

Water for All?

Review of Asian Development Bank's Water Policy Implementation in Nepal's Context - Main Report



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Preface

The Asian Development Bank (ADB) approved its first Water Policy - Water for All - in 2001 and one of the provisions of the Water Policy is its comprehensive review in 2005. The Water Policy review by ADB provided an opportunity for WaterAid and its partners to constructively engage in the comprehensive implementation review of the policy.

Under the Water Knowledge Partnership Programme between ADB and WaterAid, designed to strengthen the involvement of civil society in promoting effective water management policies and practices, WaterAid undertook a study to examine the effectiveness of a sample of ADB-supported water and sanitation projects in three countries – India, Bangladesh and Nepal. The aim of the study was to feed evidence based analysis into the 2005 comprehensive review of ADB water policy. The study, which was co-funded by ADB and WaterAid, is officially called “ADB Water Policy Review: Preparing WaterAid Partners in Asia for involvement”. The study was undertaken between November 2004 and September 2005.

ADB is a leading multilateral agency in Nepal. Its involvement in the water and sanitation sector is very significant, where thus far, loans of more than US\$ 85.25 million for rural programmes, loans of more than US\$ 220 million for urban programmes; and technical assistance of US\$ 5.6 million have been provided for sector development in Nepal. As per the ADB Country Strategy and Programme (2005-2009), the investment in the social infrastructure, which includes the water and sanitation sector, is on the rise. It also mentions that within the past decade, ADB's lending in the sector has doubled and two projects ongoing are: (1) Community Based Water Supply and Sanitation Sector Project; and (2) Secondary Towns Urban Environment Improvement Project.

WaterAid Nepal has recently formulated its new Country Strategy (2005-2010) based on the analysis of the sector issues and barriers that impede access to poor and vulnerable communities. The strategy has three key components: rural service delivery; urban service delivery; and research, learning and advocacy. By taking an active role and greater participation in sector activities, research and learning, WAN endeavors to increase sector knowledge for improved policy and practices, while promoting pro-poor and innovative approaches in the sector.

A number of institutions have contributed immensely in this study project and WaterAid Nepal would like to particularly thank Dr Sudhindra Sharma and his team at Interdisciplinary Analyst for having undertaken the study for WaterAid in a very professional manner; Ms Laxmi Sharma, ADB Nepal Resident Mission for the cooperation she extended to WaterAid during the study; DWSS authorities, particularly Mr Hare Ram Koirala, Director General; Mr Raj Kumar Malla, Deputy Director General; Mr Hari Prasad Sharma, Project Manager and officials of small town project for assistance including logistics support; and users groups and communities of the visited projects for their time and inputs during field visit by the study team. Credit also goes to Mr Puskar Shrestha, NGO Forum for Urban Water supply and Sanitation in conducting a specific case study of Small Town Water Supply Project. Thanks are due to Prof. Rajendra Shrestha for his contribution in Debt Analysis.

Contribution from Prof Puskar Bajracharya, in the capacity of peer review group member from Nepal is appreciated for his critical review and suggestions on the report. We would also like to thank other peer review group members especially Professor Amitabh Kundu from India, Haroon Rashid, a freelance consultant from Bangladesh, and Sameer Dossani, previously with the NGO Forum on ADB for their inputs and critique.

We very much acknowledge technical support and guidance from Mr Girish Menon, Operations Director, WaterAid UK. Ms Belinda Calaguas, Head of Policy, WaterAid UK and Mr Oliver Jones, ex-Regional Programme Officer for Asia, WaterAid UK from the very beginning.

The study would not have been possible without its anchorpersons. We would like to thank Mr James Wicken, Regional Advocacy and Policy Advisor for his development of the research framework, the production of a synthesis report based on country reports, and for providing overall coordination to the study. WAN recognizes efforts of Mr Rabin Lal Shrestha, Research and Advocacy Manager, who, as the Project Coordinator for Nepal, led and provided technical inputs for the study. We would also like to thank Ms Anita Pradhan, Documentation Manager for her support to bring this research into publication.

This research report is expected not only to enrich greater understanding of ADB water policy implementation in Nepal but also to trigger interest for instituting changes in the design of sustainable water and sanitation services for the poor.

Sanjaya Adhikary
Country Representative
WaterAid Nepal

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Abbreviations

ADB	Asian Development Bank	NGO	Non-government Organization
ADI	Assessing Development Impact	NPC	National Planning Commission
BME	Benefit Monitoring and Evaluation	OED	Operation Evaluation Department
CAPE	Country Assistance Program Evaluation	PCR	Project Completion Report
CBO	Community Based Organization	PIC	Project Implementing Consultants
CBWSSSP	Community Based Water Supply and Sanitation Sector Project	PMU	Project Management Unit
CDR	Central Development Region	PPAT	Project Performance Audit Report
CHRDU	Central Human Resources Development Unit	PPMS	Project Performance Management Systems
CIUD	Centre for Integrated Urban Development	PRA	Participatory rural Appraisal
CPMO	Central Project Management Office	RES	Re-evaluation Study
CSP	Country Strategy Paper	RRN	Rural Reconstruction Nepal
CWS	Community Water Supply	RRP	Report and Recommendation to the President Report
DDC	District Development Committee	RWSSP	Rural Water Supply and Sanitation Project
DMC	Developing Member Country	RWSSSP	Rural Water Supply and Sanitation Sector Project
DWSS	Department of Water Supply and Sewerage	SES	Special Evaluation Study
EA	Executing Agency	STWSSSP	Small Town Water Supply and Sanitation Sector Project
EDR	Eastern Development Region	TA	Technical Assistance
FGD	Focus Group Discussion	TDF	Town Development Fund
FWDR	Far-western Development Region	TPAR	Technical Assistance Performance Audit Report
IDA	Interdisciplinary Analysts	TPO	Town Project Office
IES	Impact Evaluation Study	WA	WaterAid
KII	Key Informant Interviews	WAFED	Water and Energy User's Federation
LSGA	Local Self-Governance Act	WATSAN	Water and Sanitation
M & E	Monitoring and Evaluation	WECS	Water and Energy Commission Secretariat
MDT	Millennium Development Targets	WSS	Water Supply and Sanitation
MoF	Ministry of Finance	WUA	Water Users Association
MPPW	Ministry of Physical Planning and Works		
MWDR	Mid-western Development Region		
NEWAH	Nepal Water for Health		

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Executive Summary

In 2001, the Asian Development Bank (ADB) approved its policy on water - *Water for All: The Water Policy of the Asian Development Bank*. One of the provisions of this policy is to conduct an in-house review of its implementation in the third year and a comprehensive review after five years (ADB, 2001).

The policy review to be carried out by ADB provides an opportunity for WaterAid (WA) and its partners to exert influence to increase resources committed to water and sanitation and influence how these resources are allocated and managed. Hence, it is engaged in the review along with its partners and other non-government organisations to examine the effectiveness of a sample of ADB-supported water and sanitation projects in Bangladesh, India and Nepal.

The case study tries to look at the relevance, effectiveness, impact and sustainability of sampled ADB funded projects in WSS sector in Nepal. The case study also examines the debt burden created by ADB loans at various levels. By examining ADB's existing procedures for monitoring and evaluation, this study also recommends measures for future improvements.

ADB's involvement in the WSS sector in Nepal

ADB has been a leading multilateral lending agency in Nepal. One main area that it has focused its involvement has been the WSS sector, where to date, loans totalling more than US\$ 85.25 million for rural WSS projects and US\$ 225 million for urban WSS projects have been approved. In addition, TAs worth US\$ 5.6 million have also been provided.

Providing assistance to improve water supply and sanitation in the Developing Member Countries (DMC) has been an important focus of the ADB. This has been highlighted as one of the main strategies in its Country Strategy Paper (CSP) for Nepal (2005-2010). According to the CSP, investment in the social infrastructure, which constitutes the WSS loans, is on the rise. It mentions that within the past decade, lending in the sector has doubled and at present there are two WSS projects that are being proposed. They are: (i) Community-based Water Supply and Sanitation Sector II and (ii) Secondary Towns Urban Environmental Improvement project.

Rural projects funded by the ADB have focused on areas in which ADB had previously been involved, principally to

consolidate the gains made by the earlier projects. Interestingly in rural projects, projections for the targeted beneficiaries were always lower than the actual beneficiaries at the completion of the project. Studies have also shown that the per capita cost of the ADB projects are higher than those undertaken by other agencies.

The projections reveal that in order to achieve the MDTs, ADB will contribute 30 percent of the rural water target, 11 percent of the rural sanitation target and 40-50 percent of the urban water target. Due to a lack of data the contribution to urban sanitation can not be calculated however it is clear that this sector receives less priority, despite significant investment requirements.

ADB's involvement in the WSS sector has also had influence on the WSS sector policies and practice. The ever increasing loans and the close working relationship with the Department of Water Supply and Sewerage (DWSS) has allowed the ADB the leverage to be influential on policy matters. Over the years, ADB's assistance in the WSS sector has also provided valuable lessons that have been incorporated into the national policies and practices. For example, the Eighth Five-Year Plan (1992-1997) laid down the principles of participatory development and provided the guidelines that WSS development programmes be demand driven, which were the lessons learned from ADB's first two rural WSS projects. Similarly, recommendations of the TA (TA No. 1717-NEP) provided to the Third RWSSSP were instrumental in formulating the National Water Supply Sector Policy and Drinking Water Regulations, which were both approved in 1998. In 2004, the ADB was also involved in formulating the Rural Water Supply and Sanitation Policy 2004, Rural Water Supply and Sanitation

Strategy 2004 and Rural Water Supply and Sanitation Action Plan 2004. More recently, the ordinance promulgated in 2005 on the establishment of a Drinking Water Management Board is attributed to ADB influence.

Besides the influence on national policies, practices have also been affected by ADB interventions. However, if one were to compare between the two, then ADB seems to have greater leverage on policy matters than it has on actual practices.

Effectiveness of ADB water supply and sanitation projects in ensuring sustainable services for the poor

ADB funded sub-projects have been successful in increasing the coverage of clean drinking water in rural communities. But this coverage has not always included the poor or marginalized communities. Concern over cost recovery has taken precedence over pro-poor access. This is especially evident in the STWSSSP, where the users have been asked to pay 50 percent of the capital cost; 5 percent in upfront cash contributions, 15 percent in the form of cash/kind and 30 percent loan from TDF at 8 percent interest. Not surprisingly, many in the local communities cannot afford this and have consequently been excluded. In rural WSS projects, water supply to community taps/tubewells, the main source for poor households, were either cut off or in dire need of repair. WUCs were found to push for private connections over community taps/tubewells because of the prospects for generating higher revenue.

In those communities where the sub-projects have been implemented, significant benefits have accrued. Access

Performance of indicators	Poor households	Non-poor households
Dependence on ADB subproject	56.3%	48.9%
Main source of drinking water	Community taps/tubewells	Private taps/tubewells
Water payment type	Generally flat rates	Generally meter readings
Difficulty in paying water tariffs	41%	25.2%
Quality of water	Generally good	Generally good
Perception of portability	Generally satisfied with quality	Generally satisfied with quality
Quantity of water	Generally sufficient	Sufficient
Coping mechanism for scarcity	Use less water	Use alternative sources
Well managed private latrine	43.6%	73.6%

to clean water has increased regardless of caste/ethnicity. Water collection time has been reduced which has allowed women more free time to devote to other productive activities, such as kitchen gardening, spending more time with their children and even becoming involved in income generation activities. Hygiene practices have also changed for the better.

The performance of the main indicators for water supply and sanitation disaggregated between poor and non-poor households are as follows:

In ADB WSS projects, the sanitation component has not received priority. The budgetary breakdown of rural WSS projects show that while the water supply component receives the main bulk of the budget, the sanitation component is left with very little.

Field visits showed that significant numbers of households in the ADB sub-project regions do not have access to well-managed private latrines. Open defecation is still common in the ADB subproject regions. The majority of households that have private latrines constructed them without the support of the projects. Neither sewerage systems nor garbage collection systems have been introduced. Awareness campaigns were found to have been conducted in the project areas but were later discontinued.

The sustainability of the sub-projects was to a large extent found to be associated with whether the sub-projects were demand driven or not. Sub-projects were better maintained in areas where the project reduced the hardships associated with water scarcity. Local users were also willing to meet water tariffs in such areas. The commitment of the WUC members was found to be instrumental in sustaining the functioning of the systems. The support being provided by the DWSO staff was also significant.

Capacity building has been a priority of the ADB projects and TA. Trainings have been conducted, but most centre around cost recovery, the setting up of records and little evidence was found of building capacity to ensure sustainable services for the poor.

Monitoring and Evaluation

M & E systems are built into the project framework of WSS projects. During the implementing stage they are mostly centered on the physical progress of the projects, financial contribution of the beneficiaries and the implementation delays. Rarely do they concentrate on the level of services provided to the beneficiary communities, especially to the poor or the marginalized. Once the project ends, the M & E also becomes less frequent, with no system in place to monitor the sustainability of the projects.

The indicators to be monitored are formulated in agreement with the Executing Agency and are mentioned in the RRP reports. This is true for both monitoring and evaluations reports. But, for independent BME reports, it was found that local consultants evaluate projects based on their own set of indicators. When compared these indicators were found to be similar to those mentioned in the RRP documents.

Baseline data is an integral part of the M & E system, which help estimate the demand of the project, identify appropriate interventions, make projections for the future and provide the yardstick to assess the benefits after the completion of the project. But, in spite of its importance it was found that, baseline studies were not being carried out comprehensively which later limited the scope and analysis of M & E studies.

Bottlenecks identified within the M & E system were: (i) lack of WSS specific indicators, (ii) lack of disaggregated data, (iii) feedback loop missing, (iv) rigid project designs, (v) inadequate M & E capabilities, (vi) lack of continuous monitoring, (vi) M & E formats limited to project implementation and (vi) no system to validate M & E reports.

Debt burden and ADB lending

At the national level government finances its deficit through domestic and foreign debt. The development expenditure in all successive budgets has mostly been financed from foreign aid. The result is that Nepal's debt burden is increasing continuously and reached 69 percent of GDP in 2003. External debt servicing reached 14 percent of the revenue in 2002/03. Out of total foreign outstanding debt, ADB outstanding debt constituted more than 35 percent in 2003. The total

scenario indicates that Nepal sooner than latter may be facing the debt trap and already it may be termed as a moderate to highly indebted country.

Debt burden is not a major issue in rural projects where users are responsible for O&M costs only. However in the Small Towns Water Supply and Sanitation Sector Project (STWSSSP) this is a major emerging issue. The STWSSSP has set a capital cost sharing target of 50 percent which is the most ambitious yet tried in Nepal. In addition, users are also responsible for all O&M costs. In Birendranagar the community will contribute over Rs. 120 million to the project (equivalent to US\$1.6m) possibly the highest community contribution towards any project in any sector in Nepal. In Birdendranagar and Ratnanagar a 50 percent contribution equates to a contribution of US\$270 household (equivalent to ten months salary for a poor household) and US\$190 per household respectively, excluding interest on the loan.

The upfront cash contribution is only part of the connection charge in the small towns. In addition users have to pay for a meter, estimated cost of Rs 1,400, and pay for the cost of pipes and connection from their house to the main line. Hence for the two towns visited total connection charges (upfront contribution plus meter, pipes and fitting) is likely to exceed Rs 5,000. This arrangement is making it unaffordable for the poor to connect to the piped water systems.

On lending of concessional ADB loans at higher interest rates increases the financial burden on the Water Users Association (WUA) in small towns. HMG/N receives ADB loans at 1 percent interest. These are on-lent to the Town Development Fund at 5 percent and then on-lent to the WUA at 8 percent interest

per annum. This places a financial heavy burden on the WUAs. Most of the subprojects are facing delays. Delays further the debt burden on WUAs. The cost of materials increases which means that the total project cost goes up, and the loan meter is ticking – the loan repayment period and interest starts from the day the loan agreement are signed yet WUAs can not raise revenue from the project until implementation is completed and water is flowing.

Municipalities act as guarantor for the loan. However, a general lack of awareness about the loans was noted in the Municipalities and they were found to be ill prepared for managing loan repayments should they be required to.

Implementation of ADB's water policy: *Water for All*

The present study also sought to assess whether the policies mentioned in ADB's - *Water for All: The Water Policy of the Asian Development Bank* (2001), have been integrated into the design and implementation of the projects.

Altogether 14 policy actions were selected from the ADB's water policy and reviewed. They have been rated high, medium and low to show the status of their implementation.

