

**GOVERNMENT OF NEPAL**

**MINISTRY OF PHYSICAL PLANNING AND WORKS**

**National Urban Water Supply and  
Sanitation Sector Policy**

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**Final Draft**

**April 2009**

## **1.0 Background**

Access to safe drinking water supply and sanitation services is fundamental to improving public health and meeting national poverty reduction objectives. As is now widely recognized, lack of access to these essential basic services contributes substantially to the high burden of disease that needlessly foreshortens and impairs the lives of far too many of Nepal's citizens.

The economic costs of ill health, medical treatment, lost time and opportunities caused by lack of access to these basic services accounts for an estimated cost in South Asia of around \$34 billion<sup>1</sup>. The economic returns on water and sanitation investments in South Asia are around 3.5 for water supply, 6.9 for sanitation and 6.6 for fully integrated projects<sup>2</sup>. The Millennium Declaration adopted by the member states of the United Nations are committed to the Millennium Development Goals (MDGs). Target 10 under Goal 7 of the MDG clearly states "to halve by 2015 the population without sustainable access to safe drinking water and basic sanitation".

For the above reasons, the Government of Nepal remains fully committed to the provision of safe drinking water and sanitation services for all of its citizens as a fundamental human need and a basic human right and on providing improved water supply and sanitation services of medium and higher levels, that are commensurate to affordability of the townships.

## **2.0 History**

Development of this National Policy for Urban Water Supply and Sanitation follows ten years of intensive legislative work by Government and the progressive development of a wide range of sector and sub-sector policies. These include water resources, national sanitation, rural water supply and sanitation, water quality and urban development.

In the 1990s, political liberalization and a focus on decentralization, saw important new sector actors emerge, namely community groups, local government and the private sector –

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<sup>1</sup> Human Development Report, UNDP, 2006, p42

<sup>2</sup> Economic and health effects of increasing coverage of low cost household drinking-water supply and sanitation interventions to countries off-track to meet MDG target 10, WHO/UNDP, 2007

including non- governmental organizations. New working methods were developed including demand led community based participatory approaches which encouraged communities to take full ownership of schemes and allowed scarce sector resources to be used optimally.

Water supply coverage levels began to increase towards target levels as shown by 10<sup>th</sup> Plan 2007 data (Table 1) even if sector definitions of “coverage” continued to vary widely. Sanitation received a generally lower priority than water supplies despite its central role in determining public health. Indicative of progress made in service provision since 2001, Child mortality declined from 43 per 1000 live births in 2002 to 14 in 2006 (NDHS).

| <b>Coverage Indicator</b>  | <b>10<sup>th</sup> Plan Target<br/>(2002-07)</b> | <b>10<sup>th</sup> Plan Achieved<br/>(Basic level)</b> |
|--|--|--|
| <b>% population with access to improved drinking water</b><br>MDG Target: 73%    | 85   | 76.6   |
| <b>% population with access to basic sanitation services</b><br>MDG Target = 53% | 50   | 46   |

Table 1: Water Supply and Sanitation Coverage (2007), Source: NPC

Urban populations currently predominate in the terai and valleys of the mid-hills and are concentrated in 58 municipalities, of which two thirds reside in the 16 largest settlements. Total urban populations grew from 4% of national population in 1971 to 13.9% in 2001<sup>3</sup> and are expected to reach 26.7% by 2021. Urban water demand is increasing rapidly at between 6% and 9% per annum – around three times the national population growth rate – thereby placing a strain on existing urban water supply and sanitation services.

### 3.0 Present Status

GoN investments in urban water supply and sanitation are primarily guided by its Twenty-

<sup>3</sup> Central Bureau of Statistics, 2003

Year Vision (1997-2017), which seeks universal coverage by 2017, and the National Water Plan (2002- 2027). In addition, other key legislation, much of it new and of cross-sectoral relevance, needs to be considered if new Urban Water and Sanitation Policy is to meet its objectives. In this context, the following are seen as pertinent:

*Government's 3 Year Interim Plan (2007- 2010)* provides the most recent guidance on urban sector priorities highlighting, in particular, the need to address the effects of rapid urbanization on service levels, water quality and scheme maintenance. It proposes the full integration of sewerage, on-site sanitation and solid waste management in all urban schemes and specifically endorses cost recovery from consumers. Local authorities are responsible for overseeing project implementation but with private sector organizations playing increasing roles.

Interim Plan further highlights the need for improved transparency and governance systems, including consumer protection. Social inclusion is particularly emphasized including a requirement to ensure that women and disadvantaged groups are fully represented and involved in development processes.

