

GOVERNMENT OF NEPAL

MINISTRY OF PHYSICAL PLANNING AND WORKS

National Urban Water Supply and
Sanitation Sector Policy

4th Draft

February 2009

Contents

1.0 Background	3
2.0 History	3
3.0 Present Status	4
4.0 Problems and Challenges	5
5.0 Need for New Policy	7
6.0 Goal	7
7.0 Objectives	9
8.0 Policy	10
9.0 Strategies	10
9.1 Public Health	10
9.2 Economic Growth	12
9.3 Social Inclusion: Access to Services for the Poor and Disadvantaged Groups	13
9.4 Protecting and Optimising Investments	14
9.5 Cost Recovery and Financial Sustainability	16
9.6 Environmental Protection	18
9.7 An Efficient, Effective and Accountable Urban Water Supply and Sanitation Sector	19

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 recognised, 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. Around 80% of all diseases may be attributed to water and sanitation related causes and account for around 13,000 child deaths each year from diarrhoeal diseases such as dysentery, jaundice, typhoid and cholera.

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 billion¹. 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 projects². 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.

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 liberalisation and a focus on decentralisation, saw important new sector actors emerge, namely community groups, local government and the private sector – including non-governmental organisations. 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 10th 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

¹ Human Development Report, UNDP, 2006, p42

² 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

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).**

Coverage Indicator	10 th Plan Target (2002-07)	10 th Plan Achieved (Basic level)
% population with access to improved drinking water MDG Target: 73%	85	76.6
% population with access to basic sanitation services 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 2001³ 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-Year Vision (1997-2017), which seeks universal coverage by 2017, and the National Water Plan (2002-2017). 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 urbanisation 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 organisations playing increasing roles.

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

³ Central Bureau of Statistics, 2003

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 of all new projects and pollution control for all water resources.

The Nepal Water Supply Corporation Act 2nd 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 Government 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. In the absence of urban water supply and sanitation master plans, the expansion of services to the unserved has proved haphazard and ineffective. Poor sanitation services and highly degraded urban environments are the most visible consequences of this.
2. There is a lack of clarity in the roles of sector agencies, notably NWSC, DWSS, Municipalities and WUSCs, leading to confusion during project planning and implementation. This further frustrates efforts to cultivate local ownership of schemes and improve overall levels of transparency and accountability in the sector.
3. Coordination between sector agencies is generally poor and decentralization processes are delayed due to the slow transfer of decision-making authority from the centre to local stakeholders.
4. While seen as relatively transparent and accountable entities, WUSCs and municipalities are judged to require significant strengthening if they are to implement and manage schemes effectively. Failures here adversely affect scheme performance, service coverage, long term sustainability and the urban environment.
5. Competing needs to meet cost recovery objectives and provide services to the poorest commonly result in the poor and marginalised groups not being adequately served. Insufficient safeguards are seen to exist to prevent this.
6. Failures to make adequate provision for scheme maintenance means that many urban systems across the country are operating below design levels or are not working at all.
7. Private sector operators will be unlikely to take on the operation and management of urban schemes until tariff collection and associated income can guarantee a working profit.
8. Poor monitoring and evaluation of urban water supply and sanitation projects from the centre mean that accurate coverage and performance data are difficult to obtain.
9. 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. The adoption of a Sector Wide Approach (SWAp) potentially addressed this shortfall by improving the rational allocation of available resources.
10. Water rights although addressed clearly in the Water Resources Act is still a contentious issue with growing competing needs of water sources. There has to be an effective mechanism to address the problems and issues of allocation of water.
11. The motto of service providers is to provide the best services to its customers, but the inability to balance its resources is big burden due to limitations on tariff determination which prohibits independent service providers to set tariff to cover regular O&M and some debt servicing and potential capital investment
12. Approaches for solving water related problems are still oriented towards supply side management and very little focus is given on demand side management. The issue of

conservation is not adequately highlighted with incentives provided (or punishment) for conserving, water recharging and protecting water sources.

13. Uncontrolled urban development has put extensive pressure on service agencies to provide water and sanitation services.

