strategy development</li> <li>• Water quality/pollution control, standards (national, local) Regulator</li> <li>• Research and Training</li> <li>• Register professionals, contractors etc.</li> <li>• Sector coordination and financing.</li> <li>• Establishing relevant institutions and legal framework</li> </ul>
2	WSS REGULATORY BOARD	<ul style="list-style-type: none"> <li>• Regulate WSSBs</li> <li>• Determine applications from WSSBs and WSS Providers (licenses)</li> <li>• Approve operational plans, tariffs, rates, levies, charges</li> <li>• Monitor performance and quality</li> <li>• Setting and enforcing performance standards and codes of practices</li> <li>• Promote fair competition among service providers</li> <li>• Conduct studies relating to economy and efficiency of WSS (e.g., viability studies)</li> <li>• Classify/maintain register of WSS Providers</li> <li>• Disseminate information to consumers</li> <li>• Advise WSSBs on handling consumer information complaints</li> <li>• Develop sector guidelines and procedures</li> <li>• Report to parliament through minister responsible for water</li> <li>• Promote water conservation and demand management</li> <li>• To perform such other functions as are incidental to the above</li> </ul>
3	WSSB	<ul style="list-style-type: none"> <li>• Holding/lease assets</li> <li>• Prepare business plans/operational plans</li> <li>• Borrow and invest/repay</li> <li>• Contract out</li> <li>• Hold WSSBs license</li> <li>• Tariff setting</li> <li>• Expand network</li> <li>• Hold abstraction license</li> <li>• Submit financial reports</li> <li>• Submit quarterly reports on performance to WSS Regulatory Board</li> </ul>
4	WSSPs (LAs, PSP, NGOs, SHGs others etc)	<ul style="list-style-type: none"> <li>• Bid for schemes operations</li> <li>• Obtain WSO license</li> <li>• Operate schemes on a cost recovery basis</li> <li>• Comply with quality and service levels</li> <li>• Obtain Providers license from the WSS Regulatory Board</li> </ul>
5	MoH	<ul style="list-style-type: none"> <li>• Policy formulation on environmental sanitation /Public Health Act;</li> </ul>
6	Appeals Board	<ul style="list-style-type: none"> <li>• Receive and deal with complaints</li> </ul>

In this model, the ministry in charge of water will mainly be responsible for policy formulation, sector co-ordination and financing. Other major roles include; carrying out of research, training and registration of professionals. The ministry will also establish the relevant institutions in support of the proposed framework; approve and co-ordinate budgets for WSSBs and liase with donors to channel funds for development of water services.

A WSS Regulatory Board will be established under the water Act Cap 372. The WSS Regulatory Board whose only linkage with the ministry in charge of water is through legislation will regulate all

matters of water supply and sanitation service provision through direct supervision of the WSSBs. Apart from exceptional situations, the Boards will not themselves provide services directly but through entering into contracts with licensed WSS Service Providers appointed through competitive tendering. WSSBs will come into operation in areas delineated under Cap 372 and based on viability studies. They will sub-contract most of the tasks related to selection of private WSS Services Providers, preparation of projects and financing applications.

The legal responsibility for provision of water services will be vested on the WSSBs and existing public assets held by MENR, LAs and community supplies will be transferred to the WSSBs. WSSBs may, where necessary, lease assets in addition to ownership and may access loans using the assets as collateral. The WSSBs will also be responsible for preparation of business plans for operation and maintenance, development and extension of WSS services. The Boards have full mandate to ensure that services are provided within their areas of coverage without leaving any gaps. If the WSSBs fail to perform, the WSS Regulatory Board will remove the non-performing board members using provisions of the TOR, and replace them with different board members while maintaining continuity of operations. Nomination of board members of WSSBs will be through an open process involving public participation, taking cognizance of the fact that these are service boards, leading to ministerial appointment.

An Appeals Board will be provided for by law where complaints from WSSBs, WSS Service Providers and consumers on the provision of services and regulation can be lodged and attended to. The law will provide a mechanism whereby the provision of services is not stopped as a consequence of the appeals mechanism. The Minister for water affairs will appoint the Appeals Board. The President will appoint the chairman of the Appeals Board with recommendation by the Chief Justice.

Operations of existing and future SHGs and NGOs must be regulated and for this reason will fall within this institutional framework. For this reason the WSSBs will provide technical support to these communities, SHGs and NGOs. In such instances the WSSBs will assume some regulatory roles over the SHGs and NGOs delegated from the WSS Regulatory Board. The Water Sector Reform Unit, mentioned elsewhere in this paper, will develop the detailed processes through which such schemes will be integrated into the WSSBs.

The WSS Services Providers will include PSP, NGOs, communities, and SHGs etc. The WSS Services Providers will require licensing by the WSS Regulatory Board to qualify for submission of bids to operate water facilities. As mentioned earlier, WSS Services Providers will enter into a contract, for the operating of the facilities, with the WSSBs. LAs, especially in urban centres, may also form companies who may bid for operation of services like the other WSS Services Provider. So these LAs will require licensing by the WSS Regulatory Board and will be supervised by the WSSBs.

Private providers including institutions do not fall under this framework but will be nonetheless regulated on quality issues.

In line with the revised roles the existing institutions will be accordingly restructured or dissolved as necessary.