*National Policy on Rural Drinking Water Supply and Sanitation (2004)* provides guidance on water and sanitation service provision in rural areas using community led participatory approaches. While partially relevant to the urban context, particularly around the integration of inputs and local capacity building, it generally fails to address the complex operational challenges to be faced by Municipal authorities in implementing and managing urban services.

*National Drinking Water Quality Standards (2006)* provide details of the water quality standards to be applied to all new urban systems and complement the Environment Protection Act (1997) which requires Environmental Impact Assessments (EIA) or Initial Environmental Examination (IEE) of all new projects and pollution control for all water resources.

*The Nepal Water Supply Corporation Act 2<sup>nd</sup> Amendment (2007), Water Supply Management Board Act (2006) and Water Supply Tariff Fixation Commission Act (2006)* facilitate the improved management of Kathmandu Valley's water and sanitation services. These establish

the legal basis for private sector management of schemes and independent fee setting and regulation and are applicable to all urban schemes.

GoN's *Local Self Governance Act (1999)* provides the legal basis for the devolution of responsibilities and authorities for social, economic, institutional, and physical infrastructure development, including water and sanitation systems, to local government. While periodic district plans have been formulated in 52 districts a decade long political conflict, including the absence of locally elected officials for most of this period, have frustrated implementation plans.

*National Urban Policy (2007)* highlights the historical imbalances and haphazard nature of urban development in Nepal. It views urban centres as catalysts for economic development linked to north-south and east-west access corridors and flags poor sanitation, environmental degradation and lack of services by the urban poor as requiring urgent attention. Urban Policy proposes building the capacity of Municipalities to plan and manage integrated local development activities including the preparation of urban master plans to be moderated by central and regional authorities. Private sector involvement and investment in infrastructure development is specifically sought.

At the implementation level four major initiatives are addressing the Nation's urban water supply and sanitation challenges and provide important insights for the development of this policy. These are the Small Towns Water Supply and Sanitation Sector Project; the Kathmandu Valley Water Supply Sector Development Program; the Urban and Environment Improvement Project (UEIP) and several schemes managed by the Nepal Water Supply Corporation (NWSC).

#### **4.0 Problems and Challenges**

Major issues and challenges identified from various sector assessments are as follows:

1. Expansion of services has not been very systematic and effective in the absence of master plans to guide the development of water supply and sanitation systems in urban areas. Many urban areas still have poor sanitation services and suffer highly degraded urban living environment.
2. Coordination in the sector is not very effective as the institutional set up for providing

water and sanitation services in urban areas are fragmented. Roles of DWSS, NWSC, WUSC and local governments are not clearly separated and their areas of operation are not clearly defined. Operating models are agency specific and therefore widely vary between townships creating confusion in users of services.

3. WUSCs and municipalities require significant strengthening for effective management and implementation of urban water supply schemes.
4. Emphasis on cost recovery objectives also increases the risk of poor and marginalized groups not being adequately served. Sufficient safeguards are required to prevent this from happening.
5. Insufficient allocation of finance and priority towards schemes maintenance have adversely impacted on the operating efficiency of the systems.
6. It has not been possible to attract the domestic private sector to take on the operation and management of schemes due to low tariff levels, that are generally inadequate to support the O & M cost requirements as well as bad health of many urban schemes.
7. Reliable information on coverage, system performance and service delivery are not available due to lack of benchmarking and monitoring and evaluation of urban water supply and sanitation utilities/projects.
8. There is a sizable financial resource gap in the urban sector and additional funds will be required if the sector is to keep pace with projected growth.
9. Increasing number of urban settlements and limited availability of supply sources poses a balancing challenge between supply and demand.
10. Both abstraction of raw water and discharge of used water is not effectively regulated.

## **5.0 Need for New Policy**

Need for the new policy arises because:

- Demand for urban water supply and sanitation system services is increasing both in terms of basic coverage and quality of service attributes due to growth in economy, changes in rural/urban demographic patterns and relatively poor service levels existing at present in many urban areas, which necessitates accelerated development of service systems and improvement in how such systems are operated and managed.
- Development, operation and sustenance attributes of urban water supply systems carry a specific uniqueness as compared to rural water supply systems. Whereas a

comprehensive National Rural Water Supply and Sanitation Policy has been adopted and promulgated by the Government of Nepal in 2004, there exists a policy gap to address the urban water supply and sanitation programs.

