



Republic of Sudan

Water Supply and Environmental Sanitation -Policy

2010 September



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1. Introduction

Sudan is the largest country in Africa, covering an area of 2.5 million square kilometre between latitudes °03:00 and °23:00 North and longitudes ° 21:45 E and °38:30 west with a total population of 39.2 million people (according to 5th Sudan Population Census in 2008) and an annual growth rate of 2.8%. It has international borders with nine states and shares the water resources of the Nile basin and ground water aquifers with twelve countries. More than half of the population live in 15% of the total area along the River Nile and its tributaries.

The 15 Northern states of Sudan cover an area of 1.9 million square km² with an estimated population of about 30.9 million people (according to 5th Sudan Population Census in 2008). The country is, located within the arid and semi-arid part of Sub-Saharan Africa which characterized by a hot and dry weather that makes water scarcity a major problem for population living far away from the River Nile basin, the course of the rivers and seasonal valleys.

The poor water supply and Environmental sanitation situation is attributed to many factors, including lagging water development works, inadequate awareness for the need of sanitary living, poverty, unavailability of water supply and Environmental sanitation policy, planning and management difficulties, inadequate funding and the huge population displacement and disruption due to successive emergencies.

2. Water supply and Environmental Sanitation Policy outlines

- 2.1.** The importance of water and environmental sanitation to the health and wellbeing of the people of Sudan needs to be fully recognized by all segments of society. The need for comprehensive Water Supply and Environmental sanitation policy is emphasized by the prevailing health conditions in rural and urban areas, and the need to realize the Millennium Development Goals (MDGs) on water and Environmental sanitation in addition to the Government of Sudan Quarter Century Strategy.
- 2.2.** The objective of the water supply and environmental sanitation policy is to ensure adequate and sustainable domestic water supply and Environmental sanitation services and hygienic practices for all rural, urban and nomadic people of the northern states of Sudan. Water supply and Environmental sanitation policy objectives shall be entirely achieved by 2031 and will begin with achieving water and environmental sanitation related MDGs that targeting increase access to improved water supply and Environmental sanitation for 82% and 67% of the population respectively. The policy also covers schools, health facilities and religious institutions.
- 2.3.** Among the main guiding principles applied for the this policy are the importance of water for life; water as a human right; social conditions necessary for the delivery of water; protection and conservation of water. The guiding principles of environmental sanitation emphasizes access to environmental sanitation as human dignity and focus on hygiene promotion as a major vehicle for preventive health; accountability to prevent water pollution and protect water sources; the community and households play leading roles



in environmental sanitation; and priority given to vulnerable community sections in the development programs of water supply and environmental sanitation. The important role of the private sector has also been recognized as one of the key guiding principles.

- 2.4. Effective water supply and environmental sanitation strategies shall be followed to achieve these targets which include: water supply and environmental sanitation to be given high priority in the development programs of the nation; use of community based and demand driven approaches for water supply and environmental sanitation development programs in an integrated manner; use of appropriate and affordable technologies.
- 2.5. The environmental sanitation and hygiene strategies for rural communities shall mainly concentrate on community based hygiene and Environmental sanitation promotion approaches that include safe water handling and use; latrine coverage and use; hand washing; food hygiene and keeping a clean home environment as the main five components for rural areas.. In addition to the five components, urban environmental sanitation shall aim to use onsite disposal through septic tanks as well as sewerage network systems where viable mainly for collection and safe disposal of wastewater from urban areas. Solid waste management shall also be an urban environmental sanitation priority.
- 2.6. Water supply and environmental sanitation development programs shall be given high priority in funding by the government. In rural water development programs, the government, communities and other stakeholders shall cover the capital investments costs, while beneficiary communities will cover operation and maintenance costs through the development of proper tariff systems. In urban water supply development programs, the capital investment shall be covered by government and other stakeholders whereas operation, maintenance and replacement costs shall be borne by the urban community through tariff structure and service tax.
- 2.7. The roles and responsibilities of the sector stakeholders shall be clearly delineated to avoid duplication and inconsistency in roles. The community shall manage the rural systems and shall be responsible for the system sustainability. The government shall be responsible for supporting and enabling the communities. The government shall also be responsible for institutional and legislative arrangements, capacity building of government staff and communities, and implementation of the policy.
- 2.8. Water supply and environmental sanitation policy shall be interlinked with various other water use policies including Integrated Water Resource Management (IWRM) policy and the Environmental Health policy.

