

Government of Nepal
Ministry of Urban Development

National Water Supply and Sanitation Policy 2014

DRAFT

31 December 2014

GOVERNMENT OF NEPAL

National Water Supply and Sanitation Sector Policy 2014

MINISTRY OF URBAN DEVELOPMENT

Table of Contents

1.0	Background
2.0	History
3.0	present Status
4.0	Problems and Challenges
4.1	Technical Approaches
4.1.1	Urban Water Supply
4.1.2	Rural Water Supply
4.1.3	Urban Sanitation
4.1.4	Rural Sanitation
4.2	Gender Equity and Social Inclusion
4.3	Environmental
4.4	Cost Recovery and Affordability
4.5	Operation and Maintenance
4.6	Institutional Issues
4.7	Legal frameworks
5.0	Need for New Policy
6.0	Goal
7.0	Objectives
8.0	Policy Statements
9.0	Strategies

Abbreviations

ADB	Asian Development Bank
CBO	Community based organization
DDC	District Development Committee
DWSS	Department of Water Supply and Sewerage
DWSSO	District Level Water Supply and Sanitation Offices (Water Supply and Sanitation Division or Sub-division Offices)
EIA	Environment Impact Assessment
GIS	Geographical Information System
IUDP	integrated Urban Development Program
IEE	Initial Environment Examination
KUKL	Kathmandu Upatyaka Khanepani Limited
KVWSMB	Kathmandu Valley Water Supply Management Board
KVWSSSP	Kathmandu Valley Water Supply and Sanitation Program
LSGA	Local Self Government Act
LSGR	Local Self Government Rules
MIS	Management Information System
MDG	Millennium Development Goal
MOUD	Ministry of Urban Development
NGO	Non Government Organization
NDWQS	National Drinking Water Quality Standards
NMIP	national Management Information Project
NPC	National Planning Commission
NSHCC	National Sanitation and Hygiene Coordination Committee
NSHSC	National Sanitation and Hygiene Steering Committee
NWASHCC	National Water Supply, Sanitation and Hygiene Committee
NWASHSC	National Water Supply, Sanitation and Hygiene Steering Committee
NWSC	Nepal Water Supply Corporation
ODF	Open Defecation Free

PPP	Public Private Partnership
RWSSFDB	Rural Water Supply and Sanitation Fund Board
SEIU	Sector Efficiency Improvement Project
SODIS	Solar Disinfection System
SSG	Sector Stakeholders Group
STWSSSP	Small Town Water Supply and Sanitation Project
SWAp	Sector-wide Approach
UEIP	Urban Environment Improvement Project
UNDP	United Nation Development Program
VDC	Village Development Committee
WASHCC	Water Supply, Sanitation and Hygiene Coordination Committee
WASHSC	Water Supply, Sanitation and Hygiene Steering Committee
WHO	World Health Organization
WSMB	Water Supply Management Board
WSTFC	Water Supply Tariff Fixation Commission
WSTFCA	Water Supply Tariff Fixation Commission Act
WUSA	Water Users and Sanitation Association
WUSC	Water Users and Sanitation Committee

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.

Many people, both in rural and urban areas, are affected by water borne and water related diseases due to use of unsafe water and poor hygiene practices and inadequate sanitation facilities. People have to face several problems and lose opportunity to income sources. Particularly rural women are deprived of finding the income sources including due to hardship of availability of water as they spend several hours a day to fetch water from far away sources.

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".

MDG has provided a solid footing for the Government to set higher targets for the service provisions and expedite achievement adopting a number of new policies and strategies. It is encouraging to note that Nepal has already exceeded in 2013 the 2015 MDG targets which were set respectively at of 73 % and 53 % for basic water supply and sanitation facilities.

While the Government of Nepal remains fully committed to provide basic level water supply and sanitation services to all by 2017 acknowledging it as a fundamental human need and a basic human right, it has also envisaged a need to improve the basic level of water supply and sanitation services to medium and higher levels to all by 2027.

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

2.0 History

Development and enforcement of Rural Water Supply and Sanitation National Policy 2004 and National Policy for Urban Water Supply and Sanitation 2009 had been possible following a couple of decades of progressive development by the Government of a wide range of sector and sub-sector policies in piecemeal bases. During the period several other relevant policies and legislations have also been developed in the sector and sub-sector that included water resources, environment, local government, sanitation, institutional reforms, tariff regulation, water quality and urban development.

According to 2011 Census Nepal's total population is about 26.5 million of which 4.5 million (17%) is urban and 22 million (83%) is rural. The rural population live in 4200 VDCs and the urban population in 58 municipalities¹ in Terai and Mid-hills, including Kathmandu valley of which two-thirds live in 16 of the larger municipalities. In addition to the municipalities a number of smaller towns and market centres are emerging in the VDCs, mainly along the east-west highway and north south access roads. According to the updated 15 Year Urban Water Supply and Sanitation Development Plans 2000 (DWSS), there are 209 such emerging towns and market centres in Nepal with more than 2 million population that demands water supply and sanitation services of urban standards.

The urban population grew from 4% (16 municipalities) of national population in 1971 to 17% (58 municipalities) in 2011 and is expected to reach over 26% in 2021. Many more new municipalities will also be added by then.

In the 1990s, political liberalisation and a focus on decentralisation saw important new sector actors emerge, namely community groups, local bodies and the private sector – including non- governmental organisations. A number of new working methods were developed including demand led community based participatory approaches and community construction cost sharing, which encouraged communities to take full ownership of schemes and allowed scarce sector resources to be used optimally.

Water supply and sanitation coverage levels have increased to attain the target levels as shown by the Three Year Plan (2010-13) data (Table 1) even if sector definitions of “coverage” continued to vary widely. Sanitation, which earlier received a generally lower priority than water supplies despite its central role in determining public health, have now picked up to surpass the Three Year Plan targets. The decline of under 5 child mortality rate of 142 per 1000 live birth in 1990 to 42 in 2012 (Unicef) can be attributed mainly to the achievement made in the provision of basic water supply and sanitation services.

Table 1: Water Supply and Sanitation Coverage

Coverage (percentage of Population)	Three Year Interim Plan (2007-10) ²		Three Year Plan (2010-13) ³	
	Target	Progress	Target	Progress
Population with access to basic level of water supply services	85	80	85	85
Population with access to medium to upper level of water supply services	15	10.5		
Population with access to basic level of sanitation services	60	43	60	62

¹ Though the number of municipality has been increased from 58 to 130 recently, in the month of May 2014, the population data presented here refers to 58 municipalities as official updates of population data are not yet available.

²Source: NPC Three Year Plan (2010-13)

³Source: NPC Approach Paper Three Year Plan (2013-16)

Despite of the good progress made in the provisioning of basic water supply and sanitation services to the rural and urban population, more hard efforts are required to sustain functionality of completed schemes and up-gradation of basic service levels to higher levels. Especial focus is needed to protect environmental and human health from unsafe disposal of residual human waste generated from onsite sanitation systems; to provide waterborne sanitary sewerage system in urban areas where onsite sanitation system are not serving satisfactorily; to provide drainage for safe disposal of increased volume of gray water resulting from piped water supply systems; and protection of property and human health providing storm water drains in densely populated urban centres.

3.0 Present Status

Government investments in water supply and sanitation are primarily guided by its Water Plan 2002 – 27), which seeks universal coverage of basic level of water supply and sanitation by 2017. The Plan has also sought to improve the basic level of water supply of 27 % of the population to medium to high level by 2017 and of 50 % by 2027. It has, however, not set targets for improved level of sanitation services.

Until early 90s of the past century, the sector development policy was guided by periodic 5-year plans and annual Program and Budget. The first policy document was “Nepal National Sanitation Policy and Guidelines for Planning and Implementation of Sanitation Program” published in BS 2051 (AD 1994). The sanitation policy was considered necessary to promote sanitation which was given low priority against water supply in rural communities. Following the sanitation policy, the National Water Supply Sector Policy was published in BS 2055 (AD 1998), which mainly focussed on rural water supplies. A new Rural Water Supply and Sanitation National Policy replaced the 1998 policy in 2004, which also included strategies for the implementation of the policies. In the absence of a specific policy on urban water supply and sanitation, the Kathmandu Valley Water Supply and Sanitation Sector Policy and the Kathmandu Valley Water Supply and Sanitation Sector Strategies were approved by the Government in BS 2057 (AD 2000) to facilitate implementation of Melamchi Water Supply Project under ADB assistance. It was only in BS 2066 (AD 2009), The Urban Water Supply and Sanitation Policy was approved by the Government.