5.0 Need for New Policy

In order to address the complex technical, institutional, social and environmental challenges facing urban settlements, specific urban water supply and sanitation policy is recommended. This must provide statutory guidance for both new and existing schemes and be fully consistent with National Urban Policy.

The management of wastewater, solid and liquid wastes, commonly neglected, must also feature prominently since urban development without the requisite sanitation provision carries with it the risk of serious public health and environmental consequences. Policy must, in short, encompass a full continuum of public health, social, economic and environmental safeguards and the guidance by which they may be assured.

The particular needs of the urban poor need also to be accommodated, not solely for reasons of moral obligation, but because it is in the best public interest to do so. Disease transmission recognises neither social nor economic boundaries nor unsanitary practices in densely populated urban settlements, have the potential to affect the health and quality of life of all residents.

Policy Statement - The vision of the policy is to recognize basic water supply and sanitation services as fundamental human need and a basic human right. However, there is economic cost involved with its delivery and to maintain the financial viability and sustainability, efforts will be made to reduce the financial burden to consumers by rationalizing designs and the promotion of favourable financing mechanisms. The policy seeks development of a socially inclusive sector where poor and marginalized groups and especially women have access to sustainable basic services at affordable prices and a voice in decision-making. Existing lack of coordination, accountability and duplication among stakeholders shall be avoided through clearly demarcated roles and responsibilities. Necessary incentives shall be provided to encourage existing bodies to implement sector reforms matching with their new responsibilities. Adequate provisions shall be made to enhance the capacity of local bodies, WUSCs, private sector organizations and communities to successfully manage urban utilities and for government line agencies to facilitate related processes. Environmental issues including maintaining effluent standards and water conservation shall be given due importance for sustainable use of water.

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 marginalised, through the provision of sustainable water supply and sanitation services and protection of the environment.

In this regard policy specifically endorses core principles related to public health, economic growth, social inclusion, protecting and optimising investments, financial sustainability, environmental protection and development of an efficient, effective and accountable urban water supply and sanitation sector. The major policy principles in this regard are:

- To recognize that access to safe drinking water is the basic human right of every citizen and that it is the responsibility of the state to ensure its provision to all.
- The right to water for drinking takes precedence over rights for all other uses as stipulated in the Water Resources Act 2049 *Dafa 7*.
- To ensure that the existing inequities in the provision of safe drinking water are removed and the needs of the more vulnerable and poor are effectively addressed.
- To recognize and ensure the key role that women, underprivileged and marginalized groups play in the sector and ensure their participation in decision-making process at all levels.
- To recognize economic cost associated with the provision of water and sanitation services and introduce financial sustainability in the sector through levying appropriate charges, cost recovery and some provision of subsidy for different segments of the population.
- To bring clarity in the roles of all institutions including Government agencies, Regulators, Operators / Service Providers, Asset owners, etc. to further improve coordination among agencies responsible for water resources management and related agencies.
- To define the role of NGOs in the sector and their activities such that they are more realistic and practical and support the overall cause.
- To clearly define the role of local government, namely VDCs and Municipalities in supporting the provision of water and sanitation services.
- The policy should define how to approach the urban poor and make all efforts in the sector inclusive without compromising with the financial viability and sustainability of services.
- The role of the private sector needs to be clearly established and the policy should create an enabling environment to limit investment risks and ensure reasonable return on their investment without compromising on services to all including the urban poor.
- To develop programs to enhance the capacity of local bodies, WUSCs, private sector organizations and communities to successfully manage urban utilities and for government line agencies to facilitate related processes.
- To advocate the principle of Polluters to pay for river pollution etc.
- To ensure effective monitoring of policies and strategies at the local level through a combined civic body.