3. Overall objectives of the water supply and environmental sanitation policy

- 3.1. The overall goal of the water supply and environmental sanitation policy is to contribute in improving the health status and living conditions of the population and the economic growth of the nation by providing all of the population with adequate and sustainable access to WASH basic services and hygienic practices.
- 3.2. The objective of the policy is to increase the rates of access to safe water supply in rural areas by 20 litres per capita per day and 90 litres per capita per day in urban areas as well as increasing access to environmental sanitation



services to 67% of the population of Sudan in rural and urban areas by the end of 2015 to achieve the objectives of MDGs.

- 3.3.** This policy also aims at achieving the Government Quarter Century strategic Plan of 2007-2031, that intends to increase the level of access to reach 50 litres per capita per day in rural areas and 150 litres per capita per day in urban areas, in addition full coverage of all schools, public health facilities and religious premises by the end of Quarter Century strategic Plan in the 2031.

4. Water Supply Policy and Strategies

4.1. Water Supply Policy

- 4.1.1.** Access to safe and adequate water supply shall be made available to all people of North Sudan both in rural and urban areas within the shortest time possible
- 4.1.2.** Access to safe and adequate water supply shall be provided to all communities, urban, rural and nomadic populations. It is essential for the personal well being, health, social development and economic productivity and prosperity of the people of North Sudan. The current coverage needs to be increased through additional deployments of resources to meet the growing demand of the communities.
- 4.1.3.** Greater efforts shall be made to overcome the gaps in water supply development to achieve the MDG of access to safe and adequate water to the people of Sudan by 2015. The road map to achieve this MDG target requires the coverage for North Sudan to reach 60% in 2010, 82% in 2015, 90% in 2020 and 100% in 2031. To achieve these targets this Policy shall be implemented in close association with several sector strategies.

4.2. Scope of the water supply policy

- 4.2.1.** The water supply component includes improved and adequate domestic water supply for human consumption (drinking, personal & household hygiene, cooking and washing) and water for livestock.
- 4.2.2.** The scope of this Policy covers all rural and urban water supply services for households, work places, education & health facilities and other public institutions including water for fire fighting. The scope of the Policy in rural areas also covers water supply for the nomadic population and water for their livestock.

4.3. Guiding principles for provision of water supply services

- 4.3.1.** Water is the origin of life and fundamental human necessity as indicated and mentioned in all religions.
- 4.3.2.** Access to safe water is a fundamental human right for human and animal in line with article (?) of the Interim National Constitution of Sudan.
- 4.3.3.** Water has an economic and social value, accordingly the State bears the responsibility in the provision of safe water fairly distributed to all segments of society, and users will bear the costs of production, distribution and



management of the facilities. The poor segment of the society shall not be deprived from the services on the pretext that they are unable to pay its value.

4.3.4. Vulnerable social groups (children, women and the elderly) shall be given a priority and attention in water supply and environmental sanitation services.

4.3.5. In normal situation the priority for water use shall be accorded to the personal use of water for drinking, cooking food, and personal hygiene, while in the case of drought and emergency situation supply of water for drinking shall be given the highest priority among other water uses.

4.3.6. The provision of safe, adequate and sustainable water supply in equitable basis helps to maintain and build social peace and shared prosperity among communities.

4.3.7. Government is the custodian of all water resources in the Sudan in terms of protection from pollution and overuse, ensuring sustainability and to achieve an equitable distribution among communities.

4.3.8. All consumers -individuals and groups- who use the public water systems for drinking and other uses shall pay the water tariff, without exception.

4.3.9. The polluter pays: Surface and groundwater, shall be kept free from contamination that result from uncontrolled sewage flows, solid and liquid waste disposal, industrial waste discharges, chemical fertilizers and pesticides and introduction of other pollutants into the surface water bodies and groundwater aquifers. The polluters, whether individuals or organizations, shall be responsible for all the damage, and for the required cleanup

4.3.10. Private sector involvement in water services: Private sector shall be encouraged and facilitated for active involvement in the provision of water supply services to communities. The government shall empower and support private sector initiatives with required legal instruments including exemptions and creating enabling environment. In doing so, the government shall ensure the needs of vulnerable groups in rural and urban areas are sufficiently met through suitable arrangements.

4.3.11. Government as Promoter rather than implementer: In encouraging the private sector to strengthen water supply services, the government shall act as the promoter rather than the sole provider and implementer. The government shall be primarily responsible for setting policies, strategies, laws, regulations, guidelines, standards and developing sector plans, as well as monitoring and regulating service providers.