National Policies and Reforms

Policy Action No.	Implementation	Remark
Policy Action No. 1: <i>Develop comprehensive water policies in the Developing Member Countries (DMCs).</i>	Medium	<ul style="list-style-type: none"> National Water Resources Development Policy was drafted in 2003. But this policy has yet to be approved
Policy Action No. 3: <i>Optimisation of agency functions, effective cross-sector co-ordination mechanisms, such as a neutral sector apex</i>	Medium	<ul style="list-style-type: none"> Water and Energy Commission Secretariat (WECS) has been strengthened as a neutral apex body
Policy Action No. 4: <i>Review and revision of water legislation</i>	Medium	<ul style="list-style-type: none"> RWSS National Policy/Strategy/ Action Plan 2004 have been formulated Water Resources Act 1992 needs to be revised as per the spirit of LSGA 1999
Action Policy New: <i>Developing water action agendas that have clearly defined objectives and milestones linked to resources.</i>	High	<ul style="list-style-type: none"> National Water Plan that was drafted in 2004 provides a systematic framework for water resources development and identifies action plans. But this effort cannot solely be attributed to ADB.
Action Policy New: <i>The needs of the poor will be specifically factored into legal, institutional, and administrative framework.</i>	Low	<ul style="list-style-type: none"> RWSS National Policy 2004 has mentioned that norms will be developed in identifying the poorest households - But this provision has not come into effect

Improving Water Services

Policy Action No.	Implementation	Remark
Action Policy No. 19: <i>Introduce phased programs to increase the autonomy and accountability of service providers.</i>	Medium	<ul style="list-style-type: none"> Ordinance of 2005 on drinking water management provides an autonomous board for urban water management which is supposed to be accountable to users

Conserving Water

Policy Action No.	Implementation	Remark
Action Policy No. 28: Adopt cost recovery principles in their water policies and strategies	High	<ul style="list-style-type: none"> ■ New projects have adopted this policy e.g. Urban Environmental Improvement Project ■ In some projects users being asked to share capital costs not only O&M costs
Action Policy No. 29: Promote the phased elimination of direct subsidies to the poor	High	<ul style="list-style-type: none"> ■ Urban Environmental Improvement Project has been designed with phased elimination of direct subsidies ■ affordable minimum block tariff being maintained under Melamchi Water Supply Project
Action Policy No. 30: Regulatory agencies will be helped to develop water rights	Medium	<ul style="list-style-type: none"> ■ An ordinance has been promulgated in 2005 on Drinking Water Management Board, which has provision of establishing an autonomous board to manage and regulate WSS sector. It is hoped that the board will address the issue of water rights.

Fostering Participation

Policy Action No.	Implementation	Remark
Action Policy No. 36: Getting the poor to participate	Low	<ul style="list-style-type: none"> ■ Participation of poorer segments not adequately sought
Action Policy No. 37: Promote the participation of civil society	Medium	<ul style="list-style-type: none"> ■ Participation of civil society sought in the design of some projects but not all
Action Policy No. 38: ADB will strengthen women's ability to participate	Low	<ul style="list-style-type: none"> ■ During the study, the study team did not find any case of ADB's support focused on strengthening women's abilities.
Action Policy New: Tools, including guidelines for participatory will be developed.	Low	<ul style="list-style-type: none"> ■ CBWSS has Gender, Caste and Ethnic participation strategy. STWSSP has project implementation guidelines comprising project philosophy, role of WUSC, contribution modality and others. However, at the field level, it is rarely used.

Improving Governance

Policy Action No.	Implementation	Remark
Action Policy No. 39: Promote the development of sustainable plans for capacity building	Medium	<ul style="list-style-type: none"> ■ A sector-training centre has been established to provide training to DWSS personnel, but the desired outcome has not been seen. ■ Insufficient capacity building of new service providers ■ Capacity building not focussing on capacity to serve the poor

Recommendations

Strategic recommendations

- » In order to provide sustainable services to the poor, it is important to emphasise pro-poor policies above cost-recovery principles, which would ensure that the poor – irrespective of whether they are willing to pay for the cost or not – get access to services.
- » WSS projects should be carefully designed with wide-ranging consultations with stakeholders so that pro-poor components are addressed. Hastily formed projects with minimal stakeholder participation generally tend not to be pro-poor.
- » More budget needs to be allocated for the sanitation component so that the sanitation component in each WSS project receives the attention it deserves. Well-managed latrines, sewerage system and garbage management system should be integrated with the water supply sub-projects as a basic component of the overall project.
- » There is a need for the ADB to formulate WSS-specific monitoring indicators instead of using general indicators as at present. These indicators should be linked to the log-frame formulated at the very beginning of the project. A set of proposed WSS specific indicators have been attached as Annex 7.
- » While there is a monitoring system that is built into projects, a more effective management information system would facilitate relevant information reaching the decision-makers in a timely manner and thus enable prompt decision-making on the part of project managers. In other words, feedback loop between monitoring and decision-making processes need to be strengthened.
- » While at present, the monitoring formats are geared towards the construction phase of the project, these need to be reformulated with the post-construction stage in mind. Only when the project looks beyond construction activities would it be possible to ensure the long term functioning of the water supply systems.
- » The system of monitoring and evaluation formulated by the ADB needs to take into cognizance the developing member-country's own system of M & E system. In the case of Nepal, the National Planning Commission has a system of M & E, which is mandatory for all projects to follow. As far as possible, all M & E system need to have a certain level of compatibility, which reduces the efforts for carrying it out, and also increases its effectiveness.
- » In order to ensure the independence of the third party in evaluating the project - either in the form of BME or PPMS – the ADB should hire the consultant directly rather than the DWSS doing so. The implementing agency - i.e., the DWSS hiring the third party to evaluate the project - has led to it exerting undue pressure as a result of which the study has not been neutral. An even better arrangement would be funding the evaluation from a neutral source.
- » WAN calls the donors, including ADB for debt relief programmes as Nepal is moving towards the debt trap. WAN also urges government to seriously think towards domestic resource mobilisation as external resource/debt is increasing.

Operational recommendations

- » The ADB should increase community participation in the various stages of the subprojects. Community participation should be made more effective beginning from the phase of project design to the phase of day-to-day operation and maintenance.
- » Information about the project should be disseminated to users at an early stage of the project and during the project implementation as well.
- » ADB-supported WSS projects should effectively co-work with local NGOs and CBOs to organize awareness campaigns at the local level. It should promote local institutions for organizing information dissemination programmes and interaction programmes.
- » Water quality of the ADB-supported sub-projects should be improved. For instance, proper water treatment process should be installed in the Jhumka subproject to make the water potable and the system sustainable in the long term.
- » The current monitoring format in WSS projects that includes mainly physical and financial progress needs to be expanded to include other variables like the extent of community participation, the progress in community education, awareness and training along with sustainability of benefits and other pertinent indicators.
- » It is commendable that the STDWSSSP envisages the users themselves to be involved in monitoring processes. It is important that the monitoring formats meant for the users be in simple Nepali language. Moreover, the users should receive adequate training in using this format.
- » It is important that the M&E data be disaggregated on the basis of poverty and gender. It is only when the data is disaggregated on the basis of poverty and gender that specific social and gender changes can be measured.
- » There is a need to strengthen the capacity of DWSS in monitoring. At present it is the consultants and the NGOs that are primarily responsible for monitoring. The capacity of the Department staff both at the central and regional levels and the capacity of the users need to be enhanced, especially as it moves to a new role as a facilitator.
- » Concerned government departments and their line agencies, aside from the implementing agency, need to be included in the monitoring of the projects from the beginning to ensure that effective monitoring occurs even after the completion of the project. For instance, though the de facto implementing agency of STWSSSP is the PMO/TPO it is necessary to bring the DWSO into the process since DWSO would be providing technical services with the completion of the project.
- » The government and donors should initiate reducing on-lending interest rate so that financial burden to WUA is reduced. Access to services for Poor people should not be constrained because of upfront cash contribution.

Introduction

1.1 Background

In 2001, the Asian Development Bank (ADB) approved its policy on water - Water for All: The Water Policy of the Asian Development Bank. One of the provisions of this policy is to conduct an in-house review of its implementation in the third year and a comprehensive review after five years (ADB, 2001).

The policy review to be carried out by ADB provides an opportunity for WaterAid (WA) and its partners to exert influence to increase resources committed to water and sanitation and influence how these resources are allocated and managed in member countries. Hence, WaterAid is engaged in the review along with its partners and other non-government organisations to examine the effectiveness of a sample of ADB-supported water and sanitation projects in Bangladesh, India and Nepal.

This Case Study assesses the involvement of the ADB in the water supply and sanitation (WSS) sector in Nepal and tries to look at the relevance, effectiveness, impact and sustainability of sampled ADB funded projects. By

examining ADB's existing procedures for monitoring and evaluation, this study also recommends measures for future improvements. The Case Study also examines the debt burden created by ADB loans at various levels.

ADB has been a leading multilateral lending agency in Nepal. One main area that it has focused its involvement has been the WSS sector, which accounts for 14 percent of all loans and 5 percent of Technical Assistance (TA) coming into the country. To date, loans totalling more than US\$ 85 million for rural WSS projects and US\$ 225 million for urban WSS projects have been approved.¹ In addition, TAs worth US\$ 5.6 million have also been approved to support the projects.

Considering the inflow of aid into this sector, it is necessary to explore how the assistance has actually been operationalized. This would show among others, whether or not the needs of the people regarding clean and safe water have been met, whether the underserved communities have been targeted, whether the programmes are cost-

¹ 70.5 percent of the urban WSS sector loans have been targeted towards the inhabitants of Kathmandu valley totalling US \$ 155.0 million, while 29.5 percent totalling US \$ 65.0 million have been provided for projects focused on small towns along the east-west highway and nine urban centres outside of Kathmandu valley.

effective and are working towards poverty reduction. Exploring how policies are formulated, projects designed and implemented at various levels would show the efficiency of the projects and the effectiveness of aid in WSS sector. This could help in further highlighting the need for aid effectiveness in Nepal in general and the WSS sector in particular. It is hoped that this review would result in more suitable and effective water policies relating to the provision of water supply and sanitation as well as to poverty reduction.

1.2 Research Questions

This case study revolves around five main research questions, which were finalized during the inception workshop at the start of the study:

1. What is ADB's involvement in the WSS sector in Nepal and its contribution to the Millennium Development Targets (MDTs) and the concerned water policies of Nepal?
2. How effective are selected WSS projects of the ADB in providing sustainable services to the poor people?
3. How does ADB evaluate and monitor WSS projects and do these procedures need to be changed to enable ADB to know if sustainable services are being provided to the poor people?
4. What do these projects contribute to the debt burden at various levels, what is their impact on WSS allocations and what are the conditionalities of the loans?
5. How is the ADB water policy reflected in project design and implementation and does the policy need to be changed to make it more effective?

1.3 Objectives

The main objective of this study is to review ADB's water policy implementation in Nepal, specifically the study aims to:

1. Assess the effectiveness of ADB supported WSS projects in Nepal in ensuring sustainable water supply and sanitation services to the poor.
2. Review ADB's existing M&E procedures and suggest measures for improvement.
3. Examine whether ADB WSS projects are contributing to the debt burden
4. Identify areas in the ADB Water Policy that have largely been complied with and areas that require greater adherence.

1.4 Indicators

Indicators at the community level and Executing Agency level were chosen to assess the effectiveness, impact and sustainability of the sample ADB funded sub-projects. Based on these indicators, questions for the household survey, key informant interviews, and focus group discussions were formulated. The complete list of the indicators has been presented in Annex 2.

Data collected in the survey has been analysed by disaggregating the data between poor and non-poor households. This was done in order to get a clearer picture of whether ADB funded projects were providing services to the poor; which is one main objective of this case study. Poor and non-poor households were differentiated based on the ownership of land holdings. Those households that owned lands were considered as non-poor while households without land were identified as poor.²

² In December 2004, the government of Nepal published Nepal Living Standards Survey in which the living standard measurement was primarily based on the Cost of Basic Needs method. This study could not employ the same technique to determine the living standards of our sample households, as relevant data to follow this technique was not collected.

1.5 Methodology

Both qualitative and quantitative approaches have been adopted to conduct this case study. Specific methodologies were applied for each research question.

TABLE 1: Methodology for the research questions

Research Question	Methodology
1. What is ADB's involvement in the WSS sector in Nepal and its contribution to the Millennium Development Targets (MDTs) and the concerned water policies of Nepal?	Document Review
2. How effective are selected WSS projects of the ADB in providing sustainable services to poor people?	Survey Questionnaire, Key Informant Interviews, Focus Group Discussion, Observation, Project Documents, Social Mapping
3. Monitoring and Evaluation of WSS projects by the ADB and do these procedures need to be changed to enable ADB to know if sustainable services are being provided to poor people?	Key Informant Interviews, Document Review, Focus Group Discussion
4. What are the financial implications of ADB project funding for WSS at various levels?	Document review and key informant interviews
5. How is ADB Water policy reflected in project design and implementation and does the policy need to be changed to make it more effective?	Project Documents, Key Informant Interviews

Primary data collection

Field visits: Field visits were conducted to the selected sample sub-projects to directly observe field realities in terms of the situation, functioning, impact, etc of the projects.

Key informant interviews: Interviews were arranged with key personnel and community members of the concerned programmes and projects. They included Project Management Unit (PMU), Project Implementation Consultants (PIC), Department of Water Supply and Sewerage (DWSS) staff, community leaders, Water User Committee (WUC) chairmen, etc. Checklists were developed for this purpose. (The lists of the key informants are presented in Annex 11).

Focus group discussions: Group discussions were arranged with community members in each of the

selected sample projects. The discussions were organized with male, female as well as children around the main research issues.

Consultative meetings: Four consultative meetings were organized in the selected sample sub-projects.³ Key individuals involved in the WSS sector participated in the discussions. (The issues that were discussed and the list of participants are presented in Annex 10).

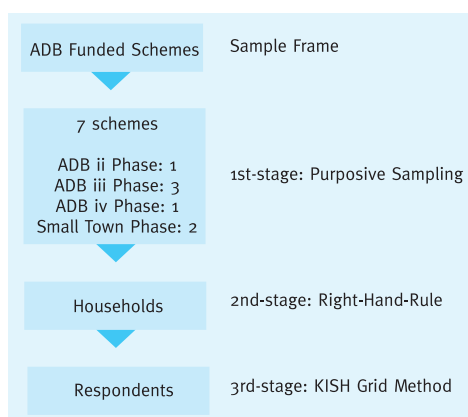
Household surveys: Household surveys were conducted in sample sub-projects to assess the effectiveness of the ADB supported subprojects.⁴ Questionnaires for the household survey were developed based on the indicators determined during the study Inception Workshop. The questionnaires were first pre-tested and then finalized based on the feedback.

³ The consultative meetings were organized in Morang, Chitwan, Banke and Surkhet.

⁴ Household surveys were conducted in Sunsari, Morang, Chitwan, Banke and Surkhet districts.

Sampling : The total number of the ADB funded WSS projects were taken as the sample frame for the case study. Five ADB supported projects⁵ and seven subprojects (five rural water supply and sanitation sub-projects and two small town water supply and sanitation projects) were selected through purposive sampling. From the seven subprojects, 418 households were randomly selected. The sampling technique is illustrated in Figure 1.

FIGURE 1: Flow Chart of the Sampling Technique



The salient features of the selected sub-projects have been attached in Annex 1.

The seven sub-projects were selected in consultation with the Department of Water Supply and Sanitation (DWSS) based on the following criteria:

- » Various types of projects and the technologies that were used (Rural/ Small town; Tubewell/Gravity flow/ Pumped water systems)
- » Project completion date (projects implemented post 1990, projects that are old enough to provide opportunity to observe the sustainability of the impacts).
- » As Nepal is passing through a difficult armed conflicts situation, the accessibility of the sub-projects from the security point of view was also taken into consideration.

Four hundred and eighteen households in total were randomly selected in the sample sub-projects. Distribution of the sample households across the seven subprojects was based on proportional allocation .

TABLE 2: Selected sample sub-projects

Development Region	Rural WSS Sub-projects			Small Town WSS Projects
	Gravity flow	Tubewell	Pumped	
Eastern	Panchakanya**	Indrapur**	Jhumka***	
Central				Ratnanagar
Mid-Western	Jarbuta*		Khajura**	Birendranagar

Note: * Second RWSSP, **Third RWSSSP, ***Fourth RWSSSP

TABLE 3: Number of household surveys taken in the sample sub-projects

District	Scheme	No. of HH
Chitwan	Ratnanagar	60
Morang	Indrapur	49
Sunsari	Panchakanya	50
	Jhumka	51
Banke	Khajura	47
Surkhet	Jarbuta	62
	Birendranagar	99
Total		418

Secondary data collection

Desk study of documents: National policies, plans and strategies related to both rural and urban water supply and sanitation were reviewed and used in the final analysis. In addition, evaluation and monitoring reports, and guidelines were also analysed.