- Many institutions are involved in providing water supply and sanitation services in urban areas. The need for an umbrella policy is felt for achieving coherent and consistent development of the sector in urban areas, avoiding duplication of efforts, avoiding confusion of operational modalities and achieving uniformity in service standards across the towns
- Development of water supply and sanitation services within the townships must be harmonized with urban development plans and programs

Overall policy support and guidance is required towards achieving equity in service delivery by ensuring that the financially marginalized households within the system areas are mainstreamed as valid customers of service through design and implementation of financial incentives where so required.

## **6.0 Goal**

The goal of the National Urban Water Supply and Sanitation Policy is to ensure the socio-economic development, improved health status and quality of life of urban populations, including the poor and marginalized, through the provision of sustainable water supply and sanitation services and protection of the environment.

## **7.0 Objectives**

1. To ensure the availability of basic safe, accessible and adequate water supply and sanitation services to all urban populations for improved quality of life.
2. To improve the level of water supply services with at least one-third of the urban population having access to high or medium level services by 2017.
3. To ensure the participations of the users especially women and the vulnerable groups in articulation of their concerns and in decision making at all practical levels.
4. To enhance institutional and operational capacity at local levels for effective operation and maintenance of water supply and sanitation services.
5. To recover capital investment, generate funds for operation and maintenance and

protect & optimize investment on a sustainable basis.

6. To protect, harness, develop and manage surface and ground water sources serving urban centers in an efficient manner.
7. To promote public private partnership in water supply and sanitation services delivery.
8. To enhance sector effectiveness for improved service delivery.

## 8.0 Policy Statement

The Policy recognizes that the scope of urban water and sanitation services extends beyond fulfilling the basic human needs, which aims towards achieving improved quality of life through providing safe, reliable, adequate and enhanced services at affordable prices to the consumers. Compatible infrastructure, appropriate institutional setup, rationalized cost recovery, favorable financing environment, enhanced people's participation and their role in decision making and appropriate partnership with the private sector are recognized as core elements towards achieving these objectives in a sustainable manner. The policy also aims to adopt measures to safeguard the environment and emphasizes achieving a balance with other competing uses of water through adoption of demand and discharge management measures.

The major policy principles in this regard are:

- It is duly recognized that fresh and usable water is a finite and precarious resource and it must be judiciously utilized for municipal consumption. Thus demand side management strategies will be duly considered and promoted while developing and expanding new water supply and sanitation systems. Adequate provisions will be adopted to protect the watershed for ensuring sustainable availability of water. Discharge into natural water bodies will be gradually regulated to protect the ambient water quality.
- Effective and appropriate institutions will be promoted depending upon the characteristics, size and complexity of water supply and sanitation systems to develop implement, operate and manage water supply and sanitation systems in an efficiently consumer responsive manner within the limits of financial affordability. Central subsidies shall be generally discouraged at the operational levels unless for needy targeted cases. The state shall continue to provide partial investment for development of water supply and sanitation systems for communal benefits.



- Users involvement will be promoted through enhanced role in decision making at all levels to inculcate community ownership with aims to achieve a long term financial sustainability and consumer responsiveness in system development, implementation, operation and maintenance and effective service delivery.
- Apart from delivering the services through conventional approaches due preferences will be given to promotion of alternative technical options like rainwater harvesting, water reuse and recycling, etc. through the research development and up scaling of such alternative systems, which have a potential to be developed as complementary sources to meet the deficit in supply.
- Poor and the marginalized sections of the communities within the project areas will be mainstreamed as valid customers for service delivery through defining pro-poor strategies for connections and sustained use of services.
- Private participation will be encouraged on development, implementation, operation and maintenance of water supply and sanitation service delivery systems by fully or partially outsourcing provision of bulk water, system maintenance, management and other components of service delivery, as feasible.
- Bench marking and monitoring of urban water supply and sanitation systems against pre- defined indicators and service standards will be accorded a high priority at the national level. The knowledge and information management for the sector will be enhanced through creation, updating of central database and sharing through publication and dissemination.

## 9.0 Strategies

To ensure that policy is carried forward, the following strategies are identified:

### 9.1 Public Health

**(Objective 1:** To ensure the availability of basic safe, accessible and adequate water supply and sanitation services to all urban populations for improved quality of life.

**Objective 2:** To improve the level of water supply services with at least one-third of the urban population having access to high or medium level services by 2017.)

