

**Medium Term Expenditure Framework
(2002/3-2004/5)
Water Supply and Sanitation Sector**

Nepal Development Forum-2002

**His Majesty's Government of Nepal
Kathmandu
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Executive Summary

Background

The ninth plan has aimed to provide basic drinking water service to all the population of Nepal by the end of FY 2001/02. However the population served by basic drinking water service at the end of ninth plan is expected to be only about 71.5 %. The coverage by basic sanitation service stands at about 25 % of total population.

The main issues and challenges in the sector relate to lack of adequate budget, spreading of its allocation in large number of projects, lack of adequate sources and dispute in water allocation, lack of coordination between various agencies involved in the sector, operational subsidies in urban water supplies, poor status of information system and ineffective monitoring and evaluation.

Sectoral Planning and Budgeting

The water supply and sanitation sector is to contribute to the national goal of poverty alleviation by expanding basic water supply coverage to 85% of the total population which involves providing basic water supply service to additional 4,235,000 population. Expanding sanitation coverage, upgrading of water supply services and promoting private sector involvement in management of urban water supply and improve and upgrade water supply service in Kathmandu valley are other objectives of the tenth plan.

Multiple agencies are involved in the development of water supply and sanitation sector. Beside government agencies many non-governmental agencies are also working in awareness building, health and sanitation education and implementation of water supply and sanitation schemes. INGOs & NGOs also mobilize its own resources to implement water supply and sanitation projects. VDC and DDC are also involved in the development of the sector and use a part of the fund made available to them by government for development of water supply and sanitation services.

Altogether 26 projects and programs are under implementation in the FY 2001/02. Out of 26 projects, 6 projects under donor funding and one project under HMG/N funding are closing down in the current fiscal year. Beside Melamchi Project, only one project under donor funding will remain for next year.

HMG/N is implementing the Melamchi water supply Project with the top most priority. With the completion of the preparation phase of the project and signing of the agreements with all the funding partners, the project has stepped into implementation. Substantial amount needs to be invested from the Government to meet the committed 25 percent counterpart fund for the project in the forthcoming years. The budget allocation for the Melamchi project will be looked at separately and will not be allocated at the cost of the other rural and urban water supply and sanitation programs.

IDA is supporting the policy and institutional reforms for the establishment of the efficient and effective service delivery system in managing and operating water supply and sanitation systems in the Kathmandu Valley. The process has been initiated to let the

management and operational function of the water supply system to the private operator of International repute by December 2002.

The rural water supply is very much affected due to the delay in the project preparation of the proposed ADB funded community water supply project and could not overlap with the ongoing fourth rural water supply & sanitation project. Similarly the rural water supply is going to suffer due to the completion of the IDA funded rural water supply & sanitation project from next March. The second phase of this Flagship project, which has demonstrated sustained and self-reliant measures through the contribution of the capital cost sharing to the extent of 40 % by the beneficiary community in the form of cash and kinds is very promising and needs a priority for implementation.

Medium Term Expenditure Framework

The medium term target for development of water supply and sanitation sector is to increase coverage by basic water supply service to 80% of the population and to expand basic sanitation service and to upgrade the water supply service levels. These objectives would be accomplished by carrying out existing coverage sustaining activities, coverage expanding activities and service upgrading activities.

The unit cost for the services has been based on the recently completed rural water supply project funded by ADB and rural water supply and sanitation project funded by World Bank for rural water supplies. The unit costs of Small Town water supply and sanitation project and DACAW program funded by UNICEF has been taken for upgrading of service and sanitation program respectively.

Melamchi project has been identified as one of the national priority project and therefore needs no further prioritization. The other main priority of the sector is providing basic water supply and sanitation service followed by the need to upgrade the service level. The projects have been grouped into two categories the first one that contribute to achieving the objective of basic service coverage and the other which contribute to upgrading of service level. The prioritization process for these two groups has been dealt separately by developing separate prioritization criteria.

As a result of prioritization, seven ongoing and three upcoming projects contributing to the expansion of basic water supply service have been grouped into first priority. Seven ongoing projects contributing to upgrading of service have been grouped into priority 2. Three projects contributing to upgrading of services have been grouped into priority 3. The budgets for low priority projects have been downsized for the FY 2002/03. The budgets from these projects have been reallocated to Melamchi project. Three low priority projects will be dropped in the FY 2003/04.

The budget allocation to various ongoing projects for next year have been made on the basis of budget ceiling for the sector. The budget for next two years have been estimated on the assumption that the budget for donor funded projects including Melamchi Project will be available as per requirement and the priority project budgets are raised by 10%. The comparison of budget allocation is follows:

S.N	Projects	Budget for FY 01/02 (current)	Budget for 02/03	Budget for 03/04	Budget for 04/05
		Rs. in '000	Rs. in '000	Rs. in '000	Rs. in '000
1	Melamchi Water Supply Project	1727000	2701000	6894330	9756000
2.	Priority 1 coverage expanding project	1650663	1494930	1694588	1842918
3	Priority 2 Service level upgrading Project	457187	512400	807070	874800
4	Priority 3 service level upgrading projects	83000	42500	20000	20000
	Total	3917850	4750830	9415988	12493718

Although the total allocation for the sector has increased by 21.3%, the budget allocation for the activities excluding Melamchi project has decreased by 6.5% for the next fiscal year. The budget allocation for first priority program has also decreased by 9.1% due to completion of ongoing projects and lack of new projects to replace the completed activities.

The priority 3 projects have been downsized by about 49% for the FY 02/03. Three projects will be dropped in FY 03/04 and the budget further reduced by about 53%.

The output of projects and programs of medium term will be provision of basic water supply service to additional 1703,400 rural and 255,000 urban population, basic sanitation facilities to additional 2138,000 population and upgrading of service of additional 200,000 population to high service level and 457,900 population to medium service level.