⁵ Second Rural Water Supply and Sanitation Project; Third Rural Water Supply and Sanitation Sector Project; Fourth Rural Water Supply and Sanitation Sector Project; Community Based Water Supply and Sanitation Sector Project; Small Towns Water Supply and Sanitation Sector Project

1.6 Process

Guided by corporate call for Regional study, WaterAid Nepal undertook this study in close coordination with WAUK and Regional Project Manager of the study. Country Representative of WAN took keen interest on this and appointed Research and Advocacy Manager – Mr. Rabin Lal Shrestha as project coordinator for WaterAid Nepal team.

Following process were adopted to complete the study:

A. Research Studies and Study Team Composition

- » Regional common understanding of issues and methodologies were reached through a number of regional interactions by workshops, email and other means of communications. Starting the common understanding was possible through information provided by WAUK desk study on ADB M&E processes
- » To carry forward the study, institutional consultant “Inter Disciplinary Analyst (IDA) lead by Dr. Sudhinder Sharma was recruited. Peer Review Group was also formed to provide feed back on the study report. Prof. Puskar Bajracharya (Economist and Management Expert) of Tribhuvan University, Nepal was recruited in Peer Review Group.
- » To bring in civil society perspectives WAN also supported NGOForum for Urban Water Supply and Sanitation (NGOFUWS) to conduct case study of ADB sponsored Small Town Projects. Additionally, team of Prof. Puskar Bajracharya and Prof. Rajendra Shrestha conducted study on “Debt Status in Nepal”. Information of these two reports was fed into the main study conducted by IDA.
- » WAN made due effort to coordinate with Department of Water Supply and

Sewerage (DWSS) – the executing agency of rural water supply and small town project sponsored by ADB. The department supported the study team by providing access to information and supporting in project selection and field visit logistics.

B. Workshops

Number of workshops was conducted to cater common regional perspectives and country specific issues. The workshops did contribute in enriching study methodology and findings.

B.1 Regional Level Workshops

- » **Pre-Inception Workshop** (December 2004, Kathmandu Nepal) – WaterAid in house discussion on pre-inception workshop contribute to framing research questions and identifying ways forward.
- » **Inception Workshop** (January 2005, Delhi, India) – Represented by WAUK, Project Manager, Project Coordinators from India, Bangladesh and Nepal, Consultants, Peer Review Group (excluding Nepal) and ADB Manila and Resident Missions met to discuss on common understanding of objectives, research questions and indicators; and a broad methodology for the study.
- » **Mid Term workshop (July 2006, Kathmandu, Nepal)** – The workshop discussed on first drafts of case studies prepared by the consultants. The meeting was represented by WA UK, Country Programmes, consultants, Peer Review Group, ADB, NGO Forum on ADB, Bank Information Centre, and WA partners in Nepal (36 people).
- » **Final workshop (September 2005, Kathmandu, Nepal)** – The workshop contributed in finalising the draft case studies prepared by the consultants.

B.2 National Seminar (February 2005, Kathmandu, Nepal) – WAN organised one day national seminar to disseminate

findings of Nepal Case study. Ministry of Physical Planning and Works, Department of Drinking water and Sewerage, ADB and other stake holders participated in the seminar. Their suggestions and feedback were taken into account to finalise the study report.

1.7 Field Management and Networking

Pre-testing of the research tools was conducted in Biratnagar between 20-25 March 2005. Later, the team also took part in the Social Mapping Training Workshop in Delhi (2-5 March 2005). Field visits were conducted between 20 March-21 May 2005. During the field visits, the study team conducted interviews, group discussions, social mapping, household surveys, and consultative meetings in Morang, Sunsari, Chitwan, Banke and Surkhet districts. In addition, the team also conducted key informant interviews with the DWSS officials in Kathmandu.

The research team included WaterAid partners and other civil society organizations in the review process through consultative meetings and where possible engaged them during field visits and workshops. Consultative meetings were held with the local stakeholders in lthari (for Morang and Sunsari districts), Ratnagar (for Chitwan district), Nepalgunj (for Banke district), and Birendranagar (for Surkhet district). Government officials, NGOs, CBOs and WUC representatives were invited to the consultative meetings to inform them about the review of ADB's water policy and the on going research. During such meetings, the emerging findings of the study particularly the issues of relevance related to the WSS projects, constraints and future recommendations were discussed.

Several meetings with the key personnel at DWSS located in Kathmandu were held and advice was sought from them about various facets of the study. Information was shared with key ADB officials in Kathmandu.

1.8 Limitations

The research team was faced with the following limitations:

- » The study adopted sampling of seven sub-projects as one of its main research methods. These were sampled on the basis of certain criteria in consultation with the DWSS. One needs to be cautious in generalizing its findings.
- » The majority of the projects selected for the study were designed before the ADB water policy was formally approved. This is an uncontrollable limitation in the absence of projects implemented post 2001.
- » Project reports (such as baseline surveys, project monitoring reports) were not made available. There was lack of comparable data on WSS, which restricted the study team in making its analysis on the sustainability of the sample sub-projects based on field observations, survey findings, KII and FGD.
- » The on-going Maoist insurgency in the country was a major factor in the selection of the subprojects, particularly, in terms of the geographical spread of the sampled subprojects. Security issues were very significant. The number of possible study subprojects had to be short listed, which narrowed the study area.
- » Nepal *bandhs* restricted the movements of the research team at the field sites, which in turn hampered data collection.

ADB's involvement in the WSS sector in Nepal

2.1 Water supply and sanitation situation in Nepal

In Nepal, 28.4 percent of the total population still does not have access to safe drinking water (The Tenth Plan 2002/07). The sanitation figures are even more dismal with 75 percent of the total population lacking access to proper toilet facilities (The Tenth Plan 2002/07).

In spite of the improvements made in the WSS sector in a relatively short period of time⁶, there are obstacles that are impeding the coverage and improvement of the delivery of services in the sector. The major ones being the lack of sufficient funds, institutional deficiencies, poor planning, and the lack of coordination between the various sector players. Adverse security situation and political instability also contributed to limiting the delivery of services.

Some of the major actors in the WSS sector have been presented in Table 5. Besides these players there are other numerous local NGOs and CBOs who are working to increase the delivery of water supply and sanitation to both the rural and urban population.

In recent years, the emergence of local NGOs supported by donors has led to pluralism with a wide variety of delivery approaches promoted by different agencies. There are more than twenty international donor agencies and I/NGOs that are active in this sector, but only a few work directly with the Department of Water Supply and Sanitation (DWSS), the lead agency in the sector. This has led to uncoordinated activities that are poorly targeted.

TABLE 4: Drinking water coverage at the end of the Ninth five-year Plan Period (1997-2002)

Services	Rural area (in %)	Urban area (in %)	Total (in %)
Water supply	71.0	76.0	71.6
Sanitation	20.0	53.0	25.0

Source: The Tenth Plan 2002/07

TABLE 5: Major actors in the WSS sector

Actors	Type	Funding
Department of Water Supply and Sewerage (DWSS)	Government Agency	Government, ADB, UNICEF
Rural Water Supply and Sanitation Fund Development Board	Autonomous Board	World Bank
Nepal Water for Health (NEWAH)	NGO	DFID, WaterAid Nepal
FINIDA	Government Agency	Finish Government
Gurkha Welfare Scheme Nepal	NGO	DFID, WaterAid Nepal
HELVETAS	INGO	Swiss Government

⁶ In 1970 only 6 percent of the rural population had access to protected drinking water [National Water Plan (Draft), 2004]

2.2 ADB's⁷ involvement in the WSS sector in Nepal

ADB first began lending to Nepal in 1969. Since then, it has emerged as one of the largest multilateral donors in the country providing grants, loans and technical assistance for a multitude of projects. In the 1990s, it was the largest multilateral donor, with 40 percent of the share of multilateral aid, disbursing on average US \$75 million a year.

ADB first entered the WSS sector in 1984. The first loan was provided to the rural water supply sector. Since then three other rural water supply projects have been implemented.⁸ A fifth, the Community Based Water Supply and Sanitation project is in the process of being implemented. The total amount for these five projects is US\$ 85.25 million.⁹

Besides the focus on the rural sector, the ADB has also disbursed loans to urban water supply and sanitation projects. In the urban water supply sector, ADB has approved six loans totalling US\$ 225 million.¹⁰ A loan of US\$ 30 million has also been provided to the Urban and Environmental Improvement project that consists of a partial WSS component.

Technical Assistance (TA) worth around US\$ 5.6 million have been provided in the WSS sector. This accounts for 5 percent of total TA to Nepal.

2.2.1 Reasons for entering the sector

At the time when ADB entered the WSS sector in Nepal, on the international scene there was growing realization of the adverse effects of inadequate water supply and poor sanitation on the lives of human beings. The discourse sought ways to improve access to improved water supply. Some of the major landmarks were the United Nations (UN) Conferences held in Vancouver (1976); Mar del Plata Conferences held in Argentina (1977), which emphasised the issue of water quality and the social aspects of development; and the Alma Ata conferences held in Kazakhstan (1978), which gave global recognition to the concept of primary health care. These conferences helped in bringing the world's attention to the WSS sector in the developing world. One significant outcome was the declaration of the 1980s as the "*International Drinking Water Supply and Sanitation Decade*" by the United Nations. The conferences also made strong commitments and instructed national governments to give priority to the provision of improved water supply to 1,500 million people and sanitation facilities to 750 million people¹¹. Funding agencies were also looked upon as important players in helping achieve the desired objectives.

It was during this phase that ADB first entered the WSS sector in Nepal in 1984,

⁷ ADB first began lending to Nepal in 1969. As of 31 December 2003, 104 public sector loans had been approved totalling approximately US\$ 2.1 billion. In addition, 238 Technical Assistance (TA) totalling approximately US\$ 109.5 million had been provided. The assistance has been mostly focused on three areas that account for 82 percent of ADB's total public sector loans: social infrastructure (38.7 percent), energy (25.4 percent) and agriculture and national resources (17.9 percent). The loans to the WSS sector fall under the social infrastructure sector.

⁸ Second RWSSP, Third RWSSP and Fourth RWSSP.

⁹ Budget calculated from PCR and RRP documents.

¹⁰ STWSSP, Melamchi Water Supply, Melamchi Water Supply (Engineering), Kathmandu Valley Water Services Sector Development, Urban And Environment Improvement and Kathmandu Urban development.

¹¹ Regmi 2000.

through its loan to the first RWSSP. ADB's initial rationale behind entering the WSS sector with the first RWSSP was to increase the access of clean and adequate supply of water to the rural population.¹² This project took cognisance of and positioned itself according to the sixth-five-year plan (1980-1985) that emphasized extending drinking water facilities to rural areas.¹³ In the subsequent projects the rationale was expanded to include sanitation and by the fourth RWSSSP the objectives had been incorporated with the HMG/N poverty reduction strategy. These later projects were conceived to support and achieve the objectives of the government's development and sector plans.

2.2.2 Level of priority given to the WSS sector

The WSS sector has received a high priority from the ADB. Providing assistance to improve water supply and sanitation is one main strategy of its poverty reduction policies.

The social infrastructure sector, under which WSS falls, accounts for 38.7 percent, of all ADB investment in Nepal, which is the highest of all sectors. Specifically, water supply and sanitation loans account for approximately 14 percent of all ADB loans and for 5 percent of all TAs in Nepal.

The ADB's Country Strategy and Program (2005-2009) for Nepal outlines ADB's strategic approach over the next 5 years to be focused on a broad-based and inclusive social and economic development process to achieve a sustainable reduction in poverty. One of the main characteristics of the CSP is to

support the government to improve the access of the poor to basic services, address the needs of women, ethnic groups and castes. As per the priorities outlined by the Tenth plan of HMG/N, the ADB's future strategy also includes improving the health conditions of the poor and disadvantaged by increasing the coverage and improving the rural water supply and sanitation.

According to the CSP, the investment in the Social Infrastructure is on the rise. It mentions that within the past decade, lending has doubled. At present, there are two more projects that are being proposed in the WSS sector. They are the Community-based Water Supply and Sanitation Sector II and the Secondary Towns Urban Environmental Improvement project.

The Maoist conflict that has adversely affected many donor projects is also endangering the ADB funded WSS projects. While rural WSS projects have not been directly threatened by the Maoists, Nepal *bandhs* or closures have indirectly affected them. Delays in the supply of materials and the restrictions in travel have collectively affected the projects, resulting in delays in implementation.

2.2.3 ADB supported WSS Projects and Technical Assistance

2.2.3.1 Summary of Rural WSS Projects

The following table provides a brief summary of the five rural WSS projects that have been supported by the ADB. The budgets of the projects, locations, types of schemes, targeted population along with

¹² The PCR of the First RWSSP mentioned that despite the abundance of water resources only 16 percent of the population had access to public water supply (benefiting about 86 percent of the urban inhabitants and only 12 percent of the rural populace).

¹³ The aim of the sixth-five-year plan was to provide drinking water facilities to 25.8 percent of the rural population and 87.2 percent of the urban population, thereby reaching a national average of 30 percent.

Table 6: Rural WSS projects funded by ADB

Description	1st RWSSP	2nd RWSSP	3rd RWSSSP	4th RWSSSP	5th CBWSSSP
Loan Approval Date	1984	1989	1992	1996	2003
Project Completion Date	1992 (3 yrs late)	1995 (18 months late)	1997	2002	2010
Total cost (in million US \$)	12.0	15.6	27.8	25.25	35.7
a) ADB contribution	9.6	13.1	20.5	18.05	24.0
b) HMG/N contribution	2.4	2.5	4.0	3.9	7.7
c) DDCs/VDCs contribution	-	-	-	-	0.4
d) Beneficiaries contribution	-	-	3.3	3.3	3.6
Budget allocated (in million US \$)					27.8
a) Water Supply	9.706	13.31	23.12	18.940	23.1
b) Sanitation	-	-	0.31	0.120	1.8
c) Capacity building (Training)	0.002	0.210	0.61	0.930	1.8
d) Awareness Campaigns	-	-	-	1.38	1.1
Location of the projects (Region Wide)	FWDR, MWDR	FWDR, , MWDR, EDR	FWDR, MWDR, EDR	FWDR, MWDR, EDR	FWDR, MWDR
Types of subproject	Tube-wells, Piped systems	Tube-wells, Piped systems, Springs	Tube-wells, Pumped systems, Piped systems, Wells, Springs	Gravity fed piped systems, Ground water pumping	Gravity, Tube-wells, Overhead tank, Rainwater harvesting
Number of subproject	NA				
a) Rural		109	9,932	1,258**	1,200
b) Urban		7	-		
Targeted population	971,000	465,000	NM	600,000	600,000
Total beneficiaries	980,000	512,700	1,466,700	670,000	
Total number of water systems constructed/ rehabilitated:					(targeted)
a) Tube-wells	7,283	960	9,335	-	276
b) Gravity fed piped systems	-	-	-	1258	780
c) Piped systems	74	116	426	-	132
d) Rainwater collection	-	-	-	-	12
e) Springs	-	10	171	-	-
Total number of latrines constructed					(targeted)
a) Institutions	No latrines were constructed	146	-	1,277	-
b) Private		-	6,420	33,000	30,000
c) Community		-	-	-	-
d) Public		-	133	-	-
Success rating of the completed projects:					
a) PCR	NA Partly Successful	Successful	Generally Successful	Successful	
b) PPAR		-	-	-	
Current Status	Completed	Completed	Completed	Completed	Planning Stage, delay in finalizing the Centre Project Management Consultants

Source: PCR (1993,1997,1999,2004), PPAR (1997) and Report and Recommendation (2003).

Note: ** Rural and urban subproject not differentiated

NA: Not Available

CBWSSSP: Community Based Water Supply and Sanitation Project, RWSSP: Rural Water Supply Sector project, RWSSSP: Rural Water Supply and Sanitation Projects, FWDR: Far Western Development Region, MWDR: Mid Western Development Region, CDR: Central Development Region, EDR: Eastern Development Region

the beneficiaries, project ratings by various evaluation reports and current status have been presented. Detailed description of the rural WSS projects are presented in Annex 3.

