

REPUBLIC OF KENYA

Ministry of Water and Irrigation



The National Water Services Strategy (NWSS)

(2007 – 2015)

September 2007

1) Introduction

Water is not only the most important factor for production but together with sanitation (which includes disposal of effluent and excreta) is the most important factor for human health. It is estimated that 80% of all diseases are water related, resulting in a huge bill for health care which could be drastically reduced with improved water services. The negative impact of insufficient water services on education and on productivity of the population is equally huge. Thus, water is a key determining aspect for economic growth in a country and for the wellbeing of its population.

Kenya with a population of 35 million faces enormous challenges in providing sustainable access to safe water, sewerage systems and basic sanitation for its fast growing population. Presently, the rural population is still bigger than the urban. But, as in all other countries in Africa, the pace of urbanisation is breathtaking and leads to an increasing number of emerging “hotspots” which need particular attention such as the densely populated settlements of the urban poor. More than half of the urban population live in such settlements where population growth reaches 10% per annum and more. The high density makes living conditions especially deplorable due to the sanitary conditions, creating a special condition of poverty. Sustainable access to safe water is estimated at around 60% in urban and 40% in rural settings. Missing baseline data and sustainable information systems hinder obtaining a clear nation wide picture and thus, coverage can only be estimated. Therefore, sustainable access to safe water and basic sanitation is still declining in terms of quality and quantity.

The main reasons are old infrastructure, inadequate management and maintenance of existing infrastructure, insufficient sustainability, investments not enough concentrating on the options of fast tracking access and informal service provision operating outside a framework of basic standards and regulation.

The National Water Master Plan Aftercare Study (1998) reports that there are close to 1800 water supply systems under the management of various providers. In addition, there are other privately owned boreholes, springs and other surface water schemes that are also part of service provision. Sewage systems cover only 14% of the population living in 215 urban areas. In these towns most of the water supply and sewerage collection, treatment and disposal systems have been deteriorating rapidly, and fail to meet the water demands (both quantity and quality) of the ever increasing population.

The result is extremely high levels of unaccounted for water (UFW) reaching 60% on average. Losses also include theft of water, “informal” unauthorised and unpaid for connections as well as other mechanisms for obtaining water without paying for it. As long as consumption and billing is not metered, losses will remain high because wastage of water is not penalised. The un-metered systems create distortions in consumer charges and loss of revenue. Regular meter reading and billing based on actual consumption is still not practiced. Collection efficiency is insufficient due to underperforming management of providers and government institutions refusing to pay for WSS services or not planning/budgeting for water services. GoK departments and public institution are the biggest debtors of the WSS utilities. Furthermore, funds generated through water revenue are often diverted by Municipalities other than to support water and sanitation activities. Tariffs are not in line with costs adding to the financial difficulties and resulting in systems not operating

sustainably. This penalises particularly the poor as the systems cannot be extended to their settlements or cannot be maintained in their areas. Joint connections with rising block tariffs penalises the consumers.

Nevertheless, good management practices on socially responsible commercialisation have emerged during the sector reform e.g. in Nyeri which needs to be known and duplicated on a large scale.

Many rural households have to spend hours per day fetching water from unsecured sources where water quality is suspect. The burden is borne by women and children for whom there is no time to attend school regularly because of the obligation to secure water for the household. Safe water sources in the rural setting are often not adequately managed by the users, wasting investment by shortening the lifespan of the infrastructure.

Urban households disposing from onsite-sanitation facilities have their sludge disposed of at nearby streams, contaminating ground and surface water from which providers and downstream dwellers draw their water for production or drinking. Small, especially informal providers generally do not treat such contaminated raw water or do not regularly test it before distribution. Funds provided for rehabilitation, upgrading and expansion of water supply and sewage facilities are insufficient and also not being used to achieve the biggest leverage on sustainable access. In addition, water resources are becoming more scarce, an issue which is addressed in the NWRMS.

In recognition of past neglect the Government initiated a process of deep rooted reforms for the entire water sector which led to a new water policy, legal and institutional framework and new sub-sectors strategies.

With the sector reform the different sub-sectors are now under radical transformation. Water resources management and development are separated from water services delivery. The MWI has delegated key functions to autonomous sector institutions and now mandated to ensure policy formulation, resource mobilisation, sector coordination and monitoring/control. The capacity of these institutions need to be continuously enhanced to ensure they perform effectively and efficiently. The interest of the MWI and all sector institutions is to make water supply and sanitation services nationally recognised as a key factor for improved living conditions and productivity of the population, as a basis for social and economically sustainable development in Kenya. Public consultation is now entrenched in the Water Act 2002 to ensure participation of citizens and stakeholders in decision making. Every citizen therefore has a responsibility to improve sector performance and attain access to safe water and sanitation in order to realize the right to water as a human right

Other sector documents for policy implementation include the National Water Resource Management Strategy, completed in 2006, the National Irrigation and Drainage Policy and the Land Reclamation Policy both under preparation.

The term ‘water services’ wherever used carries the meaning provided in the Water Act 2002 which interprets water service to mean ‘any service of or incidental to the supply of water or the provision of sewerage’. The NWSS covers the period from 2007 to 2015 and gives the strategic framework for water services sub-sector.

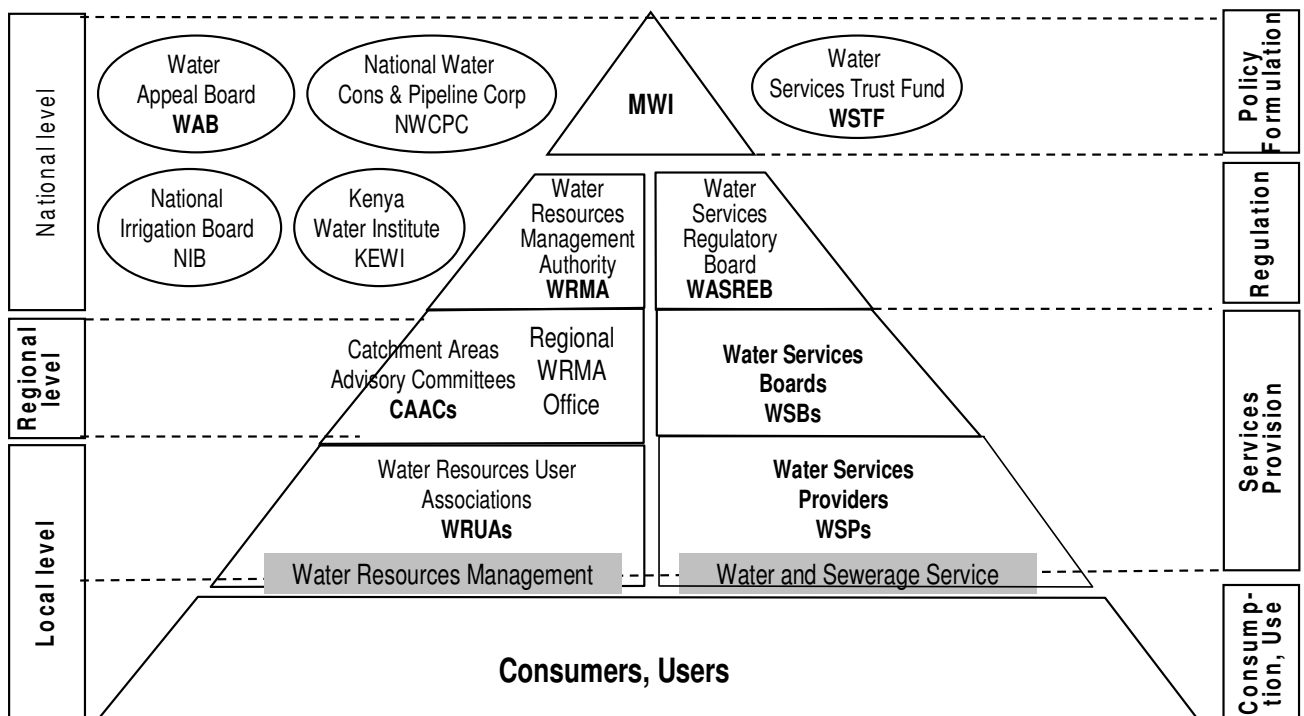
2) Institutional Framework

2.1 Institutional set-up

The main purpose of the reform is to separate water resources management and development from water services delivery, while the Ministry in charge of water affaires deals with policy and strategy formulation, mobilization of funds, coordination and monitoring. Although the separation of the sub-sectors is key the strong link between WRM, WSS and WSTF is recognized. This is particularly crucial for areas like pollution of raw water sources, issuing of extraction permits, clustering of WSS systems, etc. Consequently, the NWRMS and NWSS must be seen within one framework of the water sector. The distribution of roles in the WRM-sub sector is lined out in the NWRMS and for the WSS sub-sector in the present documents and as follows:

The WASREB regulates water service provision, the WSBs are in charge of assets and contracting WSPs for WSS from the public, private, community and civil society sectors while the WRMA is in charge of WRM. All of these institutions report to boards that represent different stakeholders' interests. Thus service provision shall be driven by efficiency by incorporating private sector principles through commercialization of WSS. Once the reforms are advanced the providers owned by the Local Authorities will have to compete with other potential service providers. It will be the responsibility of the WASREB, WSBs and the WSPs to work in concert with Local Authorities, CBOs, NGOs, and the private sector, to ensure the implementation of the strategy.