7.0 Objectives

1. To ensure the availability of basic safe, accessible and adequate water supply and sanitation services to all urban populations by 2017 with at least one-third of the urban population having access to high or medium level services.
2. To reduce the incidence of water, hygiene and sanitation related diseases in urban areas by % by 2017.
3. To stimulate socio-economic development in urban centres through the productive use of urban water supplies and the effective management of all wastes.
4. To ensure that the basic service needs of poor and marginalised communities are met and that these groups, and especially women, are involved in all decision making that affects their service interests at all levels.
5. To enhance institutional and operational capacity to ensure that new and existing schemes are efficiently and transparently managed and maintained in order to operate at required service levels for their full design periods.
6. To recover capital investment and generate funds for operation and maintenance through setting and collection of water supply and sanitation tariff in an equitable and sustainable manner.
7. To harness, develop and manage surface and ground water sources serving urban centres in an efficient and equitable manner and ensure their protection and that of surrounding ecosystems.
8. To clearly define the roles and responsibilities of central and local government bodies, external development partners, the private sector - including NGOs - and user groups in scheme development, implementation and regulation and performance management in accordance with national decentralization policy.
9. To recognise the role of a broad range of providers in the sector and provide a supportive policy framework that encourages alternate options through private provision, public-private partnerships, NGO and community involvement.

10. To monitor effectively the implementation of existing policy and strategies and the gains made in the sector.

8.0 Policy

The main thrust of MPPW towards increasing equitable service coverage, improving public health, stimulating economic growth, protecting the environment and improving the performance of both individual schemes and the sector as a whole is through engaging a broad range of stake holders including government, the private sector, civil society and users in service provision and the establishment of a supportive and transparent policy and regulatory framework.

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 by 2017 with at least one-third of the urban population having access to high or medium level services.

Objective 2: To reduce the incidence of water, hygiene and sanitation related diseases in urban areas by % by 2017.)

9.1.1 Properly functioning water supply and sanitation services will protect public health. The state shall ensure provision of basic service level of safe / potable drinking water to all in urban areas with a minimum quantity of 25 liters per capita throughout the year at an accessible point no more than 250 meters of every urban abode. The provision of water in quantity, with a minimum average supply of 100 litres per capita per day for household connections, 65 lpcd for yard connections and 25 lpcd for community taps to the quality defined by national water standards⁴ will help ensure this. The responsible authorities will be encouraged to continually maintain and upgrade supplies in order to ensure continuity of supplies and thereby protect water quality.

9.1.2 Water resources will be protected and supplies treated as required to meet national bacteriological, chemical and physical water quality standards using technologies that are appropriate to the local operating context. Particular attention will be paid to the monitoring of

⁴ As defined by National Drinking Water Quality Standards and directives of the Water Supply Tariff Fixation Commission.

arsenic levels in groundwater and appropriate mitigation measures. Water at designated points in each system⁵ will be tested regularly in certified laboratories with results posted publicly. Appropriately equipped regional testing laboratories staffed by competent technicians will be established. The capacity of water utility operators/service providers to test water quality and monitor the effectiveness of the remedial measures will also be developed.

9.1.3 Environmental sanitation will be included in all water supply projects and be an integral component of Urban Master Plans as specified in National Urban Policy. This will include the provision and management of wastewater and solid wastes at household, commercial facility and institutional levels. In general, sewerage systems will be constructed in central areas, where implementation of such system is economically and technically viable, and on-site sanitation promoted in outlying areas. 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.

9.1.4 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(???)

9.1.5 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.

9.1.6 Water conservation shall be extensively promoted through mandatory 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. In areas where feasible alternate technical options like rainwater harvesting, fog water collection, etc. shall also be promoted. Users groups shall be encouraged to adopt practices to optimize usage of water at the household level.

⁵Normally source, intake, storage and a sample of distribution points

9.1.7 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.

9.1.8 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.

9.2 Economic Growth

(Objective 3: To stimulate socio-economic development in urban centres through the productive use of urban water supplies and the effective management of all wastes.)

9.2.1 Economic growth combined with an understanding of water’s intrinsic economic value and the central role played by sanitation in ensuring sustainability and quality of life are mainstays of this policy. Accordingly efforts will be made to stimulate commercial and small scale industrial development - leading to increased urban employment - through the provision of adequate urban water supply and sanitation services. Unplanned large scale industrial enterprises (define by consumption level) will be required to secure their own water supply and sanitation services in accordance with the licensing requirements laid down in Water Resource Regulations (1993).

9.2.2 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 disposal of commercial solid and liquid wastes.

9.2.3 Private sector investment in the construction, rehabilitation and management of urban water supply and sanitation services, including local water markets, will be promoted in line with National Urban Policy.