4.3.12. Environmental conservation: All construction of water supply facilities shall consider environmental measures for conservation of the environment such as water resources and vegetation cover from over exploitation and contamination.

4.4. Strategies for provision of adequate safe water supply in rural areas

4.4.1. Water needs for domestic use shall be given the highest priority.

4.4.2. Community based and demand driven approaches shall be used. Active community participation at all stages of water supply development shall be followed and community awareness of proper water handling and use, and hygienic living shall be promoted.



- 4.4.3. The leadership role of women in community water supply activities shall be encouraged, including planning, implementation, operation and maintenance and overall management of rural water systems. At the village/community level committees, efforts shall be made to have equal representation of men and women both as members as well as chair/vice-chair positions.
- 4.4.4. The designated government bodies at federal and state levels shall take full responsibility for adequate training, technical assistance and capacity building for community members and sector professionals to achieve sustainable water supply services.
- 4.4.5. To ensure system sustainability, involvement of qualified private sector in the management of water systems shall be encouraged as alternative to community management. In that case, appropriate arrangements are required to safeguard the needs of the vulnerable sections of the community.
- 4.4.6. Water supply and Environmental Sanitation programs shall be implemented as an integrated program to ensure effective health benefits. Institutions responsible for the water supply and environmental sanitation programs shall harmonize and coordinate their activities in planning and implementation in an integrated manner.
- 4.4.7. The pastoralist population shall be provided with access to water supply for their livestock while taking into account the environment conservation measures.
- 4.4.8. Government shall ensure that there is adequate and safe water supply facilities and that are easily accessible from a distance suitable for all communities with affordable costs that help continuity and sustainability.
- 4.4.9. Greater efforts shall be made to overcome the gaps in water supply by providing 20 litres per capita per day to cover 79 % of the rural population in 2015 and 50 litres per capita per day to cover 100% of the rural population by the end of 2031.
- 4.4.10. Increases in the proportion of consumption related to population growth and standard of living shall be taken into account in the programmed expansion into the water supply systems.
- 4.4.11. Water-supply systems in rural areas shall be designed to enable provision of additional water supplies for use in micro-economic purposes, such as rearing domestic livestock and backyard micro-irrigation.
- 4.4.12. Water for domestic use shall be chemically and bacteriological fit for human consumption at all times within acceptable limits. The quality of the water shall adhere to the Sudan water quality standards.
- 4.4.13. Access to rural water supply at a public water points shall be not more than 500 meters walking distance from the dwelling.
- 4.4.14. The selected technology shall be appropriate to the environment, local skills, financial and management capabilities of the communities, continuity and sustainability.

4.5. Strategies for provision of adequate safe water supply in urban areas

- 4.5.1. The needs of water supply for various domestic uses in urban centers shall be given the highest and top priority. Water required for flush toilets and



sewerage systems waste removal from households and public buildings shall be provided where appropriate.

- 4.5.2. The urban water supply systems shall be administratively independent, with an efficient management system and run in a cost effective and sustainable manner.
- 4.5.3. The service level in urban water supply systems shall ensure availability of adequate, safe and accessible water at reasonable distance to all communities, at all times and at affordable cost.
- 4.5.4. Water supply systems in urban areas shall be designed with adequate capacity to provide 90 litres per capita per day to meet daily personal requirements and other uses to cover 93 % of the urban population by end of 2015 and 150 litres per capita per day by the end of 2031.
- 4.5.5. Urban water systems shall be designed to allow for future growth in water demand and allow for growth for timely system extensions.
- 4.5.6. Water for domestic use shall be chemically and bacteriological fit for human consumption at all times within acceptable limits. The quality of the water shall adhere to the Sudan water quality standards.
- 4.5.7. Urban water supply systems delivering water at public water points shall be not more than 100 meters walking distance from the dwelling by end 2031. House connections shall be encouraged in urban water supply systems where appropriate.
- 4.5.8. The selected technology shall be appropriate to the environment and local skills, and financial capabilities, community management capacity to ensure continuity.

5. Environmental Sanitation and Hygiene Policy and Strategies

5.1. Environmental Sanitation and Hygiene Policy

- 5.1.1. Access to adequate environmental sanitation and hygiene services and hygienic practices shall be made available to all people of Sudan in urban, rural and nomadic areas within the shortest time possible.
- 5.1.2. The significance of provision of adequate environmental sanitation, hygiene and safe drinking water as a package, which is clearly evident in the reduction of water and Environmental sanitation related diseases and in improving the health of population, shall be well established at all levels.
- 5.1.3. Political will and commitment by the government in recognizing environmental sanitation as an essential instrument for improving and maintaining public health shall be firmly established.
- 5.1.4. Greater efforts shall be made to overcome the environmental sanitation gap by increasing access to adequate environmental sanitation to cover 67% of population in Sudan by 2015 and 100% by the end of 2031 to achieve both the MDGs and the government Quarter Century Strategy.