Rural projects funded by the ADB focused on areas in which ADB had previously been involved. Principally this can be accounted to consolidate the gains made by the earlier projects in those areas (i.e far-western development region, mid-western development region and the eastern development region).

2.2.3.3 Summary of Urban WSS Projects

The following table provides a brief summary of the six urban WSS projects that have been supported by the ADB. The costs of the projects, locations, types of subproject, targeted population, project ratings and current status have been presented. Detailed description of the urban WSS projects are presented in Annex 4.

Around half of Nepal's urban population is estimated to live in the Kathmandu

Table 7: Urban WSS projects funded by ADB

Description	Kathmandu Urban Development	Melamchi Water Supply (Engineering)	STWSSSP	Melamchi Water Supply	Urban and Environmental Improvement
Loan Approval Date	1993	1998	2000	2000	2002
Completion Date/ Expected Completion Date	1999	2002	2006	2006	2010
Total cost (in million US \$)	16.7	6.75	53.9	464.0*	375
a) ADB contribution	16.7	5.0	35.0	120.0	30.0
b) HMG/N contribution	-	1.75	10.9	118.0	4.4
c) DDCs/VDCs contribution	-	-	-	-	3.1 (town, communities/psp)
d) Beneficiaries contribution	-	-	8.0	-	-
e) Co-financing agencies	-	-	-	226.0	-
Location of the projects	Kathmandu valley	Kathmandu valley	Small emerging towns along the East-West highway	Kathmandu valley	Bharatpur, Hetauda, Bidur, Banepa, Panuti, Dhudikhel, Dhading besi, Ratnanagar, Kamalimai
Types of subproject	Drainage	Support HMG/N in preparing MWIP	Water supply, drainage and sanitation	Water supply and wastewater services	Urban development
Targeted population	NA	NA	600,000	NA	320,000
Success ratings of the completed projects	Partly successful	Successful			
Current status	Completed	Completed	39 percent physical progress as of May 2005.	Access road construction is going on ¹⁴ .	10% progress as of July 2005

Source: www.adb.org, Key informant interviews

Note:* The figure has recently been increased to US\$ 530 million.

NA: Not Available, STWSSSP: Small Town Water Supply and Sanitation Project

¹⁴ 4 Km of Sindhu access road and 1 1/2 Km of Gyalthal access road has been completed so far, according to WAFED, 22nd August, 2005.

Table 8: Breakdown of ADB loans across the country

ADB projects	Kathmandu valley	Outside Kathmandu valley	Total Urban loans
Cost of the projects (in US \$ millions)	155.0	65.0	225.0
Percent	69	31	100

Source: PCR (1993, 1996, 1997, 1999, 2004), www.adb.org

valley. Urban WSS projects funded by the ADB are decidedly Kathmandu biased in terms of their focus. Among the five urban WSS projects funded by the ADB, three have been targeted towards the inhabitants of the Kathmandu valley totalling US \$ 155.0 million (i.e. 69 percent of the total urban loans) While the remaining two projects totalling US\$ 65.0 million focus on small towns along the east-west highway and nine urban centres outside of Kathmandu valley (i.e. 31 percent)

2.2.3.5 Technical Assistance

ADB provides technical assistance (TA) to its developing member countries to help in the strengthening and improvement of data management systems and services. Specifically TAs help the member countries to: (i) identify, formulate, and implement projects, (ii) improve the institutional capabilities of governments and executing agencies, (iii) formulate development strategies, (iv) promote the transfer of technology and (v) foster regional cooperation.¹⁵

The ADB has provided TAs worth 5.6 million US dollars in the Water Supply and Sanitation Sector. The list of the TAs have been presented in Annex 5.

2.3 ADB's contribution to MDT's

The MDGs are eight goals, supported by 18 time-bound targets and 48 measurable indicators that outline objectives for poor developing countries (ADB, 2004). The MDG target 10 relates to the water supply and sanitation sector.

MDG Target (10): “Halve by 2015 the proportion of people without sustainable access to safe drinking water and sanitation.”

Asian Development Bank (ADB) through its WSS projects, has been one of the main players in assisting the government achieve the MDGs by 2015.

ADB's contribution to the MDTs in Nepal has been calculated based on the estimated number of people served by ADB supported water and sanitation projects between 2000 and 2015 and the predicted level of investment. It is estimated that ADB investment in rural water and sanitation in Nepal between 2000 and 2015 is likely to equate to a contribution of 30 percent of the water target and 11 percent of the sanitation target in terms of people served. In the urban sector, it is estimated that ADB investment in urban water between 2000 and 2015 is likely to equate to a contribution of 40 to 50 percent of the water target. Due to a lack of data the contribution to urban sanitation can not be calculated however it is clear that this sector receives less priority, despite significant investment requirements. Details of these calculations are attached as Annex 13.

¹⁵ www.adb.org/economics_statistics/statistics/technical_assistance

Table 9: Calculation of ADB contribution to rural water and sanitation

Contribution (2000 to 2015)	People/latrines (m)	Percent
People to serve to meet rural water MDT	6.81	
Rural people served with water by ADB supported projects	2.04	
Estimated ADB contribution to rural water target		30
No. of latrines to be constructed in rural areas	0.7	
Estimated latrines constructed with ADB support in rural areas	0.08	
Estimated ADB contribution to rural sanitation target		11
People to serve to meet urban water MDT	4.2	
Urban people served with water by ADB supported projects	2.02	
Estimated ADB contribution to urban water target		48

Source: WaterAid Nepal, 2004

2.4 Impact of ADB's involvement in WSS sector policies and practices

Developing and reforming national policies related to WSS sector policies and practices are a key thrust of the ADB's water policy. In this section, the impact that ADB has had directly/indirectly or has not had on national policies and practices are examined.¹⁶

2.4.1 Impact on national policies

ADB has been leveraging policy changes in the WSS sector in Nepal ever since it first entered the sector in 1984.

Over the years, ADB's assistance in the WSS sector has provided valuable experiences and lessons some of which have been incorporated into national policies and practices. For example, the major lessons learned from the first two rural WSS projects (1984-1991) were: (i) project sustainability required a participatory approach and (ii) projects should be demand driven. These lessons were subsequently reflected during the formulation of the Eighth Five Year Plan (1992-1997) which laid down the principles of participatory development

and provided the guidelines that WSS development programmes be demand driven and based on local felt need, be guided by a hardship criteria, and that the users should be willing to bear the capital cost.

During the Third RWSSSP (1992-1997) a TA (TA No. 1717-NEP) was provided for rendering advisory services to the DWSS. The main recommendations of the TA were: (i) participatory approach, (ii) transfer of water supply schemes to beneficiaries, (iii) strengthening of DWSS, (iv) planning support to enable local bodies to plan their district development, (v) promoting private sector engagement, and (vi) developing a management information system (MIS).¹⁷ Later, when the National Water Supply Sector Policy and Drinking Water Regulation were formulated in 1998, besides the experience of other aid agencies, it was found that they also incorporated the recommendations made by the TA, highlighting the need of community participatory approaches to planning, greater autonomy of service providers and transformation of DWSS's role from that of an implementer to that of a facilitator.

¹⁶ The impact of ADB on WSS sector policies and practices have been determined through documentation review of PCR, RRP documents, which have highlighted the areas where lessons learnt from the ADB projects, have been incorporated in national policies and practices. Key informant interviews with DWSS staff, ADB representatives and water experts were also a rich source of information in this regard.

¹⁷ PCR, 1999.

In 2004, the Rural Water Supply and Sanitation National Policy was formulated with close consultation of stakeholders representing donors, NGOs, private sector agencies and community members.¹⁸ Among the stakeholders, ADB consultants were more centrally involved in the policy formulation. There are various similarities between ADB's Water For All and HMGN's Rural Water Supply and Sanitation National Policy. Some of these are highlighted in Table 10.

Recently in 2005, three new ordinances on drinking water management have been promulgated. Ordinance no. 1, addresses the reform of the existing Drinking Water Cooperation Act 1990, ordinance no. 2 provides an autonomous board for urban water management and ordinance no. 3 establishes an autonomous commission called Water Tariff fixation Commission to fix the rate of water tariff and maintain the quality of services to be provided by water

Table 10: Comparison between ADB's Water For All 2001 and RWSS Policy 2004

Water For All	RWSS National Policy
<p>Fostering the integrated management of water resources</p> <p>Improving and expanding the delivery of water services</p>	<ul style="list-style-type: none"> ■ Water supply programmes will be conducted in conjunction with other programmes related to water resources development where possible. ■ 100 percent population will get water supply facility. ■ 100 percent will get sanitation services. ■ Existing water supply system will get massive renovation, rehabilitation, improvement and expansion works as well as increase in the quality of services. ■ The type and level of service will be according to the "capacity as well as willingness to pay" by the consumers.
<p>Fostering the conservation of water and increasing system efficiencies.</p>	<ul style="list-style-type: none"> ■ Measures will be taken to reduce environmental impacts while implementing water supply projects. ■ Necessary standard will be set and implemented for the material and equipment, system design and construction procedure to maintain the quality of work.
<p>Facilitating the exchange of water sector information and experience</p>	<ul style="list-style-type: none"> ■ Information center will be set up at the center and districts by increasing the capacity of information management for sectoral development projects.
<p>Improving governance</p>	<ul style="list-style-type: none"> ■ HMG and local bodies will play the role of regulating, monitoring and facilitating the implementation of the projects. ■ Demand driven and community approach in project selection and implementation and operation. ■ Poorest households within the community will be identified and such households will be provided with specified target grants. ■ Consumers' groups and the community organizations will be made responsible to provide WATSAN services effectively by designating proper work to the local bodies as per decentralization policy, minimizing the government's direct involvement in the water supply and sanitation projects.

¹⁸ The National Water Supply Sector Policy of 1998 was revised as the RWSS National policy 2004. This policy has emphasized a decentralization approach of development with the strengthening of community based approaches.

suppliers. It is believed that ADB has been instrumental in influencing the issues addressed in these ordinances.

2.4.2 Impact on national practices

Besides the influence on the national policies, practices have also been affected by ADB involvement in the WSS sector. However, if one were to compare between policies and practices, ADB seems to exert greater influence on the former than on the latter. In other words ADB seems to have greater leverage in policy matters than it has on actual practices.

With regard to practices, it needs to be borne in mind that the DWSS is one of the oldest players in the sector, with the exception of the Community Water Supply (CWS) programme. The CWS programme supported by UNICEF, was however, discontinued during the mid-1990s. Some of the most common practices – whether these pertain to the users, to the project cycle or to issues of sanitation – have generally tended to be influenced by the DWSS or by CWS. Since the DWSS has been ADB’s main partner in the WSS sector in Nepal and since the Department has been one of the longest serving actors in the arena, some of the practices in the sector may be attributed to the ADB. As an example, one could cite the formation of WUCs prior to project appraisal to enable the community to have a greater say in the project. This practice was started only during the third RWSSSP, which had a positive impact of creating a stronger sense of ownership and willingness to accept O & M responsibility among beneficiaries.

However, it needs to be borne in mind that from the 1990s onwards the WSS sector has largely been a plural

institutional terrain with several agencies with their own distinctive modalities and processes operating in the field. This leads to problems in attributing some of the prevalent practices in the sector exclusively to ADB’s role and influence. Rather than trying to isolate specific practices in the sector exclusively to ADB’s influence, what one could say is that there seems to be constant learning underway in the sector with each major player trying to learn from and incorporate the best practices of others, into its own programmes.

2.4.3 Why has ADB been influential at the policy level?

The impact on WSS sector policies and practices show that ADB has been able to carve a niche for itself in the sector.

Ever since the ADB entered the WSS sector in 1984, its financial profile has grown with each successive loan. The first RWSSP (1984) was given a loan of US\$ 9.6 million but by the fourth RWSSSP (1997) the loan amount had shot up to US\$ 20 million. The highest loan (US\$ 120 million) is being provided to the Melamchi Water Supply project (2000). In total, till 2005, ADB has provided loans totaling US \$ 305.25 million.

Reasons for ADB's influence

- *ADB is one of the largest donors to the WSS sector*
 - *Working closely with DWSS has provided ADB leverage in policy matters*
-

Working closely with the DWSS, a government department - at one time the sole player but at present the lead agency – has given ADB the added advantage in leveraging policies. Being a government department, the DWSS has, more than other agencies in the WSS sector, closer linkages with policy-formulating units within the structure of HMG. Not only has the ADB worked

closely with the DWSS, it has worked so for over two decades. Continuity of engagement has developed trust and partnership between the DWSS and the ADB. One could say that the Department lends a more sympathetic ear to the ADB than it does to any other agency. And because of this, ADB more than any other donor in the WSS sector in Nepal, has been able to influence policy formulation.

2.4.4 Indirect and unintended impact

The lack of involvement of the village communities especially in the case of first and second RWSSP from the outset has substantially affected the projects. It has affected the appropriateness of the project design, quality of construction, quality of O & M, beneficiary feeling of ownership of the facilities, recovery of costs thus ultimately affecting the overall sustainability of the system. These weaknesses were identified and addressed in later projects.

In the Fourth RWSSSP there is evidence that influential households are garnering undue advantage in the use of water mostly by the installation of private taps in their yards or house or public taps near their house. This has led to the monopolizing the benefits by the richer and influential households at the expense of the less well off thereby further marginalizing the weaker section of the community (PCR, 2004).

2.4.5 Best practice influence

Under the Second RWSS Project, WUCs were established during sub-project implementation and the approach was later refined to follow that adopted under the third project, where the WUCs were established prior to implementation. The new approach created a strong sense of ownership and willingness to accept the O&M responsibility as the villagers

considered themselves as participants in the project rather than mere beneficiaries. A sanitation component was also included in the form of the construction of low cost public sanitation facilities in Schools and Health Centres in the Second RWSS Project. The construction of institutional latrines, which also served as demonstration units in the hygiene education and sanitation promotional activity, was included in the water supply subproject wherever possible (PCR, 1997).

In the Third RWSSSP a comprehensive training programme was provided for not only DWSS personnel but also to WUC members and schoolteachers. A sector-training centre was established. A community liaison and maintenance unit was created to strengthen the DWSS's capability to promote community participation in the project. DWSS has continued and improved its efforts to promote NGOs during the implementation of this project and involve them at various stages of the Bank assisted fourth and fifth projects.

A systematic subproject selection criteria was established during the implementation of the Fourth RWSS Project and is being continued with the ongoing fifth ADB project, CWSSSP. These criteria are based on hardship factors, willingness to share the costs of RWSS, and poverty and social factors. The development of a social consciousness in favour of community-based management of water and sanitation has been enhanced during the Fourth RWSS Project. This has created an environment within the DWSS to envision a fundamental policy shift for its own devolution.

The experience gained from the series of RWSS Projects helped pluralize the water

and sanitation sector in Nepal. NGOs have gained confidence in delivering the WSS services to the rural communities across the kingdom. A recent study notes that the community management is at the core of all the rural water supply and sanitation programmes/projects. The implementation modality of most of the programmes involves the users or the benefited communities from the scheme selection and planning phase to the implementation phase and beyond. The communities are in-charge of the operation and maintenance of the subprojects (IDA, 2005).

It is indeed difficult to give credit only to particular players in bringing about changes in the WSS sector. But one could say that the experiences from the RWSS projects supported by the ADB were instrumental in bringing positive changes in the sector. The devolution process of the DWSS has certainly benefited from these series of ADB's RWSS projects. It can reasonably be hoped that the ongoing CBWSSSP and STWSSSP will take further steps and the DWSS plays the role of a true facilitator in the days to come.

2.5 Conclusion

ADB first entered the WSS sector in 1984, through the first RWSSP. Since, then five rural projects and several urban projects have been implemented.

The WSS sector has received a high priority from the ADB, as providing assistance to improve water supply and sanitation is one main strategy of its poverty reduction policy. Water supply and sanitation loans account for approximately 14 percent and TAs account for 5 percent of the total investment in Nepal of ADB's assistance.

The distribution of the ADB loans has interesting variation with and without Melamchi project. Kathmandu Valley Water Supply Reforms and Melamchi are considered as exceptional projects of national importance. If the cost associated with this project is considered then ADB appears in favour of urban areas (72 percent of WSS loans to urban areas). However, excluding this exception case, ADB's focus is rural with 57 percent of loans to rural areas and only 43 percent to urban centres.

Rural projects funded by the ADB have focused on areas in which ADB had previously been involved, principally to consolidate the gains made by the earlier projects.

The projections reveal that in order to achieve the MDTs, ADB will contribute 30 percent of the rural water target, 11 percent of the rural sanitation target and 40-50 percent of the urban water target. Due to a lack of data the contribution to urban sanitation can not be calculated however it is clear that this sector receives less priority, despite significant investment requirements.