Findings Implications and Conclusion

Melamchi water supply project is the major project of the sector. The project will consume more than the sectoral allocation both in terms of total budget and local component from FY 2003/04. Therefore the allocation of budget for Melamchi project should be on top of the present budgetary ceiling in order to maintain the development of water supply and sanitation in other parts of the country

The output of medium term activities in providing basic water supply services constitute about 46% of the tenth plan target. The remaining 56% of the tenth plan target are to be accomplished in the remaining two years. This will involve investment of Rs. 614.6 crores. The MTEF output lies far behind in sanitary service provision and upgrading of services also. Therefore additional funding sources need to be identified and such funding directed to the projects in the following field.

- Community Water Supply for Central and Western Region
- Kathmandu Valley Wastewater Management
- Rural Sanitation Improvement Program
- Water Supply Improvement works in major Urban Centers
- Water Quality Improvements including Arsenic Problem
- Human Resource Development

Policy Reform

The national water supply and sanitation sector policy-1998 is the guiding policy document on which the recent policy reforms are based. Kathmandu Valley Water supply and sanitation sector strategy has been approved in Nov 2000 particularly focusing on the demand management, institutional establishment, financial aspects including tariff policy. The strategy has proposed to establish Kathmandu Valley Water Authority for integrated management of water resources in the valley. KVWA will primarily be constituted with local government representatives and some line ministry representatives. It will be responsible for comprehensive water resources management including allocation, use and protection of water resources and the introduction of river basin management approach in Kathmandu Valley

The government is preparing to enact National Water Regulatory Body Act and Drinking Water Act to complete the legal framework necessary for the private sector management of drinking water and wastewater utilities. NWRB will be established to protect the consumer interests and monitor the performance of the operators. These Acts will be presented before the parliament in the next session. The government has already enacted NWSC Act second Amendment 2057 to pave the way for transfer of management of NWSC operation of Kathmandu valley.

In order to control and regulate indiscriminate abstraction of groundwater and to prevent undesirable environmental consequences of excessive draw down of groundwater levels, government is preparing an act for licensing and charging the groundwater abstractions.

In line with the PERC report recommendation for adopting practice of involving the community in rural schemes from the planning stage and sharing of cost by up-front cash contribution, the user community shall be involved from the planning stage in all rural schemes and given the role of implementator with non-governmental organization and government agencies assisting the community and playing the role of a facilitator. The policy and institutional arrangement for training of user committee members and the operators on a continuous basis as per requirement will be suitably designed and executed.

Conclusion

Data management is required for a good planning exercise. Hence, there should be a system for data acquisition, data entry and data management including information dissemination.

It is expected that the present MTEF (Medium Term Expenditure Framework) approach will resolve most of the problems in the programming and budgeting front. The effectiveness of this approach, however, is highly dependent upon the ability of all planning units operating at different levels of the government departments and ministries. MTEF presupposes advance planning and this in turn demands updated data and information at different levels.

Medium Term Expenditure Framework
Ministry of Physical Planning and Works
Water Supply and Sanitation Sub-Sector

1. Background

1.1 Present Status

Drinking water is the basic need of all human beings and the provision of safe drinking water is the declared commitment of the government. However there is still about one third of population who are still deprived of safe drinking water. Lack of safe water is considered to be the main reason of infant mortality in Nepal. People are forced to lose income opportunities due to water borne diseases. Women are especially deprived of the opportunities to engage in income generating activities because of the need to spend long hours in fetching water.

The water supply coverage achieved till the end of eighth plan period in 1996/97 was estimated to be 61% of the total population. The ninth plan has targeted to provide basic water supply services to additional 9.7 million people and increase this coverage to reach 100% by the year 2001/02. In the sanitation sector, the ninth plan has aimed to increase the coverage by basic sanitation services from 20% to 40% of total population. But the achievement at the end of ninth plan period both in water supply and sanitation sector is expected to be much lower than the target. The status of water supply and sanitation coverage at the end of ninth plan is expected to be as shown in the following table.

S. No	Description	Population Benefited by 2001/02* ('000)					
		Rural		Urban		Total	
		No.	%	No.	%	No.	%
1	Basic Water Supply	14464	71.3	2512	72.6	16976	71.5
2.	Basic Sanitation	4094	20.0	1826	53.0	5920	25.0

* Benefited Population does not include coverage by NGOs, Local development agencies and RWSSFDB in FY 2000/01 and 2001/02.

1.2 Issues and Challenges

The main issues and the challenges facing the sector are as follows:

1. There has been no match between the target and the amount of resources available for the development of the sector.
2. There are large numbers of rural water supply schemes in implementation without adequate budget being allocated to each scheme. The scheme construction period is too long. People have not been able to get the benefit in time and in proportion to the investment. There is lack of political will and commitment.
3. Various governmental and nongovernmental agencies involved in the WSS provision has been useful in supplementing the national goal of speedy access on

- one hand, while on the other the lack of coordination between them has resulted in some cases duplication of investment and confusion to the communities.
4. Many water supply schemes are not in operation due to lack of proper maintenance. Though the sustainability of new rural water supply schemes has improved considerably after the community participation and takeover of operation and maintenance by the community, there are still many old schemes (about 584) under the operation and maintenance of DWSS.
 5. Source pollution has increased in recent years. The pollution of big surface sources is in the increasing trend. There is lack of legal provisions to control pollution.
 6. There is lack of perennial water sources in the nearby vicinity of the community in many remote areas. There is increasing conflict on the allocation of water sources for various uses.
 7. Many urban water supply systems run on operational subsidies, whereas the rural schemes are being maintained and sustained by the beneficiary communities. Principle of Cost recovery particularly in the urban areas has not been fully effective. The sector has not been able to attract private sector investment in its activities.
 8. Information management system in the sector is poor. Though DWSS has been identified as the lead and coordinating agency in information management, the information flow to the department from NGO and other agencies has not been maintained.
 9. Though Non-formal education, health and sanitation education and women income generating programs have proved to be helpful for the success of sanitation program in rural areas, there has not been adequate coordination between various agencies involved in these activities.
 10. There is need for increased awareness on health, hygiene and sanitation. The temporary latrines constructed in many areas are not sustainable.
 11. There is need for redefinition and delineation of appropriate roles and responsibilities.
 12. There is lack of effective body to monitor the performance of water supply agencies.