5.2. Scope of the Environmental Sanitation and Hygiene policy

- 5.2.1.** The environmental sanitation and hygiene component includes hygiene promotion as a strategy consisting of water handling, storage and use, latrine coverage and use, personal hygiene with focus on hand washing, food hygiene, and home and surrounding environment cleanliness.
- 5.2.2.** The scope of this Policy covers urban and rural environmental sanitation in communities' households and local institutions such as schools and other educational institutions, health facilities, religious institutions, commercial premises and cultural and recreational centres such as hotels and recreational centres.
- 5.2.3.** The environmental sanitation component also includes safe waste water and solid waste management (collection and treatment); and disposal in urban areas.

5.3. Guiding principles for provision of Environmental Sanitation and Hygiene services

- 5.3.1.** Hygiene Promotion is an effective preventive means in public health management: Hygienic living is the best means of preventing adverse public health conditions. It is much less expensive and easy to manage in the day-to-day life of the people, once it is an accepted way of life. Hygiene promotion is an essential strategy in water supply and environmental sanitation development activities and needs to be rigorously applied to be successful in improving public health conditions in the various community environments, at individual households, communities, schools and health institutions level.
- 5.3.2.** The polluter pays: The environment shall be kept free from contamination and pollution as the result of uncontrolled sewage flows, solid and liquid waste disposal, industrial waste discharges, chemical fertilizers and pesticides. The polluters whether individuals or organizations, are responsible for all the damage, and for the required cleanup.
- 5.3.3.** Rural environmental sanitation is primarily the responsibility of each household and the community: Each community shall shoulder the responsibility of maintaining an open defecation free (ODF) environment through collective decision making. Each household shall be responsible for the environmental sanitation tasks in its yard. However the government shall have the responsibility for creating awareness and demand in the community for all environmental sanitation measures. Community-based and demand-responsive approaches shall be applied at household, community and government levels to fulfil their respective responsibilities in the drive toward total rural environmental sanitation.
- 5.3.4.** Urban environmental sanitation is primarily the responsibility of local government and household: As the urban environmental sanitation facilities are usually expensive and require specialized technical skills to establish, the state and local authorities shall take initiative to plan and establish such facilities with the community's involvement. An appropriate mechanism shall be established to sustain such facilities by introducing cost recovery from households. In doing so, the government shall ensure the need of the poor segment of society is addressed by making suitable arrangements.



- 5.3.5.** The vulnerable sections of the community, i.e. children, women and the elderly - shall be given priority attention in environmental sanitation promotion: When vulnerable sections of the community have a genuine inability to carry out environmental sanitation measures, they shall be supported by the community and others, and receive priority help to enable them carry out all necessary environmental sanitation tasks within their yards.
- 5.3.6.** Environmental sanitation facilities shall not be allowed to pollute the environment: When environmental sanitation facilities being established by the household or private sector or any other eligible entity, it shall ensure that the waste from such environmental sanitation facilities do not pollute the environment and water bodies, including ground water aquifers.
- 5.3.7.** Private sector involvement in environmental sanitation and hygiene services: Private sector shall be encouraged and facilitated for active involvement in the provision of environmental sanitation services to communities. The government shall empower and support private sector initiatives with required legal instruments including exemptions and creating enabling environment. In doing so, the government shall ensure the needs of vulnerable groups in rural and urban areas are sufficiently met through suitable arrangements.
- 5.3.8.** Government as Promoter rather than implementer: In encouraging the private sector to strengthen environmental sanitation services, the government shall act as the promoter rather than the sole provider and implementer. The government shall be primarily responsible for setting policies, strategies, laws, regulations, guidelines, standards and developing sector plans, as well as monitoring and regulating service providers.
- 5.3.9.** Environmental conservation: All construction of environmental sanitation facilities shall consider environmental measures for conservation of the environment such as water resources and vegetation cover from over exploitation and contamination.