The two latest sector policy documents which are concerned with the sector are briefly described here. This new unified Policy document replaces the existing two policy documents for the reasons as stated in Section 5.0: Needs for New Policy. Additionally, Annex 2 briefly describes many other pertinent legislations, policies and periodic plans.

Rural Water Supply and Sanitation National Policy 2060 (2004) and Rural Water Supply and Sanitation National Strategy 2060 (2004):

The principal objectives of this policy were to set a new set of targets to provide safe, reliable and affordable water supply with basic sanitation facilities to 100 percent of the population on priority basis specially targeting the backward people and ethnic groups, reduce water borne diseases and save the time and labour of men, women and children from fetching the water. The policy focuses on massive renovation, rehabilitation, improvement and expansion works of the existing system and increase the quality of service.

The Policy has provided some guidance on water and sanitation service provision also in urban communities as it was partially relevant to the urban context, particularly around the integration of inputs and local capacity building. As it obviously failed to address the complex operational issue of urban water supply and sanitation service delivery, an Urban Water Supply and Sanitation Policy was formulated and enforced in 2009.

Urban Water Supply and Sanitation Policy 2066 (2009): The Urban Water Supply and Sanitation Policy (UWSSP) had addressed the need of an umbrella policy to achieve coherent, consistent and uniform approaches of development of sector in urban areas by all the different agencies and institutions involved. The Policy sets the cost recovery principles, public private partnership and sector effectiveness for improved service delivery in proper perspectives according to the need of the day.

The Policy had identified four major initiatives at the implementation level that are addressing Nation's urban water supply and sanitation challenges and provide important insights for the development of the Policy. Those were the Small Towns Water Supply and Sanitation Sector Project (STWSSSP); the Kathmandu Valley Water Supply Sector Development Program (KVVSSSP); the Urban Environment Improvement Project (UEIP) and the Integrated Urban Development Projects (IUDP). This policy had provided a firm basis for the extension of the Projects with additional resources made available.

4.0 Problems and Challenges

In the past the sector has been able to take a number of positive steps in the right direction at all stages of water supply and sanitation project cycle. The worth to mention in rural sub-sector are: formation and legal registration of WUSAs, licensing for uses of water sources with priority for drinking water, demand led project implementation, community participation and women's involvement at decision making, social inclusion in sharing project benefits, community contribution to the construction costs, community ownership and management, consumer cost sharing and cost recovery in financially viable projects, increased focus on sanitation promotion, etc.

Similarly concrete initiatives have been taken to reform the urban sub-sector that includes decentralized management of municipal water supply and sanitation services at local levels through WSMBs, initiatives on public-private-partnership approaches, full cost recovery, tariff fixation based on commercial principles, etc.

Coverage target set by the National Plans for basic water supply and sanitation services have been met. Campaign to declaring open defecation free (ODF) municipalities, VDCs and DDCs are successfully going on and many have already been declared.

The successes mentioned above can be attributed to the good policy frame work put in place over the past two decades. However, a number of problems and challenges in the sector still remain to be addressed as the initiative taken in the past needs further strengthening and firming up. Furthermore, many more new challenges have emerged that needs new approaches to deal with, e.g., sustainability of completed scheme; upgrading service levels; providing services to remaining un-served; enhancing access to services to poor and marginalized; improving capacity at local levels, social and environmental safeguards;

enhance rapid improvement in urban sanitation; enhancing access of women, children and physically challenged people to public services; etc.

The major problems and challenges, identified by various sector assessments, that needs further action to institutionalize and firming up at all level of service operations are discussed under the thematic topics as below.

4.1. Technical Approaches

4.1.1. Urban Water Supply

1. Water supply service delivery in most urban areas is poor and inadequate. In the cities and towns water supply coverage is poor; supply pressure is low; supply is intermittent; water is not potable without further measures at household level to make it potable; non revenue water is high; consumer satisfaction is low. All urban water supply services are in need of substantive improvements.
2. Water supply provisions have largely been understood only for domestic demands for drinking, cooking, washing and other personal hygiene. Other municipal uses such as water for fire fighting, street cleaning, city greeneries, recreation, public drinking and washing facilities, etc. has been ignored while planning for water supply services. Similarly, meeting other institutional and industrial demands, especially pertaining to hospitals, schools, hotels and housing estates, have not been understood as service providers' responsibilities.
3. Local sources, especially in hills areas, are soon found to be inadequate to meet the demand for water supply for the rapidly and haphazardly growing towns and cities, The existing sources are depleting by years. Transfer of water from higher or lower sources located at longer distances are costly and poses a number of social and environmental problems and challenges. Storage of abundantly available rain water locally for distribution in dry weather is difficult because of high land prices and difficult terrains.
4. Provisioning of basic water supply and sanitation services for squatters and slum dwellers, the poor and marginalized groups has largely been neglected.

4.1.2. Rural Water Supply

5. Though with the substantial investment in the rural water supply sub-sector a good coverage has been achieved in the past decades, functionality of the completed schemes has been a major issue. About half of the schemes are reported to be non-functioning in the need rehabilitation.
6. Many towns and market places have emerged in rural communities with improved accessibility by roads and highways and more and more will emerge in the future. The water supply and sanitation services built to provide basic level of services have now become grossly inadequate in many of the rural communities due to increased population and improved living standards of the people.

7. Mostly rural water supplies in hills are designed and operated based on small surface and sub-surface sources with very marginal dry weather discharges. While the sources flow at many times higher discharge rates in most months in a year. Such small sources are prone to dry out for a slightest change in climatic, geotechnical and vegetation of their catchment due to natural or human causes.
8. Source dispute is common among competing user community and competing use of water from the source in absence of a scientific and comprehensive water resource planning at local levels.

4.1.3. Urban Sanitation

9. Sanitation services have generally been very poor in most urban areas. Raw sewage is directly discharged in to natural water courses without treatment.
10. Either on site sanitation technologies to safely manage human excreta has failed to adequately prevent urban environment pollution due to its inappropriateness in densely populated localities or the local administration have not been effective to enforce the minimum sanitary standards on the urban population.
11. Availability of land for the construction of low cost waste water treatment facilities that demand large land area is difficult in most urban situation.
12. Almost all of the few wastewater treatment plants existing in Kathmandu valley are either not operational or under used for a variety of management weaknesses. Wastewater treatment facilities in the out of valley towns are nonexistent.
13. Poor solid waste management practices are adding problem to the operation of waste water collection systems in cities and towns.
14. Towns and cities gravely lack toilet facilities at public places and most existing facilities lack adequate water supply and proper upkeep. The poorly managed public toilets sets bad example among the people and de-motivates them to have such facilities in their neighbourhood.

4.1.4. Rural Sanitation

15. Sanitation promotion activities in rural areas have been traditionally treated a piggyback to water supply projects. As a result no post-project support and monitoring are weak.
16. The sanitation promotion in rural areas has mostly focussed on hygiene education and on-site sanitation in the form of family toilet and septic tank construction. Adequate attention has not been paid to environmentally and hygienically safe handling and disposal of septic waste from the on-site sanitation facilities.
17. Resource recovery from human faeces and urine for use as agricultural manures have not been given due attention.

18. Many schools in rural areas are either without a toilet or without adequate toilets.
19. Public toilet facilities on public transport stops along roads and highways are scarce.
20. Adequate priority is not given to the construction of surface drains for the disposal of increased waste water (gray water) flow due the provision of improved water supply.
21. Absence of sanitary solid waste management practices in rural areas, especially in emerging towns, is impairing the benefits of improved water supply and sanitation to rural population.

4.2. Gender Equity and Social Inclusion

22. Barring menstruating and postnatal women and Dalits from using family water points and toilet facilities is still a social taboo widely practiced in many rural communities in some parts of the country.
23. Though a legal offence, un-touchability still exists in many rural communities which bars the so called un-touchable from using community water taps and sanitation facilities.
24. Public toilet facilities are not user friendly to women, children and physically challenged people.
25. School toilets are not user friendly to girls and physically challenged students.
26. The poors and marginalized are heavily burdened to pay up-front cash or voluntary labour contribution for the construction of water supply schemes, connection fees, and cost recovery based water tariff.
27. The poors and marginalized, both in urban and rural areas, are heavily burdened to contribute to the cost of construction of water and wastewater facilities and pay for construction of family toilets.

4.3. Environmental Issues

28. Global climate change has made water supply sources vulnerable to deplete or dry out rendering water supply services inadequate or defunct. It is more vulnerable for the water supply systems designed and constructed based on small sources with marginal flows.
29. Absence of the demarcation and legal definition of the effective catchment area of the water supply sources are un-enabling service providers from protecting the sources against deforestation and pollution.
30. Surface and ground water sources in towns and cities are being polluted to variable degree in the absence of adequate and effective sewerage and sanitation services.
31. The environmental concerns in the construction and operation of water supply and sanitation services are largely ignored.