1.3 Recent Policy Reforms

Institutional Reforms

The national Water Supply & Sanitation Sector Policy 1998 does give a clear policy direction in the development of this sub sector. The Policy focuses mainly in the following areas:

- Decentralized approach of development by appropriately recognizing the roles and responsibilities of the local governments and beneficiary community organizations in planning, implementation and upkeep of the WSS services and delineation and redefinition of the role of the water organizations as a facilitating agency
- Due recognition of the fact of the need to have a sound financial management for the long term sustainability of the developed system and thus the sharing in the capital cost has been appropriately recognized. The need to capacitate the local

institutions, people to enable them to take up appropriate decisions in time has been recognized and is being promoted.

Based on the overall national policy, a separate KV- WSS Sector Strategy has been approved in Nov 2000 to suit to the specific nature of the valley particularly focussing on the Demand management, Institutional establishment, financial aspects including that of tariff policy and so on. The strategy has proposed to establish Katmandu Valley Water Authority (KVWA) for integrated management of water resources in the valley. KVWA will primarily be constituted with local government representatives and some line ministry representatives. It will be responsible for comprehensive water resources management including allocation, use and protection of water resources and the introduction of river basin management approach in Kathmandu Valley.

The government has made policy change in the institutional arrangement for providing service at the district level and has dissolved the district level offices of department of water supply and sewerage as per the recommendation of public expenditure review committee. Five monitoring & supervision, forty-three division offices and twenty seven subdivision offices have been established under the department to carry out planning and implementation of medium and big water supply schemes. The present arrangement has reduced the DWSS staff by 423.

In line with the government policy to promote private sector participation in urban water supply sector, Nepal Water Supply Corporation Act (second amendment) 2057 has been promulgated. This has paved the way for transfer of management of urban water supply systems to the private sector.

A National Sanitation Policy has been formulated by the government and is in the process of approval by the cabinet. The policy deals with both urban and rural sanitation in the country and clearly specifies the priorities, technical options. Five-year action plan has been prepared and submitted to NPC for approval.

2.0 Sectoral Planning and Program Budgeting

2.1 Objective, Strategy and Output of Sector in Tenth Plan

The water supply and sanitation sector would contribute to the national goal of poverty alleviation by providing basic social service to people and basic infrastructure for economic development. The objectives of the sector in Tenth Plan are as follows:

Objectives

1. To provide basic water supply service to 85% of total population of the country by the end of plan period.
2. To provide basic sanitation facilities to 50 % of population by advancement of public awareness on health and sanitation by appropriate education and campaign.
3. To upgrade water supply service levels and provide high service level to additional 5% and medium service level to additional 10% of total population.

4. To promote private sector involvement in management of urban water supplies and improve and upgrade water supply service in Kathmandu valley to high service level.

Strategy

1. Rural Water Supply schemes shall be implemented on user community's need and demand basis with maximum utilization of local resources and beneficiary community's participation and involvement. The schemes shall be made effective and sustainable by responsibly involving user committee and local agency from the planning stage and strengthening implementation, repair and maintenance and leakage control arrangements. Besides Non-governmental agencies, Community organizations/agencies and private sector shall be mobilized as partners in the development of the sector.
2. Emphasis shall be given to skill and capacity development of User committees and Non-governmental organizations to implement rural water supply schemes by mobilizing them.
3. Priority will be given to the use of appropriate simple technologies that can be supported by the community. Wherever perennial and adequate source is not available, water supply service shall be provided by adopting technologies like Rainwater harvesting, solar pumps, hydrams etc.
4. Rural water supply schemes requiring rehabilitation and incomplete schemes shall be implemented with priority.
5. Policy of conservation and development of water resources within the watershed area by integrated (conjunctive) use management of ground and surface water sources will be adopted. The institutional development for integrated use management of watershed will be made for improvement and augmentation of water supply in Kathmandu Valley.
6. National drinking water quality guidelines shall be prepared and Quality Monitoring and Control Mechanism shall be strengthened to provide safe water.
7. Sanitation Programs shall be implemented as an integral part of water supply scheme. Construction of sewerage system in densely populated area and on site sanitation in other areas shall be emphasized.
8. Water Supply Schemes shall be operated on cost recovery basis. In rural areas, policy of operation by users community on operational cost recovery basis shall be adopted. Cost recovery of other costs along with operation and maintenance cost shall be adopted in urban areas.
9. Besides promoting private sector involvement in the management of urban water supply, water supply facilities shall be developed and expanded by involving and allocating responsibility to municipalities as per decentralization policy.
10. Monitoring of private sector operated water supply service shall be performed by independent regulatory body. Initiatives will be taken to conduct in a phased manner monitoring of government, semi-government and user committee operated water supply systems in urban and semi urban areas by regulatory body.

Expected Outputs

The output at the end of tenth five-year plan in 2006/07 is expected to be as follows.

S. No.	Description	Population in Thousand		
		Rural	Urban	Total
Water Supply Sector				
1	Population at the end of FY 01/02	20281	3461	23742
2	Population at the end of plan period 06/07	22315	4368	26683
3	Benefited Population at the end of 01/02	14464	2512	16976
4	Benefited percentage at the end of 01/02	71.3	72.6	71.5
5	Total Population to be benefited at the end of 06/07	18867	3713	22580
6	Percentage benefited at the end of 06/07	85	85	85.0
7	Additional population to be benefited by basic service in tenth plan period	4403	1201	5604
8	Additional Population to be benefited by existing system capacity	1083	328	1369
9	Additional Population to be benefited by new schemes	3362	873	4235
10	Additional population benefited by high level service			1334
11	Additional population benefited by medium level service			2668
Sanitation Sector				
1	Benefited Population at the end of 2001/02	4094	1826	5920
2	Benefited percentage at the end of 2001/02	20	53	25
3	Total benefited Population at the end of 2006/07	9707	3634	13341
4	Percentage Population benefited at the end of 2006/07	43	83	50
5	Additional population to be benefited in tenth plan period	5613	1808	7421

Contribution of Output to National Goal

The outputs from the sector shall contribute highly to the poverty alleviation goal of the tenth plan. The outcome of providing basic water supply services is reduction in incidence of water borne diseases, reduction in medical expenses, increase in time for income generating activities, increase in productivity of people etc. The saved time in fetching water could be utilized for other income generating activities and thus indirectly supports the poverty alleviation goal. The improved water supply service also acts as an infrastructure for the development of economic activities and will contribute to accelerate economic growth in the country.