Water supply systems will be augmented and developed as necessary to ensure that all urban populations have access to a reliable and potable drinking water services either through at least a yard connection or through a communal water point at an accessible point not farther than 100 meters of their dwellings. This shall be achieved through:

- i. Implementation of new projects in emerging and small towns areas, market centres, etc., (by fulfilling the 15 year Development Plan recently updated)
- ii. Augmenting of system delivery capacities in medium and larger town areas through harnessing additional sources and reducing technical losses.
- iii. Installation of new and upgrading of Water Treatment Plants, as necessary, to produce and distribute water in accordance to the standards and principles set out by the National Drinking Water Supply Guidelines.
- iv. Gradually improving the distribution system capacity to provide safe, reliable and continuous water supply under acceptable pressure. Computerized modelling of distribution system areas will be promoted for larger towns wherever feasible.
- v. Commissioning of Melamchi Water Supply Project for augmented bulk water supply in Kathmandu Valley.
- vi. Promotion of conjunctive use of ground and surface water supplies to balance the dry and the wet season capacities in Kathmandu Valley and other areas as practical.
- vii. Undertaking large scale improvement of treatment capacities and distribution network inside the Kathmandu Valley.
- viii. Promoting collection and utilization of rainwater harvesting and other appropriate technologies at domestic and communal level wherever feasible.
- ix. Raising consumer awareness towards demand management and household level of treatment.
- x. Developing and implementing Water Safety Plans by the water utilities. The implementation of these plans will be adequately monitored. Capacity of the water utilities will be developed to regularly monitor water quality by testing of samples to comply with the physical, chemical and biological parameters.

Existing provisions of surveillance through Ministry of Health and its agencies will be activated. A systematic process of monitoring, publication and dissemination of water quality data for public consumption will be initiated.

- xi. Appropriate on and off site sanitation systems will be developed, implemented and promoted both at project and household levels to suit local physical environment, practices and affordability. Existing sewer and other sanitary systems that do not conform to sound environmental engineering practices shall be re-engineered for better environmental friendliness.
- xii. Innovative forms of on-site sanitation including eco-san will be promoted. Standards for wastewater treatment and discharge will be enforced in accordance with the National Environmental Rules and Regulations. The safe recycling of solid waste will be promoted.
- xiii. The Government through its line agencies and NGOs shall promote implementation and use of hygienic latrines at the household level and shall target 100 percent coverage by latrines in all urban areas by the year 2017.
- xiv. Hygiene promotion through inputs provided by local government agencies, local bodies and NGOs will ensure that water storage, handling and waste related practices are sanitary. Public health interests will be served through the provision of a basic service level to all residents.
- xv. Water conservation shall be extensively promoted through source protection works in all schemes to be implemented or rehabilitated for urban areas. Encouragement through some financial assistance shall be provided to local users groups to protect and conserve local traditional sources like stone spouts and dugwells, based on local requirements and feasibility as well as merit of such proposals.
- xvi. In the event of an outbreak of a water and sanitation related disease; a rapid response team will be mobilized in consultation with the Ministry of Health and Population's Epidemiology and Disease Control Division for containment of the outbreak. A permanent institutional structure will be defined, from the existing for preparedness.
- xvii. In the event of an emergency or disaster, the District Disaster Relief Committee (DDRC) shall serve as the forum for WASH coordination activities

at the local level. The district level WASH cluster shall be led by the district office (Water Supply and Sanitation Division Office – WSSDO) of the sector lead agency DWSS and other WASH agencies like INGOs/NGOs, decentralized offices of the UN agencies and VDCs shall be its members. The WASH cluster at the district level shall liaise with Department of Water Supply and Sewerage (DWSS) which in turn will liaise with the Sector Stakeholders Group at MPPW and coordinate and execute emergency works.

- xviii. At the project design stage demand surveys will determine water consumption rates and allowance made for population growth and economic development. Similarly, sanitation provisions will factor in the management of commercial solid and liquid wastes.

## **9.2 Access to Services and Decision Making for the Poor and Disadvantaged Groups**

**(Objective 3:** To ensure the participations of the users especially women and the vulnerable groups in articulation of their concerns and in decision making at all practical levels.)

Recognizing that the impact of deficient basic services falls most heavily on the poor, policy will ensure that such groups have access to sustainable basic services at affordable prices and have a voice in service-related decision making. As such, squatter and slum settlements residing within service areas of water systems shall not be systematically excluded from basic services.

- i. Formation of Water and Sanitation Users Groups will be promoted to legally establish such groups with defined authority and accountability, as valid entities, in planning, implementation, ownership of systems and operation of services.
- ii. The rights and needs of poor and marginalized groups, and especially of women, will be protected primarily through their statutory and proportional representation and their role in decision making will be enhanced by adoption of effective capacity building measures at both program and project levels.
- iii. Women's participation will be emphasized in all aspects of water supply and sanitation planning, implementation, management, operation and maintenance. Recognizing that men have an equally important role in realizing

the benefits of water supply and sanitation services, they will be encouraged through proper education and awareness programs for effective management of water supply and sanitation at household levels.