32. Un-clear policy and laws delays approval of concerned authorities even in most genuine cases for locating water supply and sanitation facilities in forests, national parks, wildlife conservation areas.

4.4. Cost Recovery and Affordability

33. Private sector and financial institutions are unable to invest in financially viable projects in the absence of conducive cost recovery policy and legal provisions.
34. Blanket application of a uniform cost recovery policy is leading low income communities to choose lower service levels and conservative designs.
35. Full cost recovery for wastewater services with treatment facilities would generally be unaffordable to most urban and all rural communities due to its high investment and operation costs.

4.5. Operation and Maintenance

36. Often quality of material and workmanship used in the construction, more so in rural areas, are poor resulting in higher operation and maintenance costs.
37. Generally revenue generated is inadequate due to low tariff in most urban and rural water supply and sanitation services to pay for staff salary, energy, chemicals, maintenance and repairs and other costs.
38. Generally the central and field offices of larger urban water supply and sanitation utilities are over staffed. And staffing in their departments is not balanced according to their workloads.
39. Corrective maintenance is generally preferred than the preventive maintenance as no advance maintenance plans are prepared.
40. Maintenance technicians, more often in rural areas, lack needed skill and are inadequately supervised.
41. Out-sourcing of maintenance works is un-common as most maintenance works are done in-house by its regular or long-term employed staff members.
42. Maintenance of sewerage and sanitation services receives lower priority.
43. High electricity energy costs and long load shedding hours each day due to national shortage of electricity supply is adversely affecting the operation of electricity-based water supply and wastewater services.

4.6. Institutional Issues

44. Expansion of services is often ad hoc and a quick-fix solution to the problem of service deficiency in municipalities in the absence of master plan to guide the development of water supply and sanitation system.
45. Clarity lacks in the roles and responsibilities between local government and other sector agencies for the development, operation, monitoring and regulation of water supply and sanitation services.
46. Coordination among the sector agencies involved both in the urban and rural water supply and sanitation service delivery are lacking leading to duplication of efforts and inefficient use of scarce resources.
47. Many of the different approaches adopted by different agencies, particularly those involved in rural sub-sector, in the planning and implementation of water supply and sanitation schemes are causing confusion among the population and encouraging unhealthy competition among the agencies.
48. Investment for the service improvement in NWSC towns is impaired due to lack of clarity on the role of NWSC while the Government has set off to implement institutional reform through the formation of WSMBs in cities and towns operated by it.
49. Due to lack of skilled manpower and financial resources, local bodies have largely been unable to bear the responsibility for water supply and sanitation services in cities, towns and villages as envisaged by the LSGA and LSGR.
50. The LSGA and LSGR have not adequately recognized the role of the grass root level institution of WUSAs that has now proved to be the foundation stone of the decentralized water governance structure.
51. The efforts to strengthen the capabilities of Water Users and Sanitation Committees (WUSCs), especially in rural areas, to effectively participate in the planning, implementation and operational decisions and entrepreneurial management of services are inadequate.
52. Coordination at different levels among the various implementing agencies, service providers and service regulators are weak and ineffective causing duplication and wastage of effort and resources.
53. Local bodies have mostly been unable to effectively deal with the sanitation problems in cities and towns by curbing all un-sanitary practices, including solid wastes management.

4.7. Legal Frameworks

54. The Water Supply Rules, enforced under the existing WRA, has been realized to be inadequate to account for as broad and diverse socio-economic sector as water supply

and sanitation. The parent law, the WRA, was primarily enforced to regulate water resource use for the conservation and protection of surface water sources.

55. The existing regulatory law, WSTFCA, is realized to be weak to effectively and adequately safeguard consumers' right in receiving safe and reliable services from service provide at affordable price and at the same time make them aware to use the services responsibly. The jurisdiction of WSTFC over the rural water supply and sanitation services is largely unclear.

5.0 Need for the New Policy

The New Water Supply and Sanitation Policy is the revision and merger of two separate Policy documents, namely, i. Rural Water Supply and Sanitation National Policy 2060 (2004) and ii. Urban Water Supply and Sanitation Policy 2066 (2009). The need for the revision and merger of the existing Policies has arisen due to the following reasons:

Need for a single water supply and sanitation policy

1. The separate urban and rural water supply and sanitation policies were formulated at different times on as needed basis. As most issues are common for both urban and rural sector, it is an opportunity to merge them together while updates of the both were considered.

Need for update of the urban and rural water supply and sanitation policies

2. As the rural and urban policies were written at different times, they have appeared to be inconsistent and incoherent with each other in many respects.
3. The policy review and update was needed to address ever increasing demand for improved water supply and sanitation services in context of improving economy and living standards, increasing awareness and changing life style in both urban and rural areas.
4. Many new experiences in the operational and technical aspects of the sector have been gained nationally and internationally over time in the sector which needs to be reflected in the national policies. Similarly many new concept, thinking, opinions, and approaches have emerged over time.
5. Strengthening of policies were needed to provide a set of common objectives, goals and approaches of operation of all sector agencies to achieve coherent and consistent development of the sector minimizing duplication of efforts and effective utilization of scarce resources.
6. Right and responsibilities of the consumer and the service providers needed clearer definitions to facilitate service providers to improve the service delivery and raising awareness among the consumers to take best advantage of the delivered services.

7. An added emphasis to urban sanitation with sewerage collection and treatment facilities needed to be given in policy to alleviate the worsening urban environment in the lack of investment in urban sewerage systems.
8. Merits of current policies needed review for their effectiveness and adequacy in meeting the intended goals and objective.

6.0 Goal

The goal of the National Water Supply and Sanitation Policy (NWSSP) is to reduce urban and rural poverty by ensuring equitable socio-economic development, improving health and the quality of life of the people and protection of environment through the provision of sustainable water supply and sanitation services.

7.0 Objectives

1. To ensure the availability of safe and adequate water supply and sanitation services to all according to the coverage targets with defined service levels as set out below:

Water supply

- Coverage of 100 percent of the population with basic level of services of which at least 25 percent having medium to high level of services by the year 2017¹.
- Coverage of 100 percent of population with medium to high level of services by 2027².

Sanitation

- Coverage of 100 percent population with basic level of services of which at least 10 percent having medium to high level of services by the year 2017¹.
 - Coverage of 100 percent of population with medium to high level of services by 2027².
-

¹National target of National Water Plan (2002-27)

²Proposed targets for medium to higher level of services.

Note: Refer to Annex 1: Glossary of Terms and Definition for the definition of “service levels”.

2. To ensure the participations of the users, especially women and the poor and marginalized groups, in articulation of their concerns in decision making at all levels;
3. To ensure access of women, poor and marginalized groups, including slum and squatter dwellers and disabled, to water supply and sanitation services;

4. To protect, develop and manage existing and potential surface and ground water sources of water supplies;
5. To protect surface and ground waters from waste water pollution;
6. To promote use of affordable and cost effective alternative technologies;
7. To enhance local institutional capabilities to plan, implement and manage water supply and sanitation services;
8. To maximize recovery of investment costs from users capable to pay for the services;
9. To enable operator and service providers to raise tariff to fully cover operation and maintenance costs of water supply and sanitation services;
10. To promote public private partnership and to promote investment by nation financial institutions for the sector development.
11. To enhance coordination and delivery efficiency of the institutions involve in the sector; and
12. To strengthen legal framework to protect environment, safeguard consumer interests and clarify institutional roles and responsibilities for sustainable service delivery.

8.0 Policies

The Policy recognizes that the scope of water and sanitation services extends beyond fulfilling the basic human needs, which aims towards achieving improved quality of life through providing safe, reliable, adequate and enhanced services at affordable prices to all consumers, including poor and marginalized. Compatible infrastructure, appropriate institutional setup, rationalized cost recovery, favourable financing environment, full user participation in decision making and fruitful partnership with the private sector are recognized as core elements towards achieving the sectoral objectives in a sustainable manner. The policy also aims to adopt effective measures to safeguard the environment and emphasizes achieving a balance with other competing uses of water through adoption of demand and supply management measures.