9.2.4 Private sector organisations will be encouraged to initiate “corporate social responsibility” activities including, for example, the supply of additional services in poor areas, education programmes in schools and environmental improvement projects.

9.3 Social Inclusion: Access to Services for the Poor and Disadvantaged Groups

(Objective 4: To ensure that the basic service needs of poor and marginalised communities are met and that these groups, and especially women, are involved in all decision making that affects their service interests at all levels.)

9.3.1 Recognising 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 a voice in service-related decision making that will affect them. This is regardless of whether or not such residents have legal citizenship and land tenure rights. As such, squatter and slum settlements will be automatically included in service areas.

9.3.2 Tariff structures and other financing mechanisms will help cross-subsidise services 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, local NGOs and community groups through an appropriate local oversight body⁶. The final decision on the award and monitoring of subsidies should be taken by local users through appropriate local committees. **The Water Supply Tariff Fixation Commission will provide independent regulation and guidance on these measures.**

9.3.3 Wherever feasible, 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 costings have been finalised will be required to pay a separate connection fee. Tariff charges for community taps will be cross-subsidized such that they recover O&M costs only. A range of payment options, including regular instalments and credit schemes, will be offered to allow poor consumers to meet tariff charges.

9.3.4 In cases where the private sector is involved in the investment, construction, rehabilitation, operation and management of services, the contracting government agency will include mandatory provision in the contract to accommodate the above provisions .

9.3.5 The rights and needs of poor and marginalised groups, and especially of women, will be protected primarily through their statutory and proportional representation on urban Water User and Sanitation Committees and related sub-committees. Affirmative action is proposed to ensure that such representatives fill executive positions in these committees thereby ensuring that their interests are protected.

⁶ Sector consultation proposed participatory social mapping of all service settlements to include caste, ethnicity, wealth ranking and willingness to pay surveys.

9.3.6 Women’s participation will be emphasized in all aspects of water supply and sanitation planning, implementation, management, operation and maintenance.

9.3.7 The government shall encourage Municipal poverty mapping, which is to be utilized as the basis for identification of the target groups for cross subsidized services for the urban poor.

9.4 Protecting and Optimising Investments

(Objective 5: To enhance institutional and operational capacity to ensure that new and existing schemes are efficiently and transparently managed and maintained in order to operate at required service levels for their full design periods.)

9.4.1 Protecting costly infrastructure investments is essential if scheme benefits are to be sustained, urban economies to grow and value for money obtained. This is particularly recognised where schemes are externally financed and direct cost recovery from consumers is required. In this regard, 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, repayment and import duty waiver practices. WUSCs should be enabled to register as private companies, select financing institutions from a range of public and private sector institutions, secure legal right to the use of water sources and prepare water safety plans.

9.4.2 Many urban schemes fail to provide design service levels and keep pace with growth in demand. This is commonly attributable to inadequate institutional, financial, management, operational and maintenance provisions. Optimising the use of available resources, establishing sustainable, effective and accountable operational and management systems is therefore central to policy. Accordingly policy promotes appropriate and affordable approaches to sustainable urban water supply and sanitation services based on:

1. Technologies and systems that consumers are willing and able to pay for.

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. Low cost options including the of upgrading traditional water and sanitation services and the promotion of new technologies such as rainwater harvesting will be included.

2. Human Resource Development

Programs will be developed to enhance the capacity of local bodies, WUSCs, private sector organizations and communities to successfully manage urban utilities and for government line agencies to facilitate related processes. HRD activities will include:

- i. Developing the capacity of public training institutions (e.g. Central Human Resource Development Unit (CHRDU), Nepal Administrative Staff College (NASC), Council for Technical Education and Vocational Training (CTEVT)) and appropriate private sector training institutions to develop and run appropriate orientation and training programmes and, as appropriate, to carry out operational research.
- ii. Organizing appropriate training programs for WUSC members 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 organisations specialising in business management services.
- iii. Training and orienting staff of local bodies (VDCs, DDCs and Municipalities), Service Providers, Utility Operators, WUSC members, the Department of Water Supply and Sewerage (DWSS) and Nepal Water Supply Corporation (NWSC) on urban service provision in accordance with the specialised roles to be played by each organisation. In addition to covering technical subject matter on the design, implementation, operation and maintenance of schemes – particularly including sanitation and environmental protection - key topic areas will include participatory planning, social mobilization, social inclusion, communications, contract management, scheme management and system monitoring.
- iv. Utilising 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 marginalised groups.
- v. Conducting basic training on water supply and sanitation operation, maintenance, repair and monitoring for technicians, junior technical personnel and trades people – preferably at the district or regional level and involving private sector trainers.