### 3.5 STRATEGY

The Government's strategy for institutional restructuring in the water sector therefore will be to:

- a) Finalize legislation (Cap 372) to create enabling environment and clearly define roles of all sector actors as outlined in the strategy.
- b) Establish and operationalize new institutions and restructure existing ones in accordance with strategy and legislation.
- c) Implement the transition arrangements
- d) Solicit financial support from partners to implement transitional arrangements

### 3.6 PROPOSED TRANSITIONAL ARRANGEMENTS

The Government is committed to creating an enabling environment for all actors to operate effectively and efficiently and will adopt a diminishing role in the direct implementation and management of water supply and sanitation services. The Government recognizes the need for a smooth transition in order to minimize disruptions in the provision of services. Implementing the proposed reform will also require large financial resources for capital investment and technical assistance.

Transition plan of the sector is proposed to take up to 5 years to complete.

This process will be spearheaded by MENR with consultations with other interested parties including other government ministries. The main role of MENR will be to guide the reform process in line with overall GoK reform policies. MENR will consult with the following ministries, government and non-governmental bodies:

- Ministry of Local Government
- Ministry of Finance and planning
- Attorney General's Chamber
- Ministry of Health
- Association of Local Government Authorities of Kenya (ALGAK)
- NGO Council
- Kenya Association of Manufacturer (KAM)
- Institution of Engineers of Kenya
- Sector partners
- Private sector

Immediately after commencement of the reforms process, MENR will form and operationalize and supervise an autonomous Water Sector Reform Unit (WSRU). The unit mandate will be through a Cabinet Paper.

MENR will also form and operationalize the WSS Regulatory Board.

During transitional period WSRU will handle the followings main functions:

- Setting up of WSSBs through conducting of viability studies
- Drafting of detailed hand-over guidelines
- Drafting of standard management, lease or concession contracts between WSSBs and private WSS Services Providers and communities

- Drafting detailed guidelines for monitoring the technical, commercial and financial performance of WSSBs;
- Effecting the relationships between WSSBs and LAs, SHGs, Communities and NGOs.
- Integration of rural water schemes into the WSSB framework.
- Developing a mechanism for the transfer of current water assets and the management of existing liabilities particularly of LAs.
- Handle the public awareness campaign associated with this national strategy.

WSRU will be an autonomous transition body and should last for a period not exceeding five years within which time they would have achieved their mandate. The unit will be a "lean" office with only a limited number of engineers, financial analysts, economists and legal advisers. It should initially obtain limited permanent technical capability and subcontract to specialized consultants most of the preparation of the documentation that would constitute the WSS Regulatory Board framework, viability studies of WSSBs, syndication and PSP.

The location of the WSRU should be outside the sector ministry as this is meant to operate in a fairly autonomous manner reporting directly to the IMC.

The WSS Regulatory Board will come on board as soon as the law is in place and this will require phasing out of WSRU to avoid conflicts. It is recommended that hand over of facilities be effected without prior rehabilitation. Rehabilitation will be carried out in the course of operation after handover has been done.

Viability studies should ensure there are no areas, which are unattractive for WSOs. Re-course may have to be made to use traditional WSS Services Providers including NGOs, communities etc. where necessary.

*Proposed studies to be carried out are listed below and will require professional specialists in engineering and finance:*

- (a) Identification and valuation of existing infrastructure assets and attached liabilities;
- (b) Assessment of ten year capital investment needs based on realistic assessment of demand taking into account the impact of improvements in unaccounted for water and revenue recovery;
- (c) Determination of the operational costs of meeting improved performance standards;
- (d) Assessing likely tariff levels for different consumer groups;
- (e) Preparing indicative balance sheets, income and expenditure statements and cash flow forecasts to determine viability;
- (f) Examining options for combining the water supply of more than one local authority to improve viability;
- (g) Examining opportunities for, and interest in, participation by the private sector.
- (h) Preparing comparative options
- (i) Building consensus amongst all the stakeholders for the way forward.
- (j) *Any other studies that may be deemed necessary*

## 4.0 CAPACITY BUILDING

### 4.1 CURRENT SITUATION

Currently there are many skilled professionals in the sector but these have limited incentives and poor remuneration. Ineffective bureaucratic procedures, lack of autonomy and lack of facilities have had adverse effect in the provision of the WSS services.

#### 4.1.1 Human Resources

Recent studies assessing of human resource needs in the sector indicate that there exists specialized personnel in the sector distributed within the main actors comprising MENR, NWCP, MoLG and Water undertaking LAs. A few other technical personnel are employed by NGOs and private sector.

With the on going reforms in the sector there will be need to re-deploy existing management to fit into new roles of emerging actors. This may, in addition to redeployment, require re-training of staff and further capacity building.

#### 4.1.2 Institutional Performance

Due to reduced financial allocations, the performance of existing institutions has been declining due to ageing of the utilities, lack of equipment and failure to carry out assigned functions. This has been compounded by conflicting responsibilities in key policy and service delivery organizations.

### 4.2 PROBLEM STATEMENT

- The poor performance of sector professionals mostly results from inability to offer competitive packages and incentives to competent managers.
- The communities carrying out water activities have severe problems in technical, management and regulatory functions.
- Lack of sector financing resulting from non-cost recovery activities and poor commercial management.

### 4.3 REQUIREMENTS FOR THE FUTURE

Any reform of the sector will need to be supported by a major initiative to provide short term transit capacity of sector and their personnel, in addition to strengthening the traditional managerial, supervisory and technical skills involved in the provision of these services. Implementation of reforms would require restructuring and institutional strengthening. The on-going Public Sector Reform Programme by GoK is attempting to address this problem.