5.4. Strategies for Environmental sanitation promotion in rural areas

- 5.4.1.** Promotion of environmental sanitation shall be pursued in an integrated manner, based on community participation to create effective awareness among communities on proper hygiene knowledge and practices.
- 5.4.2.** Environmental sanitation promotion in the rural areas shall be based on five building blocks so that environmental sanitation and hygiene benefits are achieved and maintained by the communities.
- Safe water handling and proper use,
 - Latrines construction and proper use (low cost option, effectively used and kept clean),
 - Sustained hand washing practices,
 - Food hygiene, and
 - Maintaining a clean home environment.
- 5.4.3.** Promotion measures shall fit with local and environmental conditions – with due respect to existing safe practices, religious beliefs and socio-cultural norms in the specific locality. Awareness and demand creation to ensure



community acceptance and commitment shall be the aim of environmental sanitation and hygiene promotion, and advocacy measures.

5.4.4. The acceptance and success of environmental sanitation facilities in rural areas, particularly household latrines, shall depend on the technology used in that specific area. Environmental sanitation options shall be cost effective and designed in consultation and agreement with the community. Use of local materials without undermining the environment shall be emphasized.

5.5. Strategies for Environmental Sanitation promotion in urban areas

5.5.1. Promotion of environmental sanitation shall be pursued in an integrated manner, based on community participation to create effective awareness on proper hygiene knowledge and practices.

5.5.2. Environmental sanitation promotion in the urban areas shall be based on five building blocks so that environmental sanitation and hygiene benefits are achieved and maintained by the communities.

- Safe water handling and proper use,
- Latrines construction and proper use (low cost option, effectively used and kept clean),
- Sustained hand washing practices,
- Food hygiene, and
- Maintaining a clean home environment.

5.5.3. Collection, storage, removal and safe disposal and treatment of residential and commercial wastewaters through individual disposal systems (such as septic tanks) shall be given the highest priority in urban environmental sanitation. On the other hand the sewage system with proper treatment facilities shall be regarded as a better option.

5.5.4. Collection and safe disposal of solid waste from residential and commercial areas, including institutions and public places should be given the same priority in the environmental sanitation in urban areas. Industrial and chemical waste should be classified, treated and disposed of in a proper manner.

5.5.5. The technology choice shall focus on cost-effectiveness for urban environmental sanitation. The sewerage system which is suitable for built-up urban areas shall be of the right economic scale, affordable and manageable. In the peripheral sections of urban areas where sewerage network system is not available, appropriate technologies shall be explored and used.

5.5.6. Solid waste collection and disposal system shall be designed for cost effectiveness. proper landfill systems and recycling of solid waste management shall be used wherever feasible.



6. Water supply and Environmental Sanitation Policy and Strategies for schools, health facilities and religious premises

6.1. School, Health Facilities and Religious Premises Policy

- 6.1.1.** Accessibility to adequate and safe water supply and satisfactory environmental sanitation for schools, health facilities, religious institutions and markets shall be indispensable at all time.
- 6.1.2.** School children shall have a healthy learning environment, including access to and use of clean child-friendly environmental sanitation facilities, hand washing and water supply. Children shall develop skills, knowledge and attitudes for effective hygiene practices at school and at home.
- 6.1.3.** Priority shall be given to provision of water supply services and environmental sanitation for hospitals and primary health centres.

6.2. Scope of School, Health Facilities and Religious Premises Policy:

- 6.2.1.** The scope of this policy covers water supply, environmental sanitation and hygiene services for all rural and urban for education, health facilities and religious institutions.
- 6.2.2.** The water supply component includes improved and adequate water supply for human consumption (drinking and personal & institution hygiene).
- 6.2.3.** The environmental sanitation and hygiene component includes water storage and use, latrine coverage and use, personal and environmental hygiene with focus on hand washing, food hygiene and safe waste management.

6.3. Guiding principles for provision of School, Health and Religious Premises Water, Environmental Sanitation and Hygiene services

- 6.3.1.** There shall be separate toilets for girls and boys in the schools. The standard norms shall be not more than 50 boys or 30 girls to use one drop hole.
- 6.3.2.** Cost for the water supply, environmental sanitation and hygiene services in schools, health facilities and premises and public institutions including operation and maintenance costs shall be covered by adequate budgetary allocations by the respective institutions.
- 6.3.3.** New schools, health facilities and other institutions yet to be constructed shall have reliable water supply, environmental sanitation and hygiene facilities as part of the initial construction components.
- 6.3.4.** Public and private institutions including government agencies, religious institutions, public centres such as parks and recreation areas shall have adequate improved environmental sanitation facilities including urinals, latrines and hand washing facilities with soap. The primary responsibility of management shall remain with respective institutions.
- 6.3.5.** Technology and designs shall be sound, user friendly and relevant to the environmental context. Portable or reusable structures shall be used as relevant.