9.5 Cost Recovery and Financial Sustainability

(Objective 6: To recover capital investment and generate funds for operation and maintenance through setting and collection of water supply and sanitation tariff in an equitable and sustainable manner.)

9.5.1 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. In order to optimize the capital investment in the sector flexible financial mechanisms, including cross-subsidies, and the use of appropriate and affordable technologies will be encouraged to help facilitate the process. To meet cost recovery targets appropriate tariff mechanisms like sliding tariff rates or incremental block tariff rates shall be promoted and efforts will be made by government to reduce the financial burden to consumers by rationalising designs, introducing public auditing and introducing favourable financing, on-lending, repayment and import duty waiver practices, wherever feasible. In this regard the following will be done:

a. To promote the efficient use of potable water:

All tariff systems will reward water conservation. Groundwater abstraction will be licensed, metered and volumetrically charged as per the Water Resources Act (WRA) 1993.

b. To ensure financial sustainability of water supply services by recovering from consumers:

- i. A fixed percentage of capital investment costs in cash and in kind in accordance with the socio-economic classification and service level of each urban settlement⁷ ranging from 20 percent for emerging small towns to 70 percent for major metropolis.
- ii. 100 percent of operation and maintenance costs
- iii. 100 percent of any loan repayment costs

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 served⁸.

⁷ Note: Sector consultation proposed user contribution range of between 40-75% depending on socio-economic classification. DWSS proposes 20%. Contribution guideline needs to be informed by economic assessments including that from Emerging Towns PPTA.

⁸ Sector workshop proposed a contribution of between 10-30% of capital costs (depending on socio-economic classification) and 30% of operation and maintenance costs from users. DWSS proposes 15% of total. Economic assessment requires as above

On site sanitation will be the responsibility of individual households but with subsidies and technical guidance available from municipalities for poor and marginalised settlements.

- c. 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 block” charged to users from poor and marginalised groups. Lifeline block shall be defined as a minimum of 5000 to a maximum of 10,000 liters per household per month.

Individual tariff setting will be the responsibility of each service providers following guidelines issued by the Water Supply Tariff Fixation Commission. In order to stimulate economic growth, provisions will be made for a separate tariff structure for bulk water supply, where feasible.

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.

Penalties for late payments will be clearly laid out and strictly enforced by the water utility operators/service providers. Beyond a certain specified period of default, services may be disconnected and the costs of reconnection, including transaction costs, charged to the defaulter. The exceptions here will be poor users who are served at the basic service level through public water points where continuity of service provision will be maintained, and households headed by a single women or disabled person.

The level of contribution for implementation would depend upon the size and category of the urban center under consideration. A flat and uniform percentage of contribution cannot be applied for all urban centers across the spectrum.

For emerging / small towns the prevailing contribution level of 20 percent should suffice. However, such contributions shall preferably be from users or could also be supported by contribution from local governments through locally levied taxes etc. As 100% cost recovery is not possible in immediate future, the time frame for the recovery of capital investment for the **medium term and long term shall be targeted after five years and ten years respectively.**

Use and preservation of traditional sources like stone spouts, stone dug wells, etc. will be encouraged with some financial subsidy and shall not be subjected to prescribed tariffs or used for commercial purposes.

9.6 Environmental Protection

(Objective 7: To harness, develop and manage surface and ground water sources serving urban centres in an efficient and equitable manner and ensure their protection and that of surrounding ecosystems).

9.6.1 Contamination of surface and ground water sources by wastewater, industrial effluents and other wastes degrades water quality and seriously 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.