A schematic representation of the institutional framework for the water sector under the Water Act 2002



2.2 Roles and responsibilities for WSS sub-sector

The roles and responsibilities of these institutions are:

Institution		Roles and responsibilities
1.	Ministry of Water and Irrigation (MWI)	• Development of legislation, policy and strategy formulation, sector coordination and guidance, and monitoring and evaluation • Overall sector investments planning and resource mobilisation
2.	Water Services Regulatory Board (WASREB)	• Regulation and monitoring of service provision (Water Services Boards and Providers) • Issuing of licenses to Water Services Boards • Setting standards for provision of water services • Developing guidelines (water tariffs etc.)
3.	Water Services Boards (WSBs)	• Efficient and economical provision of water services • Developing water and sewer facilities, investment planning and implementation • Rehabilitation and replacement of infrastructure • Applying regulations on water services and tariffs • Procuring and leasing water and sewerage facilities • Contracting Water Service Providers (WSPs)
4.	Water Service Providers (WSPs)	• Provision of water and sanitation services, ensuring good customer relation and sensitization, adequate maintenance of assets and reaching a performance level set by regulation
5.	Water Services Trust Fund (WSTF)	• Financing provision of water and sanitation to disadvantaged groups (pro-poor) as water poverty fund
6.	The Water Appeals Board (WAB)	• Arbitration of water related disputes and conflicts between institutions and organizations
7.	National Water Conservation and Pipeline Corporation (NWPC)	• Construction of dams and drilling of boreholes
8.	Kenya Water Institute (KEWI)	• Training and research

3) Vision, Mission, Goals and Principles for Water Services

3.1 The Vision

“Assured water supply, sewerage services and basic sanitation for all Kenyans for improved health and wealth creation on an individual level and for the nation”

3.2 The Mission

“To realise the goals of the MDG declaration and the Vision 2030 of the Kenyan Government concerning access to safe and affordable water and basic sanitation by responsive institutions within a regime of well defined standards and regulation”

The GoK in its efforts to protect and allocate water resources in a sustainable manner, as well as, to improve WSS service provision and safe wastewater disposal to protect the environment has given clear policy direction for the water sector (Sessional Paper Number 1 of 1999). In addition, the GoK has responded to the Vision 2030 and the recommendation of the “Kenya Economic Recovery for Wealth and Employment Creation (2003-2007)”, by commencing a water sector reform program with a particular emphasis on the poor (equally recommended by the PRSP) which has led to a new institutional and legal framework and a SWAP (Sector Wide Approach to Planning) in the sector. This included the:

- Establishment of regulation for WSS
- Transfer of government WSS schemes to Water Services Boards (asset development) communities and other lower level actors
- Provision for commercialisation and PSP in financing and management of WSS service provision
- Promotion of WSS services to the poor in both the rural and urban settings through the WSTF

The Water Act 2002 in sections 49 and 50 provides for a National Water Services Strategy to be adopted which aims at having a capable person at all times in every area of Kenya, providing water and sanitation services, to arrange for investments and implementation plans and to provide for national monitoring and information systems on water services.

3.3 Goals of the National Water Services Strategy

“The overall goal of the National Water Services Strategy is to ensure sustainable access to safe water and basic sanitation to all Kenyans”

The main intermediate goal is to meet the water related MDGs by 2015:

- To “halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation” (target 10, enlarged by the Johannesburg declaration)
- To ensure environmental sustainability (Goal 7)

The information systems and the database in the WSS sub-sector have not yet developed to the extent that precise figures for coverage responding to the key notions of sustainability, safe water, accessibility, etc. are available. Nevertheless, knowing the real situation on the ground in specific areas through surveys and studies the MWI estimate (2006) coverage for the:

- urban setting: water 60% and sanitation 55%
- rural setting: water 40% and sanitation 45%.

The Goals of the NWSS are:

- **To increase sustainable access to safe water complying to the Kenyan standards such as drinking water quality (formal service provision) from 60% to 80% in the urban setting by 2015 and to reduce the time taken to nearest public/communal outlet and back home to an average of 30 minutes.**
- **To increase sustainable access to water complying to the Kenyan standards such as drinking water quality (formal service provision) from 40% to 75% in the rural setting by 2015 and reduce the distance to the nearest public/communal outlet to 2 Km.**
- **To reduce unaccounted for water due to both economical and technical losses from the current average of 60% to 30% by 2015.**
- **To achieve O+M cost recovery of all WSS systems gradually by 2010 with the exception of targeted subsidies to the poor.**
- **To increase access to waterborne sewage collection, treatment and disposal from 30% to 40% in the urban setting and from just under 5% to 10% in the rural setting by 2015**
- **Effluent discharge shall meet the relevant Kenyan standards including Environmental Management and Coordination Act.**
- **To increase in collaboration with the other concerned ministries, particularly the MoH (lead for sanitation), the access to basic sanitation from 55% to 77.5% in the urban setting and from 45% to 72.5% in the rural setting by 2015.**

3.4 Key principles of the National Water Services Strategy

The guiding principles for the water sector reform and therefore for the National Water Services Strategy are:

1. Sustainable access to safe water and basic sanitation is a human right.
2. Separation of policy and regulatory functions from service provision.
3. Decentralizing of responsibilities and decision making applying the principle of subsidiary for water services in accordance with the Water Act 2002.
4. Water is a social and economic good – water and sanitation service provision for the poor shall be enabled by social tariffs (for a minimum of 20l/c/d) and users shall pay according to consumption – user pays principle.
5. Sustainability of WSS systems through cost-recovery by taking into account a pro-poor pricing policy, meeting equity as well as economic and environmental concerns.
6. Well defined standards and regulation for service water delivery (formal service provision).
7. Demand management has priority over supply management
8. Importance of inter-sectoral planning on all levels
9. Public-Private Partnerships promoted to develop capital projects where feasible
10. Linkage between water supply, sanitation and hygiene management and development.
11. Linkage between water services and economical development.

12. Environmentally friendly operations of water and sanitation services – polluter shall pay for environmental damage.
13. WSS service provision responding to cross-cutting issues such as gender, HIV/AIDS, etc.

Specific principles for the urban and rural setting complementing the guiding principles

Water supply in urban settings

- Gradual self-financing of the sector - move towards O+M coverage of institutions and service providers in the medium term and total cost recovery in the long term.
- Water quality testing at outlets and water sources according to requirements (quality and frequency) shall be mandatory for all providers.
- The public is regularly and adequately informed by the WSB and WSP on tariffs, service conditions, water testing results, quality of effluent discharge, etc according to national guidelines.
- Efficiency of service provision shall be ensured by socially responsible, commercially-oriented utilities that ensure sustainability of services to all, especially the poor.
- Each consumer group receives the service level it can sustain.
- The tariffs at public/communal outlets are not significantly higher than the tariff for lifeline consumption at household connections.
- Public/communal outlets are promoted wherever a network with household connections cannot be established or maintained by the poor.
- The poor should benefit from economies of scale wherever possible.
- Areas where the biggest impact on poverty reduction and public health is expected are given priority for investments and service extension by WSB and WSPs.
- All consumption is metered to reduce UFW, curb wastages and provide justified bills.
- Demand management (efficient water use, water metering, billing, effective collection, network repair etc.) is given priority over supply management (tapping new water sources, extending treatment and storage capacity, etc.) which also implies that priority is given to the rehabilitation of existing systems for water production than increasing capacity.

Water supply in rural settings

- Implementation of all rural water supply programs to integrate sanitation, health and hygiene education.
- Rural water service provision is generally community based and demand driven but open for commercialization wherever possible.
- The rural water service provision shall increasingly move to O+M cost recovery.
- Choice of technology is community driven and based on its appropriateness to the area and users (affordability, environmental friendliness, etc.).
- Water quality monitoring at agreed intervals shall be mandatory.
- Safeguarding of water sources and rehabilitation of water point installations has priority before developing new infrastructure.

Sanitation (sewerage and basic sanitation)

- Sewerage systems shall be rehabilitated, extended or built wherever technically and commercially feasible and conditions for sustainability are proven.

- The choice of technology for basic sanitation is a household decision because ownership and acceptance by the household is the key to sustainability.
- A sufficient range of technical solutions aiming at hampering risks of pollution shall be available for the household decision.
- Basic sanitation is promoted wherever a sewerage network with household connections cannot be rehabilitated, extended or established.
- Areas where the biggest impact on public health is expected are given priority in the promotion of basic sanitation.
- New solutions are sufficiently tested before large scale implementation.
- Sector institutions and organizations are engaged in the implementation / promotion of sanitation according to their capacity.
- Not more than 4 households shall share a basic sanitation installation.
- Public sanitation installations shall be available and sustainable at all public places such as schools, markets, government institutions, etc. with a sustainable arrangement for O+M coverage.
- Ecological sanitation (ecosan) shall be promoted whenever socially accepted.

4) Water Services Strategy

Chapter 1 Water Supply in the Urban Setting

Goal: Reach at least 50% of the underserved urban population with safe and affordable water by 2015 (MDG) and thereafter, move to access to all by 2030

Medium term indicators for achievement:

- The number of clustered and commercialized providers is increasing annually from 2007.
- The key performance indicators (including coverage) of the providers holding an SPA is increasing annually from 2007.
- The WSB and the WSP document their Human Resource Development and spend 0.5% to 1% of their turn over on training as from 2008.
- Directors and managers of WSPs undergo training on corporate governance and social responsibility as part of induction upon appointment and at least once every 2 years
- Reporting by WSBs and WSP including on water testing is defined in 2007 and enforced starting 2008.
- An annual report on the development of the WSS sub-sector including comparative reporting is issued by the WASREB from 2007 onwards.
- All WSBs submit the information on investment for the SIP annually and not later than October in the format requested by the MWI as from 2008.
- All WSBs and WSP report on the use and justification of payments made to third parties such as Municipalities from 2008 onwards in order to enhance ring-fencing of income for the water sector (use of sub-sector income for water supply and sanitation).
- Annually the MWI, WASREB, WSTF or the WSB publish and disseminate widely one example of best practices annually, not later than the end of the year starting in 2008.
- All WSPs and WSBs carry out for the system under their operation an information campaign about water use at least once every 3 years.