ADB has been influential in affecting national policies and practices in Nepal due to its ever increasing contributions and the close relationship that it enjoys with the DWSS, and consequently with the government. National water policies of Nepal such as the National Water Supply Sector Policy 1998, The Rural Water Supply and Sanitation National Policy 2004, Rural Water Supply and Sanitation National Strategy 2004, Rural Water Supply and Sanitation National Action Plan 2004, and the recent ordinance promulgated in 2005 reveal influence stemming from ADB.

Effectiveness of ADB water supply and sanitation projects in ensuring sustainable services for the poor

Assessing the effectiveness of ADB funded water and sanitation projects in ensuring sustainable services for the poor is one of the objectives of this case study report. In this section, findings from the field have been presented and interpreted with the information collected from the desk review to determine the impact of ADB supported sub-projects. Due to the limited sample size, the findings need to be cautiously interpreted. Nevertheless, the study has been able to tease out the issues on effectiveness of ADB funded water and sanitation, which have been presented under two main headings: (i) Community level and (ii) Executing Agency level.

As mentioned in chapter 1, seven subprojects (of which two were urban and five rural) were selected for the study. Altogether 418 households survey were undertaken. The number of household surveys taken in the sample subprojects as well as the distribution of poor and non-poor households is illustrated in table 11.

Out of the total sample households, households under the poor category made up 29 percent while non-poor households made up 71 percent.

Table 11: Distribution of Poverty by sub-project

Sub-project	No. of HH	Poor (%)	Non-poor (%)
<i>Indrapur</i>	60	40.5	59.5
<i>Ratnanagar</i>	49	8.3	91.7
<i>Panchakanya</i>	50	34.0	66.0
<i>Jhumka</i>	51	20.0	80.0
<i>Khajura</i>	47	30.2	69.8
<i>Jarbuta</i>	62	44.3	55.7
<i>Birendranagar</i>	99	28.6	71.4
Total Sample	418	29.0	71.0

Source: IDA Household Survey, 2005

3.1 Effectiveness of WSS sub-projects at the community level

3.1.1 Water Supply

The main objectives of the rural water supply and sanitation projects were to increase the proportion of people with access to better quality and adequate water supply, improve sanitation conditions, reduce the hardships for women, and develop mechanisms for the systems proper maintenance. The survey results indicate that the projects implemented under the Third RWSSSP and Fourth RWSSSP were successful in achieving these objectives to some extent.

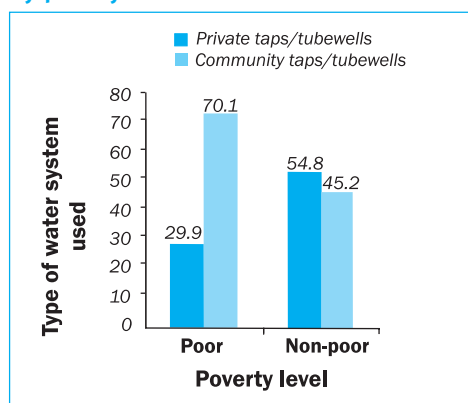
Coverage of ADB funded subprojects

The household survey revealed that only 52 percent of the households in the project area are dependant upon ADB funded water systems. This situation is different across the sample sub-projects with the highest percent of usage in Indrapur (100 percent) and the lowest at Khajura (47.7 percent). Those who did not utilize the water stated that the main reason were due to lack of finances, low quality of water, presence of an alternative source and the frequent disruption of the water supply.

When the data was disaggregated among the poor and non-poor settlements the survey revealed that 56.3 percent of the poorer segments of the community were fully dependant compared to the 48.9 percent of the non-poor.

The majority (54.8 percent) of the non-poor households rely on private connections/tubewells for their water supply while the poorer households (70.1 percent) depend upon the community/public sources.

Graph 1: Main source of drinking water by poverty level



The ratio of community taps per household was found to vary across the different subprojects. The general trends being one community tap per 5 households.

There are however exceptions to the trend. In Jarbuta it was found that 14 households were sharing the same tap and the figure was even higher in a squatter settlement in Indrapur, where 20 households were sharing the same water source. During the field visit, locals complained of insufficient water to meet everyone's demand and frequent quarrels between various households.

Water payment: Flat rates and meter readings

Water tariffs in the ADB funded subprojects were based on both flat rates and meter readings. People with household connections had to pay on the basis of meter readings while flat rates applied to the community stand posts.

Table 12: Water tariff payment type (%)

Payment	Poor	Non-poor
Flat rates	63	45
Meter readings	37	55

Source: IDA household Survey, 2005.

For meter readings, minimum tariffs had been set by the WUC. They ranged from Rs 30 – Rs 70 throughout the different subprojects. In the case of the flat rates, they also varied from Rs 20 –Rs 25.

Flexibility in the payment was seen in only one sample subproject, Panchakanya, where WUCs allowed poorer households to pay the tariffs a week after the deadlines, without any fines. In addition, the same WUC had also waived the water tariffs for two elderly couples living in the village.

Quality of water: Generally good

The quality of water supplied was found to be generally good, except in the case of Jhumka. A significant 56.7 percent of the respondents were satisfied with the water quality. Those who were not, complained of hardness (32.9 percent),

dirty water (24.5 percent), bad colour (18.9 percent) and bad smell (12.6 percent). The poor quality of water was also identified as the main reason (60 percent) of the respondents turning towards alternative sources.

Among the sample subprojects, the pumped system at Jhumka is facing a problem because of water quality. High iron content has made local users revert back to tubewells, thereby threatening the overall sustainability of the system. Locals complain of rashes breaking out on their skin after bathing, clothes turning yellowish on washing and of having to clean their water tanks every week.¹⁹ WUC members further complain that in spite of requesting District Water Supply Office (DWSO) staff for a filter, which they believe could solve the quality problem; their pleas have been repeatedly ignored. They further add that the water system should have had a filter constructed. Blackish water has also been seen in Khajura, which has been blamed on the GI pipes and the medicine used to kill bacteria.

The quality of water was not found to be different across the poor and non-poor households of the same water systems, but non-poor households were found to be more aware of cleanliness and issues pertaining to water quality. Hence, they were more dissatisfied with the quality than the poor.

Quantity: Sufficiency varies across systems and seasons

There is regular supply of ADB funded water in the subprojects. Most of the users (54 percent) mention that the water supplied is sufficient to meet all their domestic needs. The users of Panchakanya (95.9 percent) and Khajura

Table 13: Household activities for which water supply is not sufficient

	Scheme (%)		
	Indrapur	Jhumka	Jarbuta
Drinking	15.4	51.3	1.2
Preparing/cooking foods	13.8	22.4	-
Bathing	15.4	6.6	17.6
Personal ablutions	12.3	1.3	8.2
Washing clothes	21.5	18.4	18.8
Washing utensils	1.5	-	1.2
Feeding the cattle	6.2	-	17.6
Religious purposes	-	-	10.6
Irrigating bari	12.3	-	24.7
Others	1.5	-	-
Total	100.0	100.0	100.0

Source: IDA Household survey, 2005

(82.4 percent) were especially satisfied with the quantity compared to the users of Jarbuta (51.6 percent) and Indrapur (57.1 percent). No difference was seen among the poor and non-poor users of the same water systems.

The amount of water supplied was found to vary across the seasons. In the case of the gravity flow system in Panchakanya, locals complained that the supply is always disrupted during the monsoon season, when the intake gets damaged due to floods. Similarly in Indrapur, locals expressed their grievance that during the dry months, the tubewells frequently dry up. Through FGD, it was revealed that there had been negligence during the installation of the systems; there were frequent breakdowns and spare parts were not readily available; which affected the supply.

Water pressure: Generally good

The water pressure was reported to be good. In Jhumka, there is so much pressure that the water goes up to the second floor of houses without any pumping system. The pressure across poor and non-poor households was found not to vary.

¹⁹ Locals complained that nearly 1 kg of blackish substance has to be removed from their water tanks.

Water timing: Convenient

Water timing in the ADB funded subprojects with piped systems is intermittent with water generally supplied during the mornings and the evenings. Water is supplied for a couple of hours per day; two hours in the mornings and two in the evenings.

According to the survey, the water timing is convenient for a high percentage of the respondents (86 percent). This was a general trend that was seen throughout the different subprojects and the poverty levels.

For those, who do not find the timings convenient, the main reasons were water does not come throughout the day/during the mid-day, water comes during the night, and water comes very early in the mornings.

Water fetching time: Drudgery has been reduced

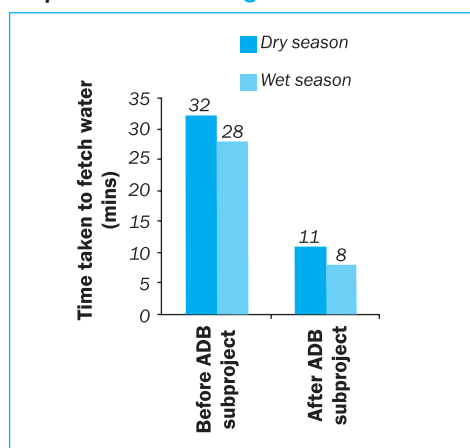
In all of the selected ADB sub-projects, the local community people prior to the

Table 14: Water fetching time before ADB subproject

Poverty	Dry season (in minutes)	Wet season (in minutes)
Poor	42	35
Non-poor	27	26
Average	32	28

Source: IDA household Survey, 2005.

Graph 2: Water fetching time



sub-project had to face a lot of hardship in meeting their need for clean drinking water. Women and girls were especially burdened with the responsibility, as the majority of them had to travel long distances, many times. Women in Panchakanya and Jarbuta had to travel more than half an hour to the nearest water source each day.

Before the ADB funded subproject was introduced, it took 32 minutes (dry season) and 28 minutes (wet season) in total average to fetch water (i.e., go, wait, collect and return). With respect to the poverty levels, poorer households suffered more than the non-poor.

After the sub-projects were introduced, the collection time was reduced to 11 minutes (dry season) and 8 minutes (wet season), nearly one third of the earlier fetching time for both dry and wet season.

Once the ADB funded subprojects were constructed, the length in water fetching time did not vary significantly across seasons and poverty levels.

The projects have been successful in reducing the drudgery for both poor and non-poor households. Beneficiary households have been able to save a substantial amount of time, which many have utilized by engaging in vegetable farming, animal rearing and exploring small-scale businesses. In addition, women have more time to spend on the care of their children and improve sanitary conditions.

Water collection: Women's responsibility

Most of the respondents who have to fetch water from community/public sources mention that they have to go more than three times a day (44 percent). Through the FGD and field

Table 15: Water collection trips

No. of water collection trips	Percent
Once	1.6
Twice	31.2
Thrice	23.3
More than three times	43.9
Total	100.0

Source: IDA Household survey, 2005

visits, it was found out that in general the number of trips for collecting water has reduced compared to before projects.

In the sampled households, elderly married women usually go for water fetching. However, other members of family are also significantly involved in fetching water. Respondents were asked why a particular person goes to fetch water. The simple majority (48 percent) mention that it is the household duty of that person closely followed by unavailability of other members (43 percent).

Treatment of water: No steps taken

Water users generally do not treat the ADB supplied water. The survey revealed that only 41 percent do take steps to treat the water. The inhabitants of Jhumka, were the users who most frequently treat their water, due to the high iron content.

Different treatment procedures were found to prevail across the sample subprojects. Most people in Jhumka prefer filtering, people in Panchakanya boil water, and the inhabitants of Indrapur cover the tap faucet with cotton clothes, a kind of filtration process.

Alternative sources: A necessity

Even though the ADB funded systems were the main sources of water in the sampled projects, many households had to turn towards alternative sources due to the water scarcity (59 percent) or

because the water quality from the ADB funded systems were less than acceptable. A significant 30 percent said they to use less water to cope with the lack of water.

Coping with water scarcity: Non-poor households use alternative sources while poorer households use less water.

When disaggregated between the rural and urban projects the majority (68 percent) of the rural population use other sources while urban dwellers (43 percent) use less water. This means that urban dwellers have fewer alternatives than rural dwellers.

Table 16: Coping with water scarcity

Description	Rural/Urban Scheme (%)	
	Rural	Small Towns
Use less water	23.5	42.6
Use other sources of water	68.4	40.4
Buy water	-	2.1
Re-use of used water	8.2	14.9
Total	100.0	100.0

Source: IDA Household survey, 2005

For those people who have to use alternative sources, 35.5 percent mention that scarcity occurs more than six months in a year, mostly during the dry summer and winter months.

Discrimination: Does take place

The water supply systems funded by the ADB have been discriminatory towards the poorer segments of the communities. This is more evident for the STWSSSP than the rural water projects.

Even though one of the main priorities of the ADB funded water projects was to provide access to the poor and

marginalized, in reality this has taken a back seat as a result of the cost recovery aspect of the projects. Water supply was distributed to only those households/communities, which could pay for associated costs to have the water connection. No subsidies were provided to the poorer segments. (Details regarding the design faults and the discrimination towards the poor are further discussed in section: 3.1.7)

When analysed through the prism of caste and ethnicity, the survey showed that a significant (66 percent) did not think there had been discrimination, while 11 percent believed that there had been biasness in the installation of the systems. Discrimination did take place in some of the sampled subprojects, though it was not wide spread. The survey showed that the largest user group were the Bahun/Chhetri (52.3 percent) followed by Hill Dalits (17.6 percent). But, this data is more of a reflection of the general composition of the communities. Interviews and FGD revealed that in Jarbuta, there was evidence of discrimination against the Dalit community judging by the location and less number of tapstands constructed in their community. Similarly in Jhumka, community tap users complained that the women of higher castes demand to use water before Dalits and even go as far as cleaning the whole tapstand area to purify the water, after the Dalits have used it.

Considering monopolization of the water sources, most respondents do not think that any particular individuals/groups have monopolized the public water sources (78 percent). But, during the field visits it was

seen that the public water taps/points were installed near the homes of the WUC members. In Indrapur, during the installation of the tubewells, local leaders had distributed the tubewell units according to their own political interests.

3.1.2 Sanitation/Personal Hygiene Sanitation component of ADB funded WSS projects: Not prioritised

ADB funded WSS projects have not given adequate attention to sanitation. It was only during the Third RWSSSP that a sanitation component was included as a part of the project²⁰, but even then the amount of budget allocated was extremely small. Since then, the situation and priority still has not increased.

The most glaring example is seen when the budgets of the rural WSS projects are broken down. While the water supply component receives the major bulk of the budget, the sanitation component is usually left with very little. Hence, it is not surprising that in all of the sample subprojects that were visited, ADB's contribution was extremely little or non-existent.

When the sanitation programmes were conducted, both hard and soft interventions were made at the

Table 17: Budgetary breakdown of WSS projects (in US \$ million)

Description	Third RWSSSP	Fourth RWSSSP
Water supply	23.12	18.94
Sanitation	0.31	0.12
Capacity building	0.61	0.93
Awareness campaigns	Not Available	1.38

Source: PCR 1999, 2004

²⁰ Low cost sanitation for private households was introduced along with public institutions, PCR 1999.

individual, household and community levels. Simple latrines were distributed and simple underground drainage was constructed in the urban settlements. Among the rural sample subprojects Panchakanya and Jhumka were the only areas in which private/community latrines were distributed. In the case of STWSSSP, efforts are underway to distribute private latrines through subsidised programmes.

Sanitation situation before ADB projects

Before the entry of the ADB projects the sanitation situation in the sampled subproject areas varied. In the case of Panchakanya, there were no latrines in the whole village, while in other areas such as Jhumka, Khajura, Birendranagar, and Ratnangar UNICEF had conducted sanitation programmes whereby latrine rings had been distributed through revolving funds.

Current sanitation situation: Most latrines constructed through private means

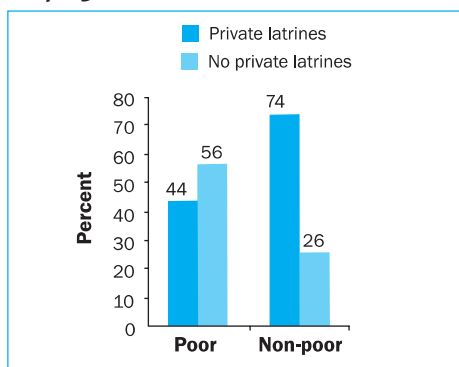
The survey results show that 64 percent of the respondents had well managed private latrines. But, the picture from the field visits and FGD, was that the number was far less. Of the households without well managed private latrines, around two fifths practice open defecation, one third use unhygienic private latrines and a quarter use neighbours latrines.