2.2 Institutions Involved

Many agencies are involved in the development of water supply and sanitation sector. The main agencies involved at present are:

- Department of Water Supply and Sewerage (DWSS)
- Nepal Water Supply Corporation (NWSC)
- Rural Water Supply and Sanitation Fund Development Board (RWSSFDB)

- Melamchi Water Supply Development Board (MWSDB)
- INGOs, NGOs and CBOs
- Local government agencies (VDC and DDC)
- Users Committees

DWSS and RWSSFDB are government agencies responsible for water supply and sanitation service development in rural areas. Ministry of Local Development has also been carrying out rural water supply development works in some districts under integrated development projects. NWSC, MWSDB and DWSS are conducting water supply development work in urban areas.

Many non-governmental agencies are working in the water supply and sanitation sector since last many years. They have been involved in awareness building, health and sanitation education and implementation of water supply and sanitation schemes. The government policy has been to encourage NGOs to complement its effort in the development of the sector. INGOs & NGOs also mobilize its own resources to implement water supply and sanitation projects.

VDC and DDC are also involved in the development of the sector and use a part of the fund made available to them by government for development of water supply and sanitation services.

Water Users Committees are the grass root level where the capability of water supply system management has greatly enhanced in recent years.

2.3 Major Projects and Programs

Altogether 26 projects and programs are under implementation in the FY 2001/02. Out of 26 projects, 6 projects under donor funding and one project under HMG/N funding are closing down in the current fiscal year. The current sectoral budget allocation is about 44% for Melamchi Project activities, 42.13 % for extending coverage by basic services and the rest for upgrading of service level and others.

S.N.	Project Type	Budget (Rs. '000)	% of Total Budget
1	Melamchi Project Activities	1727000	44.08
2	Basic coverage expanding priority 1 Projects	1650663	42.13 (75.34)
3	Service Level upgrading priority 2 projects	457187	11.67 (20.87)
4	Service level upgrading priority 3 projects	83000	2.12 (3.79)
	Total	3917850	100.00

Note: figure in bracket is percentage excluding Melamchi Project

The most important project in the sector is Melamchi Project. This project has been designed to bring additional water from Melamchi River into Kathmandu valley and solve the aggravating water shortage problem of valley on long-term basis. HMG/N is

implementing the Melamchi water supply Project with the top most priority. With the completion of the preparation phase of the project and signing of the agreements with all the funding partners, the project has stepped into implementation. Substantial amount needs to be invested from the Government to meet the committed 25 percent counterpart fund for the project in the forthcoming years. The budget allocation for the Melamchi project will be looked at separately and will not be allocated at the cost of the other rural and urban areas water supply and sanitation programs.

IDA is supporting the policy and institutional reforms for the establishment of the efficient and effective service delivery system in managing and operating water supply and sanitation systems in the Kathmandu Valley. The process has been initiated to let the management and operational function of the water supply system to the private operator of International repute by December 2002. This has also been one of the pre conditions set by major funding agencies (ADB, JBIC, Norad, and Sida) for the establishment of a competent institution to manage the additional water from Melamchi in an effective and efficient manner.

The small town water supply project, which will assist mainly in enhancing the present water supply service levels in the small and upcoming towns under ADB assistance, is another project of importance in the context of its capital cost sharing by the beneficiaries to the extent of 50 percent.

The major project for rural water supply is the drinking water project funded primarily from the government's own resources. 1226 schemes are currently in implementation under this project in various parts of the country. 164 schemes are targeted for completion in the fiscal year 2001/02. 1062 schemes will be transferred to next year's program. These 1062 schemes are in various stages of construction and will serve 1860,000 populations when completed. This large number of schemes has been prioritized and grouped for completion in each year.

The rural water supply is very much affected due to the delay in the project preparation of the proposed ADB funded community water supply project and could not overlap with the ongoing fourth rural water supply & sanitation project. Similarly the rural water supply is going to suffer due to the completion of the IDA funded rural water supply & sanitation project from next March. The second phase of this Flagship project, which has demonstrated sustained and self-reliant measures through the contribution of the capital cost sharing to the extent of 40 % by the beneficiary community in the form of cash and kinds is very promising and needs a priority for implementation. This project is expected to provide water supply service to about 756,000 populations in next five years.

3.0 Budget Programming - Medium Term Expenditure Framework (MTEF)

3.1 MTEF Targets and Outputs

Medium Term Targets

The medium term targets for development of water supply and sanitation sector in three years are set as follows:

- To increase coverage by basic water supply service to 80% of total population.
- To increase population served by basic sanitation to 40% of total population.
- To upgrade water supply services to provide high service level to additional 2% of total population and medium service level to additional 4% of total population.
- To implement water supply improvement programs in Kathmandu valley to improve water supply and sanitation service to high service level by 2006/07.