The major policy principles in this regard are:

1. **Basic level service coverage:** The government have recognized water supply and sanitation services as one of the basic human rights. It has achieved, till now, a remarkable success in providing basic water supply and sanitation services to a large proportion of population and pledges to achieve universal coverage shortly by the end of the year 2017. (Objective 1)
2. **Up gradation of service level:** With rising awareness and generally improved economy, people in rural and urban areas are aspiring for service levels higher than basic levels of services. To fulfil such aspiration the Government will upgrade the existing basic water supply and sanitation services to medium and high level of services both in rural and urban areas by the year 2027 in phase manner. (Objective 1)
3. **Rehabilitation of non functional schemes:** More than half the existing water supply schemes, especially in rural areas, is reported to be non functional or partially functional. Similarly, many institutional and public sanitation facilities, both in urban and rural areas, are poorly operated and managed. Government will accord high priority to rehabilitate such existing non-functional and partly functional water supply and sanitation facilities. (Objective 1)
4. **Consumers' involvement in decision making:** Some progress has been made so far in the aspect of consumer's involvement in decision makings. Based on the past experience, users' involvement will be further promoted and made more effective

through widening and intensifying the community consultation process for all important and crucial decisions ranging from planning to operation and management of services. Especial focus will be given to women, poor and marginalized group of consumers to participate in the decision making processes. (Objective 2)

5. **Accessibility of all to services:** In many instances poor, marginalized and squatters are generally deprived of the benefit of improved water supply and sanitation facilities for one reason or another. School and public sanitation facilities are un-friendly to girl students, women, and disabled. All measure will be taken to ensure that all have equal accessibility to water supply and sanitation services. (Objective 3)
6. **Drinking water source protection and conservation:** The catchment areas of urban and rural water supply sources are universally unprotected from human encroachment which is the common causes of source pollution, source depletion and source use conflict. Appropriate measures will be taken to protect all water sources from any human activities in the catchment areas that adversely affect the quality and quantity of flow of the water sources. At the same time conservation measure will be promoted to enhance the quality and flow of water in the drinking water sources. (Objective 4)
7. **Protection of surface and ground water sources from wastewater pollution:** It has been observed that all surface water sources, especially in urban areas, have been heavily polluted by the discharge of untreated wastewaters and dumping of septic sludge from on-site sanitation facilities. Densely located on-site sanitation facilities, such as septic tanks, and pit-latrines, in urban and rural localities have been posing risk of ground water pollution. To minimize such risks appropriate measures will be taken in phased manners to improve waste water management to prevent surface and ground water pollution. (Objective 5)
8. **Compliance with environmental protection laws:** It is now being increasingly realised that the weak compliance of existing environment laws during the construction and operation of water supply and sanitation projects causing environmental degradation at local level and adding to the global climate change. Taking serious note of such shortcomings measure will be taken to ensure that the existing environment laws are strictly complied. (Objective 5)
9. **Use of cost effective and affordable alternative technologies::** Use of advanced technologies adopted by industrialized countries in the water supply and sanitation service provisions have often proved to be unaffordable in Nepali socio-economic conditions and greatly restricts expansion of service coverage due to high investment and operation costs. This applies more to wastewater treatment technologies. To overcome these situation alternate cost effective and affordable technologies will be promoted though they may not always meet the standards of industrialized countries. (Objective 6)
10. **Strengthening local institutional:** The local institutions, namely WUSAs, Water Supply Management Boards and NWSC branches, NGOs and CBOs needs strengthening to enhance their capability to deliver water supply and sanitation services effectively. Especially, strengthening of WUSAs in rural subsector, needs urgent attention as most schemes in rural subsector are found to be non functional. The Government will accord high priority to strengthen local institutions to enable them to effectively plan, develop and manage the water supply and sanitation services. (Objective 7)
11. **Strengthening local capabilities:** Local bodies, generally lack expertise and resources to carry out the function as envisaged in the LSGA and LSGR in effective and adequate manners. The Government will take concrete measures to strengthen

local bodies to enable them to play central role in planning; overseeing, coordinating and monitoring sector development activities. (Objective 7)

12. **Enhancing NGOs role in the sector development:** The Government fully recognizes the contribution made by non-government organizations to the development of the sector mainly by fulfilling the social mobilization roles. However, NGOs level of involvement, scope of assignment and harmonization of inputs with other project activities greatly varies across the sector agencies. The Government will take further steps to enhance NGOs roles and responsibilities in the sector with defined minimum levels of involvement to be coherently and consistently made across the sector agencies. (Objective 7)
13. **Cost sharing for the construction of service provisions:** Realizing water supply and sanitation services basic human needs the Government have made substantial investment for basic level of services in the sector over the last four decades in the past. However, as people have had been seeking more-than-basic level of services at affordable cost; application of cost sharing option has proved encouraging in the past. Based on the experiences of the past, the Government will adopt a variable cost sharing options for the service provisions depending on the level of service preferred by the beneficiary community. (Objective 8)
14. **Adequate tariff for sustainable service delivery:** The Government acknowledges that the normal practice of fixing inadequate tariff for water supply and sanitation services has universally affected the sustainability of built facilities and the service delivery to the consumers adversely To overcome such anomalous situation government will be supportive of all initiatives taken by commercial service providers to enable them to maintain desired level of service delivery and facilitate community service provides to set adequate tariff so that the sustainability of the built facilities are jeopardised. (Objective 9)
15. **Private sector participation in water supply service delivery:** Generally water supply is a profitable business in urban areas as evident from the fact that private sector is profitably operating tanker services partly meeting the supply deficiency in Kathmandu valley. Though this indicates that the private sector has potential to invest in urban water supply sub-sector, appropriate environment have not been created for them to invest in the urban water supply operations. The Government, now recognizing the potential of private sector as its sector development partner, will create appropriate environment for the private sector to participate in the urban water supply delivery (Objective 10).
16. **Sector financing through banks and other financial institutions:** Government has enabled WUSAs of small and emerging towns to implement water supply schemes through TDF loans of up to 45% of the construction costs with the guarantee provided by concerned local body. Based on the success of such initiative the government will create enabling environment for banks and other financial institutions to provide investment loans to WUSAs, water companies and local bodies for development of water supply and sanitation sector. (Objective 10)
17. **Sector coordination:** Sector coordination is an issue seriously pursued by the Government in the past. The National Sanitation and Hygiene Steering Committees (NSHSC), the National Sanitation and Hygiene Coordination Committee NSHCC) and the Water Supply, Sanitation and Hygiene Coordination Committees (WASH CCs) have been established and mandated to coordinate the sector activities at central, regional, municipal and VDC levels. A Sector Stakeholders Group (SSG) comprising of donors and national stakeholders have also been established to jointly review and assess the sector performance and extend cooperation for the harmonized

and coordinated development of the sector. The Government, encouraged by the improved sector coordination attained through such initiatives, will take concrete steps to strengthen the Committees by making it permanent institutions of the sector. (Objective 11)

18. **Clearer role and responsibilities for stakeholders:** The traditional arrangement of the Government as the owner and the WUSAs as the operator of the water supply and sanitation service assets has made the community dependent on the government for further development and improvement of service delivery. This has also sidelined the local bodies from taking the roles and responsibilities given to them by the LSGA and LSGR. The Government will set clearer roles and responsibilities among its agencies, local bodies and WUSAs in regards to the ownership, operational responsibilities and service development and improvements (Objective 11).
19. **Sector-wise Approach (SWAp) to service development:** Traditional short term project based approach of service delivery has not proved to be very effective in bringing together the Government, donors and other stakeholders for broadening policy dialogue; implementing a single sector policy and a common realistic expenditure programme; common monitoring arrangements; and more coordinated procedures for funding and procurements. Such practice has resulted in the duplications of efforts and unhealthy competition among donors and stakeholders. This approach has adversely affected the service delivery efficiency and sustainability of services. For these reasons SWAp, in line with the basic principles of program-based approaches (PBAs), will be followed under the strong leadership of the Government through its WASH CCs at all levels. (Objective 11)
20. **Benchmarking and performance monitoring:** Initiatives on benchmarking and monitoring of urban water supply utilities against predefined indicators and service standards has now been taken by the Sector Efficiency Improvement Unit (SEIU) of the Water Supply and Environment Division, MoUD. The current efforts will be accelerated and the benchmarking and monitoring will be made a permanent feature of sector monitoring process. (Objective 11)
21. **Strengthening DWSS as the sector led agency:** Despite of the fact that the DWSS is the designated lead sector agency of the Government, it has not been able to perform the lead role assertively in the absence of clearly defined roles as the lead sector agency. The Government will define the roles the DWSS needs to fulfil as the lead agency of the sector and strengthen it to effectively discharge its roles. (Objective 12)
22. **Service regulation and tariff setting:** The water supply and sanitation sector has so far gone un-regulated. The Water Supply Rules was enforced in 1988 (2055) under the Water Resources Act of 1992 has proved inadequate to address variety of environmental, societal, economical and institutional issues due to limitation of the parent law. The WSTFC established in 2006 has also limited mandate tariff fixation for commercial operators rather than service regulation and tariff approval at national level. The Government will take concrete steps to strengthen the existing legal regime to protect environment, safeguard consumers' interest for receiving quality services at affordable price and define roles and responsibilities of sector stakeholders.