Of the total latrines in the sampled area, only 3.9 percent of the latrines were constructed with ADB support

Households identified the lack of money (96.4 percent) as the main reason for not having a private latrine. 2.3 percent of the respondents also identified the lack of ADB support as another reason. While a few also mentioned that there was no need of private latrines.

When the survey data was disaggregated between the poor and non-poor, it was seen that 74 percent of the non-poor households have latrines as compared to the 56 percent of poor households. This shows that the poor lag behind considerably as far as sanitation is concerned. Most of the households which have well-managed private latrines had constructed them with their own money (94 percent). This was seen across the different subprojects and the poverty levels.

Graph 3 : Private latrines



Good practice: Construction of latrines as a prerequisite to water supply

During the study an interesting insight was learnt at Panchakanya. The DWSO had made the installation of private latrines a prerequisite to the installation of a

water supply system. This policy turned out to be a success as the community people were ready to do anything in order to get the drinking water and so along with the access to drinking water, sanitation of the community also improved. However, this was an isolated case. It is important that such practices be mainstreamed, and linked with intensive long term hygiene education.

Open defecation: Still practiced

Open defecation is still practiced by around 14 percent of respondents in the sample subprojects, in rural and urban areas alike. Most people (73 percent) continue this practice because they cannot afford to build latrines. In addition, the survey also revealed that 15.9 percent actually find it convenient.

ADB latrines: Community latrines in need of maintenance

ADB programmes have supported private, community and institutional latrines. The majority of the latrines have been private latrines that have been distributed through revolving funds (Panchakanya), while only a few community/ institutional latrines have been constructed (Jhumka).²¹

During the field visits it was observed that community latrines were in a bad condition. Out of the 14 community/ institutional latrines constructed in Jhumka only 2 remain functional. The rest were dirty and in one case the locals had had to demolish it due to the lack of maintenance and the foul stench emitting from the area. Locals when questioned, mentioned that they prefer going to rivers, fields than the community latrines, because these are so ill kept. The latrines have no access to water except when the users carry the water in buckets. There is also no provision of electricity. In schools, the institutional latrines are not gender sensitive as the single room latrines were constructed for both girls and boys, and latrine designs were not found to be sensitive to the needs of children or disabled people.

Awareness programmes: Discontinued

In many of the subprojects, awareness programs on health and hygiene practices were not effectively emphasized. Awareness programs were found to have been conducted only during the initial stages of the projects, which at the later date, were discontinued.

What works: Community Led Total Sanitation

CLTS a new concept of shifting people from open to fixed point defecation through the process of ignition PRA. Sustainable hygiene behavior change is achieved as people become fully aware of the links between open defecation and health. In this approach much more emphasis is given to software rather than hardware and no subsidy is provided on hardware. The main indicator used to judge the success of this approach is "no open defecation in the community". This is a quantum jump to closing the gap between water and sanitation coverage

Awareness programmes were only emphasized during the initial stages of the projects.

Solid Waste Management:

Burning the most common practice

Most of the households in the study area dispose of solid waste by burning it outside their homes (29 percent). The survey also shows that significant proportion of the people dispose of solid waste by collecting in pit and using as

²¹ In Jhumka 14 institutional/ community latrines were constructed as a part of the ADB project.

manure (19 percent). No significant differences were seen among the different poverty levels as far as waste disposal was concerned.

Hygienic practices:

Overall hygiene has improved

The survey revealed that most of the people always wash their hands after defecation (97 percent) and before eating (99 percent). Soap and water are the most common commodities used for washing hands after defecation followed by ash and water. Most said that they changed their habits due to awareness campaigns, mostly conducted by DWSO, UNICEF and ADB. No variation is observed across the poverty line. It should be noted that this information was gathered through survey rather than observation of practice.

Overall hygiene has improved considerably in the project areas.

A significant 71 percent believe that the overall hygiene of their families has improved after the implementation of the projects. When asked to list the main benefits, 83 percent mentioned the less frequency of diseases. However, this finding from the survey needs to be cautiously interpreted as the ADB projects are not the only programme in the area.

Table 18: Benefits of improved hygiene

Description	Percent
Less frequency of diseases	83.4
Members are now more healthy	12.6
Time saved from travelling to health post	4.0
Total	100.0

3.1.3 Capacity and willingness to pay

Willingness to pay the costs: Dependent on the hardship factors

The costs that the users have to pay include the initial membership costs, the

installation costs and the monthly water tariffs. In the case of STWSSSP, prospective users must pay membership fees if they want to be included in the water system; the costs range from Rs 5 to Rs 3,500.²² Installation charges also need to be paid. In the case of the rural projects the amount differs according to the different water systems; the installation charges for individual private connections are higher as compared to the community standposts, for which charges are collectively taken from the users.

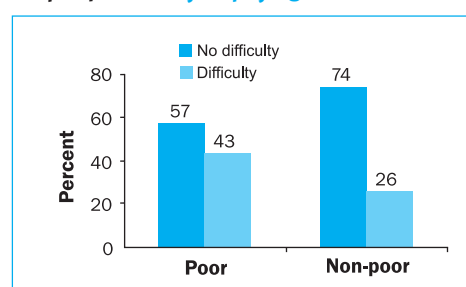
Table 19: Average cost for private connections in rural subprojects (Membership fees and installation charges)

Sub-project	Average Cost (Rs)
Jhumka	2,800
Khajura	1,467
Jarbuta	2,652

Source: IDA Household Survey, 2005

According to the findings of the survey, most of the households (70 percent) do not have problems in paying the water tariffs. Those who said that they did (29 percent) point to financial difficulties as the main problem. But, what is interesting is that besides economical reasons a significant percent also mention the low quality of services as a major factor in their unwillingness to pay tariffs.

Graph 4: Difficulty in paying water tariffs



²² The WUA of Bandipur have set Rs 5 as the membership fee to encourage the users to become part of the project.

The study also revealed that locals who face hardship in getting water were found to be more willing to pay high prices (Rs 3,500) for the supply of water (eg. Birendranagar). While those who had alternative sources were less willing (eg. Ratnanagar).

Very few households (6 percent) have borrowed loans to connect to the ADB water systems. Those who have taken loans have borrowed in the range of Rs 2,000 to Rs 5,000. The majority of the loans have been taken from banks or finance companies at various interest rates ranging from 2 –30 percent.

3.1.4 Community participation

The beneficiary communities' participation in the ADB funded subprojects was limited to that of labour contribution. The survey revealed that in the stages of design and choice of technology and M & E the participation was extremely low, moderate in the stage of information dissemination and significant in only day-to-day operations and maintenance.

The lack of community participation has been attributed to inappropriate project designs that have substantially hindered the sustainability of the piped systems. A case in point is that of Panchakanya,

where the locals have complained that, had they been included in the design of the water system, they would have proposed a larger intake at a further point, which would have lessened the continuous maintenance that is needed during the monsoon, when the system gets repeatedly damaged.

In the case of STWSSSP, a high level of community involvement was seen. This is due in part to the crucial role that the WUC is playing and will play in the future in terms of collecting the initial 5 percent up front cash and the monitoring of the subproject implementation.

The survey showed that a high majority of the respondents (60 percent) think that information regarding the project activities was disseminated beforehand and during the project implementation. However, some 27 percent profess ignorance.²³ Government authority (55 percent) was found to be the leading agency to disseminate information followed by CBOs (16.4 percent).

People in the ADB-sub-project regions are well aware that access to safe drinking water is a right. The survey revealed that the media has played the most significant role (57 percent) in making people aware on this matter. Awareness campaigns conducted by local CBOs/ NGOs and government authorities have also played an important role.

Table 20: Community participation at various stages of subproject implementation

Stage	No involvement	Little involvement	Great deal of involvement
Design	95.2	4.1	0.7
Choice of technology	94.8	4.1	1.2
Day-to-day operation	84.9	6.2	8.9
Maintenance	75.6	10.8	13.6
Monitoring	93.0	5.5	1.4
Evaluation	94.3	4.3	1.4
Information dissemination	85.7	9.1	5.3

Source: IDA Household Survey, 2005

3.1.5 Community Management

WUCs were formally established prior to the sub-project implementation. The members (generally 8-10 members) were elected through a general body meeting, *sadharan sabha*. Ideally, the WUC were to be representative of the various caste and class living in the area people, but

²³ 78 percent of the locals of Ratnanagar were the most uninformed about the ADB project.

in reality the members were more from the dominant castes who were financially well-off and the poor are not represented in these decision making bodies. Hence, in such situations it is unlikely that the voices of the poorer segments of the community would be heard.

The composition of the WUC has also not been conducive to promote the participation of women in the decision-making processes. It is mandatory for the WUCs to appoint at least two women, but there are no specific measures to ensure that they fill key-decision making positions. Tokenism is more prevalent than true and active involvement.

3.1.6 Sustainability

During the field visits, the selected subprojects were found to be at different stages of functioning. They ranged from very well maintained subprojects (Panchakanya) to those that were in urgent need of support (Jhumka, Indrapur).

Among the five sampled rural projects, sustainable services were being provided in three of them. The systems were properly maintained, damage to pipes and intakes was repaired and water tariffs were regularly collected. Systems not providing sustainable services were found to frequently break down, spare parts were not readily available and users were not willing to pay water tariffs.

Sustainable services to the poor:

The site visits revealed that while private connections were well maintained and functional, the community tapstands and tubewells were rarely given priority by the WUC. This was more evident in those systems that had both household connections and community taps.

According to the WUC, private connections are considered more favourable because of the higher revenue generation, as compared to the community taps, which according to the WUC are much less cost effective.

But, it is the poor who are fully dependent on the community taps/tubewells for their daily water supply,

WUCs prefer private connections over community taps due to higher revenue generation.

who are suffering the most as a result of the WUC's policy. Most cannot afford the private connections and so when the taps supplied by the ADB supported subprojects are turned off or breakdown, most turn towards rivers and streams to meet their water demands. Hence, field visits show that sustainable services are not being supplied to the poorer households. In addition, deliberate negligence was seen by WUCs regarding supply of water to minority communities. A case in point, is that on Jarbuta, where 3 community taps providing water to the Dalit communities have remained out of operation for years.

Factors affecting sustainability:

The sustainability of subprojects was seen to a large extent to be associated with whether the subprojects were demand driven or not. Subprojects were better maintained in areas where the project reduced the hardships associated with water scarcity (Panchakanya). Local users were also willing to meet water tariffs.

The commitment of the WUC members was found to be instrumental in sustaining the functioning of the systems.

Table 21: Status of community taps/tubewells

Name of the project	Type/s of water delivery system	Year of completion	Installed community taps/ tubewells	Present number of community taps/ tubewells functioning
Panchkanya	Gravity flow with community taps	1999	14 community taps	14
Jhumka	Pumped scheme with overhead tank	1997	14 community taps and other private taps	2
Khajura	Pumped scheme with overhead tank	1997	1 community taps and other private taps	1
Jarbuta (scheme Ka)	Gravity flow with community taps	1995	22 community taps	18

Source: Field visit, 2005

Factors affecting sustainability

- Demand driven
- Sense of ownership among users
- Active role of WUCs
- Availability of spare parts
- Support provided by DWSO

WUCs that were active in their communities, systematically and regularly collected water tariffs and fines, and had policies regarding new connections were financially better equipped with dealing with disturbances in the functioning of the systems.²⁴

The support being provided by the DWSO staff was also significant, especially in terms of providing financial and technical assistance for the operation and maintenance of the systems.²⁵ However, there is a need for effective and regular two-way communication to exist between the WUC and the Department authorities, a sentiment that was raised by WUC members.

3.1.7 Pro poor? Exclusion of the poor

The cost recovery scheme of STWSSSP has compelled WUCs to raise higher cash contributions, which in turn means higher membership fees, installation charges and water tariffs. A study conducted by Centre for Integrated Urban Development (CIUD), calculated the initial cash contribution in a subproject (Lekhath) to be 5 times the monthly income of the poor household and 8 times the salary of the ultra poor.

The project does not have any provisions for the poor. It requires both poor and non-poor to pay the same amount. Hence, only the non-poor households will benefit from the project. In Ratnanagar,

In STWSSSP an overly ambitious cost recovery scheme is excluding the poor who are the most vulnerable.

²⁴ In Panchakanya, the WUC charge new households an initial charge of Rs 500 (for concrete houses) and Rs 300 (for wooden houses) and later a monthly charge of Rs 20.

²⁵ Rs 14,000 had been provided in terms of monetary help to the WUC at Panchakanya to enlarge a water tank. Similarly, expert help has been provided to repair pipelines in Jhumka.

whole squatter communities have been excluded because the inhabitants cannot afford to pay the required amounts.

The inability to pay the Water User Association (WUA) membership fees means that the poor are also excluded from the subsidised sanitation programme. The sanitation subsidy provides the members with 3 pieces of GI sheet, 3 sacks of cement, a pan and some pipes. The remaining materials and costs have to be borne by the users themselves.²⁶

What works: Cost Recovery Designed in Consultation with Communities

WaterAid Nepal is piloting a capital cost recovery approach in water supply project implementation in poor urban communities. The main features of the approach are:

- » 80% of capital cost is recovered from users
- » 20% is provided as a subsidy by the Municipality
- » size of monthly instalments and period of repayment is fixed by the community
- » the recovered fund is deposited in the revolving fund, which is administered by the Municipality and re-invested in needy poor communities

In some projects, efforts have been made to distribute water supply or provide provisions to the poorer communities. But

these efforts are more of a reflection of the WUCs concerns rather than pro-poor policies formulated by the implementing/ executing agency. For example, in some rural subprojects community taps were distributed in squatter areas²⁷, water tariffs for single elderly people were waived and locals were given the opportunity to pay installation charges in instalments. Similarly in Bandipur, the WUC have fixed the WUA membership fee at Rs 5, so that the poorer households can take advantage of the subsidised sanitation programme.

At the implementing agency level, talks are underway to utilize 1 percent of the 8 percent interest that the WUAs of STWSSSP have to pay to the TDF for the inclusion of the poorer segments into the project. This is yet to be brought into effect.

The project design of STWSSSP mentions that the system will consist of 80 percent private connections and 20 percent community taps.²⁸ But, in reality similar to the rural projects, WUCs are pushing for private connections due to the higher revenue collection and discouraging community taps, thereby further marginalizing the poor.

Similarly, squatters have also been excluded from drinking water and sanitation services due to the lack of legal rights of squatters' over land. DWSS staffs view that, if WSS projects provide drinking water supply connections in squatter areas, it is perceived as legalising their status. Hence, this has given them the convenient excuse of ignoring squatter areas. However, drinking water services can be provided

²⁶ In Birendranagar, a man had taken the subsidy materials but still could not build the latrine because he could not afford the remaining materials

²⁷ In Jhumka, 14 community taps were installed in squatter areas with one tap serving to 20-25 households. But presently, out of the 14 only 2 are functioning.

²⁸ ICIUD, 2005

to squatters in the form of community tap stands provided that private connections are not given.²⁹

Exorbitant water tariffs

When the CIUD study compared the water tariffs of Kathmandu valley with the estimated water tariff for small town projects, it was found out that the people of small towns have to pay more than double to that of the capital. For example

the estimated water tariff for an average fully plumbed household in Ratnanagar is Rs 183 for 10 m³, while the same amount of water in Kathmandu costs Rs 50.

Project design faults

The study showed that ADB supported WSS projects that were designed and formulated with wide stakeholder consultation have included pro-poor components, which are in line with ADB's water policy, such as the CBWSSSP. But, when projects have been hastily conceived with little or no stakeholder involvement, such as the STWSSSP then they have gone against the spirit of being pro-poor. In STWSSSP, the ADB has

What works: Gender and Poverty (GAP) Sensitive Programming

Nepal Water for Health has mainstreamed a gender and poverty approach to targeting to poor in WSS projects. The key elements of the GAP approach are:

- » Participatory well-being ranking of households to identify the poor
- » Flexible policy for number of households per water point
- » Women making decisions over water points location and design modifications
- » Health, hygiene and sanitation education to men as well as women and to 'in-school' and 'out-of-school' boys and girls
- » Gender awareness training to partners and communities
- » Gender balanced community water and sanitation users committees with women in key decision making positions
- » Priority for project paid jobs and training to women and poor men

Mainstreaming the GAP approach shows positive results in social transformation and qualitative changes in the lives of women and the poor.