Once the restructuring process to operationalize the new institutional framework has been carried out, the new organisations will require substantial support in developing their corporate strategies, management plans and structures to effectively undertake the responsibilities.

The organizations in this category are:

- a) MENR
- b) WSS Regulatory Board

- c) WSSBs
- d) WSSPs including; Private Sector, Local Authorities, Communities who manage their own schemes.

#### 4.4 OBJECTIVE

The most important resource in development and maintenance of services is human capital, which must have the right skills and motivation to perform. Institutional strengthening to clarify the operational roles, coupled with financial and technical resources will be required to realize the full potential and synergy necessary to achieve coverage targets

#### 4.5 STRATEGY

- a) Carry out staffing norms with job description for the new institutions.
- b) Rationalize then re-deploy personnel to new roles
- c) Recruit suitable staff
- d) Develop a comprehensive training programme for sector personnel
  - i. Carry out training needs assessment (TNA)
  - ii. Identify sources of funding
- (e) Develop a competition remuneration and incentive structure for the organisations.
- (f) Corporate strategies and management plans should entail equipment and adequate logistical support in line with responsibilities to be carried out.
- (g) Promote Participatory Rural Appraisal (PRA) in community water supplies, and also Local Authorities to ensure they understand their new roles and the requirements for effective implementation.

## 5.0 PRIVATE SECTOR PARTICIPATION

### 5.1 CURRENT SITUATION

Historically, urban and rural water and sewerage services in Kenya have been dominated by the public sector. To date, formal involvement of the private sector has been essentially limited to consultants and contractors and management contracts such as the case of Malindi and Runda. However, the inability of the public sector to provide adequate water and sewerage services to a significant proportion of the urban population has encouraged "informal" private service providers to step in to meet demand, particularly in informal settlements. Activities of these providers include:

- a) Vending water from private connections to unconnected consumers.
- b) Private retailers like those who sink their own wells or boreholes
- c) Vending of water from illegal connections

### 5.2 PROBLEM STATEMENT

The current problems that hinder effective participation of the private sector include weak performance of public utilities, lack of autonomy, incentives to operate efficiently and non-cost recovery. These may be summarised as below:

- a) Administrative barriers and lengthy bureaucratic process in licensing of PSP in water
- b) Lack of well defined regulation, criteria and guidelines for PSP entry
- c) Lack of public awareness on PSP concepts
- d) Poor enabling environment, political interference, and inadequate legislative provisions
- e) Lack of level playing field as a barrier to entry of competition (exclusivity and monopoly)
- f) Lack of access to finance; development financiers are unwilling to lend to PSP
- g) Local financial institutions are not familiar with water services as commercial operations.
- h) Limited capacity in, financial, technical and management in local PSP.
- i) Poor state of infrastructure

### 5.3 POLICY OBJECTIVES

The government will create an enabling environment to attract private capital and management expertise to improve and sustain efficient service delivery, including participation of NGOs, SSIps with proven capacity and providing for vigorous competition for cost-effective service delivery.

### 5.4 STRATEGY

The advantage of well-designed PSP arrangements is that it provides the private sector with incentives to develop focused capacity. In order to attract the private sector for improvement in service delivery and efficiency for the benefit of water users the following strategies will be adopted.

- a) Review the Water Act, Local Government Act and related legislation to clarify and streamline the institutional framework to support PSP.
- b) Carry out economic viability assessment to provide efficient scale of operations at lowest cost. This may entail syndication of utilities where there is potential to achieve economies of scale.



- c) Government to facilitate establishment of a WSS Regulatory Board for the sector that shall:
  - i. Enhance competition through transparent and effective criteria to level the playing field
  - ii. Prepare performance criteria and means to ensure compliance before award
  - iii. Promote local PSP by requiring franchising or local incorporation arrangements.
  - iv. Promote local companies engaged in PSP as policy
  - v. Tighten supervision so that illegal vending is unattractive business and hence eliminated

## 6.0 FINANCING

### 6.1 CURRENT SITUATION

#### 6.1.1 General

By and large the water sector has been experiencing a sharp decline in financing for both Development and Operation and Maintenance over the years. Currently the funding levels available to the sector are very low compared to the levels of the 1970s and 1980s. This declining trend has continued to the point where the scarcity of financial resources both for development and rehabilitation of the existing water supplies poses the biggest challenge to the Government. This is against the proclaimed objective of increase in water coverage. The problems associated with the scarcity of funding in rural water supply are not necessary similar to those on the urban water supply sub sector.

#### 6.1.2 Funding for Operation and Maintenance

In the case of rural water supplies facilities have continued to deteriorate due to inadequate allocation of funds for maintenance of rural water supply. RWSS reliance on the Exchequer for O&M funding has proved futile due to declining allocations, which are about 40% of water revenues collected.

Funding of O&M of UWS experience problems of different kind as management is less reliant on the Exchequer. Lack of autonomy in management of WSS service as resulted in diversion of accruing water revenues to unrelated financial expenditure in the case of Local Authorities, whereas unsustainable cross subsidies have undermined operations of other providers e.g. NWCP and MENR.