9.0 Strategies

To ensure that the stated policies are carried forward, the following strategies are identified against each of the policy statement:

9.1. Basic level service coverage: The universal coverage of basic level of water supply and sanitation service will be achieved at the end of the year 2017 adopting following strategies. (Objective 1):

1. High investment priority will be given to serve the un-served population in order to achieve the universal coverage by the year 2017.
2. Basic level of service provision will be targeted to low income remotely located communities.
3. Communities receiving basic level of services will be required to pay minimum of contribution to the cost of contribution of the scheme.
4. Communities served with basic level of services will be provided necessary technical support to enable them to operate and maintain the facilities and maintain the sustainability of the services.
5. Simpler technical options with low operation and maintenance cost will be preferred.

9.2. Up gradation of service level: The Government will adopt the following strategies in upgrading the existing basic water supply and sanitation services (Objective 1):

6. Upgrading of water supply and sanitation services will be targeted to municipalities and emerging market centres and small towns in VDCs.
7. A municipality or a VDC will be divided in basic, medium and high level districts for providing water supply and sanitation services according to the populations' income levels and willingness to pay.
8. Commercially operating service providers in municipalities will be required to upgrade water supply and sanitation services according to the specified service levels of the districts within their jurisdiction by the year 2027.
9. WUSAs operating in municipalities will be required to upgrade water supply services at least to medium level by the year 2027.
10. Commercially operating service providers in municipalities will be encouraged to expand their service to adjacent un-served areas and upgrade service levels in areas served by other WUSAs according to the specified service level of the district.
11. Local bodies engaged in providing water supply and sanitation services will be required to upgrade water supply and sanitation services according to the specified service levels of the districts within their jurisdictions by the year 2017.

12. Where no other service providers have been designated, the local bodies will be required to provide water supply and sanitation services according to the specified service levels of the districts within their jurisdiction by the year 2027.

9.3. Rehabilitation of non functional schemes: Government will rehabilitate such non-functional and partly functional water supply and sanitation facilities adopting the following strategies (Objective 1):

13. High investment priority will be given to the rehabilitation of non functional or partly functional rural water supply and sanitation service system to provide basic level of services by the year 2017.
14. Commercial operating service providers in municipalities will be required to rehabilitate or reinstate any or all parts of non- or partially functional water supply and sanitation service system to make it fully functional by the year 2017.
15. WUSAs operating on full or part cost recovery principles will be required to rehabilitate or reinstate any or all parts of water supply and sanitation service system to make it fully functional by the year 2017.
16. Local bodies operating water supply and sanitation systems will be required to rehabilitate or reinstate any or all parts of the water supply and sanitation service system to make it fully functional by the year 2017.

9.4. Consumers' involvement in decision making: Consumers, especially women, poor and marginalized groups, will be encouraged to participate in the decision making processes at all levels. The strategies will be as the following (Objective 2):

17. The consultation processes with consumers, including potential consumers, will be improved at all stages of project planning, development and operations, including tariff setting, so that the project implementing agencies and the service providers are able to provide demand based services.
18. Adequate measures will be taken to ensure that the consumers understand existing level of services, identify technology and service preferences and are presented the range of available technological and cost options to enable them to take informed decisions.
19. Women's participation will be further strengthened in all aspects of water supply and sanitation planning, implementation, management, operation and maintenance. To this effect the minimum numbers of women members in the executive body of service providers will be increased to one-third of the total number of executive members. At least one women member will hold one of the important positions of the Chair, Vice-chair, Member Secretary or Treasures.
20. The Service Providers will be required to make extensive consultation with identified poor and vulnerable groups of consumers during tariff setting processes and properly accommodate their concerns as well as adopt measures for their relief.

To ensure this the executive committees of service providers will be required to have at least one member from disadvantaged and indigenous group of consumers.

21. Recognizing that men have an equal role in realizing the benefits of water supply and sanitation services, they will be encouraged through proper education and awareness programs for effective management of water supply and sanitation at household levels.

9.5 Accessibility of all to services: Following strategic measure will be taken to ensure that all have equal accessibility to water supply and sanitation services (Objective 3):

22. All project implementing agencies and service providers will be required to prepare social maps to adequately identify poor communities, slums and squatters requiring special assistance to avail the services so that the poor and marginalized people get and remain connected to water supply and sanitation services.
23. Public and school sanitation facilities will be adequately provided for and made user-friendly to women, girl students and the physically challenged people.
24. Effective community education programs will be implemented to eliminate social discrimination against women in postnatal and menstruating periods and Dalits from using household and public water and sanitation facilities.

9.6 Drinking water supply source protection and conservation: Appropriate measures will be taken to protect and conserve sources of water utilities adopting the following strategies (Objective 4):

25. Use and preservation of archaic and historic water sources like stone spouts, Kuwas, wells and ponds, etc. will be encouraged for recreational and aesthetic purposes. As an exception, use of such historical water sources as complementary sources of water supply in water scarce areas of the towns and cities will be permitted with adequate catchment protection and water treatment.
26. The influencing catchment areas of the surface and ground water sources of water supply sources will be defined and the service provider will be made responsible to protect and preserve the catchment area to safeguard the quality and flow of water.

9.7 Prevention of surface and ground water sources from wastewater pollution:

Appropriate measures will be taken in phased manners to improve waste water management to prevent surface and ground water pollution implementing the following strategies (Objective 5):

27. The Government will set wastewater quality standards for discharging all kinds of wastewater into natural water bodies and agricultural lands. The standards will be enforced in order of priority set according to the severity of pollution of surface and ground water sources.

28. Preferences will be given to the application of wastewater, with appropriate treatment meeting wastewater quality standards, on agricultural lands against the discharges in to surface waters.
29. Hospitals, commercial establishments and Industries will be required to treat their wastewaters on-site before so that they meet the wastewater standards before they are discharged in to the public sewers.

9.8 Compliance with environment protection laws: The Government will take concrete measures to ensure that the environment laws are fully complied during the construction and operation of water supply and sanitation projects.

30. The environment awareness and environment compliance monitoring programs will be made mandatory for all water supply and sanitation projects at construction and operation stages.
31. The water supply and sanitation development plans in urban areas will be guided by and implemented in accordance to Environmental Improvement Plans of the concerned towns and cities.
32. The water supply and sanitation professional and technicians will be sensitized to the requirement of the environment laws and expertise will be developed within the sector agencies to plan and design projects with minimum of adverse environmental impact during construction and operation.
33. Necessary expertise will be developed among the sector agencies to carry out IEE and/or EIA in accordance to the prevailing environment laws.
34. Existing design guidelines will be reviewed and updated to ensure that the service facility designs minimize the adverse environmental impact during construction and operation of the schemes.

9.9 Use of cost effective and affordable alternative technologies:: Alternate cost effective and affordable technologies will be promoted though they may not always meet the standards of industrialized countries (Objective 6):

35. Roof top rain water harvesting technology will be promoted in geographical areas with high occurrences of rainfalls and where water supply by conventional means is not feasible.
36. Development of artificial lakes and ponds will be considered to hold abundant wet season flow of small rivers and streams to supply communities in dry seasons when source water is greatly depleted.
37. When feasible, the water supply system in mid-hills and along southern foot hills will be designed based both on surface and ground water sources to supply most of water supply from surface sources and deficient water from ground water sources.
38. Very low cost method of household disinfection, such as solar disinfection (SODIS) and boiling of drinking water, will be promoted as stop-gap measures in rural

communities that are vulnerable to the water-borne diseases due to drinking polluted water until provision of safe water supply are made.

39. Promotion of eco-friendly toilets will be scaled up, especially in rural areas, to recover the high nutrition urine to use as fertilizer in agriculture fields.
40. Small bore sewers to carry septic effluents of on-site sanitation system and its treatment in low cost wastewater treatment system, e.g. reed bed, will be given high priority over other conventional wastewater system in smaller towns and low income suburbs of larger towns and cities.
41. Wastewater treatment based on natural processes, e.g. waste stabilization ponds, will be preferred against conventional technologies as standard treatment methods whenever land is cheaper.
42. Decentralized mechanical wastewater package treatment plants will be employed when land is expensive in densely populated towns and cities.