In order to achieve the objectives as stated above, activities of three categories would be carried out. The activities are:

- Existing coverage sustaining activities (rehabilitation, O&M management, Leakage control)
- Coverage expansion activities (new schemes in unserved areas)
- Service upgrading activities (quality and quantity improvement)

3.2 Cost Estimate

The cost estimates of ongoing projects have been based on the estimates prepared by the respective agencies. However such estimates differ significantly between the projects funded by various funding agencies and the modalities followed in implementation of various projects. In general for projects implemented for coverage increase, rural water supply projects funded by ADB and rural water supply and sanitation project funded by World Bank can serve as the basis because the schemes under these projects are spread throughout the country including remote areas. The estimated cost of currently ongoing Small Water Supply and Sanitation Project can represent the present cost of upgrading the service level. The sanitation project under DACAW program funded by UNICEF has been taken as the basis for estimate of sanitation cost. The adopted average per capita cost of providing various services has been presented below:

S.N	Project	Per capita cost excluding community contribution (Rs.)	Remarks
1	Rural Water Supply and Sanitation Project	2700	Basic service cost includes sanitation
3	Small Town Water Supply and Sanitation Project funded by ADB	3000	Service Upgrading cost
4	DACAW Program, UNICEF	114	Sanitation program
5	Sewerage	3000	Sewer extension
6.	Quality Improvement Program (WTP)	500	Service upgrading by quality improvement only

3.3 Prioritization Criteria

Water supply and sanitation are the basic need of the people and so projects for coverage expansion and upgrading are generally priority projects. However attempt has been made to prioritize the project on the basis of the contribution that each project makes to the main element of the Poverty Reduction strategy outlined in tenth plan. The prioritization criteria have been developed on the basis of guidelines developed by NPC, the recommendations of PERC report and the sectoral requirements.

In identifying the sectoral requirement, Melamchi project has been identified as one of the national priority project and needs no further prioritization.

The other main priority of the sector is providing basic water supply and sanitation service followed by the need to upgrade the service level. The projects have therefore been grouped into two categories the first one that contribute to achieving the objective of basic service coverage and the other which contribute to upgrading of service level. As the upgrading of services is mostly related to urban area and the issues relating to rural and urban water supply are quite different, the prioritization process for these two groups has been dealt separately.

The following parameters have been used as criteria for the prioritization of basic coverage expansion schemes and service level upgrading schemes.

Criteria for basic coverage expansion schemes	Criteria for service level upgrading schemes
<ul style="list-style-type: none"> • Need for HMG Involvement • Past Performance • Sustainability • People's Participation • Regional Balance • Activity Giving Quick Results • Cost Effectiveness 	<ul style="list-style-type: none"> • Sustainability (Cost Recovery) • Community/Local body participation • Regional Balance • Cost Effectiveness • Economic Importance of project area • Past performance

Though the parameters for both types of schemes are mostly the same, the weightage and the requirements for scoring are different. In basic coverage projects, the community participation has been given more weightage while the cost recovery aspect has been granted more weightage in service level upgrading projects.

3.4 Project Inventory with prioritization

Melamchi Project and Kathmandu Valley water supply project related to Melamchi project under the funding of IDA have not been prioritized under the criteria as stated above. Melamchi Project, which will improve the water supply situation of the capital of the nation and contribute toward economic development of the country, is one of the top national priority projects. Therefore the project has been taken to be in the top in the ranking.

As a result of prioritization, seven ongoing and three upcoming projects contributing to the expansion of basic water supply service have been grouped into first priority. Remaining ten ongoing projects contributing to upgrading of service and other works have been grouped into priority 2 and priority 3 (details in Appendix).

3.5 Project Budget Allocations and Outputs

The budget allocation to various ongoing projects for next year have been made on the basis of ceiling received for the sector. The budget for next two years have been estimated on the assumption that the budget for Melamchi Project will be available as per requirement and the rest of the ceiling will be raised by 10%. The budget for donor-funded projects has been allocated as per the program requirements. The breakdown of allocation for Melamchi Project, coverage expanding projects and service level upgrading projects has been presented below. (See Appendix for detailed budget table)

S.N.	Projects	Budget for 02/03		Budget for 03/04		Budget for 04/05	
		Rs. in '000	% of total	Rs. in '000	% of total	Rs. in '000	% of total
1	Melamchi Water Supply Project	2701000	60.30	6894330	73.21	9756000	78.09
2.	Priority 1 coverage expanding project	1494930	28.98 (73.00)	1694588	17.99 (67.20)	1842918	14.75 (67.32)
3	Priority 2 Service level upgrading Project	512400	9.90 (24.94)	807070	8.59 (32.01)	874800	7.00 (31.95)
4	Priority 3 service upgrading projects	42500	0.82 (2.06)	20000	0.21 (0.79)	20000	0.16 (0.73)
	Total	4750830	100.00	9415988	100.00	12493718	100.00

Note: figure in bracket is percentage excluding Melamchi Project

Although the total allocation for the sector in FY 2002/03 has increased by 21.3%, the budget allocation for the activities excluding Melamchi project has decreased by 6.5% for the next fiscal year. The budget allocation for first priority program has also decreased by 9.1% due to completion of ongoing projects and lack of new projects to replace the completed activities.

The priority 3 projects have been downsized by about 49% for the FY 02/03. Three projects will be dropped in FY 03/04 and the budget further reduced by about 53%.

The output of the projects and their contribution in meeting various objectives of MTEF areas follows:

Objective	Activity	Output
<p><u>Objective 1</u> To increase coverage by basic water supply to 80% of total population</p> <p><u>Objective 2</u> To increase population served by basic sanitation to 40% of total population</p>	<p>a) Drinking Water Project b) Rainwater Harvesting c) Rural Drinking water Project (West Region) d) Water Supply and Sewerage Program e) System development program in 12 towns f) Community Water supply Project g) Rural Water Supply and Sanitation Fund Development board Project h) MPO Program i) Sewerage construction project j) Greater Sewerage Project</p>	<ul style="list-style-type: none"> • 1703,400 Rural Population served by basic water supply • 255,000 urban population served by basic water supply • 1875,000 additional rural population served by basic sanitation • 263,000 additional urban population served by basic sanitation
<p><u>Objective 3</u> To upgrade water supply service to provide high service level to additional 2% of total population and medium service level to additional 4% of total population.</p>	<p>a) Drinking water Quality maintenance Project b) Small town Water Supply and Sanitation project c) Mangarh Drinking Water Project d) Water Supply and Sewerage Program e) System Development Program in 12 Towns f) Dharan Water Supply Project g) Butwal Municipality Water Supply Project h) Production Improvement Project i) Urban Area Drinking Water and Sanitation Rehabilitation Project j) Deep Tubewell and Metering Project</p>	<ul style="list-style-type: none"> • 200,000 additional population served by high service level. • 457,900 additional population served by medium service level.
<p><u>Objective 4</u> To implement water supply improvement programs in Kathmandu valley to improve water supply and sanitation service level to high service level by 2006/07</p>	<p>a) Melamchi Water Supply Project b) Kathmandu Valley Urban Water Supply Project c) Kathmandu Water Supply Improvement Project</p>	<ul style="list-style-type: none"> • Melamchi Project in implementation for completion in FY 2006/07

MTEF and Tenth Plan Target

The activities of MTEF are expected to meet about 46% of the water supply coverage target of tenth plan. The approach paper of tenth plan has highlighted water supply coverage only and the coverage targets for sanitation service and service upgrading are not specifically mentioned. The targets for sanitation and upgrading of services

have been taken from the draft plan document and the long-term vision of the ninth plan document and needs to be finalized.

Description	Tenth Plan Target Pop.('000)	MTEF Output Pop.('000)	Difference Pop.('000)	Unit Cost (Rs.)	Budget Requirement (Rs. '000)	Remarks
Basic Water Supply Service	4235.0	1958.4	2276.6	2700.	6146820	
Basic Sanitation Service	7421.0	2138.0	5283.0	114.	602262	Cost for awareness and hygiene education only
Upgrading of water supply service						
a) medium level	2668.0	457.1	2210.9	3000	6632700	
b) high level	1334.0	200.0	1134.0		14880000	Completion of Melamchi Project will meet this target

In order to meet the tenth plan target of basic water supply coverage, the investment of Rs. 614.6 crore is required to be made in the last two years of the plan period. The investment required for education and awareness campaign for sanitation and upgrading of water supply service level are 60.2 crores and 663.2 crores respectively. Melamchi Project will however meet the target of upgrading to high service level within the tenth plan period.

4.0 FINDING, IMPLICATIONS, IMPLEMENTATION AND CONCLUSION

4.1 Findings and Scenario

Melamchi water supply project is the major project of the sector. This project alone requires substantial budget for next fiscal year, which is more than the total allocated sectoral budget for current fiscal year. The project will consume more than the sectoral allocation both in terms of total budget and local component from FY 2003/04. Therefore the allocation of budget for Melamchi project should be on top of the present budgetary ceiling in order to maintain the development of water supply and sanitation in other parts of the country.

There are 7 projects, which are closing in FY 2001/02. There will remain only one donor funded project (Small Town WSS project) in the sector beside Melamchi Project from the next fiscal year. The output of this project and other government-funded projects (even with government budget allocation in line with current years budget) will fall very short of medium term target. Therefore new upcoming projects with donor funding are essential to meet the medium term as well as five-year development targets. The projects on pipeline are high priority projects. The community water supply project and rural water supply and sanitation fund

development board project are necessary to meet the basic water supply coverage target.

Though ongoing water supply projects and MPO program under UNICEF funding will motivate people to construct sanitation facilities, there is still large gap in the funding to meet the targets of the medium term. New funding sources are required to meet the target.

Urban water supply and sanitation rehabilitation project, Production improvement programme, Greater Sewerage Project, leakage Control and Repair Programme, Drinking water and Sewerage Programme under Nepal Water Supply Corporation are designed mainly to serve the needs of Kathmandu valley. As private operator is expected to be in place by December 2002 and will implement Kathmandu Valley water supply for the improvement of the system, the above mentioned projects could be either discontinued or down sized only to cover the areas outside the Kathmandu Valley.

The budget estimates have not allocated any amount for O&M purposes. It is assumed that the consumer themselves will pay for O&M. In case of rural area this needs community awareness and training programs for the user committees on a continuous basis. Therefore there is need to put more emphasis on continuous human resource development and awareness programs.

There has been significant gap between tenth plan target and the MTEF output. MTEF activities are expected to meet only about 46% of tenth plan target in basic water supply provision. The output lies far behind in sanitary service provision and upgrading of services. Therefore additional funding sources need to be identified and such funding directed to the projects in the following field.

- Community Water Supply for Central and Western Region
- Kathmandu Valley Wastewater Management
- Rural Sanitation Improvement Program
- Water Supply Improvement works in major Urban Centers
- Water Quality Improvements including Arsenic Problem
- Human Resource Development

4.2 Donor Assistance Re-adjustment

Donor assistance in water supply sector has been provided in the priority projects only. Therefore the necessities of donor readjustment are not seen to be significant.

Low Priority Projects

The budgets for low priority projects have been downsized for the FY 2002/03. These projects are related to urban water supply. The budgets from these projects have been reallocated to Melamchi project. Three low priority projects will be dropped in the FY 2003/04. These are a) Dharan Water Supply Project b) Urban Water Supply and Sanitation Rehabilitation Project (Kathmandu Valley Urban Water Supply Project take its place for Kathmandu) and c) Butwal Water Supply Project.

4.3 Implication (Policy Reforms)

The implication of prioritization is not significant if the budget for Melamchi project is treated as additional budget for the sector.

In implementing the activities of MTEF, policy changes will be made to make the program effective and output oriented. The community-based approach adopted in recent years for implementation of rural water supply schemes have proved to be sustainable and effective. This approach will be further strengthened for the effective implementation of projects in medium term.

PERC report has also recommended adopting practice of involving the community in rural schemes from the planning stage and sharing of cost by up-front cash contribution. This strategy has been adopted for the tenth plan. The user community shall be given the role of implementator of the schemes with non-governmental organization and government agencies assisting the community and playing the role of a facilitator. The policy and institutional arrangement for training of user committee members and the operators on a continuous basis as per requirement will be suitably designed and executed.