#### 6.1.3 Funding of Expansion and New Schemes Development

For both rural and urban water supplies and sanitation services funding from the Exchequer and development partners have declined for various reasons, these include:

- a) Percentage of budget allocated for recurrent expenditure has increased in proportion to development expenditure which has sharply declined
- b) Financial institutions have shied away from supporting the water and sanitation sub-sector as it is considered a high-risk investment.
- c) Private funding has not been forthcoming to the sector more so in view of the fact that water has not been viewed as an attractive business for the private sector to invest
- d) External financing has been tied to macro-economics reforms which have taken long to realize

To address the issue of declining funds, Government is making attempts to attract financing for the sector from development partners, and identify means to provide incentives for private sector financing and management, and to mobilize funds for capital development from users of the WSS services. This requires the introduction of appropriate incentives together with enabling policies such as flexibility in tariff setting, rationalizing financial procedures, removal of bureaucracy and emphasizing performance based management. A clear and transparent disclosure mechanism, needs to be developed to ensure that private role in financial management is in the interest of long term sustained service delivery and utility performance.

## 6.2 PROBLEM STATEMENT

The Poverty Reduction Strategy Paper (PRSP) places high priority on WSS as a means of poverty reduction. However, the Exchequer allocations have been declining, averaging less than 5 billion shillings a year against a requirement of 9 billion needed for effective maintenance, mostly used for personnel management leaving nothing for capital investment and long term sustainability.

External sources of funding to Kenya have declined due to macro level policy relating to effective management, efficiency and accountability. Donors have reduced financing pending a clarification of the overall policy environment and institutional arrangements. Failure to sustain previous projects and investments has contributed to development partners' fatigue. There have been initiatives aimed at channeling finances directly to communities or through NGOs under special financing mechanisms. Failure of on lending to Local Authorities and Central Government Agencies has reduced capital inflows from multilateral financial sources. Other problems that have affected the sector include the following:

- a) Currently MENR and NWCPC apply uniform tariffs and increasing block structure. This has resulted in cross-subsidies across geographical areas and among consumers but has not resulted in access to the poor who are often not connected to networks.
- b) WSS schemes currently lack sufficient autonomy to collect and use revenue at source. Both MENR and NWCPC schemes transfer 35% of cash generated to headquarters, typically headquarters cover salaries, power and chemical cost. However, operations, which generate a cash surplus seldom, receive it back and therefore cannot fund badly needed maintenance expenses.
- c) Due to lack of autonomy, WSS managers cannot be held accountable for misuse of scarce resources. Operations run by public agencies and communities have neither managerial nor financial autonomy. Although cash generated is deposited in a separate account, revenues from WSS sales are often used for expenses not related to WSS.
- d) Many government agencies and local authorities that obtain loans for development from GOK and development partners do not make necessary arrangements to service and offset the debt.
- e) Bureaucratic procedures limit the ability to respond in timely manner to operational and developmental requirements.
- f) Unaccounted for water resulting from inefficient operations, aged systems, no maintenance and no or non-functional meters. This distorts consumption and encourages wastage and hampers efficient operations and maintenance of the facilities
- g) Low billing and collection resulting from poor incentives, lack of facilities and failure to apply the existing management systems
- h) Lack of skills in commercial management of utilities.

- i) Illegal connections and vandalism has been a major cause of disruption of services and loss of water resulting in serious revenues losses.
- j) Use of inappropriate technology has resulted in higher unit water costs, which may not be covered by the provided tariff structures.
- k) Large uncollected water debts particularly from public institutions

### 6.3 POLICY OBJECTIVES

The policy objective for financing is to: (a) mobilize local resources and complement with external resources; (b) increase investment efficiency by assessing demand and prioritizing rehabilitation; (c) ensure sustainability of WSS schemes through appropriate pricing policy; (d) rationalize financial management systems to increase efficiency, transparency and accountability.

### 6.4 STRATEGY

In order to achieve the above policy objective the following strategies will be adopted:

- Provide WSS schemes with financial autonomy
- Restructure financing policy
- Restructure financing mechanisms
- Restructure pricing policy
- Carry out investment in the sector
- Attract foreign capital and technical investment into the water sector

#### 6.4.1 Provide WSS Schemes With Financial Autonomy by:

- a) Reforming financial procedures to reduce bureaucracy, increase transparency, accountability and improve on timeliness
- b) Introducing commercial management through performance based operations and benchmarking
- c) Increasing the percentage of revenue used at scheme level.

#### 6.4.2 Restructure Financing Policy to:

- a) Prioritize internal cash generation and cost savings as primary source of financing for the sector;
- b) Establish and operationalize financing arrangements to allow low-income households access to water supply and sanitation.
- c) Development levies through service providers levied by the WSS Regulatory Board for the development of utility to the less advantaged.

#### 6.4.3 Financing Mechanism

- a) Mechanisms to channel and mobilize funds to develop WSS services through establishment of the trust funds and others.
- b) The business and operational plans as the basis for sourcing funds for capital development
- c) Develop clear appraisal procedures to allow WSS service providers access to capital development funds from GoK, donors etc.

- d) Develop financing mechanisms that allow communities access to capital development funds from GoK, donors etc.
- e) Encourage the development of local water sector investment instruments such as water bonds through the financial markets for example the Nairobi Stock Exchange

#### **6.4.4 Pricing Policy**

- a) Establish and operationalize pricing policy that meets objectives of cost recovery, equity, and environmental protection; and
- b) Classify schemes according to management, commercial and technical requirements to determine pricing.