- iv. All urban water supply and sanitation projects will be required to prepare social maps to adequately identify urban poor and vulnerable groups requiring special assistance to avail the services. Adequate measures will be defined within the project design documents to address their concerns to ensure that such groups are not systematically devoid from benefitting from the services. Output-based aid (OBA), a strategy for using explicit performance-based subsidies, will be introduced to promote connections of the poor and disadvantaged groups to the water supply and sanitation systems.
- v. Adequate consultations shall be made by the Users Committee with such identified vulnerable groups during tariff setting and their concerns as well as measures for relief will be duly considered during setting of the tariff at the local level.
- vi. To the extent possible, a demand responsive approach will be taken in the selection, planning, design and implementation of water supply and sanitation schemes. This will involve extensive consultations with potential users to understand existing systems, identify technology and service preferences and present the range of technology and cost options available.

### **9.3** Capacity Enhancement for Better Delivery

**(Objective 4:** To enhance institutional and operational capacity at local levels for effective operation and maintenance of water supply and sanitation services.)

Appropriate institutions suitable to the technical and operational complexity of the water systems as well as size of the townships are essential to provide effective consumer services. Water utility operating companies established under commercial principles, government corporation, local users' bodies, local water boards, etc. and their combinations will be permitted depending upon the geographical, technical and financial characteristics of the systems. Adequate institutional and operational capacities will be developed inside such institutions to respond to requirements of local planning, implementation and operations.

- i. Adequate legal provisions will be made to allow local water user groups to form a conglomerate based on efficiency and economic principles for operational ease of water supply systems. Such conglomerates may be graduated to water supply boards with defined legal authorities and accountability based on a criteria of predefined indicators.
- ii. Access of local water bodies, boards, etc. to local commercial financial markets will be encouraged. Policy and legal measures to allow water groups and utilities to avail credit and banking services for enhancement of system and service delivery will be worked out.
- iii. A national system of bench marking and monitoring the water utilities will be established to allow mutual learning and identify corrective measures to improve service delivery. A utility partnership shall be fostered between local water operating bodies at appropriate levels to mutually benefit from their respective strengths and experiences.
- iv. Local water operating bodies will be empowered with adequate operational autonomy at local levels within the framework of national policies, legislation and regulations. In case of utilities operated by central agencies, their local units will be empowered with higher level decision making authorities at local levels. A structured mechanism will be established at local levels, to allow consumer participation in operation and maintenance and cost recovery of systems. Appropriate linkages with local government will be established for better service delivery.
- v. Cross-linked agencies like administrative, security and other development agencies will support the functioning of local water operating bodies and liaise with other communities to enable them to function in accordance with their mandate and existing legislations.
- vi. Water utility operators will be permitted to propose differential tariff and connection policies for geographically isolated utilities depending upon the socio-economic structure, operation and maintenance requirements and related factors affecting the tariff to make such utilities financially sustainable and independent and responsive to local environment.

## **Human Resource Development**

Adequately skilled and appropriately motivated human resources are vital to achieving efficiency in development and operations of services. Owing to this reason, targeted strategies will be adopted to enhance the capacity of local bodies, WUSCs, private sector organizations and communities to successfully manage urban utilities. Government line agencies will facilitate related processes.

- i. The Central Human Resource Development Unit (CHRDU) will be strengthened to train and produce skilled personnel for building capacities of local and central water operating bodies in technical and operational matters. Appropriate training programs for WUSC members will be organized to enhance their abilities to manage and administer water supply and sanitation systems in accordance with small business enterprise principles and practices. This may include, as required, “on-the-job” management support from private sector organizations specializing in business management services.
- ii. Platforms of other public training institutions (e.g. Nepal Administrative Staff College (NASC), Council for Technical Education and Vocational Training (CTEVT)) and appropriate private sector training institutions will also be utilized for specialized training and other capacity building activities, as appropriate.
- iii. Utilizing the resources of the Ministry of Health and Population, particularly its National Health Education Information and Communication Centre (NHEICC), local governmental agencies and NGOs, for health education, hygiene promotion and water conservation among scheme users, with a particular focus on poor and marginalized groups. (surveillance and water quality).
- iv. Capacity of the CHRDU and DWSS will be enhanced to provide business and commercial support services to the water operating bodies in order to create a more financially sustainable environment in the sector including support to the small scale WUSCs for application of tariff fixation, business plan preparation, etc.
- v. The roles and responsibilities of central and local government, private sector including NGOs and user communities will be harmonized by defining it with

appropriate legislations, regulations and guidelines. Broadly stated, central line agencies will serve as policy makers, regulators, facilitators, technical support agencies and monitoring and evaluation agents. Ownership and responsibility for the implementation and management of projects will be the responsibility of local bodies, municipal authorities, Water and Sanitation User Committees, Water Supply Management Boards and private sector organizations. NGOs will play important roles in community awareness raising and public auditing.