9.6.2 Appropriate revision of the existing legal framework will be made to address issues including the protection and improvement of water sources and catchments, groundwater recharge, 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.

9.6.3 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.

9.6.3 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, including end-point users.

9.6.4 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.

9.6.5 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.

9.6.6 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.

9.7 An Efficient, Effective and Accountable Urban Water Supply and Sanitation Sector

(Objective 8: To clearly define the roles and responsibilities of central and local government bodies, external development partners, the private sector - including NGOs - and user groups in scheme development, implementation, regulation and performance management in accordance with national decentralization policy.

(Objective 9: To recognise the role of a broad range of providers in the sector and provide a supportive policy framework that encourages alternate options through private provision, public-private partnerships, NGO and community involvement.)

(Objective 10: To monitor effectively the implementation of existing policy and strategies and the gains made in the sector.)

9.7.1 Roles and Responsibilities

1. The roles and responsibilities of central, federal and local government bodies, WUSCs, the private sector and donor agencies will be clearly defined in accordance with Nepal's new Constitution and national decentralization policy. The primary purposes here will be to improve sector efficiency by avoiding overlaps in organisational jurisdiction and improve overall levels of coordination and institutional accountability.
2. 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. Clear documentation drafted in Nepali, and signed by all stakeholders, making clear the roles and responsibilities of each organisation, for project implementation will be a standard requirement in all projects. WSUC's and other bodies will be party to all contracts for which they are financially liable. Local monitoring capability will be built within WUSC and user groups.
3. The ideal institutional model for service delivery in the urban areas shall have three players, namely; asset owners, regulators and service providers.

4. Designated local bodies (VDCs, Municipalities and DDCs) shall facilitate, monitor and regulate the formation, registration and functioning of WUSC. Local government bodies will also take the lead in formulating development plans inclusive of water supply and sanitation services for areas 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.
5. 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.
6. 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 donors will provide the basis for improved sector planning and monitoring and opportunities for collaborative working.
7. Considering the existence of various sizes of urban centers, it would make great sense to classify towns based on their capacity, financial soundness, resources, etc. The policy should develop threshold indicators to classify towns with a provision for gradual “graduation”. In other words a promotional ladder can be developed after assessing the town’s capacities.
8. An agency like DWSS could monitor the performance of the service providers and check whether the services provided conform to the requirements set forth in the contractual obligations of the service provider.
9. DWSS capacity shall be strengthened so that it can monitor 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.
10. For technical support to WUCs, the central line agencies shall look at certifications and regulating private technical agencies – licensing then and revoking their licenses for malpractices. User groups shall engage only licensed agencies for managing water systems and providing technical support.
11. Adequate funding to deal with wastewater treatment, disposal of solid and liquid waste in an appropriate manner shall be made available by the Government on a priority basis for urban centres.

9.7.2 Increased Range of Service Providers

1. A conducive and appropriate regulatory framework will be created to encourage private sector involvement in the development, management and public auditing of urban water supply and sanitation services.
2. The Government of Nepal remains fully committed to private sector participation and public-private partnerships in the development and management of urban water supply and sanitation services in order to:
 - i. attract additional investments for infrastructure development and the management of urban water supply and sanitation systems
 - ii. improve and expand basic drinking water and sanitation services in urban areas
 - iii. ensure sustainability of services through adequate cost recovery, improved systems management and clear accountability to users and municipal authorities.
3. 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.
4. 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.
5. Capable domestic private sector enterprises will continue to be given priority over international private sector participation.
6. Prior to engaging the private sector in urban water supply and sanitation services, the WSTFC will be strengthened to monitor and evaluate the performance of private sector organisations. Independent public auditing through NGOs specialising in consumer rights will be an integral part of program design.

7. 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.
8. As per the new Water Board Act formation of water board in towns is possible, which shall have control over assets and liabilities. Towns with adequate capacity or potential to perform in the spirit of the board formation act shall be encouraged by the Government.
9. 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.