#### **6.4.5 Investment**

- a) Provide a reasonable service to the underserved and improve services to those already served through leak repairs and other rehabilitation works.
- b) Ensure optimal and sustainable investments by use of appropriate technology.
- c) Carryout necessary extensions and developments to meet projected demands.
- d) Extend sewerage reticulation into high priority and under served areas where on- site sanitation is not technically viable.
- e) Integration of the planning for sewerage services with water supply
- f) Promote the use of correct on-site sanitation where technically viable and economically more attractive than sewerage.

### **6.5 ACTIONS**

During the preparation of future WSS projects, in line with investment strategy, the following actions would have to be carried out.

- a) In the short-term carryout rehabilitation of WSS facilities to increase water supply coverage for domestic, livestock and industrial demands.
- b) Identify and develop adequate and appropriate water supply systems to meet the current and future domestic, livestock, and industrial demands for all.
- c) Provide water for livestock by rehabilitation of water pans and development of ground water resources in livestock rearing areas.
- d) Involve potential consumers actively in the design of the future schemes taking to consideration their preferences and willingness to pay.
- e) The technical design of rehabilitation and extension projects has to be carried out in parallel with that of the implementation of management arrangement.
- f) Develop minimum sanitation standards appropriate to the category of settlement and ensure that these are adhered to in physical planning.
- g) Review building regulations with a view to removing obstacles to the provision of water and sanitation services in unplanned settlements.
- h) Support a water demand management strategy that involves development and implementation of customer focused programmes aimed at influencing end users

consumption patterns with the aim of achieving economic efficiency, social development, environmental sustainability, equity and welfare.

## 6.6 INVESTMENT PLAN

Most of the data and information below has been taken out of the Aftercare Study and will be subject to verification by the WSRU.

### 6.6.1 Demand for Water Supply Services

On the assumption that the present service coverage is improved to the target ratio, 80% on average in 2010, the total population served is estimated to increase to 37 million in 2010. Urban water supply schemes will serve 11 million people, while 15 million and 11 million people will be serviced by large and small-scale rural water supply schemes respectively. Residential water demand is forecast reflecting income categories and services type of the customers.

Water demand values estimated in the above procedures based on the 1986 Design Manual are estimated as summarised in the Table 6.1 below:

**Table 6.1 Estimated Water Demand**

Category	Demand (1,000 m <sup>3</sup> /day)	
	1995	2010
Residential urban	747.8	1,642.8
Residential rural	468.2	932.6
<b>Sub-Total</b>	<b>1,216.0</b>	<b>2,575.4</b>
Non-residential, health facilities, schools, industry and commerce	593.9	986.3
<b>Total</b>	<b>1,809.9</b>	<b>3,561.7</b>
Livestock water	376.6	621.4
<b>Grand Total</b>	<b>2,186.6</b>	<b>4,183.2</b>

Source: Figures obtained from After Care Study of the National Water Master Plan.

It is evident from Table 6.1 above that there is need to develop water supply projects to meet demands though the magnitude of the development needed will vary from one area to another. The proposed development is given in Table 6.2 below:

**Table 6.2 Summary of the Water Sources Development Plan**

Scheme	Deficit 2010	Proposed water Resource development (1,000 m <sup>3</sup> /day)				Total
		Surface	Ground	Ground and surface		
				Surface	Ground	
Urban	1,112	1,046	42	20	4	1,112
Rural large	36	35	1	0	0	36
Rural small	218	4	84	94	36	218
<b>Total</b>	<b>1,366</b>	<b>1,085</b>	<b>127</b>	<b>114</b>	<b>40</b>	<b>1,366</b>

Source: Figures obtained from After Care Study of the National Water Master Plan.

### 6.6.2 Demand for Sanitation Services

Service level coverage for sewerage is fairly low in urban areas and non-existent in rural areas. The sanitary facilities used in the rural area consist mainly of pit latrines.

It is assumed that improving service coverage in urban areas is necessary since the large number of residents in an urban community who do not have adequate sewage disposal can adversely affect the health of water resources and of other residents who do have sewerage. The proposed target service ratios are shown in Table 6.3 below.

**Table 6.3 Target Service Levels**

Population In Urban Centre	% Of Population Connected To Sewer
P > 300,000	50%
300,000 < P < 100,000	40%
100,000 < P < 20,000	25%
P < 20,000	15%

Source: Figures obtained from After Care Study of the National Water Master Plan.

The planning horizon is the year 2010. The study covers 40 urban centres: 30 already have sewerage systems and 10 have an urgent need for improving sanitation conditions (i.e. on-site sanitation is inadequate).

In some case where urban centres already have a higher service ratio the strategy will be to continue sewerage development to keep pace with population growth in effect maintaining existing percentage service ratio.

The overall target achieved by the proposed development plan would see 38% of the total urban population connected to sewers by the year 2010 a net increase of 250% in terms of total population served. This large increase, driven by the rapid population growth, will require a considerable effort in sewerage development.

In the rural area the coverage of pit latrines is estimated at 40 %. It is proposed to extend the sanitation to cover all by the year 2010 at an average rate of 20 persons per pit.

### 6.6.3 Construction Cost Estimates

Evaluations that have been carried out over the last few years have estimated the investment cost for rehabilitation and development of fairly sustainable water supply and sewerage systems for the next ten years as shown in Table 6.4 and discussed below;

The cost estimate is based on 1998 rates of materials and may therefore require adjusting upwards to reflect current rates. The following points are taken into consideration in the establishment of the cost estimates.