Challenges

Most of the water supply systems do not cover O+M costs, thus sustainability is far from being achieved. Many providers lack professional and skilled manpower, are not operating professionally enough and are not sufficiently commercially oriented, leading to low performance (low collection, high water losses, etc.) and insufficient sustainability of service provision. There is also general lack of maintenance tools, equipment and transport. In addition, the insufficient economies of scale and economically-unviable tariffs hamper sustainability of systems. Many small-sized systems lead to high production costs and cannot attract and maintain the necessary qualified professionals.

The low cost recovery and performance of the providers is resulting to high water losses, low water quality, erratic water supply, insufficient maintenance and deterioration of the assets and thus further decline in the service level. Under these conditions and with little consumer orientation on water use and obligations, it is difficult to extend services to the poor and to obtain the consent of the consumer to accept tariff adjustments.

Low performance, non transfer of assets and missing ring fencing of income results in poor perspective of sustainability, which keeps many potential donors away from the sector. This results in an investment gap for rehabilitation and extension of systems and performance enhancement measures.

Consumption metering is limited or does not exist at all promoting water wastage. The un-metered systems create distortions in consumer charges and loss of revenue. Revenue collection too is extremely low. Tariffs are out of line with costs adding to the financial difficulties. It has been estimated that only about 60% of revenue due (of the 20%-50% of the water that reaches the consumer) is actually collected. The largest debtors are GoK departments and public institutions. Furthermore, maintenance is inadequate because the funds generated through water revenue are diverted to other uses, which does not support the water system.

Recent developments

As forerunner of the sector reform some municipalities have agreed to form commercially oriented autonomous water companies and join together (clustering) thus, to obtain economies of scale and professionalize service provision. This has significantly improved performance of service provision, cost recovery and sustainability. Today the sector is in a position to duplicate such successes on a large scale. Nevertheless, the successes obtained so far have not been sufficiently publicized. The sector reform has also complemented the commercial orientation with regulation ensuring that the poor can benefit from the sector reform (socially responsible commercialization). The regulator has issued a minimum service level, standardized SPA and introduced comparative competition in order to make the sector transparent to the public. Nevertheless, insufficient investment, cost recovery, corporate governance, limited qualified personnel and consumer service orientation still remain as challenges requiring intervention. Commercialization and clustering has attracted investments by donors in various areas.

Strategic response

a) Increasing sustainability and benefits of economy of scale

- Encourage WSB and municipalities to further cluster systems in order to obtain the benefits of economies of scale and to professionalize service provision by establishing commercially-oriented providers operating under private sector principles. Each case of clustering and commercialization shall be prepared by comprehensive feasibility studies and shall be accompanied in the start-up phase, with support to the newly formed providers. Such actions shall also be accompanied by the transfer of assets to the WSBs according to the new Water Act 2002.
- Tariffs shall cover justified costs and be reviewed periodically. In a first step O+M cost recovery shall be achieved progressively to total cost recovery through water bills for consumption of services.

b) Increasing performance of service provision

- Ensure the autonomy of day-to-day operation of providers by separating service provision from policy making at national and local levels.
- Regulation by the WASREB shall foster good corporate governance and aim at ring-fencing of income in the water sector with the help of the MWI. It shall also help to formalize all service provision, increase cross subsidization and extension of service provision to the urban poor as providers increase their performance. This shall be achieved through the signing and

monitoring of code of practices, implementation of inspection programs by the WASREB and WSBs, the follow up on how income in the water sector is used and the promotion of schemes to make the voice of consumers transparent and public.

- The WSP shall be held accountable for informing the public according to the obligations given by regulation. Thereby, the role of the community and consumer based organization has to be acknowledged.
 - The WSP shall with its customer management focus on the differences among consumer groups by implementing specific customer strategies for water kiosks, large consumers etc.
 - All consumers shall be billed according to consumption, made regularly aware of the need to preserve water resources (water use) and all outlets and household connection shall be metered in order to justify billing to consumers, reduce UFW, and increase performance of service provision.
 - Particular attention shall be paid to billing and collection from government institutions. Thereby the MWI will support the WSP through the WSB and WASREB to change the behavior of government institutions regarding payment of water bills.
 - The potential of PSP, especially the local private sector, shall be used to further improve service levels and reduce costs. Such participation shall range from transferring operation of systems to private entities on one side, and to delegate operation of public/communal outlets to individuals linked to the formalized providers by contract on the other side
 - The Ministry of Finance issues a letter to all government institutions indicating that WSPs have the obligation to suspend services in case of non-payment of water bills. It also indicates that all government institutions provide for adequate funds in the annual budget for WSS services received.
- c) Service provision according to minimum standards**
- Bring all service providers under the regulatory regime and ensure compliance to minimum requirements such as water quality testing, publication of test results, tariff according to justified costs, customer service requirements, etc. This can be done by signing of SPA with WSP (formalising service provision), linking informal providers within a service area of a formal provider to the WSP. If this is not possible then the formal service providers shall be obliged and offered incentives to cover underserved areas within a given timeframe. Tariff negotiations and pro-poor financing mechanism shall help to achieve such aims.
 - The standards set by regulation (technical, management, etc.) shall be implemented not only through the regulatory tools but also through the provision of investments by the WSB and low cost technology by the WSTF, and shall be reviewed regularly to test their effectiveness and relevance.
 - All WSP shall make a focal person (smaller providers) or create a structure (bigger providers) responsible to implement the pro-poor focus including extensions and management of service provision to the settlements of the poor. The WSBs shall enforce this approach.
 - All WSPs develop and implement an effective and efficient maintenance plan
- d) Increasing funding and leadership of GoK in the sector**
- Funds provided by development partners (banks, NGOs etc.) shall increasingly be channeled through the sector institutions like WSB and WSTF.
 - Increased self financing in the sector shall be used to attract growing funds from development partners. For this, the MWI and autonomous institutions such as the WASREB, WSTF and the WSBs shall document and disseminate best practices and the best investment opportunities to reach the urban poor.

- Sector investments shall be linked to performance of WSB and service providers and shall also promote demand management and stakeholder involvement.
- The WSBs and the WASREB shall contribute, through the business planning obligations, to the updating of the SIP and the priority setting of funds available. Investments in the sector shall not only focus on infrastructure (rehabilitation, extension and new systems) but also on the improvements of operation

Chapter 2 Sewerage in the Urban Setting

Goal: Reach through sustainable waterborne sewage collection, treatment and disposal systems 40% of the urban and 10% of the rural population by 2015 and total coverage in all urban centers by 2030

Medium term indicators for achievement:

- Effluent discharge shall meet the relevant standards (Kenyan or in their absence internationally recognised standards) by 2010.
- Cost recovery for sewerage system is part of the tariff adjustment procedure from 2008.
- In 2008 the WASREB will elaborate a concept for the reuse of effluent and issue thereafter relevant recommendations to the WSBs and WSPs.

Challenges

The investment needs and maintenance costs for sewerage systems are much higher than for water supply systems. In areas where settlements are unplanned and consumption of water is low, sewerage systems cannot technically be built and operated.

Where sewerage systems exist, a large proportion of households are not connected due to the costs of maintaining a connection or due to the poor functioning of the system. In many areas where consumers could afford such a system, including medium towns, sewerage services do not exist.

Tariffs for water do not include sufficient tariffs for sewerage and management of sewerage by providers is often seen as a by-product of water services and therefore, given little attention. The treatment and control of effluent is by far insufficient and the options of reuse of sewer or recycling of effluents are not explored. Sewer flooding occurs regularly in many towns, causing epidemics such as cholera. Lack of sewer systems and sewage treatment plants may result in pollution of underground water and contamination of existing water sources, especially for downstream users and in flood prone areas.

Recent developments

With the formation of commercially oriented water providers, sewerage systems have also been transferred to most of these enterprises. Nevertheless, this process has not yet been finalised in some towns. Water companies reaching a higher level of performance are able to pay more attention to sewerage services.

Strategic response

- a) **Increase investments and sustainability of sewerage systems**

- Build and enlarge sewerage systems wherever sustainability (affordability) is proven.
 - Promote concurrent development of water and sewerage facilities
 - The WASREBs shall ensure, gradually, cost recovering tariffs for sewerage systems as part of water tariffs and include sewerage in the tariff adjustment procedures.
 - All sewerage systems shall be transferred to commercially oriented providers who shall be obliged to prove to the WASREB and the WSB that sufficiently trained professionals are operating the system.
 - Promote PPP options where feasible
- b) Improve treatment and reuse of effluent**
- Improve treatment and reuse of sewerage by improved technologies for treatment and recycling.
 - MWI and the WASREB shall encourage the exchange of knowledge and experience of WSP operating sewerage schemes.
 - WASREB shall collaborate with NEMA and other relevant agencies to improve monitoring of the quality of effluent discharged by WSPs and reduce the incidences of sewer flooding.
 - The WSB and the WSP operating sewerage systems shall be obliged to provide for disposal of sludge from onsite sanitation at treatment facilities and inlets at the network
 - A concept for the reuse of effluent is available for the MWI in order to prepare recommendation for the sub-sector

Chapter 3 Basic Sanitation in the Rural and Urban Setting

Goal: Increased access to safe and improved basic sanitation facilities particularly for the poor to 77.5% in the urban setting and 72.5% in the rural setting by 2015.

Medium term indicators for achievement:

- All relevant sectors have reached a consensus on their respective roles and responsibilities with regard to sanitation by 2008 and their roles are documented in a policy paper.
- The WASREB and WSBs propose an implementation strategy for the involvement of the water sector institutions and providers to improve access to basic sanitation for the poor by 2008.
- 90% of all investment projects reserve and use the funds relative to the quota for sanitation set by the MWI with effect from 2008.
- The WASREB has issued guidelines on sanitation, and together with the WSBs, ensure their enforcement from 2008.
- Base line data on basic sanitation are available for 60% of rural areas and the settlement of the urban poor by 2008.
- The WSTF encourages integration of basic sanitation in water supply projects by 2008 and finances at least 7 pilot projects by 2009.
- A basic sanitation implementation strategy for water sector institutions available 2009.