The policy of involving municipalities in development & expansion of water supply system is one of the strategies for development of the sector. In line with this strategy, the government has decided to establish Kathmandu Valley Water Authority for integrated management of water resources in the valley. KVWA will primarily be constituted with local government representatives and some line ministry representatives. It will be responsible for comprehensive water resources management including allocation, use and protection of water resources and the introduction of river basin management approach in Kathmandu Valley.

The government is preparing to enact National Water Regulatory Body Act and Drinking Water Act to complete the legal framework necessary for the private sector management of drinking water and wastewater utilities. NWRB will be established to protect the consumer interests and monitor the performance of the operators. These Acts will be presented before the parliament in the next session.

In order to control and regulate indiscriminate abstraction of groundwater and to prevent undesirable environmental consequences of excessive draw down of groundwater levels, government is preparing an act for licensing and charging the groundwater abstractions.

4.4 MTEF Implementation

The Project Implementation Plan (PIP) providing a description of the project and all of the arrangements for project management, use of consultants, construction contracts, financial accounting, progress reporting, and monitoring and evaluation will be prepared to use as a guiding document by the executing agency, implementing agency, Project Manager and donor to plan, monitor and evaluate the project.

It is proposed that the PIP will be prepared in two stages:

- A preliminary PIP providing sufficient essential information to enable the sectoral agency, NPC and MOF to appraise and approve the project.
- An expanded PIP will be prepared after project is approved and included in the sectoral agency's programme, containing details needed for implementation. For donor-funded projects and large scale HMGN projects, the PIP will be prepared following a prescribed format with require detailed descriptions of arrangements for project management, reporting, participation of stakeholders, etc.

The PIP will be divided into three major sections:

- Project description
- Implementation arrangements
- Implementation plan

Project Description

This will include project's basic information, objectives and scope, activities with output of each components and ways to achieve them. Further the project description should also cover financial and economic analysis, assumptions and risks and financing plan including source of funding, expenditure and fund requirement and forecast.

Implementation Arrangements

A clear-cut implementation arrangement will be required in terms of organization responsible for the Project

The project manager should be assigned with necessary delegation of authority and line of command and responsibilities of other concerned especially in complex projects should also be clearly defined. For example defining levels of authority for approval of designs, cost estimates, shortlisting of consultants, preparation of terms of reference, proposal evaluation criteria and procurement of goods and works in conformance with the FAR etc. In some donor-funded projects, the loan agreement between the donor and HMGN may alter the authorities specified by the FAR in order to expedite procurement.

Further the functions and responsibilities who are involved as consultants, contractors and equipment suppliers especially where multiple consultants and contractors. In conditions of contract for works or goods, the Employer, Employer's Representative, Engineer, Engineer's Representative, Contractor, Contractor's Agent etc. shall be identified. The powers of the Engineer and Engineer's Representative shall be clearly specified.

The PIP should identify key project stakeholders as well as agencies whose cooperation is necessary. These may include agencies at the central level (other line agencies, AGO, FCGO), district level (DDC, CDO, other line agencies) and the local level (VDCs, NGOs, users groups).

The PIP should describe the coordination arrangements, which will be established with these stakeholders to gain their cooperation in the design, implementation and operations/ maintenance stages of the project.

A Project system should be made for project financial accounting, disbursement and auditing. In domestic projects the procedures to be followed are defined by FAR 2056

In donor-funded projects, the executing agency / implementing agency will adopt project management and accounting procedures which conform to the donor's own procedures and reporting systems. Such additional requirements fall into three categories: donor monitoring and evaluation; procurement; and financial accounting.

Implementation Plan

Plan and Schedule will have to be prepared covering principal tasks or activities in each component and their planned start and completion dates. For example activities such as land acquisition, resettlement action plan and coordination with utilities including detailed plan and schedule covering all procurement actions for the appointment of consultants and contracting for works and goods.

Specific Actions should be prepared that include any specific actions which will be required to achieve the project's development impact objectives. Such actions may include a resettlement action plan (RAP), environmental management action plan (EMAP) and other plans to mitigate undesirable impacts on project affected groups.

Implementation Measures

In order to internalize MTEF as quickly as possible, the following implementation measures should be adopted simultaneously.

- a. Regular updating of data bases particularly relating to programmes, projects and budget.
- b. Training of manpower to familiarize with this new concept.
- c. Regular monitoring and supervision to observe whether or not the progress is moving in the right direction as per MTEF concept.
- d. Annual evaluation of performance to find out the real issues and challenges in the adoption of MTEF concept and lesson learned.

4.5 Monitoring and Evaluation

Project Impact, progress and financial indicators will have be worked out for monitoring and evaluating the development impacts of the project with source of information and means of verification; performance indicators in terms of delivery of inputs and achievement of measurable outputs. It should clearly state the source of information and the frequency of monitoring; and indicators to assess the project's budgetary and financial health, indicating source of information and frequency of monitoring.

In donor-assisted projects, the loan agreement may contain loan covenants, which are actions, or restrictions, which the borrower must comply with as a condition of the loan. The loan agreement will normally specify the method of monitoring the borrower's progress in complying and this information is normally included in the PIP must be adhered to.

Ways to progress monitoring and on going evaluation of project work being done at different level are:

- Regular quarterly progress monitoring and reporting
- On-site supervision and inspection of works
- Workshop

There is nothing new about prevailing regular quarterly progress reporting for all government agencies are familiarized with this system. The second category of tools such as on-site supervision and inspection of works are carried out particularly in the major construction and planning related works as and when required. However, the third one, that is, workshop, is new approach being put into practice by the department since last two-three years and this has proved useful and effective to review and evaluate the works. The workshop brings into focus not only the progress of works as per regular annual programme but also discusses seriously the issues and problems (financial, administrative etc.), hindering the progress of the work. These efforts, however, calls for further refinement and strengthening in order to get desired result in the future.