9.10 Strengthening local institutional capabilities: The Government will accord high priority to strengthen local institutions in order to improve their capability to effectively plan, develop and manage water supply and sanitation service at local level (Objective 7):

43. The current sector institution reform process of transferring NWSC towns to new local Water Supply Management Boards (WSMB) to develop, manage, and operate water supply services will be expanded to more willing towns and cities. The Boards will be fully supported by providing necessary funds and technical assistances.
44. Since the institution reform initiatives have commenced in later years of the past decade, Government and donor funding support to NWSC has drastically curtailed in anticipation that its towns would be transferred to Boards in near future. The Government has realised that the reduced funding support has unfairly affected the service delivery in NWSC towns. The Government will ensure that NWSC receives adequate funding support so that it is able to sustain the service delivery at desired level in its towns.
45. As NWSC jurisdiction is increasingly shrinking with more and more towns are being transferred to new Boards, it will be transformed into an agency enabled to operate the services under management contracts with other asset owners, including WSMBs.
46. Service delivery capacity of KUKL, the company created on PPP model to operate water supply and sewerage services and implement improvement works in Kathmandu valley towns, have increasingly weakened since its creation due to poor political support of the transitional Governments in the past. As now the political environment has much stabilized, the Government, in the capacity of its largest shareholder, will take concrete steps in collaboration with other shareholders to re-establish and enhance KUKL capabilities.
47. NWSC employee unions are seen unsupportive to the reform process as they are concerned about their career and the retirement benefits in the new organizations. The

Government will take appropriate steps to ensure that the employee retirement benefits are fully secured and their fair career development is assured.

48. The legal position of WUSAs will be strengthened as the owners of the water supply and sanitation assets providing them with defined authority and accountability, in order to make them independent and autonomous to take initiatives to undertake further improvements in the service delivery to the consumers.
49. WUSAs will be encouraged to form Boards to strengthen their institutional capacity to serve its consumer with enhanced autonomy and independence as provisioned in the WSMBA.
50. RWSSFDB will be made a permanent agency of the Government to provide financial grants, and implementation assistance through NGOs and consulting firms, to promote community managed water supply and sanitation schemes.
51. WUSAs capacity will be increasingly enhanced to plan, implement and operate rural water supply and sanitation schemes. The DWSSOs' roles will be increasingly focussed to facilitating communities by providing technical support to plan, implement and operate the schemes.
52. Cross-linked local agencies like administrative, security and other development agencies will be oriented to support and facilitate service operators to enable them to serve the consumers in accordance with their mandate and jurisdiction.

9.11 Strengthening local capabilities: The Government will take concrete measures to strengthen local bodies to enable them to play central role in planning, overseeing, coordinating and monitoring sector development activities (Objective 7).

53. The policy to implement development activities only when they are part of the development plans of the local bodies will be strictly followed.
54. Concerned VDCs or municipalities will be adequately consulted to reflect their concern in planning and designs of the water supply and sanitation projects.
55. Concerned VDCs or municipalities will be made available by the sector development agencies all relevant information including the copies of reports, designs and drawings, and cost estimates of the water supply and sanitation projects.
56. Concerned DDCs, VDCs, and municipalities will be presented by the sector development agencies the physical and financial progress reports of the activities in review meetings.
57. Concerned DDC, VDCs and municipalities will be required to make periodical visits to project sites to appraise and monitor the progress and assist to resolve social and environmental problems and issues hindering the progress of the project.

58. Concerned DDCs, VDCs and municipalities will be made available by the concerned sector agencies a copy of the management contract made with a service provider or a private operator.
59. The service provider or the private operator will be required to provide periodical operation reports to the concerned DDC, VDCs and municipalities for review. The service providers or private operators will be answerable to the local bodies for the operation reports.
60. Concerned DDCs, VDCs and municipalities will be required to make periodical visits to the service providers or operators' facilities to appraise and monitor the functioning of the facilities and assist to resolve any pertinent problems and issues related to service operations.
61. The present effort to encourage and support DDCs, VDCs and municipalities to prepare and implement time-bound plans to attain "total sanitation" and declare areas of their jurisdiction "Open Defecation Free (ODF)" will be accelerated.

9.12 Enhancing NGOs role in the sector development: The Government will take steps to further enhance NGOs roles in the water supply and sanitation sector development (Objective 7).

62. NGOs involvement will be made mandatory at the planning, development and operational phases of projects for socio-economic benchmarking surveys, health and hygiene promotion, and social mobilization purposes.
63. NGOs will be periodically mobilized to communities to assess and monitor sustainability and benefits of the projects following the completion of the projects.
64. NGOs will be mobilized to support communities to manage the construction of small rural water supply and sanitation schemes implemented with the grants made available by the government or local bodies.

9.13 Cost sharing option of service provisions: The Government will adopt different proportion of cost sharing between beneficiary communities, local bodies and the government depending on the level of service demanded by the communities (Objective 8).

65. The Government will continue to provide 80 to 90 percent of the water supply and sanitation project construction costs with the provision of basic level of services. The remaining 10 to 20 percent of the construction cost shall be contributed by the users, preferably in cash term, depending on the affordability of the user community.
66. The Government will continue to provide 50 to 60 % of the water supply project construction costs with the provision of higher than basic level of services. Depending on the affordability of the user community, the remaining 40 to 50 % of the construction cost will be borne by the user community, of which 5 to 10 % will be upfront cash contribution and the remaining 30 to 45 % will be made available as loan through other intermediary funding agencies.

67. The Government will generally not contribute any cost of water supply project construction to commercially operating water supply service providers.
68. The Government will provide 70 to 80 % of the sanitation project construction costs with the provision of services higher than the basic level. The remaining 20 to 30 % of the construction costs will be jointly borne by local bodies and non-commercially operating service providers.
69. The Government will provide 20 to 30 % of the construction costs of sanitation project with services level higher than basic level as grants to commercially operating sanitation service providers.
70. If not mutually agreed otherwise, the investment made by the local bodies in sanitation projects in the service area of a commercially operated sanitation service providers will be treated as grant.

9.14 Adequate tariff for sustainable service delivery: The Government will support and facilitate service providers to fix tariff at adequate level necessary for sustained service delivery (Objective 9).

71. The WSTFC will be enabled to nationwide approve water supply and sanitation tariffs based on transparent criteria and commercial principles for commercially operating service providers.
72. The WSTFC will be enabled to nationwide approve water supply and sanitation tariff based on transparent criteria for WUSAs operating on non commercial but on full or part of the investment cost recovery basis. The tariff must meet loan recovery, if any, replacement costs and operation and maintenance costs.
73. WUSCs of community managed water supply and sanitation services will be facilitated to fix adequate tariff to meet the replacement and operation and maintenance costs.
74. All service providers will be required to set discounted tariff rate for targeted poor and disadvantaged group of consumers distributing the financial burden to other consumers. The service providers shall be allowed to compensate losses through tariff to be paid by other consumers.

9.15 Private sector participation in service delivery: The Government will create appropriate environment for the private sector to participate in the urban as well as rural water supply and sanitation service delivery (Objective 10).

75. Municipalities, VDCs and WUSAs will be encouraged and facilitated to operate the service under management contract and outsource operation and maintenance of the service assets.
76. Municipalities, VDCs and WUSAs will be encouraged and facilitated to involve private sector to invest in the water supply and sanitation infrastructure development.

9.16 Sector financing through banks and other financial institutions: The government will create enabling environment for banks and other financial institutions to provide investment loans to local bodies, WUSAs, Corporations, and companies for the development of water supply and sanitation sector. (Objective 10)

- 77. The local bodies will be provided legal basis for giving guarantee to local banks and financial institutions on behalf of WUSAs, if they wish to take loans for meeting full or part of the investment costs in water supply and sanitation infrastructure.
- 78. WSMBs will be provided legal basis to mortgage their mobile or immobile assets to banks and financial institutions against loans for meeting full or part of the investment costs for the infrastructure development and service delivery improvement.

9.17 Sector coordination: The Government will strengthen the Coordination Committees established at different levels and make them permanent institutions of the sector (Objective 11).

- 79. Legal provisions will be made to make national, regional, district and local WASH coordination committees permanent sector institutions with defined roles and responsibilities.
- 80. The NSHSC and NSHCC will be respectively renamed as NWASHSC and NWASHCC to correctly reflect its coordinating role in both water supply and sanitation sub-sectors.
- 81. The WASH CCs will function as extended arm of DDCs, VDCs and municipalities in preparing consolidated and unified sector development and operational plans and in monitoring and evaluation of sector development and operational activities.
- 82. The role of the Federation of WUSCs will be strengthened in the WASH CCs by recognising its importance and capability to ensure transparent, accountable and effective service delivery.
- 83. The District WASH CCs will be provided with necessary resources to establish and strengthen grass root WASH CCs at VDC and Municipal levels to prepare their own WASH plans to form the district WASH plans.