Challenges

Considering the existing constraints regarding evacuation of excreta through sewerage systems, it becomes evident that large scale coverage of sanitation can only be achieved with basic sanitation installations responding to national minimum requirements/standards such as number of users, functionality, social acceptability, security and environmental compatibility. As for water supply,

basic sanitation needs professional management for construction and provision of services, as well as, subsidies for the poor.

It is estimated that more than half of the poor in rural and urban areas (around 60%) do not have access to adequate basic sanitation installations. Estimates also depend on a reference line/standards which have not yet been defined on the national level.

Sanitation issues do not yet receive the same attention as water. One of the reasons is that sanitation responsibilities are fragmented between many players and an adequate coordination mechanism is still missing.

Although the sanitation situation in rural areas is far from ideal, the health risks in the urban environment - particularly in the densely populated settlements of the poor - are far higher. Repeated outbreaks of water related epidemics like cholera is evidence of poor sanitation installation and practices in these areas. The close proximity of latrines and open wells or hand pumps, as well as, broken sewer systems, leads to subterranean and surface pollution. In the case of dilapidated water supply systems combined with erratic supply, sewage enters the water distribution systems and thereby aggravates the poor sanitation situation in the urban areas. Another key factor is that certain basic sanitation solutions are not accepted in particular environments due to cultural or religious beliefs and technical constraints.

Many of the poor simply cannot afford installing basic sanitation infrastructure and the importance of good sanitation and hygiene are not always known and appreciated. Consequently, a large number of households fail to invest in them. Water is a major support to sanitation and hygiene and therefore in areas with inadequate water, good hygiene practices such as washing of hands might be uncommon even where people recognize that importance.

Recent developments

Reforms in the different sectors relevant to basic sanitation emphasize closer inter-sectoral cooperation. This opens opportunities to fast track access. One move in the right direction is the recommendation of the SWAP conference to elaborate a cross-sectoral sanitation strategy and a memorandum of understanding between the Ministries directly concerned. Secondly, a policy on environmental health and hygiene (National Environmental Sanitation and Hygiene Policy) is now available. Also the Ministry of Education is contributing by earmarking a budget to be spent on water and basic sanitation in schools. All actors in the sector recognize the significant role that sanitation plays for dignity and sustainable development and therefore underline the need to give sanitation issues priority.

Strategic response

a) Contribute to inter-sectoral cooperation

- Develop a common understanding of the roles of the different Ministry departments at all levels in the sub-sector. This shall follow the principle of decentralization and private sector participation that opens opportunities for other actors. There is need for harmonization of policies, approaches and planning within all relevant sectors.
- Project implementation shall take care of all cross-cutting issues linked to sanitation such as water, environment, waste management, gender, health and hygiene, etc.

- The MWI shall help to establish an inventory of pilot projects and their lessons learned and promote implementation of further pilots by the sector institutions if needed as a preparation for large scale implementation. Such implementation concepts shall be worked out in close collaboration with other Ministries such as Health, Local Government and Education on national and local level. Implementation of basic sanitation shall be carried out by the local private sector for the construction and specialized NGO's in collaboration with the structure on the local level (Municipalities, CBOs, Public Health, Security Forces, Schools, etc.) when it comes to sensitization and promotion / marketing.
 - In cooperation with the Ministry of Local Government, legislation shall be revised in order to ensure that all new constructions is obliged to contain adequate sanitation facilities particularly in the settlements of the urban poor.
- b) Enhance the contribution of the water sector to basic sanitation**
- The MWI shall define, together with the institutions in the water sector, what role the new structures such as the commercialized WSP and the private sector can play in basic sanitation.
 - Sanitation issues shall receive much more attention in future than in the past. This can be done by designating at the different institutions specialized personnel for sanitation and by fixing a quota of sector investment for sanitation (separate budget). While the quota system is important, there shall be comprehensive sanitation plans with clear budgets.
- c) Professionalisation and minimum standards for basic sanitation**
- The WASREB shall propose a minimum requirement and definition of basic sanitation in consultation with other relevant ministries. Minimum requirements concern not only technical aspects but also security of users, cultural, religious and environmental issues, etc.
 - The WSTF shall finance implementation of projects for basic sanitation responding to the minimum requirements with the help of other sector stakeholders such as WSP, NGOs etc. Such projects shall not only target households but also public institutions, such as schools, markets, etc.
- d) Fast tracking basic sanitation for the poor**
- As the cost factor is detrimental to the choice of the facility, onsite sanitation infrastructure shall be subsidized for the poor. This can be done through subsidies provided by the donors, GoK, or a levy on water bills. In addition, social marketing activities shall be undertaken to promote affordable solutions.
 - Promote education on good hygiene practices

Chapter 4 Water Supply in the Settlements of the Urban Poor

Goal: Achieve the MDG by fast tracking affordable and sustainable access to safe water in the settlements of the urban poor.

Medium term indicators for achievement:

- National standards (technical and managerial) for low-cost technologies are designed and enforced through the WSTF (finance arrangements) and WASREB (tariff negotiations) by 2008.
- An increasing number of public/communal outlets are brought under formal service provision/regulation with approved tariffs (WASREB) and controlled water quality and service level (WSB and WSP).

- The number of service areas supplied by providers using raw water from non-controlled sources or sources within or near settlements is reduced annually. All such service areas are identified by 2008.
- Baseline data for WSS is available for all settlements of the urban poor in 2009.
- Annually the MWI, WASREB, WSTF or the WSBs publish and disseminate widely, one example of best practices for the service provision of the urban poor not later than the end of the year.
- From 2008 on, the WSPs (including the support by the WSTF) offer sustainable access to safe water to 500,000 new consumers annually.

Challenges

Recent studies carried out in the settlements of the urban poor (Inside Informality, WB report No. 36347-KE, 2006) indicate that about 80% of the poor in Kenya do not have sustainable access to affordable safe drinking water. The reason is that service provision to the poor is mostly left to the informal service providers not operating under regulation and according to standards. In addition, the ground water sources in urban settlements are highly contaminated and protected wells and boreholes in these areas can no longer be regarded as safe and used for service provision. Protection of water sources on the surface does not solve the problem of contaminated ground water and therefore the use of such inappropriate water sources by informal providers shall be discouraged. Therefore, consumers spend long hours queuing for water which is not controlled/tested and water prices are 5-20 times higher than tariffs charged by formal providers to connected customers. Such underserved areas, where today about 50% of the urban population live, are growing faster than any other areas in the country and are multiplying in numbers. Consequently, the number and percentage of underserved will also grow if sustainable access to safe water for the poor is not increased faster than in the past.

Utilities perceive service provision to the poor as commercially unattractive despite many studies proving the opposite. On the other side, many of the informal providers are organized in cartels, profiting from their monopoly power by distorting competition and creating artificial shortages. Nevertheless, there are other informal providers who could be formalized and brought under a regulatory regime to benefit the poor.

Donor funds concentrate more on improving services to already connected consumers by upgrading existing systems, and not enough on providing services to the urban poor through low cost technologies, which could offer fast tracking of access in the urban setting. Low cost technology already in place does not respond to minimum requirements and is therefore often not sustainable. In addition formal WSP do not yet have enough knowledge to install and operate sustainably commercial viable low cost systems such as kiosks.

Provision for way-leaves and sites for mains, plants and kiosks lacks in a majority of cases for new projects. This has created instances where buildings have been constructed over pipelines (water and sewers) and inability to construct kiosks to serve poor settlements.

Recent developments

Presently, a regulatory system has been put in place to ensure that commercialization is socially responsible and that improvement in performance is also benefiting the poor. The sector reform

created also the WSTF as a poverty fund that presently is concentrates on rural water supply and is just beginning to develop mechanisms to reach the urban poor.

Strategic response

- a) **Ensure increased service provision in the settlements of the urban poor with minimum requirements and standards**
 - WASREB, WSBs and WSPs shall develop and implement strategies to extend formalized service provision to the urban poor or link up informal providers with formal WSPs in order to formalize their activities and bring them under the regulatory regime.
 - The WASREB should define and enforce, with the help of the WSBs and the WSTF, national standards for the service provision through low cost technology including design, spacing of kiosks e.g., and the operation/management of the systems.
 - The WASREB and the WSBs shall pay particular attention to low cost technology systems as the number of the served population often exceeds the population served by household connections. Therefore, effective monitoring by these institutions of service provision through kiosk systems to the urban poor shall be ensured in order to secure sustainability and compliance to regulation and improve data on service provision in the settlements of the urban poor.
 - Water sector progress reports shall include information on the development of service provision in the settlements of the urban poor.
 - WASREB, WSBs and WSPs shall develop and implement strategies to encourage community participation at kiosk level and kiosk management and to link informal service provision gradually to the systems operating under regulation.
- b) **Use of water sources in the settlements of the urban poor**
 - Wherever formal or informal providers use unsafe water sources they shall be forced by the WASREB and the WSBs to abandon such sources or to install adequate treatment facilities or to connect to networks operated by a utility which fulfills the standards for service provision.
- c) **Accelerate sustainable access to safe water in the settlements of the urban poor**
 - Wherever underserved settlements of the urban poor (planned or unplanned, legal or illegal) are close to a network of a utility, the WASREB and the WSBs shall oblige the WSPs to extend services with low cost technologies such as water kiosks, as a first step (fast tracking access to the poor). The WASREB shall use tariff adjustment negotiations to offer the necessary incentives to the WSPs.
 - Such systems should preferably be financed through the WSTF in order to ensure that national standards for low cost technologies can be enforced.

Chapter 5 Water Supply in the Rural Setting

Goal: Reach at least 50% of the underserved population in rural areas with safe and affordable water by 2015 (MDG) and thereafter move to sustainable access for all by 2030

Medium term indicators for achievement:

- Inventory, protection and conservation plan for water points available by 2008.
- From 2008 onwards, all rural water projects have a water sanitation and hygiene education component.