What works: Pro-poor Graded Subsidy Approaches

Accurately targeted subsidies can be an effective way of ensuring services reach the poor. In the Gender and Poverty approach poor households are identified through participatory well-being ranking and the following subsidies provided:

- » Free latrine components to the poorest households
- » Pay poor households 50% of the value of their labour contribution to project implementation
- » Graded rate system of O&M payments based on well-being ranking (poor pay lower monthly tariffs than the rich)

²⁹ Interview with Dharendra Raj Sharma, former member of the Sukumbasi Ayog (Commission for Squatters)

pushed for investment recovery from the water users, which is unrealistic and may lead to the failure of the project. In addition, the highly centralized decision making set up, whereby power is not delineated to the Town Project Office (TPO) is creating hindrances and delays in the implementation of the project. Which in turn, means that there is less time for the users to repay the loans and tariff hikes and defaults are likely.

What works: Mapping the poor

In the ongoing ADB funded Melamchi Water Supply Project maps have been drawn up of the Kathmandu valley to show where the poor are located and how they are accessing water supply. A task force of ADB, Government and NGOs was established to lead this work and the task force endorsed the methodology and committed to base implementation of the project on the findings. The maps show the location of all public stand posts, an important water source for landless people, and their current status. The maps also show the location of slum and squatter communities, including information on the population in these communities and their access to water supply. The maps will be used by the Low Income Customer Support Unit to prioritise services to these areas.

3.2 Executing agency level

3.2.1 Institutional Strengthening/ Capacity Building

ADB supported projects have prioritised capacity building even more than sanitation. Starting from the first RWSSP, the amount of budget allocated for capacity building has steadily increased through the years.

Table 22: Budgetary breakdown for rural WSS projects

Budget allocated (In million US \$)	1st RWSSP	2nd RWSSP	3rd RWSSSP	4th RWSSSP
Capacity building (Training)	0.002	0.210	0.61	0.930
Sanitation	-	NM	0.31	0.120

Source: PCR (1993, 1997, 1999, 2004)

TA provided to the ADB supported projects focused on providing advisory services, institutional strengthening and training to the DWSS staff. Later, during the implementation of the projects, DWSS staff were assisted in strategic planning, short-term action measures to implement the strategic plan and the strengthening of annual planning and budgeting. Training curriculum also consisted of cost recovery measures, setting of the water tariffs and a simple cash accounting system.

During the Third RWSSSP, a community liaison and maintenance unit, was created to strengthen the DWSO's capability to promote community participation in the project and a Central Human Resources Development Unit (CHRDU) was established under the DWSS. This centre was set up to provide training to DWSS staff, WUC members as well as teachers on (i) community based water supply systems survey and design, (ii) social facilitation, (iii) participatory rural appraisal, (iv) water supply testing and (v) construction supervision and management. According to the PCR of the

Third RWSSSP, the centre was successful in training 1,600 individuals out of which 10 percent were women. But, later the functioning of the system was found to slowly decline. The PCR of the Fourth RWSSSP reported that the facility remains under used and that the trainings contributed little to the strengthening of sector institutions, particularly the DWSS.³⁰

During the field visits, DWSO staffs in the district headquarters were found to be skilled and sensitive to water and sanitation issues and to the concerns of the poor. Some reported of having undergone PRA trainings to identify and provide services to the poorer segments of the community. This however, could not be validated.

Under the CBWSSSP, the DWSS is executing its role as a facilitator. It is expected to update the district water supply profiles, which will provide service providers with valuable information for planning future water supply projects.

3.2.2 Accessibility of Institutions

In the selected schemes, the WUC members and the local users stated that the project officials visited communities during the initial surveys, during construction and at the handing over ceremonies. After handing over of the responsibility of the sub-projects to the WUC, no effective monitoring of the sub-project systems was carried out. So the accessibility of the DWSO as far as the ordinary user is concerned is intermittent.

The Department has generally addressed community needs when they have been reported to them. Communication however is generally not effective. When complex problems arise in the water systems, communities have to wait for days to receive DWSO support. Regular trainings

are also organized and conducted by the DWSS for the WUC members and the maintenance staff but due to poor communication, these training were not able to include all those who are in dire need of such skill to run the subprojects smoothly.

In recent projects, NGOs are involved at various levels. Particularly, they are contracted to carry out social mobilisation activities. This proved to be a constructive step, as they are more accessible to the various sections of the communities than the Department. These NGOs have played a positive role in creating health, sanitation and hygiene awareness among the community members. In general, they have become instrumental in providing more institutional access and services to the people, but there is still room for improvement in delivering qualitative and effective services to the poor.

3.2.3 Coordination and Synergy among the Sector Players

Many sector players, such as the UNICEF, World Vision, Gurkha Welfare Society, Nepal Water for Health (NEWAH), Rural Reconstruction Nepal (RRN), etc are working in the subproject areas. These organizations were involved in providing water supply as well as sanitation services to the local community.

The spirit of decentralization and the Local Self Governance Act needs to be better realized by the sector players especially to prevent duplication. One of the major problems in this process is that the majority of the plans and programmes of Non-Government Organizations are not integrated with the District Development Committee (DDC) plans. One of the reasons is that the DDC plans are formulated according to the

³⁰ PCR 2004

Nepali fiscal year while most of the foreign donors and donor funded NGOs have different systems and a limited time frame to execute the programmes. Duplication however can still be avoided if the sectoral players inform the government line agency of their programmes.

3.3 Conclusions

ADB funded sub-projects have been successful in increasing the coverage of clean drinking water in rural communities. But this coverage has not always included the poor or marginalized. Concern over cost recovery has taken precedence over pro-poor access. This is especially evident in the STWSSSP, where the users have been asked to pay 50 percent of the capital cost. Not surprisingly, many in the local communities cannot afford this and have consequently been excluded. In rural WSS projects, water supply from community taps/tubewells, the main source for poor households, were either cut off or in dire need of repair. WUCs were found to push for private connections over community taps/tubewells because of the higher revenue generation.

In communities where the sub-projects have been implemented, significant benefits have accrued. Access to clean water has increased regardless of caste/ethnicity. Water collection time has been reduced which, has allowed women more free time to devote to other productive activities, such as kitchen gardening, spending more time with their children and even becoming involved in income generation activities. Hygienic practices have also changed for the better.

The majority of the water users professed satisfaction with the quality

and quantity of the ADB supplied water. But grievances against the frequent disruptions of the water systems, the constant need of repairs for tube-wells and the high iron content of water were raised by many local users.

The sanitation component has not received a high priority. Significant numbers of households in the ADB subproject areas do not have access to well-managed private latrines. The majority of households that have private latrines constructed them with their own money and not as part of ADB subprojects. Open defecation is still common in the ADB sub-project regions. Neither sewerage systems nor solid waste management systems have been introduced. Awareness campaigns were conducted but later discontinued.

The sustainability of the subprojects was seen to a large extent associated with whether the subprojects were demand driven or not. Subprojects were better maintained in areas where the project reduced the hardships associated with water scarcity. Local users were also willing to meet water tariffs in such subprojects. The commitment of the WUC members was found to be instrumental in sustaining the functioning of the systems. The support being provided by the DWSO staff was also significant

Capacity building has been a priority of the ADB projects and TA. Trainings have been conducted, but most centre around cost recovery, the setting up of records, etc.

3.4 Recommendations

The recommendations for improving the effectiveness of ADB projects so that they will provide sustainable services to the poor are as follows:

3.4.1 Strategic recommendations

- » In order to provide sustainable services to the poor, it is important to emphasise pro-poor policies above cost-recovery principles, which would ensure that the poor – irrespective of whether they are willing to pay for the cost or not – get access to services.
- » WSS projects should be carefully designed with wide-ranging consultations with stakeholders so that pro-poor components are addressed. Hastily formed projects (between the ADB and executing/ implementing agencies) with minimal stakeholder participation generally tend not to be pro-poor.
- » More budget needs to be allocated for the sanitation component so that the sanitation component in each WSS project receives the attention it deserves. Well-managed latrines, sewerage system and garbage management system should be integrated with the water supply sub-projects as a basic component of the overall project.

3.4.2 Operational recommendations

- » Information about the project should be disseminated to users at an early stage of the project and during the project implementation as well.
- » ADB-supported WSS projects should effectively co-work with local NGOs and CBOs to organize awareness campaigns at the local level. It should promote local institutions for organizing information dissemination programmes and interaction programmes.
- » Water quality of some of the ADB-supported sub-projects should be improved. For instance, proper water treatment process should be installed in the Jhumka subproject to make the water potable and the system sustainable in the long term.
- » The ADB should increase community participation in the various stages of the subprojects. Community participation should be made more effective beginning from the phase of project design to the phase of day-to-day operation and maintenance.

Monitoring and Evaluation

Monitoring and Evaluation (M & E) is an important aspect of project management. Monitoring is generally a built-in mechanism, which involves checking targets/programme with the progress that is being made. It suggests corrections that have to be made. Evaluation on the other hand is a process of studying whether the desired objective of a project has been achieved or not. Evaluations may be ongoing, (operational audit, technical audit, mid term evaluation), terminal (project completion report), or sustainability or impact evaluations. The study sought to understand how M & E is undertaken in ADB WSS projects and whether it provides ADB with the information it needs to know if projects are ensuring sustainable services for the poor.

4.1 ADB's monitoring rationale and procedures

4.1.1 Rationale

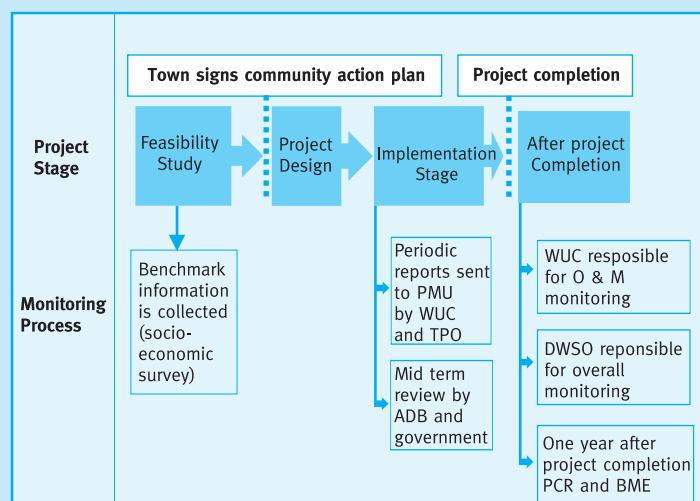
According to ADB, the purpose of monitoring is to: (i) ensure timely execution of projects as designed and scheduled, (ii) to find out problems and have them resolved promptly and (iii) provide feed

back to benefit design, execution and management of future projects.³¹

4.1.2 Procedure

Monitoring procedures include the collection of a benchmark socio economic survey of the project area, periodic updates sent by the WUC, TPO, DWSS staff; annual reviews prepared by the Central Project Management Office (CPMO), Project Management Unit (PMU) to the ADB, joint reviews conducted by ADB and the government³²; and midterm reviews conducted by the ADB and government with community support.

Figure 2: Monitoring process of STWSSSP



³¹ www.adb.org/Documents/Resettlement

³² The ADB and government conduct joint reviews twice a year during the implementing phase of the projects.

The monitoring procedures for rural and urban projects were found to vary. For example, in the case of STWSSP, DWSS has agreed to synchronize its M&E system with the project's M&E and necessary budget is allocated in the FY2005/06 budget and actions were agreed regarding the involvement of DWSO in the field. WUCs and TPO staff then are made responsible for monitoring during the implementation stage of the project, but in the case of

rural projects, up to the fourth RWSSSP, it was the DWSO staff who had this responsibility. Changes were again made to the monitoring procedure during the CBWSSSP; when the M & E procedures were introduced under the PPMS (Project Performance Management System) and DDC is made responsible for PPMS.

According to ADB monitoring guidelines, monitoring should include the project implementation status, extent of community participation, (including contributions to capital costs), the progress of community education and awareness programmes, progress in training of community groups and DWSS staff, and sustainability of benefits (including environmental and social impacts and institutional reforms). But, based on the inputs obtained at the field site and the review of periodical updates sent by the TPO staff to the PMO of STWSSSP, it was found that monitoring was confined to the physical progress being made, and the financial and implementation delays.³³ The level of services provided to the beneficiary communities, especially to the poor and marginalized did not figure in the monitoring.

BME vs PPMS

The PPMS serves the same end as the BME (and more) but it achieves these in a different manner. Both PPMS and BME measure the outcomes or impacts (identified as benefits and results). The PPMS goes beyond BME by seeking to establish a cause and effect relationship between the project and the impact. It does this by using targets and indicators set in the project framework during design. During implementation, the PPMS require an assessment of the likelihood that development objectives will be achieved. A preliminary assessment of impacts or their likely magnitude is made at completion via the project completion report. For a sample of projects, more detailed impact assessment is made via the project performance audit report, and in a few cases, by follow-on re-evaluation or impact evaluation studies. BME, on the other hand, measures changes in a range of socio-economic indicators at fixed points of project implementation (typically at the start, midpoint and completion). Relating these changes to project interventions have proven to be difficult. Further, because BME focused only on benefits, it provided little or no information of value to project managers. On the other hand, PPMS is expected to be part of day-to-day project management by providing regular updates on projects "at risk."

Source: ADB, 1998. Using the Logical framework for Sector Analysis and project Design. A User's Guide

Monitoring was centred on physical progress of the projects

M & E systems have been institutionalised during implementation and after project completion. During the implementing the task falls on the WUC, TPO and DWSS staff. Afterwards the main responsibility lies with the DWSS. Trainings are provided to the WUC (by the PIC) and the DWSO staff to help set up records.

³³ During the course of the study, the team could not locate any monitoring reports for the ADB funded projects either at the DWSS or the field sites, except the periodical reports sent by the TPO of the STWSSSP. The most common reply that the team received was that it is extremely difficult to locate the reports as they have been stored with countless others or that during the setting up of the new offices they have been misplaced.

WUC involvement in M & E

In STWSSSP, WUC have been made responsible for monitoring and improving O & M during and after project completion. Two members need to establish a system to record data, based on the formats prepared by the PIC and regularly update the PMO.

M & E procedures are continuous during the implementing stage.³⁴ This can be attributed to the release of funds based on performance of the projects. However, once the projects are completed, M & E systems are less frequent. During the field visits it was found out that the DWSS only came to know about the functioning of a system after the local WUC members approached the offices for help. Hence, there is a lack of continuous M & E system in place to monitor the sustainability of the systems.

4.1.3 Indicators for monitoring

The indicators to be monitored are formulated in agreement with the Executing Agency and are mentioned in the RRP reports. The indicators are related to physical progress, project impact, capacity building activities and institutional reforms. (The suitability of the indicators is discussed in section 4.4.1). Based on the indicators, monitoring formats are prepared by the PIC, which are sent to project sites to be filled by various agencies such as DWSS staff, WUC members, and project engineers. From the field sites updates are sent back to the CPMO/PMO.

4.1.4 Benchmark information

Benchmark information or baseline data refers to the socio-economic characteristics found in the proposed

service area, prior to taking up a project.³⁵ This basically consists of data collected during the feasibility stage of the project through socio-economic survey, interviews with key informants, focus group discussion and observation. The main use of the baseline data is that it helps estimate the demand of the project, identify appropriate interventions, make projections for the future and provides the yardstick to assess the benefits after the completion of the project.

In STWSSSP NGOs are involved during the socio-economic surveys after the candidate community//town signs the community action plan (CAP). Each of the subprojects are sampled and socio economic surveys undertaken. But, in the case of CBWSSSP, each of the households were surveyed.³⁶ This is a good practice that should be continued along with the need to segregate the data for women and poor/non-poor. Needless to say, conducting a comprehensive baseline study is integral to assessing the impact of any project.

BME studies were limited in scope and analysis due to the lack of baseline information

4.2 ADB's evaluation rationale and procedure

4.2.1 Rationale

ADB considers evaluation as having three main functions: (i) distil lessons learned for future operations and disseminate them internally and externally, (ii) ensure accountability for use of resources to improve development effectiveness and (iii) follow up on evaluation recommendations to sustain project benefits.³⁷

³⁴ The PCR report of the fourth RWSSSP mentioned that M & E gradually lessened towards the end.

³⁵ Guidelines for Benefit Monitoring and Evaluation System, PMO STWSSSP, 2003.

³⁶ According to the hired local consultant sampling was first conducted at the project area, but later individual households were surveyed once the staff realized that the cost recovery of the sub-projects could not be accurately measured.

³⁷ www.adb.org/evaluation

4.2.2 Evaluation procedure

All public sector projects are evaluated under a project completion report (PCR) within a year of the projects completion,³⁸ after which the project loan is considered closed.