- vi. The Water Supply Tariff Fixation Commission (WSTFC) will regulate tariff fixing in accordance with the provision of the WSTFC Act. Independent oversight of regulatory practices will be provided by municipal authorities and consumer protection groups and user networks.

#### **9.4 Cost Recovery and Financial Sustainability**

**(Objective 5:** To recover capital investment, generate funds for operation and maintenance and protect & optimize investment on a sustainable basis.)

It is essential that economic costs involved in implementing and operating water supply and sanitation services are recovered at an appropriate level to ensure their long term sustainability. Flexible financing mechanisms will be adopted depending upon socio-economic, geographic, technological and institutional characteristics for optimized development of any particular urban system. Tariff will be set with principles to achieve cost recovery in operation and maintenance and a portion of the capital cost for development and expansion. Cross-subsidy will be applied between different economic groups to protect the guarantee of service to the economically poorer segments. Care will be taken in system development, operation and maintenance to reduce financial burden to consumers by rationalizing designs, promotion of social audit practices through promotion of structured public consultations and introducing favourable financing, on-lending and repayment models wherever feasible. Adequate funding to deal with wastewater treatment, management of solid and liquid waste in an appropriate manner shall be made available by the Government within its resources on a priority basis for urban centres. In this regard the following will be done:



- i. All tariff systems will reward water conservation with an objective to promote efficient use of potable water. Deep groundwater abstraction especially for commercial and institutional purposes will be licensed and metered in the first stage to create monitoring database. A system will be worked and introduced in the second phase to volumetrically charge such abstractions.
- ii. To ensure financial sustainability of water supply services a fixed percentage of capital and O&M costs shall be recovered from consumers and local governments. As a flat and uniform percentage of contribution cannot be applied for all urban centres across the spectrum, the level of contribution for implementation will depend upon the size and category of the urban center under consideration. Cost recovery will be based mainly on the following principles:
  - a. A fixed percentage of capital investment costs in cash and in kind depending upon the socio-economic classification, project life cycle cost, technological choices etc. of each urban settlements generally being not less than 30 percent of such costs.
  - b. 100 percent of operation and maintenance costs unless targeted subsidies are available for systems falling under prescribed guidelines
  - c. 100 percent of any loan repayment costs, which have been borrowed by consumers, as a part of their contribution.
- iii. Costs for the construction of surface water drainage and sewerage systems will primarily be met through central government and municipality grants as incorporated in urban master plans, but with connection charges and a proportion of total capital, operation and maintenance costs met by the consumers served.
- iv. On site sanitation will be the primary responsibility of individual households. Subsidies may be available from central and local governments only for poor and marginalised settlements, preferably under an Output Based Aid (OBA) model.
- v. To ensure equitable water supply and sanitation service provision, government subsidies, cross-subsidies, revolving loan funds and other financing

mechanisms will be applied so that only a “lifeline tariff” is charged to users from poor and marginalised groups. Lifeline block for such tariff range shall be generally fixed between of 5000- 10,000 liters per household per month depending upon water availability and socio-economic characteristics of the township.

- vi. Individual tariff setting will be the responsibility of each service providers following guidelines to be issued by the Water Supply Tariff Fixation Commission. Sale and purchase of bulk water by utilities will be permitted within the prescribed guidelines of regulating agencies.
- vii. The WSTFC will follow clear and transparent procedures in the preparation of guidelines for tariff setting and revision, including periodic adjustments for inflation, and issue timely notices to service providers and consumers.
- viii. Penalties for late payments will be clearly laid out and strictly enforced by the water utility operators/service providers. Services may be disconnected for defaulters and the costs of reconnection, including transaction costs, may be charged to the defaulter.
- ix. The utilities shall allow payment models with easier instalments to enable the poor customers to pay connection costs and water bills in a more flexible manner. This process for the poor and marginalized could also be assisted through Output Based Aid (OBA)
- x. Tariff structures and other financing mechanisms will help cross-subsidise services like community taps for the urban poor. Criteria for the identification of target groups, including social mapping, and the award of subsidies will be developed by responsible authorities working with local government agencies, utility operators/service providers, low income consumer representatives, etc. as appropriate.
- xi. Efforts will be made such that poor and disadvantaged groups will be connected to the main water supply and sewerage systems with connection costs built into total scheme costs. Consumers seeking connections after scheme designs and costing have been finalised will be required to pay a separate connection fee.
- xii. For protecting costly infrastructure investments concerted efforts will be made

by government to reduce the financial burden to consumers by rationalising designs, keeping scheme costs at appropriate levels, introducing public auditing to ensure transparency and through the promotion of favourable financing, on-lending and repayment practices.