- Water production capacities in urban areas are usually sufficient to meet demand in the short term, but often need rehabilitation; water production capacities have not been matched by the formal extension of distribution networks;
- A significant share of the future urban population will live in informal settlement, where low cost WSS service has to be provided;

- Waste water treatment capacities are often above that of the waste water collected by sewerage networks which all need major rehabilitation and some extension, in particular in those low income areas where multi-storey houses are being rapidly developed;
- Complex wastewater treatment plants are usually not functioning and need rehabilitation or redesigning;
- The sustainability of large rural water distribution systems is often questionable with a significant share of original customers having been disconnected;
- Technology has to be adapted to the type of service consumers want to obtain and the management capacity of the utility; and
- Most of the currently un-served rural population is likely to be served either by point water supplies or by community managed small piped systems.

The investment cost estimates are provided in Table 6.4 below:

**Table 6.4 Construction Cost Estimates for Water Supply and Sanitation**

Project	Amount (1,000 US\$)		
	Urban	Rural	Total
Rehabilitation	44,500	95,100	139,600
Ongoing	7,400	67,700	75,100
Planned/Designed	27,500	8,700	36,200
Newly proposed	1,243,000	159,800	1,402,800
Sub-Total	1,322,400	331,300	1,653,700
Sanitation	477,084	94,230 <sup>1</sup>	571,314
Livestock	-	349,760	349,760
<b>Total</b>	<b>1,799,484</b>	<b>775,290</b>	<b>2,574,774</b>

Source: After Care Study on National Water Master Plan

#### 6.6.4 Investment Plan

This will be a huge investment and there will be need for the WRSRU to prioritise the schemes at the time of hand over and allocate funds for implementation accordingly.

To implement the complete WSS projects, up to 2010, a total investment level of some US\$ 2,574 million is required. This is composed of some US\$1,653 million, US\$ 571 million and US\$ 350 million for water supply, sanitation and livestock respectively. This is a yearly total of some US\$ 260 million.



## 7.0 WATER FOR POVERTY ALLEVIATION

### 7.1 CURRENT SITUATION

Between 1993 and 1998 the percentage of urban and rural population below the absolute poverty line increased from approximately 30% to 50% resulting in a substantial increase in the number of people living below the poverty line. In urban areas most low-income households live in informal settlements where WSS utilities do not provide a direct service. More than 60% of the population in these urban centers relies on kiosks, vendors or natural sources. Most poor urban and rural residents do not have access to conventional waste water/sanitation and more than 85% of low-income households use a pit latrine.

As such, problems created by poor environmental sanitation have become more acute, and waterborne diseases such as diarrhoea and malaria, and epidemics such as cholera and typhoid, are occurring with increasing frequency and greater impact. The effects of poor environmental sanitation on public and environmental health are borne by both the urban communities and the rural communities.

In addition, inefficient management and operation of existing facilities has limited the availability of resources for investment in needed services, especially to the poor. This has led to a downward trend in 'formal' service coverage statistics in many developing countries. These statistics often do not account for 'informal' service providers, and are often misleading, as they do not illustrate the difficulties under which the majority of the poor obtain water.

The failure of public water utilities to provide adequate water and sanitation services to the poor has led to a significant proportion paying well above official prices for doubtful, and unreliable services. As a result of failure of public water utilities to provide the services, a thriving "informal" private sector initiative has arisen to fill the gap.

Not only are the poor more prone to the adverse impacts of unsafe drinking water and inadequate sanitation, surveys have consistently shown that the poor spend disproportionately more of their incomes on potable water than more privileged sections of the community for whom piped water supplies are assured.

The scale of this aspect can be appreciated by the fact that 50 to 70% total urban population lives in these informal settlements and 30-70% urban and over 60% of the rural population lives below the poverty line.

Population in urban informal settlements is increasing by 7%-12% per year, compared to 3% per year for the country as a whole. It is still evident that the urban and rural poor will remain an important target in the foreseeable future.

### 7.2 PROBLEM STATEMENT

Lack of access to WSS services by the poor has undermined Government efforts to reduce poverty. Despite significant investments, access by both rural and urban populations is limited (30% and 70% respectively) and declining. Impact has been more limited on the poor, as investments have tended to benefit the better off particularly those in planned settlements. Although investments in urban utilities have been substantial, the poor have received little in form of planning, investment and access.

In the rural areas, economies of scale necessitate a community-based approach to meeting water needs. Priorities also differ, from those of the urban poor and emphasis is often on water for economic rather than social and health purposes. Self-help and community projects have played an important role in extending services, however, inappropriate institutional and management arrangements have often led to inequitable access to water supply among members or the collapse of schemes.

Most WSS utilities are not responsible for on-site sanitation that is the most accessible form of safe sanitation among the poor in both rural and urban areas. Further this form of sanitation facility is generally considered a private or household affair and as a result limited funding, including from NGOs/Donors, is available for improvement of community facilities. A majority of on-site sanitation facilities in informal settlement and rural areas are poorly constructed and provide poor services to the users.

### **7.3 POLICY OBJECTIVES**

An adequate and reliable supply of clean water is key to stimulating economic growth and improving public health. The Poverty Reduction Strategy has recognized the critical role of water provision for health, social well being and also as a primary ingredient in economic productivity. Enhancing access to water services to the low-income areas, by reducing time taken and distance to service points, making the service affordable, and use of water to reduce poverty are the key areas emphasized by the Government for poverty reduction.