9.7.3 Sector Monitoring

10. At the sectoral level M&E Unit within the Ministry of Physical Planning and Works (MPPW) shall be responsible for monitoring major sectoral indicators including coverage by water supply and sanitation services.
11. The Water Resources Act 2049 has clearly given precedence to drinking water for priority use of available water sources. However, with growing population in urban areas water from sources in surrounding areas (primarily rural) is warranted. This has induced unwanted source use conflict scenarios with local users and potential users in urban areas. In such cases amicable settlement between the “receiving community” and the “donating community” shall be mediated by line agencies. If desired and really needed based on ground monitoring by line agencies, development assistance to the tune 5 percent of the total investment cost for a proposed water system shall be allocated for the “donating community”.
12. The current National Drinking Water Quality Standards are quite extensive and it may not be feasible to monitor and treat all the parameters listed there. The water quality aspect needs to be more practical and focus more on bacteriological contamination and other aesthetic parameters. However, regular monitoring of water quality by the service provider and additional institutional monitoring by Government agencies as mandated in National Water Quality Standards and National Water Quality Standard Implementation Directives 2062 shall be adopted where applicable.
13. Strong regulation and implementation of regulations on waste treatment and discharge by commercial and industrial entities is essential.
14. Licensing of ground water abstraction and its monitoring shall be done by central water resources agencies in conjunction with forthcoming legislative measures being formulated.
15. Apart from conventional monitoring and regulation by government agencies, self regulation shall also be stipulated in the service contracts of private service providers.

Glossary of Terms and Definitions:

- i. **Safe Water Supply:** Safe water supply refers to the withdrawal or abstraction of surface or ground water, and including rain–water harvesting, and its subsequent treatment, storage, transmission and distribution for drinking and other purposes including economic. The water supplied for drinking purposes should meet National Drinking Water Quality Standards.
- ii. **Sanitation:** Sanitation is defined as the safe management of human excreta, including the hardware (latrines, etc.) and software (regulation, hygiene promotion, etc.) needed to reduce faecal-oral disease transmission.
- iii. **Environmental Sanitation:** Environmental Sanitation refers to the wider concept of controlling all the factors in the physical environment that may have a deleterious impact on human health and well-being. It normally includes drainage, solid waste management, and vector control, in addition to the activities covered by sanitation. For the purpose of this Policy, it is assumed to exclude factors such as air pollution
- iv. **Urban:** Urban refers to a metropolitan city, sub-metropolitan city, municipality or town. The Local Self Governance Act (1999) has classified municipalities on the basis of existing infrastructure, population and potential to generate revenues as follows:
 - a. Metropolitan city: Settlement with a minimum population of 300 thousand and with at least Rs. 100 million in annual revenue. It should have public utilities including electricity, roads, drinking water, telecommunications and similar services.
 - b. Sub-Metropolitan city: Settlement with a minimum population of 100 thousand with at least Rs. 50 million in annual revenue. It should have public utilities including electricity, roads, drinking water, telecommunications and similar services.
 - c. Municipality: Settlement with a minimum population of 20 thousand with at least Rs. 2 million in annual revenue. It should have public utilities including electricity, roads, drinking water, telecommunications and other basic services. In mountain and hill areas, a settlement with a population of 10 thousand, annual revenue of Rs. 1 million with limited infrastructure can also be declared a municipality depending on the situation.

National Urban Policy (2007) expands the definition of urban to include settlements with a minimum population of 5 thousand and a population density of a least 10 persons per hectare. Further criteria include at least 50% of the population above 10 years of age

dependent on non-agricultural economic activities and access to basic infrastructure including grid electricity, telecommunications, high school and health services.

Within this framework two further urban categories are established. These are:

- d. Intermediate Town: having populations of between 10 thousand and 50 thousand.
 - e. Small Town: having populations of between 5 thousand and 10 thousand.
- vi **Service Levels:**

These are defined in the 9th Plan in accordance with the daily amount of water consumption, quality of supplied water, time period of daily supply and its reliability as follows:

Service Level	High	Medium	Basic
Quantity (lpcd)	112 –150	65	20 – 45
Quality	WHO Standards	National Standards	Potable
Accessibility	Within the house (fully plumbed)	Within the compound (yard tap)	Within 20 min. walking distance (stand-post supply)
Duration of supply (hrs./day)	24	24	4
Continuity (mnths/yr)	12	12	12