## **9.5 Environmental Protection**

**(Objective 6:** To protect, harness, develop and manage surface and ground water sources serving urban centres in an efficient manner).

Reduction in discharge in a water source may occur due to several natural and anthropogenic reasons. Contamination of surface and ground water sources by wastewater, industrial effluents and other wastes degrades water quality and adversely impacts on the environment.

Environmental protection and improvement is therefore seen to be vital for the sustainability of scheme benefits and essential in its own right. As such, water will be used in a sustainable manner to meet consumer needs while ensuring conservation of the resource and protection of the environment.

- i. Use and preservation of traditional sources like stone spouts, stone dug wells, etc. will be encouraged as complementary sources of water supply.
- ii. Appropriate revision of the existing legal framework will be made to address issues including the protection and improvement of water sources and catchments, groundwater re-charge, environmental sanitation and water conservation. Environmentally friendly technologies such as rainwater harvesting will be promoted. All environmental standards and regulations will be complied with in all water supply and sanitation schemes.
- iii. Government will review, develop, update and implement effluent standards for the treatment and disposal of raw sewage, hazardous chemicals, industrial and hospital wastes prior to their discharge into local water bodies. Institutions and individuals found in violation of above shall be liable to pay for the pollutions caused in accordance with the provisions stipulated in environmental regulations.
- iv. An Initial Environmental Examination (IEE) and/or Environmental Impact

Assessment (EIA) will be included in all projects to identify potential threats in accordance with the Environment Protection Rules and Environment Protection Act-and Rules (1997) and its subsequent amendments. Such assessments will include consultations with major stakeholders and will include end-point users at all practical levels.

- v. Procedures will be put in place to ensure that environmental impact is minimised prior to, during and following scheme construction and that any required corrective measures are put in place.
- vi. Environment-friendly water and sanitation technologies will be used including low power consumption supply and treatment systems. Particular attention will be paid to environmentally sound wastewater and solid waste management.
- vii. Environmental improvement plans will be implemented in accordance with Urban Master Plans and take into account the protection of local eco-systems and neighbouring watersheds.

**9.6 An Efficient, Effective and Accountable Urban Water Supply and Sanitation Sector**

**Objective 7:** To promote public private partnership in water supply and sanitation services delivery.

**Objective 8:** To enhance sector effectiveness for improved service delivery.

**Roles and Responsibilities**

Sector effectiveness will be increased through establishing a systematic monitoring system to monitor the utilities and their service levels, encouraging mutual learning and knowledge management, conducting impact studies etc. Public and private partnership will be encouraged to fill existing gaps in services, development and implementation of water and sanitation facilities. The roles and responsibilities of central, federal and local government bodies, WUSCs, and the private sector will be clearly defined in accordance with existing legal framework. The primary purposes will be to improve sector efficiency by avoiding overlaps in organisational jurisdiction and improve overall levels of coordination and institutional accountability.

- i. Broadly stated, central line agencies will serve as policy makers, regulators, facilitators, technical support agencies and monitoring and evaluation agents.

Ownership and responsibility for the implementation and management of projects will be the responsibility of local bodies, municipal authorities, Water and Sanitation User Committees, Water Supply Management Boards, government corporation or private sector organizations specific to each town system. Role of NGOs will be encouraged in community awareness raising and public auditing. Salient project information will be made available in Nepali language to the practical extent. Local monitoring capability will be built within WUSC and user groups.

