

GOVERNMENT OF NEPAL

MINISTRY OF PHYSICAL PLANNING AND WORKS

National Urban Water Supply and Sanitation Sector Policy

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Responsibility for the preparation, management and any subsequent revision of this policy rests with the Ministry of Physical Planning and Works of the Government of Nepal.

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 around 4% of all Disability Adjusted Life Years (DALYs) at an estimated cost in South Asia of around \$34 billion¹. Globally, this burden falls most heavily on the poorest 20% of whom only around 25% have access to improved water supplies compared with 85% of the richest 20%². By contrast, 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 projects³.

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, aided by significant External Development Partner (EDP) investments, 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 go further.

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. In response, government introduced targets for basic, medium and high service levels. 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 91 per 1000 live births in 2002 to 61 in 2006 (NDHS).

¹ Human Development Report, UNDP, 2006, p42

² Op. cit, p49

³ 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

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

Around 85% of Nepal's population currently lives in rural areas, although demographic settlement patterns are changing rapidly. Economic, security, social and other factors are leading increasing numbers to settle in established towns and cities and newly emerging urban settlements. 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 2001⁴ 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.

Urban infrastructure development is regarded historically as having been uneven and poorly coordinated with predictable consequences for quality of life, economic growth and the environment. It is estimated that around \$8.5 billion is required between 2001 and 2011 to meet new urban water and sanitation infrastructure needs.

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.

⁴ 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.

Despite this, LSGA - as highlighted in the 3 Year Interim Plan (2007-2010) - remains central to government plans under its proposed new federated structure and, as such, retains high relevance for the development of new urban policy. Here it should be noted that LSGA gives a high priority to the upliftment of socially marginalised groups, the adoption of rights based, participatory approaches to project work, maximum use of local resources and protection of the environment.

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. The financial burden carried by Municipalities and WUSCs taking loans for infrastructure projects is normally high and is exacerbated by complicated implementation procedures involving multiple stakeholders. This commonly results in long delays and the accumulation of additional financial liabilities.
7. 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.
8. 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.
9. 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.
10. 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.

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.

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

6.0 Goal

The goal of the National Urban Water Supply and Sanitation Policy is to ensure the socio-economic development and improved health status of urban populations, especially 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 six core principles, namely:

1. Public health
2. Economic growth
3. Social inclusion
4. Protecting and optimising investments
5. Environmental protection
6. An efficient, effective and accountable urban water supply and sanitation sector

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 x %⁵ having access to high or medium level services.
2. To reduce the incidence of water, hygiene and sanitation related diseases in urban areas.
3. To stimulate socio-economic development in urban centres through the productive use of urban water supplies and the responsible 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 build sufficient 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 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.
7. 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 implementation and regulation and performance management in accordance with national decentralization policy.
8. 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.

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.

⁵ Define in light of updated 15 Year Plan

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 x % having access to high or medium level services.

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

9.1.1 Properly functioning water supply and sanitation services will protect public health. 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 20 lpcd for community taps to the quality defined by national water standards⁶ 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 arsenic levels in groundwater and appropriate mitigation measures. Water at designated points in each system⁷ 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 residents are likely to be able to share investment costs, 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 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

⁶ As defined by National Drinking Water Quality Standards and directives of the Water Supply Tariff Fixation Commission.

⁷ Normally source, intake, storage and a sample of distribution points

health interests will be served through the provision of a basic service level to all residents. Flexible financial mechanisms, including cross-subsidies, and the use of appropriate and affordable technologies will help facilitate this.

9.1.5 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.

9.2 Economic Growth

(Objective 3: To stimulate socio-economic development in urban centres through the productive use of urban water supplies and the responsible 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. Sliding tariff rates will ensure cost recovery targets are met.

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 body⁸. 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 (4.3.1 to 4.3.3).

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. Independent oversight will be provided by the Water Supply Tariff Fixation Commission and NGOs tasked with public auditing functions.

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

9.4 Protecting and Optimising Investments

(Objective 5: To build sufficient 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

⁸ Sector consultation proposed participatory social mapping of all service settlements to include caste, ethnicity, wealth ranking and willingness to pay surveys.

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. In the event that scheme completion is delayed without reasonable cause, compensation including liquidated damages to cover any additional debt burden, should be charged to the body or bodies responsible for the delay.

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 included

2. Appropriate tariff setting:

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 settlement⁹.
- ii. 100 percent of operation and maintenance costs
- iii. 100 percent of any loan repayment costs

Note: 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 served¹⁰. On site sanitation will be the responsibility of individual

⁹ 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.

¹⁰ 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

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” is users from poor and marginalised groups.

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 maintained, and households headed by a single women or disabled person.

3. 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 Environmental Protection

(Objective 6: 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).

9.5.1 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.

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

9.5.3 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). Such assessments will include consultations with major stakeholders, including end-point users.

9.5.4 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.

9.5.5 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.

9.5.6 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.

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

(Objective 7: 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 implementation, regulation and performance management in accordance with national decentralization policy.

Objective 8: 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.)

9.6.1 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 Water Supply Tariff Fixation Commission (WSTFC) will be responsible for the independent regulatory and performance monitoring functions. This will include monitoring water and wastewater quality in all urban centres and for the application of appropriate incentives and punitive measures. The WSTFC will receive necessary technical advice and assistance, upon request, from the Ministry of Physical Planning and Works, Ministry of Health and Population, DWSS, NWSC and local government in carrying out these tasks. Independent oversight of regulatory practices will be provided by municipal authorities and consumer protection groups and user networks. Strengthening of the WSTFC's operational capacities at regional and district levels will be a sector priority.

4. 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.

9.6.2 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.