Specifically, the Government commits itself to:

- Increased coverage and access to WSS services especially by the poor, by 8% per annum until full coverage is attained.
- Developing financing systems for provision of WSS services to the poor

### **7.4 STRATEGY**

- a) Identify and amend laws, regulation and practices that impede access to WSS services by the poor e.g. land tenure
- b) Develop technical and service standards to allow innovation in approaches and create operational incentives to serve the poor
- c) Recognise small scale services providers and introduce other measures (e.g. increase proximity to service points) to reduce the price of water to the poor
- d) Promote rainwater harvesting and other appropriate technical options
- e) Require that business plans of primary services providers explicitly cater for the poor through affordable deposits, connection charges and service extension plans for unplanned areas
- f) Ensure that pricing policy caters for needs of the poor through affordable tariffs
- g) Establish a fund for enabling extension of infrastructure and services to informal settlements and rural communities
- h) Develop water supplies that provide for economic as well as domestic needs of poor households

- i) Strengthen the management capacity of community groups and small-scale providers and develop contractual arrangements with the primary service provider.
- j) Reduce time poor households spend fetching water, by increasing the density of networks and kiosks/water points
- k) Involve communities more effectively in determining appropriate levels of service
- l) Incorporate community water supply systems and small scale providers in the long term rehabilitation and expansion plans of WSSBs
- m) Establish appropriate credit facilities to enable households improve on-site sanitation facilities.

## 8.0 ACTION PLAN – LOGICAL FRAMEWORK

SUMMARY OF OBJECTIVES AND ACTIVITIES	OBJECTIVE VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTION
<b>OVERALL GOAL</b> To improve the social well being of the populace and enhance performance of the national economy.			The Government will continue to support the reform process
<b>PURPOSE</b> To ensure an equitable provision of an adequate quantity and quality of water and sanitation services to all competing user groups at an affordable cost and on a sustainable basis.	Lack of access to improved water supply and sanitation reduced by at least 10% per annum	Economic Survey Development Plans	
<b>Result/Output 1:</b> An appropriate institutional and legislative framework with clear definition of responsibilities of the actors put in place.	IRI / 1 Amendments to the Water and Local Government Acts to clearly distinguish regulation, WSS services provision and WRM carried out – Yr.1 IRI / 2 MENR, NWCP, LAs and others devolve WSS service provision to WSSBs and others – Yr. 1 – 5%, Yr. 2 – 10%, Yr. 3- 30, Yr.4 – 60 %, Yr. 5 – 100%	Approved Acts Legal Notices on transfer of responsibilities, Service providers licenses, WSS Providers contracts	
<b>Result/Output 2.</b> A Transition Plan to guide the reform process is established.	IRI/2 Sector reform through establishment of new institution to carry out new roles implemented as follows: Yr 1 – IMC established and operationalized Yr 1 – WSRU established and operationalized Yr 2 – WSSBs established and operationalized Yr 2 –WSS Regulatory Board established and operationalized	Legal Notices, service providers licenses Staffing Structure and payroll Staff appointment/ redeployment letters Water sector staff Rationalization Report Viability Studies Report	
<b>Result/Output 3</b> Sector institutions strengthened to undertake their new roles.	IRI/3 All identified sector institutions operating with optimum, qualified and competitively remunerated staff discharging new roles – Yr.2	Staffing structure and payroll Certificates of training	
<b>Result/Output 4</b> An enabling environment to attract private sector participation and other WSS Services Providers is established	IR4 PSP WSS Services Providers to set standards increasing as follows (%): Yr. 1 – 5%, Yr. 2 – 10%, Yr. 3- 30, Yr.4 – 60 %, Yr. 5 – 100%	Publication on guidelines and procedures WSS Regulatory Board's Register	
<b>Result/Output 5</b> Mechanisms for improving WSS services to the low income areas are established	Lack of WSS services to low income areas reduced by at least 10% per year Per capita consumption shortfall reduced by at least 10% per year Lack of connections, kiosks, ablation blocks shortfall reduced by at least 10% per year Prices standardized by Yr. 2	Survey Reports  Repealed by-laws  WSSBs Register of SSiPs	
<b>Result/Output 6</b> WSS infrastructure rehabilitated, expanded and new ones developed and used	IR6 /1 WSS schemes are operating at initial design – Yr. 6 years IR6/2 At least 60% of population within the rehabilitated schemes obtain services continuously at set service levels – Yr. 5 IR6/3 All existing WSS schemes are expanded to acceptable design standards- Yr.7 IR6/4 WSS schemes are constructed to acceptable standards – Yr.10 to 100% coverage	Contract completion certificate Technical Assessment Reports Progress Reports	

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<b>SUMMARY OF OBJECTIVES AND ACTIVITIES</b>	<b>OBJECTIVE VERIFIABLE INDICATORS</b>	<b>MEANS OF VERIFICATION</b>	<b>ASSUMPTION</b>
Result/Output 7 Effective and efficient mechanisms for mobilizing and channeling fund established	WSS/CWSS Funds established with clear disbursement procedures to meet set targets – Yr.2	Legal Notice under Cap 412 and progress reports on project implementation	
Result/Output 8 Financial autonomy of WSSBs established	IR8/1 WSSBs established through viability studies are operating with clear financial autonomy - Yr.3 IR8/2 Clear regulations establishing financial autonomy of WSSBs enacted in legislation –Yr.1	Financial procedures of WSSBs.	
Result/Output 9 Pricing policy to meet cost recovery, equity and environmental protection developed	IR 9/1 Policy guidelines on cost covering tariffs issued to all WSSBs – Yr.2 IR9/2 Cost recovery tariff implemented in schemes – Yr. 1	Official policy guidelines Approved tariffs	