- From 2008 onwards, at least 80% of all newly-created water points and facilities are still operational 5 years after completion.
- Average break down time: water points 1 week, piped systems 2 days, from 2009.
- From 2009, at least 80% of the piped installations cover O+M costs from user fees.
- Water piped systems provide services at least 12 hours per day on average.
- 75% of rural water installations are regularly monitored for water quality by 2008 and 85% of tests comply with water quality requirements by 2009.
- All the projects implemented by the WSTF follow standards set for design, project cycle, management etc. and an increasing number of projects funded outside the WSTF follow the same standards.
- As part of the 975,000 which need to be additionally covered annually from 2008 on in order to reach the MDGs the WSTF provides financial support to rural WSS projects to offer sustainable access to safe water to 200,000 new consumers annually.

Challenges

Domestic water sources in the rural setting include small-scale piped systems, water points with hand pumps (wells, boreholes) and traditional sources such as streams, dams, shallow wells and springs. These traditional sources are very susceptible to pollution because they are open or not protected.

The coverage for water in rural areas is still insufficient and estimated at around 40%. In Kenya the majority of rural water supply sources are non-piped systems. The small-scale piped systems in particular face challenges of sustainability, reliability (insufficient source, maintenance) and quality, particularly water quality. Sustainability of rural water facilities is affected by limited community ownership, choice of technology (pumped schemes are expensive to operate and maintain) and insufficient maintenance and thus, some of them wait for donor support to attend to the problems of the water supply. Sustainability is also affected by insufficient availability of spare parts and the limited involvement of the private sector. In addition, communities are often not sufficiently trained in running the installations, including management aspects, such as bookkeeping and also register a high turnover of committee members.

Missing standardization of water equipment has resulted in a multiplicity of technologies which is not only a disincentive for private sector involvement but also a reason for lengthening breakdown times. Poor governance (absence of strict rules to manage finances), sometimes coupled with limited access to banking facilities, has led to misuse or loss of community contributions, compromising operation and sustainability.

Water quality at the source is generally not monitored, thus subjecting the users to water of unknown quality. There is not enough awareness and appreciation of the importance of good hygiene in most rural areas.

Recent developments

The Water Sector Reform has created opportunities to improve access to water in rural areas. Effective regulation is now possible and WSBs are building capacities to improve support services to communities. The reform has also led to a clarification of key players and their roles. A

transitional process is ongoing such as the transfer of district water engineers to WSBs in order to streamline efforts in the water sector.

Positive institutional changes have increased the commitment of donors and NGOs to the sub-sector. Additionally, the government has increased its budget for water and sanitation while communities are more and more aware and willing to contribute and finance the operation and maintenance of water supply installations. The WSTF as the poverty-oriented financing instrument in the sub-sector, has developed a community project cycle to facilitate channeling finances directly to communities. The WSTF/WSBs are facilitating the development of national standards regarding design and management of installations as well as governance (transparency, accountability).

Through local private sector involvement, some progress has been made in the provision of spare parts, particularly for hand pumps. There is increasing awareness of the importance of quality water and the need to promote and support efforts to improve water quality through basic treatment such as chlorine, especially at public institutions such as schools.

Strategic response

a) Increased investments and ownership for sustainable access to water in the rural areas

- Increased monitoring of existing water systems and points through the WSBs and WASREB shall improve availability of information and corrective actions for sustainability. This shall be used to attract growing funds from development partners. For this, the MWI and the autonomous institutions such as the WASREB, WSTF and the WSBs shall document and disseminate best practices and the best investment opportunities to reach the rural population.
- GoK and development partners shall channel funds through the WSTF and the WSBs, in order to ensure compliance to national approaches, and the WSTF shall document good practices.

b) Improved water quality of water sources

- Investments in rural water supply shall concentrate on protection of water sources for both human and livestock uses, particularly in pastoral areas. Such investments shall always incorporate measures of local water management.
- WSBs, WSPs and community committees shall be trained and equipped to have the water quality periodically tested at water points.

c) Sustainability of water points and rural water systems

- In order to enhance sustainability of water points and small piped rural systems, ownership shall be enhanced through participatory processes (e.g. choice of technology) and through community contributions.
- The WASREB and WSBs shall enhance sustainability of bigger rural supply systems by either promoting to link such systems with WSS utilities operating in urban and peri-urban areas, or by clustering with other systems in order to obtain the benefits of economies of scale and attract professionals for the management functions.
- To improve the supply of spare parts and maintenance services in the sub-sector, the local private sector shall play a more significant role. This also includes WSPs in for the urban areas who could offer to store and supply spare parts for the rural facilities and repair services on commercial conditions. The WASREB shall provide incentives during tariff negotiations to utilities (WSPs) to carry out such functions wherever need arises.
- WSB shall use the potential of PPP measures wherever the private sector expresses their willingness to do so.

- Wherever the WSBs have developed sufficient capacity, functions and structures of the MWI still dealing with rural water supply implementation shall be completely transferred to the WSBs.
- d) Enforcements of national standards and regulation**
- The WASREB shall develop the necessary guidelines for the sub-sector, particularly water quality testing, good governance, sensitization on hygiene, etc. and the WSBs and the WSTF (when financing) shall ensure compliance and monitoring.
 - Support to the user groups shall particularly focus on good governance and management skills in order to foster sustainability.
 - The WASREB shall propose standardization for equipment in order to facilitate logistics of spare parts and repair.

Chapter 6 Cross Cutting Issues

6.1 Information Systems and Research

Goal: Accurate and reliable information on WSS and taking care of results from research is available, adequately disseminated and is used to facilitate optimized decision-making

Medium term indicators for achievement:

- The information systems at national level (WASREB and WSTF) are functional and all WSB report to the WASREB on time by 2008.
- 95% of the service providers holding SPAs report on time according to the relevant guideline by 2008.
- The development report for the WSS sub-sector is available by the end of each year from 2007 onwards and widely disseminated to the policy makers and general public.
- A baseline study for all settlements of the urban poor and rural areas in Kenya provides detailed information by 2009, which is linked to the sub-sector information system and complemented by geographical information systems in all main towns.
- By 2008 the MWI has an acceptable overview on coverage for water and sanitation based on agreed definitions.
- Research is documenting findings and best practices in the sector and presented at the annual sector conference from 2008

Challenges

Substantial information insufficiencies exist in all areas of the WSS sub-sector. This is due to the fact that baseline data, especially for the fast growing areas are missing or if existing in some pilot areas, are outdated. Additionally, existing information systems cover only limited areas and are often not sustainable. In addition, research on viable options and best practices is insufficient and making it difficult for decision makers to give directions. Reporting based on such data and good research results becomes unreliable especially for aggregated data on national level. Donor agencies, sometimes in collaboration with other Ministries, maintain their own information systems which produce misleading results (e.g. for urban coverage: Kenyan Census 1989, Kenyan Survey 1993 and 1998 and 2000 all 89%; JMP/MDGs 83% WHO/UNICEF 2006; MDG status report 2005, 89% for water and 95% for sanitation, UNDP etc.). Insufficient information at the national level

makes it impossible to set realistic and finetuned targets for policies and strategies. It also hampers acceptable priority settings. Nevertheless, due to the rapid growing needs for WSS and the huge investment gap to be closed, the risk that ongoing investments are channeled to areas not yielding acceptable benefits is limited.

Recent developments

In order to obtain a clearer picture of the situation in the WSS sub-sector at local, regional and national level the WASREB is in the process of introducing an information (Waris) and reporting system with input from the WSP and the WSBs which can also aggregate data on regional level. This system will feed into the SIS of the MWI. Waris is accompanied by reporting guidelines outlining the reporting obligations on all levels in order to obtain and analyze regular data. For the rural areas, the information system of the WASREB will be complemented by the information system of the WSTF (promis) that monitors the implementation of investments through projects. The new institutions have started to collect and document best practices, e.g. socially responsible commercialization on WSS by the WASREB.

Strategic response

- a) Use of information system to improve on data collection and reporting
 - Implementations of the WSS sub-sector information systems at WASREB and WSTF and effective enforcement of the reporting requirements by the WASREB, the WSTF and the MWI. The sub-sectoral information systems shall be linked with each other and with other relevant information systems (WRM) according to the defined input / output options.
 - Establishment and publication of a WSS sub-sector development report by the WASREB and project implementation of the WSTF which feeds into the Water Sector Development Report from the MWI.
 - Establishment of baseline data especially for the underserved settlements of the urban poor and linking baseline data to viable and sustainable information systems. At local level, such baseline data systems shall be combined with geographical information systems in order to facilitate planning of infrastructure, refine policy objectives and updating of data.
- b) Data harmonization
 - Viable sector data shall be compared with “official data” issued by the Central Bureau of Statistics and harmonized. Support for the adjustment of questionnaires for public census and the use of measurable indicators shall be offered by the MWI.
 - In order to calculate and monitor indicators such as coverage definitions based on measurable criteria and satisfying the notions of sustainability, accessibility, affordability, quality etc. shall be developed.
- c) Research and documentation of best practices
 - Each new institution documents one best practice every 2 years in a form of brochure

6.2 Sector Coordination, Programming and Communication

Goal: A coordinated program approach for the sub-sector with harmonized programming and communication linked to the sector wide SWAP and part of stake holder participation concept is in place.

Medium term indicators for achievement:

- Adequately prepared SWAP reviews and conferences held annually.
- 90% of the undertakings agreed at the SWAP conference are realized.
- An increasing number of development partners participate in joint programming under the leadership of the MWI without compromising the autonomy of sector institutions.
- The MWI signs annually-updated performance contracts with all sector institutions (including indicators for communication such as improved awareness of reform) and ensures adequate monitoring.
- All existing WSP have a communication (consumer information, water use, etc.) and report annually (accountability) according to regulation requirements from 2008. Newly created WSP introduce such systems within the first 2 years.