6.4. Strategies for Water, Environmental Sanitation and Hygiene promotion in School, Health Facilities and Religious Premises

- 6.4.1.** Water, environmental sanitation and hygiene education shall be one of the essential teaching components in schools.
- 6.4.2.** School clubs shall be established for participation and learning of schoolchildren on hygiene and environmental sanitation.
- 6.4.3.** The importance of water, environmental sanitation and hygiene shall be promoted through the relevant communication system both public and private media in addition to community radio, religious education and cultural centres shall be considered and used.

7. Priorities for funding and financial management

- 7.3.** Water supply and environmental sanitation services and hygienic practices development for both rural and urban communities shall be given a top priority in the budgetary allocations, in-order to meet the MDG's and the Quarter Century Strategy.
- 7.4.** The government, at federal and state levels, shall allocate adequate financial resources for water supply and environmental sanitation development programme in rural and urban areas. It shall also allocate adequate budgetary finances for federal and state government bodies for monitoring the water supply, environmental sanitation and hygiene development programs.
- 7.5.** Funding sources shall be from government's own finances as budgetary allocations and other external and internal sources such as multilateral and bilateral sources, development partners such as UN agencies, NGOs and private contributors, as well as community contribution in cash and in kind.
- 7.6.** Investment costs for the establishment of rural water supply schemes shall be covered by funds from the government, development partners and the communities. The operation and maintenance cost, including cost of replacement of equipment, shall be totally covered by the community through tariff system; the tariff structure shall take into account low income and the poor segments of the rural and urban communities.
- 7.7.** Livestock owners shall be charged for the water consumed by the herds based on area specific tariff rate.
- 7.8.** For the urban water supplies, the capital investment shall be covered by government, users (BOT) and development organization whereas operation, maintenance and replacement related costs shall be borne by the community through tariff structure.
- 7.9.** The tariff structure shall take into account low income and the poor members of the urban communities. The tariff structure shall have cross-subsidy element where high volume consumers pay higher rates and low quantity consumers are charged minimum tariff rate.
- 7.10.** Water revenues collected from water tariffs shall be used to cover: operation and maintenance costs of the urban water supply system; spare parts; replacement of aging water supply, environmental sanitation and hygiene equipment. Costs for water connections to homes shall be covered by the respective customers at full cost. Water charges shall be collected on time.



- 7.11. All consumers shall pay their bills without fail, according to the contractual agreement established at the time of the water connection. Defaulters in bill payments, including government agencies, shall be penalized and if failure to pay persists, the connection shall be cut according to the contractual agreement; in addition to that the consumer shall bear the costs of reconnection and service delivery.
- 7.12. The management of each urban water supply shall be through an authorized public agency, with an administrative linkage to the respective state, which provides overall supervision. The financial management of the water system shall be independent and shall have its own accounts that clearly record and store all water transactions at all times for periodic auditing.
- 7.13. Rural communities shall be self-reliant in establishing and maintaining household Environmental sanitation facilities. The vulnerable groups such as the real poor, the old, the sick and the disable shall be supported by the hosting communities, government and development agencies.
- 7.14. Recognizing the capital intensive nature of urban environmental sanitation infrastructure, the investment cost shall be borne by the government, from both internal and external sources. The operation, maintenance and replacement costs including any financial costs related to the investment system) shall be borne by the urban community as a whole through progressive tariff structure. The charge to each customer shall be based on properly identified environmental sanitation tariff system.
- 7.15. The water tariff structure shall be responsive to low income and poor urban communities. It shall have cross-subsidy structure for water use and wastewater generation, where high volume water users pay higher rates and low quantity users are charged at minimum rate.

8. Roles and responsibilities of the sector stakeholders

Stakeholders in the rural and urban water supply and environmental sanitation shall carry out their individual roles and responsibilities with clarity, coordination, and fulfil their mandates and commitments to achieve the established water supply and environmental sanitation objectives.

Various stakeholders in the water supply and environmental sanitation sector shall move in harmony and coordination to achieve the desired sector objectives.

Clear delineation of mandates and obligations shall be made for each stakeholder in water supply and environmental sanitation development and management activities to achieve the aims of this Water Supply and Environmental Sanitation Policy.