- ii. VDCs, Municipalities and DDCs shall be involved in facilitating, monitoring and regulating the formation, registration and functioning of WUSCs . Local government bodies shall also lead the formulation of water supply and sanitation services development plans in their jurisdiction. These agencies will facilitate the development, implementation and operation of water supply and sanitation services by resolving any water source conflicts, providing financial assistance, negotiating with funding agencies, etc.
- iii. The Water Supply Tariff Fixation Commission (WSTFC) will be responsible for developing framework and guidelines for fixing tariffs. Independent oversight of regulatory practices will be provided by municipal authorities and consumer protection groups and user networks.
- iv. Effective coordination and collaboration among sectoral and inter-sectoral stakeholders will be enhanced at both central and local levels, through the re-activation of Water Supply and Sanitation Coordination Committees at these levels. Regular consultations with sector agencies and development partners will provide the basis for improved sector planning and monitoring and opportunities for collaborative working.
- v. DWSS capacity shall be strengthened so that it can monitor the performance of the service providers, water and wastewater quality and provide technical support to WUSC and other users. It shall also work along the principles of PPP and convert present facilities as cost centres independent of government financial support.
- vi. For technical support to WUSCs, the central line agencies shall look at certifications and regulating private technical agencies – licensing them and

- revoking their licenses for malpractices. User groups shall engage only licensed agencies for managing water systems and providing technical support.
- vii. A conducive and appropriate regulatory framework will be created to encourage private sector involvement in the financing, development, management and operation of urban water supply and sanitation services.
  - viii. Private sector participation and public-private partnerships in the development and management of urban water supply and sanitation services will be encouraged in towards:
    - a. attracting additional investments for infrastructure development and the management of urban water supply and sanitation systems
    - b. improving and expanding drinking water and sanitation services in urban areas
    - c. ensure sustainability of services through adequate cost recovery, improved systems management and clear accountability to users and municipal authorities.
  - ix. Legislative reforms, cost recovery procedures and national drinking water quality standards have been established to provide private operators with the guidance, protection and autonomy to operate systems profitably. These include the “Private Investments in the Construction and Operation of Infrastructure Act 2006”, “Public Private Partnerships Policy (for local bodies) 2003” and the Kathmandu Valley Water Supply Management Board Act (2007). These documents describe the modalities for contract management, implementation, supervision and monitoring, and ensuring transparency of contracting processes. Further measures will be taken to provide the private sector with improved legal protection, access to advantageous financing arrangements and exposure to successful public-private partnership models in Nepal.
  - x. In order to meet social inclusion objectives, conditions will be laid down in the operating license agreement for the mandatory provision of services to the urban poor including squatters and those living in slums settlements and to address environmental concerns, wherever an operating license is issued.
  - xi. Capable domestic private sector enterprises will continue to be given priority

over international private sector participation for water and sanitation services including bulk water supply or only water distribution. Outsourcing of specialized services like operation and maintenance of treatment plants, meter reading and collection, etc. in urban areas will be permitted. Special care will be taken to ensure that requirements of the poor and the marginalized are not compromised as a result of such arrangements.

- xii. Private sector operators or service providers shall be provided with adequate support and legal framework to address problems such as water pollution caused to water sources by third parties.
- xiii. The Government shall create conducive environment for existing entities like NWSC to function as a commercial venture and work as an independent service provider for towns with the resources and capacity to engage such service providers.
  - a. Sector Monitoring and Legislative Framework
- xiv. At the sectoral level, the Ministry of Physical Planning and Works (MPPW) shall be responsible for monitoring major sectoral indicators including coverage by water supply and sanitation services.
- xv. A Sector Efficiency Improvement Unit will be established within MoPPW to effectively monitor the systems and services delivery in a structured manner and sector knowledge management.
- xvi. The Water Resources Act 2049 has clearly given precedence to drinking water for priority use of available water sources. Existing source conflicts shall be monitored and resolved within the ambit of prevailing rules and regulations.

## ANNEX

- i. **Urban:** Urban areas referred in the policy shall be deemed to cover areas and settlements demarcated either by political boundaries or geographical boundaries, as defined by the Local Self Governance Act (1999), National Urban Policy (2007) and the *Fifteen – Year Development Plan for the Small Town Water Supply and Sanitation Sector*.
- ii. **Service Levels:** Three categories of service levels have been defined based on the daily amount of water consumption, quality of supplied water, time period of daily supply and its reliability. The service levels in the Policy are defined hereunder:

| Service Level                        | High                             | Medium                                | Basic  |
|--------------------------------------|----------------------------------|---------------------------------------|--|
| <b>Quantity (lpcd)</b>               | > 100                            | 45 - 100                              | Up to 45   |
| <b>Quality</b>                       | WHO Guidelines                   | National Water Quality Standards 2062 | Rural Water Supply Quality Standards defined under National Standards 2062 |
| <b>Accessibility</b>                 | Within the house (fully plumbed) | Within the compound (yard tap)        | Within 100 meters walking distance (communal taps or yard taps)            |
| <b>Duration of supply (hrs./day)</b> | 24                               | 24                                    | 4  |
| <b>Continuity</b>                    | Year round                       | Year round                            | Year round   |