Challenges

The separation of functions in the sector, with different autonomous bodies having specific responsibilities in the sector and the multitude of development partners, civil society and private sector participation calls for improved coordination by the MWI. A number of development agencies do not yet participate in joint programming under the leadership of the MWI and in joint program reviews. Additionally, not all development agencies have aligned their support to sector policy and strategies.

Furthermore, misconception about the sector reform is still high and awareness insufficient. Consumers' knowledge about use of water, hygiene practices and their rights linked to water and sanitation services is also low.

Recent developments

The MWI has succeeded in launching the SWAP process and organized the first SWAP conference in October 2006. For this conference a rudimentary SIP was prepared which still needs substantial improvements and a link to the planning of investments by the WSBs. The SWAP conference proposed key undertakings which need to be carried out in the year to follow.

GoK and development all major partners have signed a Partnership Principles Agreement in 2006 which is an important step in proceeding with the implementation of the recommendation of the Paris Declaration (2005).

The water sector institutions have commenced to improve communication by elaborating communication strategies and integrating communication activities in their work plans.

Strategic response

- The MWI shall improve the SWAP process and the dialogue in the sector particularly the SIP and programming support to the sector.
- The MWI shall facilitate entry of new donor agencies into the sector and promote participation at joint programming.
- With the sector wide approach to programming (SWAP) the MWI will reinforce its lead in directing the affairs of the sector with full use of the autonomous sector institutions. It shall also help to harmonize strategies in the different sub-sectors with the water sector policy in order to reflect the vision of the government.
- The MWI shall monitor the progress regarding the indicators in the performance contracts signed with the sector institutions and in implementing the undertakings agreed during the SWAP conferences.

- The MWI and other Ministries / Government Agencies with inter-linkages will develop cooperating principles aimed at harmonizing their functions.
- All WSP shall implement the requirements of the WASREB guidelines concerning reporting (accountability) and information / sensitization activities as well as engagement of consumers / citizens.
- The MWI shall ensure that indicators aiming at improvements in communications (accountability, sensitization, information, etc.) are part of the performance contracts in the water sector.

6.3 Human Rights and Poverty Alleviation

Goal: Making sustainable and affordable access to safe water and basic sanitation to the poor

Medium term indicators for achievement:

- The WASREB, WSTF and WSBs implement a pro-poor strategy by 2008 and ensure alignment of the providers through regulation and investments thereafter.
- The WSTF promotes pro-poor projects for water and sanitation in the rural areas and the settlements of the urban poor on an increasing level.
- The MWI and the new autonomous institutions ensure that areas with informal service provision shift increasingly to formal service provision and service provision recognized as inadequate such as water trucking is increasingly replaced with sustainable pro-poor systems.
- The MWI gives priority to investments directly benefiting the poor (fast tracking MDGs, PRSP, Vision 2030).
- The sector development report replies to the key indicators for Human Right and Water.

Challenges

Kenyan infrastructure is not sufficiently developed and managed, to be able to fulfill the indicators defined for Human Rights and Water. Service provision for the urban poor is largely left to the informal sector, leading to very high, unjustified and uncontrolled water prices and insufficient control of water quality. Due to the high price of water the poor cannot afford the quantity needed for minimum consumption. Furthermore, the poor have to spend hours fetching water of poor quality. In the high density, low income areas in towns, the sanitation situation is deplorable for the poor.

Investments do not focus enough on the fast growing settlements of the urban poor although it is there where the biggest leverage for the achievements of the MDG and Human Rights and Water objectives can be obtained. This has a negative effect on the people's ability to be productive and escape the poverty level they are presently living under.

Recent developments

The government is responding by planning to elaborate a pro-poor WSS strategy which also aims at the progressive realization of Human Rights and Water. The MWI has reorganized the water sector by creating new autonomous institutions such as the WASREB, WSTF (poverty basket) and the WSBs and has allowed for socially responsible commercialization and PSP (WSP). The WSTF has received a clear mandate to improve service provision to the poor by providing funds for low cost

technology. This is to avoid sidelining the poor. Several pilot projects are carried out to improve the living conditions through water supply and sanitation in urban and rural areas.

Strategic response

- Measurable indicators for Human Rights and Water shall become part of the sector indicators.
- The MWI shall continue with its efforts to implement the pro-poor sector reform and pay particular attention to successful approaches and their use for large scale implementation.
- The MWI in collaboration with the WASREB, WSTF and the WSBs will put in place a pro-poor WSS strategy which responds to the requirements of HR and water and opt to prepare for large scale implementation.
- Sustainable low cost technology shall be promoted wherever investments are scarce and in the settlements of the urban poor where most of the households cannot afford, in the medium term, to pay a monthly water bill. Funds available for sustainable and affordable low cost technologies shall be spent in areas where the highest leverage can be obtained (a given amount of funds can provide access to the highest number of additional people). This will ensure fast progress (fast tracking) in the realization of the MDG and Vision 2030.
- Investments in formalized service provision shall be a priority because it contributes to fulfilling requirements for Human Rights and Water.
- Informal providers shall be formalized and obliged to adhere to minimum service requirements. Where informal service provision cannot be formalized special attention shall be paid to replace such services with formalized service providers such as the commercial WSP.
- The WSTF in close collaboration with the WASREB shall play a crucial role in the promotion of service provision to the poor. Increasing efforts shall be made to improve decent living conditions through basic sanitation in the high density settlements of the urban poor.
- This National WSS strategy shall be detailed with a pro-poor implementation strategy elaborated by the key institutions such as WASREB, WSTF, WSBs and key WSP and shall be followed with guidelines for implementation.

6.4 Financing in the WSS sub-sector

Goal: Sufficient funds are available for the achievement of sector goals and MDGs.

Medium term indicators for achievement:

- Funds provided for WSS investments are increasing over time.
- The efficiency on use of funds is increasing and regularly documented with value for money studies.
- The self financing of the sector is rising annually
- By 2008, a SIP is reviewed and updated annually whereby the WSBs are offering detailed input on investments' needs and realization.

Challenges

Insufficient funds are available in order to rehabilitate and extent existing systems or to build new infrastructure for WSS. Inadequate information/data makes it difficult to channel investments where the biggest benefit can be achieved. Generating funds from the private sector for WSS infrastructure

leads to very high tariffs, difficult to be accepted by the consumers. In order to attract more funds from development partners', which offer better conditions than the private sector, project proposals need to have the required quality and prove sustainability of the investments to be carried out. The full potential of self financing of the sector is still not generated, by achieving high billing rates according to consumption, high collection rates and an appropriate tariff level with a socially responsible tariff structure. The payment of the WSP to the WSBs are not yet based on real cost of operation and a well defined investment plan of the WSBs. The income in the WSS sub sector is still not fully ring-fenced as payments by the WSP to the municipalities are not used for WSS. In addition, the payments to control structures at the operational level but also at the sector institutions are much higher compared to many other African countries, thereby using funds for operational costs which could be better channeled to investments for the poor.

Recent developments

The development of regulation and commercialization of service provision will lead to higher performance of the providers and consequently to increasing interest of the development partners to invest in the sub sector. Regulation will also introduce a tariff model and procedures for tariff adjustments which include tariff negotiation linking performance to tariff adjustments. Thus, higher performance will allow for higher tariffs and an increasing self financing of the WSS sub-sector.

As the WSBs are now operational investments for rehabilitation, extension and new infrastructure can be channeled through these institutions. As asset holders the WSBs shall actively participate in resource mobilization.

Pro-poor investments such as low cost technology (hand pumps, well protection, water kiosks, etc.) shall be channeled through the WSTF and will allow to enforce the national concept for such investments not only for the design and construction but also for the management of such systems in order to ensure anchorage in operation, adequate coordination and linkage of the involved stakeholders, sustainability and compliance with standards and regulation. In addition, a SIM (Sector Investment Module) has been elaborated and will be improved gradually.

Strategic response

- Promote the elaboration of project proposals by the commercialized WSP, the WSBs and the WSTF to development partners in order to attract increasing funds from the development partners to favorable conditions.
- The potential of self financing of the sector is enlarged by improving billing, revenue collection for WSS service provision and regular justified tariff adjustments.
- Tariff adjustment procedures ensure that the payments from the WSP to the WSBs cover only justified costs and a well defined investment program.
- Payments to institutions not using the funds generated in the sub-sector for WSS shall be phased out gradually.
- The costs of regulation shall be borne by the consumers through a regulatory levy which covers only justified costs for regulation (around 1 % of the turn over of WSS service provision).
- All tariff adjustments shall be linked to performance.
- Generally, all funds for rehabilitation, extension and new infrastructure shall be channeled through the WSBs except for pro-poor investments which shall be channeled through the WSTF.
- Market place financing mechanism will be explored and tested where feasible.

6.5 Gender mainstreaming

Goal: Ensure that employment practices and provisions give due attention to issues of gender

Medium term indicators for achievement:

- The numbers of female employees at the institutions and formal providers increase steadily.
- The number of female operators for public/communal outlets at the formal providers exceeds 30% by 2009.
- Female board members in the sector institutions occupy, at minimum, one third of the available posts of board members and 50% in the committees for rural WSS by 2009.

Challenges

Women and children are among the poorest in society and are the most affected where WSS services are inadequate. Women are often not sufficiently involved in the decision making process in comparison to the role they play for WSS in the household. In addition, among the employees in the sector, women are under-represented

Recent developments

Projects pay increasing attention to the fact that water collection and sanitation is predominantly a women and children affair in households and are thus, introducing quotas for women in the planning and decision making groups / committees in the rural WSS. Good progress in this regard has been made since the water sector reform started. This promotion will also help address the gender imbalance at other levels in the water sector and promote good governance such as safekeeping of the funds and the facilities. It is also recognized that improved service conditions in low-income areas will particularly enhance the living conditions of women and children. Consequently, the water sector strategies are becoming increasingly poverty and gender oriented.