8.1. Role of the community

- 8.3.1. In regard to rural water supply and environmental sanitation, the community shall be the main stakeholder and owner of the rural water supply and environmental sanitation schemes.
- 8.3.2. The village water and environmental sanitation committee shall be responsible for the initiation of WSH schemes and shall actively participate in planning, implementation, M&E, operation and management of the schemes.



- 8.3.3. The community shall be responsible for all costs related to the operation and maintenance of the water systems and shall be enabled to properly administer the system' finances.
- 8.3.4. The community shall protect the water supply and environmental sanitation services, the water resources and the surrounding environment.

8.2. The Role of Mahalia/Locality

- 8.3.5. The Mahalia/Locality shall be responsible for preparing proposals of the WES projects for the communities in the villages with the required budget details in close coordination with SWSC.
- 8.3.6. The Mahalia/Locality shall establish Water and Environmental Sanitation (WES) unit it at Mahalia/Locality level; and water and environmental sanitation committees at village level to participate in the planning, implementation and monitoring of water supply and environmental sanitation schemes.
- 8.3.7. The Mahalia/Locality shall be responsible for supporting and monitoring operation and maintenance of water supply systems which are managed by communities.

8.3. The Role of State Water and Environmental Sanitation Corporation

- 8.3.8. The SWSC shall be responsible for planning, implementing and monitoring water supply and environmental sanitation projects in the state. It shall be responsible for selecting appropriate technology choice based on the manuals developed at national level.
- 8.3.9. SWSC shall follow efficient and effective administrative and financial management systems for water supply and environmental sanitation services in the state. It shall initiate projects for external funding. It shall also coordinate with PWSC for federally externally funded WES projects.
- 8.3.10. SWSC in coordination with PWSC shall actively engage in training and upgrading of staff skills and communities technical and managerial capacities. It shall initiate twinning approach internally and externally.

8.4. The Role of the State Government

- 8.4.1. The state government shall be responsible for planning water supply and Environmental sanitation services in the States and securing financial resources for the development of water supply and environmental sanitation systems in both rural and urban areas.
- 8.4.2. The state government shall develop the act of the SWSC and establish the board of director for the SWSC. The board of director shall play key role in planning and, monitoring the performance of the SWSC in addition to instituting water tariff systems and supporting its approval at state legislative body.
- 8.4.3. The state government shall be responsible for issuing necessary legislations and regulations to ensure protection of water resources in the state in consultation with Federal Ministry of MoIWR.
- 8.4.4. The state government shall ensure the provision of safe, adequate and reliable water supply and environmental sanitation service to all population of the state without discrimination.



- 8.4.5. The State government shall be responsible for the supervision of SWSC to ensure good performance and good governance.
- 8.4.6. SWSC shall be responsible for supervision and monitoring of all water supply and environmental sanitation projects at Mahalia/Locality and facilitate coordination among Mahalia/Locality in all WASH related issues.
- 8.4.7. In case of urban water supply and environmental sanitation services, the community shall be served by a public water and environmental sanitation agency which owns the system and runs it by charging the community for the services it provides.
- 8.4.8. The public water and environmental sanitation agency shall be responsible for maintaining the required service levels both in quality and quantity, and its performance shall be efficient and cost effective at all times.

8.5. The Role of the Public Water and Environmental Sanitation Corporation.

- 8.5.1. PWSC shall, set the standards for drinking water equipment, tools and machines and have the responsibility to carry out large scale procurement of water, environmental sanitation and hygiene (WES) supplies.
- 8.5.2. The PWSC in cooperation with other related ministries shall be responsible for coordinating all foreign assistance in support of water supply and environmental sanitation sector with all relevant ministries and institutions at federal and state levels.
- 8.5.3. PWSC shall take the responsibility of conducting national water supply and Environmental sanitation surveys and in addition to sector evaluations to assess the sector progress, challenges, and future planning.
- 8.5.4. PWSC shall organize national training programmes in drinking water supply and Environmental sanitation for the various sector personnel at the central and the state levels.
- 8.5.5. PWSC shall be responsible for monitoring the water supply and environmental sanitation activities in all the States to ensure efficiency, cost effectiveness and sustainability.
- 8.5.6. The PWSC in cooperation with other ministries shall be responsible for planning, designing and lay down the water supply and environmental sanitation standards and guidelines

8.6. Role of Federal Government

- 8.6.1. The Federal government shall be responsible for establishment of PWSC with clear mandate and roles.
- 8.6.2. Ministry of Irrigation and Water Resources (MoIWR) in cooperation with other ministries involved in water supply and environmental sanitation sector shall take the lead for placing appropriate policy instruments legislation and institutional arrangements to guide, direct, regulate and manage the water supply and environmental sanitation sector.
- 8.6.3. The federal Ministry of Health (MoH) in cooperation with State Ministry of Health shall support putting proper water quality surveillance, environmental sanitation and hygiene systems in place in addition to training of water quality control staff and carry out environmental health assessments and surveys in regard to water quality and environmental sanitation .
- 8.6.4. The MoIWR shall be responsible for the supervision of PWSC to ensure good performance and good governance.