9.18 Clearer role and responsibilities for stakeholders: The Government will set clearer roles and responsibilities among its agencies, local bodies and WUSAs in regards to the asset ownership, operational responsibilities and service development and improvements (Objective 11).

- 84. Ownership of the government funded water supply system assets will be transferred to respective Municipalities and VDCs, while continuing the practice of entrusting service operation responsibilities to WUSAs.
- 85. Ownership of the government funded sanitation and sewerage systems will be transferred to Municipalities and VDCs with operation responsibilities.
- 86. Government sector agencies will provide technical support to WUSAs to carry out feasibility studies; prepare engineering designs, drawings, cost estimates and bidding

documents; supervise the construction of development works and monitor the service operations.

9.19 Sector-wise Approach (SWAp) to service development: The Government will take strong leadership through its WASH CCs at all levels adopting SWAp in line with the basic principles of program-based approach (PBAp) (Objective 11).

87. The WASH CCs at all levels will be tasked to provide a common platform for all sector stakeholders to draw a single, comprehensive and harmonized program and budget framework, to monitor and evaluate sector performance based on uniform program level indicators and to follow a common reporting procedures.
88. The Government will initially apply sector-wide approaches of program and budgeting, monitoring and reporting in a few sample districts and extend to all districts within a 5 year time frame.
89. Serious efforts will be made to garner donors support to Government's initiatives to shift from project based approach to program based approach and align their aids accordingly within a given time frame.

9.20 Benchmarking and performance monitoring: The current efforts on benchmarking and monitoring will be accelerated and will be made permanent features of sector monitoring process (Objective 11).

90. Benchmarking and performance monitoring of all urban water supply utilities serving municipalities and small and emerging towns will be completed within a 3 year time frame.
91. Benchmarking and performance monitoring of all rural water supply and sanitation services will be initiated and completed within a 5 year time frame.
92. Benchmarking and performance monitoring of all urban sanitation and sewerage services will be initiated and completed within a 5 year time frame.
93. A web based benchmarking and performance monitoring database management system will be established and integrated with the existing NMIP database at DWSS and MIS database at MOUD.
94. The existing web and GIS based database operation of the MIS Unit at the MOUD will be revitalized and the Unit to be provided with adequate resources so that the Ministry and other sector related agencies contributing to the database are able to regularly and sustainably update and use the system data base.
95. The existing NMIP Unit database of the DWSS will be made web based and the Unit will be strengthened and provided with adequate resources so that the Department and

its sections, regional monitoring and divisional offices, and projects are able to regularly and sustainably update and use the database. To facilitate the updating processes the existing NMIP database will be converted to web based data base.

9.21 Strengthening DWSS as the sector lead agency: The Government will define the roles the DWSS needs to fulfil as the lead agency of the sector and strengthen it to effectively discharge its roles (Objective 12).

96. DWSS as the sector lead agency of the Government will assist MoUD to:

- advise on sector policies, strategies and laws;
- monitor and ensure implementation of government policies, strategies and laws;
- prepare/update design criteria and guidelines;
- prepare/update service standards, and technical manuals and guidelines;
- monitor and ensure implementation of design criteria and guidelines, service standards, and technical manuals and guidelines;
- prepare/update sector development plans;
- prepare/update periodic sector development programs and budgets;
- monitor/review sector performance;
- maintain and manage computerised sector database;
- prepare and implement sector human resource development plans;
- coordinate and harmonize donor and sector agencies inputs;
- provide other professional supports.

97. DWSS as the lead agency will perform the following tasks:

- technically approve implementation and operation of water supply, sewerage and sanitation projects at local level;
- support local bodies in developing capacities to plan and monitor sector activities;
- support local bodies to monitor service delivery by service providers;
- facilitate and provide technical and financial support to WUSAs to implement and supervise project construction;
- facilitate and provide technical support to WUSAs to operate and manage the services;
- facilitate and provide technical and financial support to WUSAs to improve, expand, augment and rehabilitate services;
- continuously facilitate and motivate WUSAs for institutional reform as appropriate;
- restore emergency in communities whose water supply and sanitation services in communities affected by natural calamities such as floods, landslides, hurricanes and earthquakes;
- facilitate and provide technical and financial support to communities to rehabilitate services disrupted and damaged by natural calamities such as floods, landslides, hurricanes and earthquakes; and
- provide training to develop capacity of the manpower at local level.

98. The CHRDU of DWSS will be developed as a national sector training institution for developing WASH related capacity at central, regional and local levels.

9.22 Service regulation and tariff setting: The Government will take concrete steps to strengthen the existing legal regime to protect environment, safeguard consumers' interest for receiving quality services at affordable price and define roles and responsibilities of stakeholders (Objective 12).

99. To facilitate effective service regulation of the sector a comprehensive law and rules will be drafted and enacted.

100. The WSTFC laws will be reviewed to mandate and strengthened it to regulate the services provided by all service providers in accordance to the laws, rules and service standards.

ANNEX 1

Glossary of Terms and Definitions

The terms used in the Policy is defined as below:

Glossary of Terms and Definitions:

The terms used in the Policy is defined as below:

- i. **Water Supply Services:** Water supply services refer to the production, storage and distribution of potable water for domestic, institutional, municipal/communal, commercial¹, and industrial¹ purposes with or without treatment that meets the National Drinking Water Quality Standards. The term also refers to the management of such water supply services. Potable water when untreated refers to water that is colourless, tasteless and odourless and also contains no chemical and microbiological impurities harmful to human health. (Refer to the Table A below for the Classification of Water Supply Service Level.)
- i.
- ii. **Sanitation Services:** Sanitation services refer to the following as the context may require:
 - a. Storage, collection, transmission, and treatment of domestic, institutional, municipal/communal, commercial, and industrial wastewater and disposal of treated wastewater in compliance with the National Wastewater Discharge Quality Standards including the management of such services;
 - b. Collection, transmission and disposal of gray waters from domestic, institutional, municipal/communal and commercial sources in aesthetical and environmentally acceptable manner including the management of such services;
 - c. Solid waste management in order to minimize drinking water pollution and interference with the wastewater management; and
 - d. Health and hygiene promotion to maximize benefits of improved water supply and sanitation services.

(Refer to the Table B below for the Classification of Sanitation Service Level.)
- iii. **Urban/Urban areas:** Urban/Urban areas refer to a metropolitan city, sub-metropolitan city, and a municipality. 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 100 million in annual revenue. It should have public utilities including electricity, drinking water, telecommunication and similar services.

¹*Only for the purposes of human consumption but not for the commercial and industrial uses for production processes*

- b. Sub-metropolitan city:** Settlement with a minimum population of 100 thousand and with at least 50 million in annual revenue. It should have public utilities including electricity, drinking water, telecommunication and similar services.
- c. Municipality:** Settlement with a minimum population of 20 thousand and with at least 2 million in annual revenue. It should have public utilities including electricity, drinking water, telecommunication and similar services. In mountain and hill area, a population of 10 thousand, annual revenue of 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 at least 10 person 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, and high school and health services.

Within this category two further sub-categories are defined. These are:

- d. Intermediate Town:** having populations of between 10 thousand and 50 thousand.
 - e. Small Town:** having population of between 5 thousand and 10 thousand.
- iv. Service Level Categorization:** Three categories of service levels have been defined for both water supply and sanitation as shown in the tables below. Categorization of water supply services are based on the daily amount of water consumption, quality of supplied water, accessibility to services in terms of type of consumer tap connection and its reliability. Similarly categorization of sanitation services is based on type of technologies of wastewater collection, treatment and disposal. The choice of technologies will generally depend on population served, level of urbanization, availability of land for treatment facility, acceptability of consumers and other area-specific environmental considerations.

A. Categories of Water Supply Services

Service Indicators	Service Levels		
	High	Medium	Basic
Quantity (lpcd)	≥112	≥65	≥45
Quality	Meets NDWQS	Meets NDWQS	Potable
Accessibility	≥75% consumers	≥50% consumers	≥75% consumers

	having private taps	having private taps	dependent on public taps
Duration of supply (hrs/day)	24 ¹ (18-24) ²	24 ¹ (12-18) ²	24 ¹ (6-12) ²
Continuity (Months/year)	12 ³	12 ³ (7 days of interruption in a year acceptable) ⁴	12 ³ (7-14 days of interruption in a year acceptable) ⁴

Notes:

- ¹ System to be designed for 24 hour supply.
- ² These reduced hours are for system performance evaluation purposes.
- ³ System to be designed for round the year uninterrupted supply.
- ⁴ Short interruption of supply in a year is acceptable for system performance purposes.