Strategic response

- The gender policy in the sector shall be completed and adopted, and implementation shall start in 2008.
- Empower women to play a more prominent role and participate in decision-making processes at all levels. Development efforts shall give priority to low income areas and integrate women to a higher extent in the decision-making process than in the past.
- With equal qualifications and experience, providers shall select, preferably, women as staff and operators for public/communal outlets such as kiosks.
- Decision makers, planners and implementers shall be sensitized by means of awareness campaigns on gender and its impact in improving water and sanitation services.

6.6 HIV/AIDS

Goal: HIV/AIDS fully mainstreamed in the water and sanitation sector.

Medium term indicators for achievement:

- All water and sanitation projects mainstream gender and HIV/AIDS from 2008.

- Increasing funds are allocated to develop WSS in low-income areas where the incidence of HIV/AIDS is high.
- 5 formal providers are sensitized annually to use their water kiosks for HIV/AIDS campaigns and prevention from 2008.

Challenges

The HIV/AIDS pandemic has a very negative effect on the professionals involved in the water and sanitation service provision. This reduces the number of experienced managers and professionals at national, regional and implementation level

There is still room to use water sector infrastructure such as pay stations and water kiosks for mainstreaming of HIV/AIDS. Water kiosks especially are ideal for mainstreaming as consumers fetch water daily or every second day. In most of the institutions in the water sector there is no work place policy on HIV/AIDS.

Recent developments

HIV/AIDS measures, such as making condom dispenser and posters available, are carried out in the water sector institutions. Equally, personnel of the sector institutions participate in HIV/AIDS events such as the HIV/AIDS world day celebration.

Strategic response

- The institutions and providers shall complement sensitization and access to protective material with a workplace policy wherever possible and use the infrastructure such as water kiosks for HIV/AIDS measures. NGOs shall help initiating and maintaining such measures.
- The MWI, the national and regional institutions, the service providers and all the user groups shall include HIV/AIDS mainstreaming activities into their action plan.
- All institutions in the water sector shall be encouraged to develop a HIV/AIDS work-place policy with the support of a qualified NGO.

6.7 Environmental Sustainability

Goal: The water resources are preserved and maintained according to the defined standards, the effluent is discharged in a controlled manner and UFW at WSS systems are not above 30%.

Medium term indicators for achievement:

- All water service providers holding an SPA report on water quality testing for raw and drinking water and effluent to the WASREB and the WSBs. Results are made public from 2008.
- Each provider holding an SPA offer collection and inlet points for effluent from onsite sanitation by 2010.
- 50% of the water service providers holding an SPA have established a protection zone of their water sources extraction points according to the requirements of the WRMA by 2009 and 100% by 2011.
- The average rate of UFW is decreasing nationwide every year from 2008.
- Billing according to consumption is increasing in the sub-sector annually from 2008.
- Eco-sanitation shall receive priority wherever consumers accept such technology from 2009.

Challenges

Conservation of water resources has not been tackled in an integrated manner. As a result, there has been unprecedented pollution and degradation of water resources arising from uncontrolled effluent discharge through sewer systems and onsite sanitation.

Most of the service providers direct their effluent into the raw water bodies without adequate treatment. In addition, providers do not offer sufficient collection and entrance points within their sewer network for disposals of onsite sanitation. Many water sources especially in the high density settlements of the urban poor do not have protection zones for ground water, thus making the water use unsafe.

Unaccounted-for water among service providers is still very high and is average 60%. This is mainly due to non-metered water consumption and inefficient repair of networks.

Recent development

Commercialization of water services has increased performance, also in terms of UFW. Some of the providers have managed to bring UFW down to 30%. Equally, such providers have started to monitor effluent quality and are thereby improving the discharge conditions. The information system Waris obliges the providers to report on the effluent discharge.

Strategic response

- The MWI through the WRMA shall enforce guidelines to establish protection zones for water extraction points used by the service providers. The WRMA shall receive authority's support for the implementation of protection measures. Wherever this is not possible such as in the settlements of the urban areas these water sources shall be declared unsafe and not counted for coverage.
- Although the NEMA (National Environmental Management Authority) and WRMA (Water Resource Management Authority) are responsible for the control of pollution the WASREB and WSBs shall enforce water and effluent quality testing and publication of result by the water service providers. To this effect the WASREB shall issue guidelines.
- The MWI and the WRMA shall support awareness measures on the importance of protecting water bodies from pollution.
- Persons handling wastewater from septic tanks and other on-site installations shall receive incentives from the WSP to discharge at treatment facilities or inlets at the sewer systems.
- Environmental friendly basic sanitation such as ecosan shall receive priority whenever possible. A mix of technology for basic sanitation shall help to enhance acceptance among the users and limits the risk of polluting of groundwater.
- Sector institutions shall strengthen demand management by ensuring that service providers increase billing efficiency according to consumption (water metering), improve network management and for efficient water use at household level. Benchmarking in the sector shall include relevant indicators.
- The WSTF shall approach financing institutions to provide funds such as subsidies or revolving funds to finance rain water harvesting in urban areas in collaboration with the WSB and the commercialized WSPs, as well as, among communities in the rural areas.

6.8 Disaster Management

Goal: The sector institutions and the providers are prepared to prevent and face disasters in WSS.

Medium term indicators for achievement:

- Guidelines on minimum requirements for disaster preparedness in WSS are made available by the WASREB in 2009.
- In cooperation with the MLG all new major constructions shall be obliged to install water harvesting installations.

Challenges

Rain water harvesting is so far not exploited sufficiently despite the scarcity of water resources in the water-stressed areas. Unfortunately, the initial high capital cost makes it difficult for communities in peri-urban and rural areas to replicate this technology. Currently droughts which have an impact on the water availability for the providers are being managed in a fragmented ad-hoc and uncoordinated manner. A comprehensive framework for water-related disaster prevention, management and mitigation in WSS is yet to be developed. As such there is need for more systematic measures to manage emergency situations in WSS and establish a strong link between WRM and WSS provision.

Relief efforts carried out by external agencies and NGOs are generally not linked to the new structure in the water sector, reducing the option to reinforce disaster preparedness of the government and the sustainability of such efforts.

Recent developments

The sector reform established new institutions which are in the process of developing regulation and information systems. This is a good opportunity to including the aspect of effluent control and disaster management in WSS. Nevertheless, such guidelines are not published and enforced yet.

Strategic response

- To attain maximum level of preparedness, management and mitigation for emergency situations in WSS the MWI in cooperation with the WASREB shall develop plans for relevant emergency situations.
- Guidelines issued by the WASREB shall oblige the WSP to establish monitoring systems and compulsory measures if disaster strikes.
- Areas prone to water-related disasters shall be identified and mapped for use in the planning and management of disasters. The WSP shall be associated with such activities.
- The MWI shall encourage agencies offering drought relief for WSS to integrate their actions in the sector-wide programming and provide such support in close cooperation with the relevant sector institutions.
- Design, construction and management of dams used for water services shall comply with established standards.

5) Implementation of the National Water Services Strategy

The NWSS gives the framework for the implementation of the sector policy of the GoK. It gives guidance to the institutions, service providers, development partners and other stakeholders for the way sector goals shall be achieved.

In order to implement the NWSS the institutions and providers in the water sector shall elaborate actions plans with a horizon of at least 3 years and ensure its annual updating. The action plans shall also include the key elements of the business and investment plans, the sector undertakings agreed upon during the annual SWAP conferences and any other key activities judged necessary by the MWI. The budget for the sector institutions shall reflect the updated action plan.

The action plans of the institutions based on the NWSS have to feed into the performance contracts signed annually with the MWI, which will also ensure that contributions of the development partners are aligned to the NWSS in accordance with the recommendation of the Paris Declaration on Effectiveness of Development Aid.

The institutions such as the WASREB, WSTF, WAB and WSBs shall ensure that sector stakeholders on local level such as providers, NGOs etc. contribute to the implementation of the NWSS and elaborate strategies detailing the NWSS such as a pro-poor strategy for service provision.

6) Monitoring and Evaluation of the Strategy

Through the performance contracts from the institutions and providers including key indicators of the NWSS strategies and the sub-sector information systems like WARIS etc. the MWI will be in a position to monitor and evaluate progress in the implementation of the sector policy through the NWSS. Thereby, the MWI will also be able to assess the contribution of the different sector stakeholders. Indicators for the implementation of the NWSS shall be revised regularly and adjusted whenever needed and progress has been achieved.

The performance and the success in the implementation of the NWSS of the involved institutions can than be made public in the reports of the MWI.

7) Cooperation on National Level for the Water Services Sub-Sector

The MWI shall ensure that coordination and cooperation on national level between the different Ministries and state agencies as well as partner institutions and agencies are effective and efficient. The SWAP shall be used to enhance cooperation and harmonisation with and among partners and the streamlining of their support to national policies and strategies.

Concerning the coordination and cooperation with GoK institutions the MWI shall concentrate on the development of activities in the areas of common interested between the different Ministries closely related to the water services sub-sector.

Ministry of Finance

Holding the responsibility to monitor and regulate the finances of all public bodies and to manage fiscal activities on national economic policies, common areas with the MWI are the mobilisation of sufficient funds for the water and sanitation sector and the constant improvement of the use of such funds.

Ministry of Planning and National Development (MoPND)

Being responsible for the monitoring of the implementation of the Economic Recovery Strategy for Wealth and Employment Creation and the Millennium Development Goals the MoPND through the Central Bureau of Statistics collects and analyses baseline information on national development and poverty reduction goals. It is the common interest of the MoPND and its substructure like CBS and the MWI to coordinate the collection, interpretation and publication of data (such as Kenya Integrated Household Business Survey - KIHBS) related to the water and sanitation sub-sector in order to provide improved and timely statistics which reflects the situation on the ground. Only data reflecting the situation can be used to review sector policies and strategies in order to improve the well being of the Kenyan population.