8.7. The Role of the Private Sector

- 8.7.1.** The Private Sector shall be actively engaged in the implementation and management of water supply and environmental sanitation programs including the preparation of designs and carrying out various construction works i.e. drilling and borehole construction, water supply and Environmental sanitation construction, as well as installation of equipment.
- 8.7.2.** The private sector shall be encouraged to be actively involved in the manufacture of water supply construction materials and equipment to ensure national self-sufficiency and efficiency in the water and environmental sanitation and hygiene sector development.
- 8.7.3.** The private sector shall follow the established standards and requirements of the water supply and environmental sanitation.

8.8. The Role of the Development Partners

- 8.8.1.** In the short term development partners shall be engaged in the water supply and environmental sanitation sector, in providing direct development assistance to compliment government and community inputs.
- 8.8.2.** In the long term, the contribution of development partners shall be mainly in capacity building to support communities develop self-sufficiency in water supply and environmental sanitation services.
- 8.8.3.** The development partners consisting of such UN agencies as UNICEF and various international and national NGOs provide assistance in program funding, and implementation as well as in capacity building activities.
- 8.8.4.** The development partners shall render their assistance under the guidance and direction of the PWC at the Federal level and the SWC at the State level periodically reporting to them on the performance of respective programs.

8.9. The Role of the Educational Institutions

- 8.9.1.** Educational institutions such as universities and schools and training centres shall play important role in educating and build capacities of the sector professionals to sustain the services of excising water supply and environmental sanitation sector personnel in addition to involvement in the sector researches and studies.

8.10. The Role of Civic Organizations

- 8.10.1.** Civic Organizations shall be involved in community mobilization, awareness creation, systems monitoring and advocacy including fund raising and labour contribution for the promotion of the WASH services.
- 8.10.2.** They shall also participate in community capacity building and hygiene education to promote environmental and personal hygienic practices.

8.11. The Role and Means of Communication Channels

- 8.11.1.** Different forms of communication channels such as radio, television, newspapers and the Internet shall be used to disseminate knowledge and awareness in relation to water and environmental sanitation, water



conservation and protection of water resources and sources from pollution as appropriate.

- 8.11.2.** Traditional means of communication and local community leaders such as religious and community leaders and community based organizations shall be used in the promotion of water, environmental sanitation and hygiene services as appropriate.

9. Institutional and legislative measures for water supply and environmental sanitation sector

- 9.3.** National commission for the water and environmental sanitation sector shall be established at the national level with representatives from the Ministry of Irrigation and Water Resources, Ministry of Health, Ministry of Education, Ministry of International Cooperation, Ministry of Environment, Ministry of Finance, PWSC and other key sector partners to coordinate, supervise, harmonize, monitor and evaluate sector performance and decisions.
- 9.4.** State council for the water supply and environmental sanitation sector shall be established with representatives from the State Ministry of Physical Planning and Public Utilities, State Ministry of Health, State Ministry of Finance, State Ministry of Education and State Water and Environmental Sanitation Corporation to ensure sector coordination and the successful achievement of policy objectives.
- 9.5.** The National Commission for the Water and Environmental Sanitation Sector and State Council for the Water and Environmental Sanitation sector shall be established with clear TOR, structure and mandate for supporting water and environmental sanitation sector in both urban and rural areas.
- 9.6.** Current drinking water standards for Sudan shall be actively enforced to ensure the standards are applied. Water from new water sources shall be tested to certify that the water is fit for human consumption and water from existing water sources shall be regularly monitored to ensure proper quality standards are maintained.
- 9.7.** Materials used in water and environmental sanitation works shall be governed by quality control laws to avoid toxic and hazardous materials. Toxic and hazardous materials shall be prohibited by law.
- 9.8.** State water resource legislation that allows states to control all the water resources within their state boundaries shall be reformed or created. Consideration shall be given to water-scarce states which would allow the transfer of water from nearby water-rich States. The Federal government, with the agreement of the related states and through MoIWR, shall have a legal mandate to decide on State to State water rights and transfer issue.