## 8.1 MAIN ACTIVITIES

<p>Main Activities for Result/Output 1</p> <p>1.1 Finalize legislation (Cap 372 and 265) to clearly define roles and responsibility of all sector actors.</p> <p>1.2 Provide a legislative framework clearly separating WSS services provision from WRM.</p> <p>1.3 Devolve WSS service provision responsibilities from MENR, NWPC and others to WSSBS, LAs, communities and others.</p> <p>1.4 Establish autonomous WSSBs</p>	<p>Main Activities for Result/Output 6</p> <p>6.1 Carry out comprehensive assessment of infrastructure, equipment and plant</p> <p>6.2 Rehabilitate existing WSS schemes to design capacity</p> <p>6.3 Expand existing WSS schemes</p> <p>6.4 Construct new WSS schemes</p> <p>6.5 Provide technical support to WSSBs implement infrastructure, equipment and plant needs</p>
<p>Main Activities for Result/Output 2</p> <p>2.1 Establish Inter-Ministerial Committee to oversee water sector reforms</p> <p>2.2 Establish and operationalize WSRU to undertake and steer the WSS sector reform process</p> <p>2.3 Rationalize, redeployment and recruit qualified staff to the proposed institutions</p> <p>2.4 Carry out syndication studies</p> <p>2.5 Advice on establishment of WSSBs</p> <p>2.6 Operationalize the office of the WSS Regulatory Board</p>	<p>Main Activities for Result/Output 7</p> <p>7.1 Develop WSS Fund for mobilizing and channeling funds to WSSBs for development of large piped systems</p> <p>7.2 Develop CWSS Fund for communities to access fund for capital development</p> <p>7.3 Create financial appraisal capacity (tools, human resource) to review business plans</p> <p>7.4 Develop procedures and arrangements for debt servicing</p>
<p>Main Activities for Result/Output 3</p> <p>3.1 Carry out staffing norms</p> <p>3.2 Carry out a comprehensive training needs assessment for the sector</p> <p>3.3 Implement training programmes</p> <p>3.4 Develop guidelines for competitive remuneration and incentive structures</p>	<p>Main Activities for Result/Output 8</p> <p>8.1 Devolve financial authority from Central Government to WSSBs</p> <p>8.2 Reform financial systems to reduce bureaucracy, increase transparency and accountability</p>
<p>Main Activities for Result/Output 4</p> <p>4.1 Clearly define conditions for PSP entry</p> <p>4.2 Promote public awareness on PSP concept</p> <p>4.3 Establish a level playing field to promote competition</p> <p>4.4 Government to facilitate local PSP</p> <p>4.5 Clearly define condition and facilitate community, NGO, SHG, and SSIPs involvement</p>	<p>Main Activities for Result/Output 9</p> <p>9.1 Assess potential for cash generation as a source for rehabilitation and expansion fund</p> <p>9.2 Develop guidelines on cost recovery tariffs</p> <p>9.3 implement pricing policy with* polluter pays* principle</p>
<p>Main Activities for Result/Output 5</p> <p>5.1 Develop a connection policy for low income areas</p> <p>5.2 Develop a tariff setting policy that targets the low income areas</p> <p>5.3 Financing mechanisms for channeling funds for development of low income areas</p> <p>5.4 Define appropriate service levels</p> <p>5.5 Identify and facilitate access to appropriate, efficient and affordable technology in resource use</p> <p>5.6 Develop guidelines for regulating SSIPs, SHG, Communities</p> <p>5.7 Develop arrangements for implementing and managing water for economic activity</p> <p>5.8 Repeal/amend By-laws that discriminate against SSIPs repeated</p> <p>5.9 Increase competition amongst SSIPs</p>	

## APPENDIX A LIST OF REFERENCE DOCUMENTS

- 1 Sessional Paper No. 1 of 1999 on National Policy on Water Resource Management and Development. *Government of Kenya 1999*
- 2 Review of the Water supply and Sanitation Sector Aide Memoir *Joint World Bank, KfW, GTZ, and AFD Mission. November 20 to December 17, 2000*
- 3 Workshop Proceedings on Country Strategy Paper on WSS services Provision at KCCT Mbagathi 24 – 26 January 2001 *Ministry of Environment and Natural Resources*
- 4 Urban Water Supply and Sanitation Services in Low Income Urban Settlements. Annex X of Aide Memoir *World Bank December 2000*
- 5 Water Bill 2001. *Ministry of Environment and Natural Resources July 2000*
- 6 Workshop Report on National Water Policy as it Relates to Poverty Alleviation. February 2-4 2000, KCCT Mbagathi. *Ministry of Environment and Natural Resources*
- 7 Interim Poverty Reduction Strategy Paper for Period 2000 – 2003. *Government of Kenya June 2000*
- 8 Financing Water Infrastructure projects in Small Cities of the Developing World; Recent Trends *Timothy Allred*
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- 25 Rural Water and Sanitation in Kenya – *WSP 2000*
- 26 Urban Water Supply and Sanitation Services in Low Income Urban Settlements *WSP 2000*