Ministry of Health

Holding the lead in environmental sanitation areas of common concerns with the MWI are basic sanitation infrastructure, promotion of hygiene through sufficient safe water supply and hygiene sensitisation in order to reduce water borne diseases. Common interests are also in the area of adequate water supply to and disposal of effluents from health installations such as hospitals in order to ensure acceptable condition for treatment of patients and to protect water resources.

Ministry of Local Government and Ministry of Housing

Responsible for public services the common areas of concern with the MWI are water supply and sanitation infrastructure (including basic sanitation) and rain water harvesting. In addition, common concerns with the Ministry of Local Government are the performance and good corporate governance of public water and sanitation utilities, as well as environmental sanitation related to disposal of excreta. Common interest exists particularly for public installation where a large number of people are permanently or regular meet such as market places, bus stations, large meeting places, prisons etc.

Ministry of Environment and Natural Resources

Responsible for the protection of natural resources and the environment common areas with the MWI are the control of effluent, disposal of excreta and raw water quality control.

Ministry of Education

Responsible for education common areas of interest with the MWI are training of children and adults on water use, hygiene and basic sanitation as well as protection of water resources.

Ministry of Trade and Industry

Common areas of interest are the control of effluent in order to protect the environment and particularly the water resource. Another area is the use of biogas produced by ecosan installations.

Ministry of Tourism

Responsible for the promotion of tourisme common areas of interest are the supply of sufficient safe water to hotels and other infrastructure for tourism and the environmental friendly disposal of sludge from sewer systems and basic sanitation installations.

Ministry of Agriculture

Common areas of interest include the reuse of sludge originating from sewer and basic sanitation infrastructure and biogas installation combined with ecosan.

Attachments

Chapter NWSS	Indicator	Responsible institution
1	- The number of clustered and commercialized providers is increasing annually from 2007. - The key performance indicators (including coverage) of the providers holding an SPA is increasing annually from 2007. - The WSB and the WSP document their Human Resource Development and spend 0.5 - 1% of their turn over on training as from 2008. - Each new Board of the WSP undergoes training on corporate governance from 2007. - Reporting by WSBs and WSP including on water testing is defined in 2007 and enforced starting 2008. - An annual report on the development of the WSS sub-sector including comparative reporting is issued by the WASREB from 2007 onwards. - All WSBs submit the information on investment for the SIP annually and not later than October in the format requested by the MWI as from 2008. - All WSBs and WSP report on the use and justification of payments made to third parties such as Municipalities from 2008 onwards in order to enhance ring-fencing of income for the water sector (use of sub-sector income for water supply and sanitation). - Annually the MWI, WASREB, WSTF or the WSB publish and disseminate widely one example of best practices annually, not later than the end of the year starting in 2008. - Each WSPs and WSBs distribute for the system under their operation information about water use to the consumers at least once every 3 years.	WSB WSB, WASREB WSB, WSP WSB, WSP WASREB, WSB, WSP WASREB WSB WSB, WSP MWI and new institutions WSB, WSP
2	- Effluent discharge shall meet the relevant standards (Kenyan or in their absence internationally recognised standards) by 2010. - Cost recovery for sewerage system is part of the tariff adjustment procedure from 2008. - In 2008 the WASREB will elaborate a concept for the reuse of effluent and issue thereafter relevant recommendations to the WSBs and WSPs.	WASREB, WSB WASREB, WSB WASREB
3	All relevant sectors have reached a consensus on their respective roles and responsibilities with regard to sanitation by 2008 and their roles are documented in a policy paper.	MWI

	• The WASREB and WSBs propose an implementation strategy for the involvement of the water sector institutions and providers to improve access to basic sanitation for the poor by 2008. • 90% of all investment projects reserve and use the funds relative to the quota for sanitation set by the MWI with effect from 2008. • The WASREB has issued guidelines on sanitation, and together with the WSBs, ensure their enforcement from 2008. • Base line data on basic sanitation are available for 60% of rural areas and the settlement of the urban poor by 2008. • The WSTF encourages integration of basic sanitation in water supply projects by 2008 and finances at least 7 pilot projects by 2009. • A basic sanitation implementation strategy for water sector institutions available 2009.	WASREB, WSB MWI WASREB, WSB WSB, WSP WSTF MWI
4	• National standards (technical and managerial) for low-cost technologies are designed and enforced through the WSTF (finance arrangements) and WASREB (tariff negotiations) by 2008. • An increasing number of public/communal outlets are brought under formal service provision/regulation with approved tariffs (WASREB) and controlled water quality and service level (WSB and WSP). • The number of service areas supplied by providers using raw water from non-controlled sources or sources within or near settlements is reduced annually. All such service areas are identified by 2008. • Baseline data for WSS is available for all settlements of the urban poor in 2009. • Annually the MWI, WASREB, WSTF or the WSBs publish and disseminate widely, one example of best practices for the service provision of the urban poor not later than the end of the year. • From 2008 on, the WSPs (including the support by the WSTF) offer sustainable access to safe water to 500.000 new consumers annually.	WASREB, WSTF WASREB, WSB, WSP WSB MWI, WASREB WSP, WSB, WSTF
5	• Inventory, protection and conservation plan for water points available by 2008. • From 2007 on, all rural water projects have a water sanitation and hygiene education component. • From 2008 on, at least 80% of all newly-created water points	WSB WSB WSB,

	and facilities are still operational 5 years after completion. • Average break down time: water points 1 week, piped systems 2 days, from 2009. • From 2009, at least 80% of the piped installations cover O+M costs from user fees. • Water piped systems provide services at least 12 hours per day on average. • 75% of rural water installations are regularly monitored for water quality by 2008 and 85% of tests comply with water quality requirements by 2009. • All the projects implemented by the WSTF follow standards set for design, project cycle, management etc. and an increasing number of projects funded outside the WSTF follow the same standards. • As part of the 975,000 which need to be additionally covered annually from 2008 on in order to reach the MDGs the WSTF provides financial support to rural WSS projects to offer sustainable access to safe water to 200,000 new consumers annually.	WSTF WSB WASREB, WSB WASREB, WSB WASREB, WSB WSTF WSTF
6.1	• The information systems at national level (WASREB and WSTF) are functional and all WSB report to the WASREB on time by 2008. • 95% of the service providers holding SPAs report on time according to the relevant guideline by 2008. • The development report for the WSS sub-sector is available by the end of each year from 2007 onwards and widely disseminated to the policy makers and general public. • A baseline study for all settlements of the urban poor and rural areas in Kenya provides detailed information by 2009, which is linked to the sub-sector information system and complemented by geographical information systems in all main towns. • By 2008 the MWI has an acceptable overview on coverage for water and sanitation based on agreed definitions. • Research is documenting findings and best practices in the sector and presented at the annual sector conference from 2008	WASREB, WSB WSB, WSP WASREB MWI, WASREB MWI MWI
6.2	• Adequately prepared SWAP reviews and conferences held annually. • 90% of the undertakings agreed at the SWAP conference are realized. • An increasing number of development partners participate in joint programming under the leadership of the MWI without	MWI MWI MWI

	compromising the autonomy of sector institutions. • The MWI signs annually-updated performance contracts with all sector institutions (including indicators for communication such as improved awareness of reform) and ensures adequate monitoring. • All existing WSP have a communication (consumer information, water use, etc.) and report annually (accountability) according to regulation requirements from 2008. Newly created WSP introduce such systems within the first 2 years.	MWI WSP
6.3	• The WASREB, WSTF and WSBs implement a pro-poor strategy by 2008 and ensure alignment of the providers through regulation and investments thereafter. • The WSTF promotes pro-poor projects for water and sanitation in the rural areas and the settlements of the urban poor on an increasing level. • The MWI and the new autonomous institutions ensure that areas with informal service provision shift increasingly to formal service provision and service provision recognized as inadequate such as water trucking is increasingly replaced with sustainable pro-poor systems. • The MWI gives priority to investments directly benefiting the poor (fast tracking MDGs, PRSP, Vision 2030). • The sector development report replies to the key indicators for Human Right and Water.	MWI, WASREB, WSB WSTF MWI, WASREB MWI, WSB MWI
6.4	• Funds provided for WSS investments are increasing over time. • The efficiency on use of funds is increasing and regularly documented with value for money studies. • The self financing of the sector is rising annually • By 2008, a SIP is reviewed and updated annually whereby the WSBs are offering detailed input on investments' needs and realization.	MWI MWI WASREB MWI, WSB
6.5	• The numbers of female employees at the institutions and formal providers increase steadily. • The number of female operators for public/communal outlets at the formal providers is over 50% by 2009. • Female board members in the sector institutions occupy one third of the available posts and 50% in the committees for rural WSS by 2009.	MWI WSB, WSP MWI
6.6	• All water and sanitation projects mainstream gender and HIV/AIDS from 2008.	MWI

	- Increasing funds are allocated to develop WSS in low-income areas where the incidence of HIV/AIDS is high. 5 formal providers are sensitized annually to use their water kiosks for HIV/AIDS campaigns and prevention from 2008.	WSTF WSB, WSP
6.7	- All water service providers holding an SPA report on water quality testing for raw and drinking water and effluent to the WASREB and the WSBs. Results are made public from 2008. - Each provider holding an SPA offer collection and inlet points for effluent from onsite sanitation by 2010. 50% of the water service providers holding an SPA have established a protection zone of their water sources extraction points according to the requirements of the WRMA by 2009 and 100% by 2011. - The average rate of UFW is decreasing nationwide every year from 2008. - Billing according to consumption is increasing in the sub-sector annually from 2008. - Eco-sanitation shall receive priority wherever consumers accept such technology from 2009.	WSB, WSP WSB, WSP WSB, WSP WASREB, WSB, WSP WASREB, WSB, WSP WSB, WSTF
6.8	- Guidelines on minimum requirements for disaster preparedness in WSS are made available by the WASREB in 2009. - In cooperation with the MLG all new major constructions shall be obliged to install water harvesting installations.	WASREB, MWI MWI