B. Categorization of Sanitation Services

S. No.	Service Components	Service Levels		
		High	Medium	Basic
1	Health and hygiene * Education	√	√	√
2	Household latrine promotion	√	√	√
3	Public and school toilets*	√	√	√
4	Septic tank sludge collection transport, treatment and disposal	√	√	√
5	Surface drains for collection, transmission and disposal of gray waters	√	√	√
6	Small bore sewer collection for toilet and septic tank effluent, low cost treatment and		√	

	disposal			
7	Sanitary sewers for wastewater collection, transmission, non conventional treatment and disposal	√		
8	Sanitary sewers for wastewater collection, transmission conventional treatment and disposal	√		
9	Limited solid waste collection and safe disposal*	√	√	√

*The component to be implemented to support local bodies and other relevant agencies.

ANNEX 2

Other Relevant Documents

The most relevant policy namely, Rural Water Supply and Sanitation Sector National Policy and Strategies BS 2060 (AD 2004) and Urban Water Supply and Sanitation Policy BS 2066 (AD 2009) have been briefly described in the main body of the document. Following briefly describes other pertinent legislations, policies and periodic plans.

Nepal Water Supply Corporation Act 2046 (1989): The Act and the succeeding Rules were enforced to convert the Nepal Water Supply and Sewerage Board to an autonomous Corporation to develop, operate and manage water supply services in the larger and medium sized municipalities, including Kathmandu valley towns. It has been amended twice and the later amendment allows it to cede willing municipalities under its jurisdiction to be governed by new Water Supply Management Boards in response to government initiative to improve service delivery in towns and cities.

Water Resources Act 2049 (1992): This Act and the one of the succeeding Rules related to water supply provides legal basis for state ownership over water resources and governs national water resource management including its use for drinking water purposes. The Act accords priority to water supply over other uses of water sources. The Act requires formation and registration of Water Users' Association (WUSA) to obtain license for the use of water source from the District Water Resource Committee. The Act requires for maintaining water quality, protection of environment and prohibits pollution. Contrary to the general understanding that it may be treated as a comprehensive legal instrument to address all uses of water, it is increasingly being felt that the Act is inadequate to encompass all issues related to effective and efficient operation and management of water supply services.

Nepal National Sanitation Policy and Guidelines for Planning and Implementation of Sanitation Programme 2051 (1994): The Policy and Guidelines, first of its kind, was prepared at a time when water supply was given high priority over sanitation. The policy was formulated and adopted to expedite sanitation coverage which was lagging far behind water supply coverage. The Policy had emphasized on changing people's unhygienic behaviour and practices related to personal, household and environmental sanitation through health and hygiene education. Importance of community and NGO involvement in sanitation promotion were recognized. The health and hygiene education was linked to the promotion of the construction and use of family latrines.

Rural Water Supply and Sanitation Fund Development Board (Formation) Order, 2052 (1996): The Formation Order established the Rural Water Supply and Sanitation Fund Development Board (RWSSFDB) to provide technical, financial and institutional support to Users' Groups and Support Organizations (NGOs and CBOs) to implement demand-led and cost effective water supply and sanitation projects in rural areas. Over a decade World Bank has been funding the Board to implement schemes. The scheme implementation modality adopted by the Board has successfully demonstrated that community management of the planning, implementation and operation is a key to the sustainability of the water supply and

sanitation schemes. The Board modality has also been replicated in many other development projects.

Environment Protection Act 2053 (1997): The Act and its succeeding Rules require either EIA or IEE, depending on its scale and complexity, of all development projects. The Act empowers the Government to control pollution of all water resources. The Ministry of Environment, Science and Technology is currently engaged in setting standards for discharge into water sources. Similarly, MoUD is developing standards for all wastewaters to be discharged in to natural water courses and agricultural fields for irrigation.

National Water Supply Sector Policy 2055 (1998): Before this policy the Government used to formulate policies and strategies through the periodic national Five Year Plans and annual program and budget. This was the first Policy (adopted during Ninth Five-year Plan 1997-2002) on water supply sector that has consolidated the Policies stated in the Periodic Plans. The Policy set the target of providing safe, convenient and adequate water supply to all the people by the year 2002, which could not be met due to inadequate investment and many other institutional weaknesses.

Water Supply Rules 2055 (1998): The Rules has been promulgated under the Water Resources Act 2049. This Rule has made provision of formation and registration of Users' Associations for the use and protection of water sources for drinking water purposes, and operation and management of water supply and sanitation services. As the parent Act, the rules also have obviously been inadequate to address the sector issues fully.

The Local Self Governance Act 2055 (1999): The Act and its succeeding Rules provide 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 bodies. While periodic district plans have been formulated in 52 districts a decade long political conflict until the year 2005 and the absence of locally elected officials for over 12 years in the past, have frustrated the implementation plans.

Fifteen-year Urban Water Supply and Sanitation Sector Plan 2057 (2000): The Plan defines and identifies emerging towns in rural area based on population, growth, socio-economic activities and potential of future growth and extension. It set an environment to implement and operate small town water supply and sanitation projects based on user co-financing and cost recovery principles. The Plan has identified 209 emerging towns and was updated for the period of 2009-2015. A number of projects have already been successfully implemented and many more under implementation with ADB assistance. Based on the success of the Plan, NPC has issued directives in 2068 (2012) to implement projects funded through Government sources on the similar principles and policies.

Water Supply and Sanitation Sector Policy for Kathmandu Valley 2057 (2000): This ad hoc policy for Kathmandu Valley was formulated, in the absence of a urban water supply and sanitation sector, to facilitate implementation of Melamchi Water Supply Project. The Policy supports the development of long term sustainability of adequate water supply and sanitation services in all towns within the Valley. The policy also envisages institutional reforms for enhancing water supply and sanitation services which resulted in the formation of a new Kathmandu Valley Water Supply Management Board (KVWSMB), and a Water Supply Tariff Fixation Committee (WSTFC).

Kathmandu Valley Strategy on Water Supply and Sanitation Sector 20057 (2000):

Succeeding the Policy for the Valley the Government has set strategies for effective management of the water resources in the Valley to ensure sustainable use, maximize secured Supply, maintain adequate water quality, and promote conservation. The Strategies also provide for setting service delivery standards at an acceptable level that promotes equitable supply of potable water, easy access, continuity and reliability at affordable prices. One of the important strategies was to operate and manage Kathmandu Valley water supply and sanitation services through a Company, Kathmandu Upatyaka Khanepani Limited (KUKL), established under public-private partnership arrangement.

Water Supply Management Board Act 2063 (2006): This Act empowers the Government to form WSMBs, in consultation with the concerned municipalities, to take over the operational responsibility from other agencies to develop, manage and operate water supply and sanitation services in Municipalities. A few Boards, including KVWSMB, have so far been formed to improve water supply and sanitation services in the municipalities. All Board towns were previously managed by Nepal Water Supply Corporation (NWSC).

Water Supply Tariff Fixation Commission Act 2063 (2006): The Water Supply Tariff Fixation Act (WSTFCA) has created an independent and autonomous Commission to protect consumer interest by approving tariff to be raised by commercially operating service providers for providing safe and reliable water supply and sanitation services. The Act however falls short of clearly defining the Commission's roles to regulate services provided by and fix tariff for all service providers in the country.

National Drinking Water Quality Standards 2063 (2006): The Standards has made it mandatory to comply with its provisions in all new water supply systems and has triggered a water quality improvement drives in urban and rural water supplies alike. Most of the water supplies based on surface water sources generally meet the physical and chemical water quality standards except for high turbidity in Monsoon season. Ground water sources at some places are reported to contain iron, manganese and ammonia in excess. Shallow ground water in a couple of districts is reported to contain arsenic above permissible level. Water qualities of existing water supplies not meeting National Drinking Water Quality Standards (NDWQS) will be improved in phased manner with appropriate treatment measures.

National Urban Policy 2064 (2007): The Policy 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 in the sector, particularly investment in infrastructure development, is specifically sought.

Three-Year Interim Plan 2064-67 (2007-2010): The eleventh Three-year Interim Plan has provided 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 has proposed the full integration of sewerage, on-site sanitation and solid waste management in all urban water supply schemes and specifically endorses cost recovery from consumers. Responsibilities of local bodies for overseeing and monitoring project implementation with private sector organisations playing increasing roles have been emphasised. Interim Plan

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

Three-Year Plan 2067-70 (2010-13): The twelfth Three-year Plan has continued to follow the guidance of the 3-year Interim Plan with further emphasis on user co-funding and their ownership over the built water supply and sanitation facilities, water quality improvement to meet NDWQS, sector-wide approaches (SWAp) in the program implementation, integrated environmental mitigation measures in project construction to prevent adverse effect on climatic change and improvement in institutional capacity.