4.6 Conclusion & Recommendation

Data management is required for a good planning exercise. Hence, there should be a system for data acquisition, data entry and data management including information dissemination.

The well-formulated plans and programs have no meaning if its implementation part is weak. The past experience has clearly indicated that even the well-formulated plans and programs also suffer during the implementation phase due to a number of reasons, such as lack of budget and uncertainty of funding, lack of effective inter-agency coordination, non-availability of appropriate manpower, lack of political commitment and so on. In a resource constraint country like ours, there is no other way other than to rely on external sources for investments on the infrastructural development. These problems are further compounded by prevailing poor programming and budgetary practices ultimately leading to poor portfolio performances. Therefore there needs a full fledge commitment from the concerned sectoral agencies in the improvement of the sector portfolio performances through the establishment of an effective and efficient decentralized institutions and their capacity development to absorb the external resources.

It is expected that the present MTEF (Medium Term Expenditure Framework) approach will resolve most of the problems at least in the programming and budgeting front as it will plan ahead both prioritized programs and projects on the one hand, and budget to implement them, on the other. The effectiveness of this approach, however, is highly dependent upon the ability of all planning units operating at different levels of the government departments and ministries. MTEF presupposes advance planning and this in turn demands updated data and information at different levels. Equally important thing to bear in mind is the issue of plan and program formulation and budgeting method deeply rooted in the minds and hands of the people as if it is a universally established model. Which may be difficult to change

overnight. Therefore, how effectively and quickly MTEF addresses these challenges and issues determine the ultimate success of this approach in our context.

Priority list of projects

Activity	Priority Group	Priority Rank by scoring	Remarks
<u>Basic Water Supply Coverage Expansion Activities</u>			
Other maintenance and Rehab Project (Management Transfer Project)	P1	1	
Drinking Water Projects	P1	2	
Rainwater Harvesting Project	P1	2	
Leakage Control and Repair Program	P1	3	
Rural Drinking water project (western region)	P1	4	Closing in FY 2003/04
Drinking water and sewerage program	P1	5	
System Development programme in 12 New Towns	P1	6	
Community Water Supply Project	P1	3	On pipeline project
MPO Project	P1	3	On pipeline project
Rural Water Supply and Sanitation Fund Board	P1	1	On pipeline project
<u>Service Level Upgrading Activities</u>			
Small Town drinking water and Sanitation Project	P2	7	
Greater Sewerage Project	P2	8	
Sewerage construction Project	P2	8	
Deep tube well and metering Project	P2	9	
Drinking water quality maintenance project	P2	9	
Mangarh Drinking water project.	P2	9	
Urban Area Drinking Water and Sanitation Rehabilitation Project	P2	9	To be closed in FY 2003/04 and be replaced by Water supply project for KV
Butwal Municipality Water Supply Project	P3	10	To be closed in FY 2003/04
Production Improvement Project.	P3	10	
Dharan Drinking Water Project.	P3	11	To be closed in FY 2003/04

ThreeYear year wise output from MTEF program/Projects

Population in '000

Project	Pop. Served in FY 2002/03		Pop. Served in FY 2003/04		Pop. Served in FY 2004/05		Total Population Served	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
<u>Basic Water Service Drinking Water Project</u>	328.0	36.0	337.0	38.0	341.0	38.0	1006.0	112.0
Small town Water Supply and Sanitation project	-	-	16.0	24.0	24.0	35.0	40.0	60.0
Rainwater Harvesting	2.5	-	2.8	-	2.8	-	8.1	-
Rural Drinking water Project(West Region)	8.9	-	-	-	-	-	8.9	-
Water Supply and Sewerage Program	-	20.0	-	15.0	-	15.0	-	50.0
System development program in 12 towns	-	10.0	-	11.0	-	12.0	-	33.0
Community Water Supply Project	-	-	38.1	-	56.9	-	95.0	-
Rjural Water Supply and Sanitation Fund Board Project	180.4	-	184.1	-	180.9	-	545.4	-
Total:	519.8	66.0	578.0	88.0	605.6	100.0	1703.4	255.0

Sanitation Services

Project	Pop. Served in FY 2002/03		Pop. Served in FY 2003/04		Pop. Served in FY 2004/05		Total Population Served	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Drinking Water Project	164.0	18.0	168.0	19.0	171.0	19.0	503.0	56.0
Small town Water Supply and Sanitation project	30.0	45.0	27.6	56.4	44.8	67.2	102.4	168.6
Rural Drinking water Project(West Region)	4.4	-	-	-	-	-	4.4	-
Sewerage construction Project	-	6.6	-	7.3	-	8.0	-	21.9
Greater Sewerage Proj.	-	5.0	-	5.5	-	6.0	-	16.5
Community Water Supply Project	-	-	19.0	-	28.5	-	47.5	-
MPO Program	315.0	-	315.0	-	315.0	-	945.0	-
Rjural Water Supply and Sanitation Fund Board Project	90.2	-	92.0	-	90.5	-	272.7	-
Total	603.6	74.6	621.6	88.2	649.8	100.2	1875.0	263.0

Water Supply Service Upgrading

Projects	Additional Pop. Served in FY 2002/03		Additional Pop. Served in FY 2003/04		Additional Pop. Served in FY 2004/05		Total Additional Population Served	
	High Level	Med. Level	High Level	Med. Level	High Level	Med. Level	High Level	Med. Level
Drinking water Quality maintenance Project	-	50	-	55	-	60.5	-	165.5
Small town Water Supply and Sanitation project	-	-	80	80	120	120	200	200
Mangarh Drinking Water Project	-	-	-	9.4	-	-	-	9.4
Water Supply and Sewerage Program	-	20	-	15	-	15	-	50
System Development Program in 12 Towns	-	10	-	11.0	-	12.0	-	33.0
Total	-	80	80	170.4	120.0	207.5	200.0	457.9