Other evaluation reports include (i) Project/Programme Performance Audit Report (PPAR), (ii) Technical Assistance Performance Audit Report (TPAR), (iii) Assessing Development Impact (ADI), (iv) Re-evaluation Study (RES), (v) Impact Evaluation Study (IES), (vi) Special Evaluation Study (SES), (vii) Country Assistance Programme Evaluation (CAPE) and (viii) Annual Evaluation Reports. Details concerning the reports have been presented in Annex 6.

In addition, a Benefit Monitoring and Evaluation (BME) is also conducted by an independent third party to assess the service provided to the beneficiaries and the benefits that they have received. Though these reports have the word “monitor” in truth they are evaluation reports which are conducted one year after the completion of the project. Since the BME reports are commissioned by the DWSS it was found that the independent third party undertaking the study faced restrictions while undertaking the study. For example, the consultants did not have access to detailed information on cost breakdown of any subproject nor did they have unhindered access to financial reports.

For all the above-mentioned evaluation reports only a select number of subprojects are taken as sample for the study. For example, during the BME study of the second RWSSP 23 sub-projects

were chosen while 50 were chosen for the fourth RWSSSP. The projects are selected based on various criteria in consultation with the Executing Agency, such as: (i) subproject completion one year ago, (ii) all trainings completed, (iii) sub-project managed by WUSC and (iv) being a largely representative sample.

Once prepared, the evaluation draft reports are circulated to the Government, Executing Agency and ADB for comments. In the case of the independently conducted BME reports, the Department has an indirect say in the finalization of the report.

Recommendations made in the evaluation reports have generally been incorporated in the subsequent projects. For example, the creation and inclusion of WUC prior to the construction of the sub-project was a recommendation made by the PCR of the first two rural WSS projects, which was inbuilt into the third RWSSSP.

4.2.3 Evaluation indicators

The ADB evaluation reports determine the indicators based on those included in the RRP. But, for the BME reports, the local consultants formulate their own set of indicators based on their own expertise. When compared, the majority were found to be similar. The indicators are measured against the baseline data collected during the feasibility study of the project.

4.2.4 Project ratings in the evaluation reports

ADB project/programme evaluations ratings are classified into: (i) Highly Satisfactory, (ii) Satisfactory, (iii) Partly Satisfactory and (iv) Unsatisfactory.

³⁸ This study is undertaken by the senior programmes officer (national officer), rural water supply engineer (staff consultant), project economist (staff consultant) and a rural water supply specialist (Fourth PCR, 2004).

These ratings are based on assessments of relevance, efficacy and efficiency and assessments of likely sustainability and environmental, institutional and other impacts, applying weights suggested in the OED guidelines.³⁹For the criteria used by the ADB guidelines see Annex 8.

While the rating system and the guidelines give an idea of how the project compared with the initial targets set up, it should not be taken at face value. For example, the Second RWSSP was rated as ‘successful’ as it exceeded its initial targets (512,700 people benefited to the targeted 465,000 people) but it was not clear whether the increases in the beneficiary numbers were due to the increase in water systems or just due to the increase in population. The increase in beneficiaries’ population may have resulted due to the devaluation of loan money (Nepali Rupees against US\$) or reducing the daily per capita demand of the water supply to the beneficiary populace. In addition, the reports do not mention the scores for each criterion, which would have given a more comprehensive picture of different aspects of the project.

4.3 Bottlenecks within the M & E system

M & E Bottlenecks

- *Lack of WSS specific indicators*
- *Data not disaggregated*
- *Feedback loop missing*
- *Rigid project designs*
- *Inadequate M & E capabilities*
- *Lack of continuous monitoring*
- *M & E formats limited to project implementation*
- *No validation of M & E reports*

Lack of WSS specific indicators

ADB does not have a set of WSS specific guidelines for M & E of WSS projects. Hence, it must rely on the guidelines meant for all project types. In many project areas one set of indicators were used for the baseline studies while another for the M & E. This has resulted in the lack of comparable data, increasing the likelihood that changes attributed to the ADB funded projects are either over or under estimated.

Data not disaggregated

BME studies pointed out that baseline data limited their analyses due to inadequate information, which lacked gender and poverty differentiation. Average data was aggregated for the whole community/town, which has made measuring specific social and gender changes difficult.

What works: Disintegrated Data Collection in M&E

WaterAid Nepal’s M&E systems disaggregate all beneficiary counts on the basis of gender, caste, socio-economic status and disability. This allows WaterAid to know who is benefiting from its projects and whether it is successful in targeting the poor and vulnerable.

Feedback loop missing

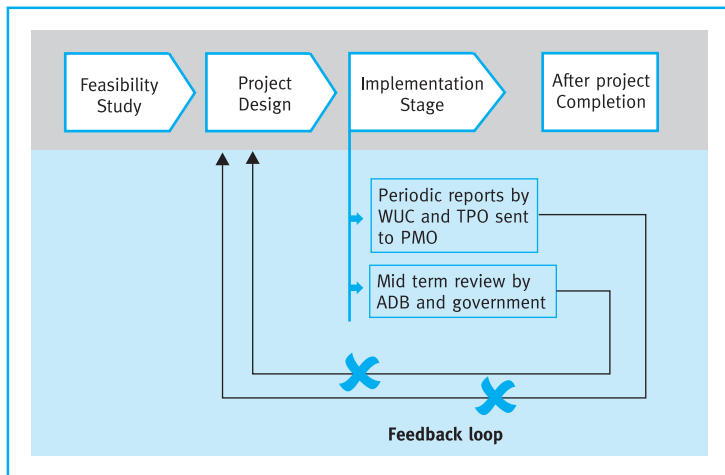
The linkage between the M & E and the decision-making is weak and tenuous. The information gathered from monitoring is not fed back into the system to bring about changes in the implementation of

³⁹ The Operation Evaluation Department (OED) is an independent department that evaluates the performance of completed projects and TAs; provides feedback to ongoing and design of operations; monitors the responses to the evaluation recommendations; coordinates the evaluation practices with other multilateral development banks, etc.

the project or to its design. This has in turn affected the timely execution and the possible correction of design faults. Figure 4, shows the limitation of monitoring processes.

There is a lack of prompt action needed to solve problems. This is especially evident in the STWSSSP, where power

Figure 3: Feedback loop missing in the monitoring process



has not been devolved to the TPO. They must contact and wait for the central offices response, to make even the simplest of changes, which may take weeks.

Rigid project designs

An important objective of the monitoring process is to identify and bring changes to any design faults not anticipated at its conception. However, fieldwork revealed that once the projects were started there were no way of making changes to the design.

Inadequate M & E capabilities

During the early WSS projects, the responsibility of M&E was given to the DWSS. ADB's assumption was that there were structures in place within the DWSS to carry out the monitoring procedures. But, in actuality the structures were deficient and the work was conducted in an ad hoc manner.

What works: Community Based M&E System: A Solution for Sustainability

Sustainability of any water and sanitation program greatly depends on active community participation and involvement throughout project cycle and beyond. For communities to manage project sustainability they need to use convenient M&E procedures. WaterAid partners encourage communities to use a simple community based M&E system which uses 6 tools - project progress chart, hygiene assessment chart, well being assessment chart, meeting monitoring chart, project caretaker log and social auditing chart.

Experience shows that the system has the following benefits:

- » Enhanced performance of the community in areas of participation, financial planning, work prioritization, leadership skills, record keeping and quality control.
- » Communities are able to identify poor and marginalized households, and realise the need for affirmative actions.
- » Due to community involvement in periodic hygiene assessments, messages are quickly adopted and their health and hygiene behaviour has improved.
- » Increased visibility and transparency of financial matters and decision making processes.

Later projects (such as STWSSSP) have appointed WUCs members and TPO staff to conduct the monitoring processes. DWSS are to be involved only after the completion of the project. While it is noteworthy that the STWSSSP has tried to involve and incorporate the ideas of the local WUC members, there are two important issues that need to be examined: (i) the difficulty presented to the DWSS to conduct M&E procedures of a project which it has no prior knowledge and (ii) the need for adequate training for the WUC members to conduct M & E.

Lack of continuous monitoring

In some rural projects, monitoring efforts were discontinued towards the end of the project. This was due to the exhausting of loan funds and the transferring of field level staff from the project sites (PCR, 2004).

What works: Looking Back Studies for Life Long Monitoring

WaterAid Nepal has supported all partners to carry out Looking Back Studies of the current status of all their projects, some of which are up to 15 years old. The results are analysed and appropriate changes made to the design of new projects. Based on the results, *Utthan* (improvement) programmes are designed to provide support to communities facing problems in sustaining projects. Looking Back Studies are a way of learning from the past to improve future programming and ensuring that all projects continue to function up until and beyond their design life.

M & E formats limited to project implementation

One of the inherent problems of the current monitoring formats, is that these are limited within the parameters of the implementation stage. Considering ADB's emphasis on sustainability and efficiency, there needs to be a framework for the post construction stage, which is unfortunately lacking at present.

4.4 Content of M&E reports

4.4.1 Suitability of indicators

ADB does not have a set of WSS specific guidelines for M & E of WSS projects. Hence, guidelines meant for all project types are used. Nevertheless, the indicators that are presently used show that attention has been given to many important themes. The next step is to analyse the themes in more in-depth and to distil from them.

The importance of women's participation in the projects has been recognized in the reports. For example, in the case of STWSSP, it is encouraging to note that the PIC added indicators to address women's participation and decision-making in the monitoring formats even when they were not mentioned in the RRP. Issues such as community involvement, inclusion of caste and ethnic minorities were also given priority in the reports.

Development impacts indicators measure the coverage of the projects, the impact that the project has had on the lives of the beneficiaries in terms of time saved, economic activities, health, women's status as well as adverse effects.

Given ADB's avowed aim of serving the poor, indicators need to pay more attention to the benefits or the exclusion

of the poorer member of the community. More in-depth analyses have to be made on the impacts on the poor and marginalized.

Delays in selecting consultants and contractors were mentioned by many PCR reports as reasons leading to the overall delay of the projects. But, the specific reasons behind such delays were not spelt out. As this is one of the most vulnerable areas of the project cycle, it is important that such delays be avoided. In a nutshell, M&E reports need to assess if the projects were influenced in any way by corruption.

Efforts have been made to translate the indicators in the guidelines into local languages for monitoring purposes.

4.4.2 Coherence between various documents

The M & E formats are prepared in accordance to the indicators mentioned in the RRP. While analysing the reports they were found to be consistent. For example, monitoring formats for the STWSSSP were coherent with those included in the RRP documents.

In the case of the BME reports, the indicators were determined by the local consultants themselves, based on their own expertise. When the indicators were compared with those of the ADB guidelines, they were similar in nature. The only difference was the inclusion of gender specific indicators in the BME indicators.

4.5 National monitoring system

HMGN has its own system of monitoring, which is also known as the National Planning Commission (NPC) system of monitoring. It has two types; the first one is the general system, applicable to all

projects and the second one, is an additional system applicable for core projects. NPC system is mandatory to all projects and is basically an input-output monitoring. It consists of progress reporting of physical works and financial expenditure with problem statement and suggestions for solution (DoR, 2000). In addition, donor assisted projects, including ADB, have their own extensive monitoring system at project level based on log frame approach of planning, programming and monitoring and involve quarterly progress reporting from projects.

Besides this the Ministry of Physical Planning and Works also has its own monitoring and evaluation unit, which oversees the monitoring of projects of all the departments under it. The M & E reports of the WSS sector projects also make their way to the ministry.

4.6 Conclusion

M & E systems are built into the project framework of WSS projects. During the implementing stage they are mostly centered on the physical progress of the projects, financial contribution of the beneficiaries and the implementation delays. Rarely do they concentrate on the level of services provided to the beneficiary communities, especially to the poor or the marginalized. Once the project ends, the M & E also becomes less frequent, with no system in place to monitor the sustainability of the projects.

The indicators to be monitored are formulated in agreement with the Executing Agency and are mentioned in the RRP reports. This is true for both monitoring and evaluations reports. But, for independent BME reports, it was found that local consultants evaluate projects based on their own set of indicators. When compared these

indicators were found to be similar to those mentioned in the RRP documents.

Baseline data is an integral part of the M & E system, which help estimate the demand of the project, identify appropriate interventions, make projections for the future and provide the yardstick to assess the benefits after the completion of the project. But, in spite of its importance it was found that, baseline studies were not being carried out comprehensively which later limited the scope and analysis of M & E studies.

4.7 Recommendations

4.7.1 Strategic recommendations

- » There is a need for the ADB to formulate WSS-specific monitoring indicators instead of using general indicators as at present. These indicators should be linked to the log-frame formulated at the very beginning of the project. A set of proposed WSS specific indicators have been attached as Annex 7.
- » While there is a monitoring system that is built into projects, a more effective management information system would facilitate relevant information reaching the decision-makers in a timely manner and thus enable prompt decision-making on the part of project managers. In other words, feedback loop between monitoring and decision-making processes need to be strengthened.
- » While at present, the monitoring formats are geared towards the construction phase of the project, these need to be reformulated with the post-construction stage in mind. Only when the project looks beyond construction activities would it be possible to ensure the long term functioning of the water supply systems.

- » The system of monitoring and evaluation formulated by the ADB needs to take into cognizance the developing member-country's own system of M & E system. In the case of Nepal, the National Planning Commission has its own system of M & E, which is mandatory for all projects to follow. As far as possible, all M & E system need to have a certain level of compatibility, which reduces the efforts for carrying it out, and also increases its effectiveness.
- » In order to ensure the independence of the third party in evaluating the project - either in the form of BME or PPMS – the ADB should hire the consultant directly rather than the DWSS doing so. The implementing agency - i.e., the DWSS hiring the third party to evaluate the project - has led to it exerting undue pressure as a result of which the study has not been neutral. An even better arrangement would be funding the evaluation from a neutral source.

4.7.2 Operational recommendations

- » The current monitoring format in WSS projects that includes mainly physical and financial progress needs to be expanded to include other variables like the extent of community participation, the progress in community education, awareness and training along with sustainability of benefits and other pertinent indicators.
- » It is commendable that the STDWSSSP envisages the users themselves to be involved in monitoring processes. It is important that the monitoring formats meant for the users be in simple Nepali language. Moreover, the users should receive adequate training in using this format.
- » It is important that the data be disaggregated on the basis of poverty

and gender. It is only when the data is disaggregated on the basis of poverty and gender that specific social and gender changes can be measured.

- » There is a need to strengthen the capacity of DWSS in monitoring. At present it is the consultants and the NGOs that are primarily responsible for monitoring. Rather for this, the capacity of the Department staff both at the central and regional levels and the capacity of the users need to be enhanced, especially as it moves to a new role as a facilitator.
- » Concerned government departments and their line agencies, aside from the implementing agency, need to be included in the monitoring of the projects since the beginning to ensure that effective monitoring occurs even after the completion of the project. For instance, though the de facto implementing agency of STWSSSP is the PMO/TPO it is necessary to bring the DWSO into the process since DWSO would be providing technical services with the completion of the project.

The debt burden and ADB lending

5.1 The Big Picture

5.1.1 National level debt burden

Government finances its deficit through domestic and foreign debt. Foreign aid is vital for Nepal's development effort. Nepal started receiving foreign aid after the initiation of planned development in the country. The development expenditure in all successive budgets has mostly been financed from foreign aid. The current 10th Five Year Plan/ Poverty Reduction Strategy Paper also aims to finance 58 percent of development expenditure through foreign assistance. This has led to a rise in both domestic and foreign debt.

Nepal's debt burden is increasing continuously and reached 69 percent of GDP in 2003. In 2003, net outstanding debt reached Rs. 327.1 billion, five times the annual revenue, and almost three times the estimated budget expenditure for 2003/04. Nepal's per capita debt burden based on population of 24.2 million amounted to Rs. 13,500 (around US\$ 181 based on foreign exchange rate 74.75 in 2003). The ratio of external and domestic outstanding debt constituted nearly 3:1 showing that Nepal is mainly dependant on foreign loans. Furthermore,

out of total foreign outstanding debt, ADB outstanding debt constituted more than 35 percent in 2003.

Nepal's debt servicing is also rapidly increasing and it has started to put pressure on the public expenditure system. The external debt servicing reached 14 percent of the revenue in 2002/03. The average annual growth in debt servicing (combining both internal and external) is higher than the growth in government revenue. The debt servicing is increasing at 17.2 percent per annum as against 15.5 percent per annum for the revenue. In 2003, debt servicing reached 26.3 percent of the annual government revenue and 28.5 percent of the regular budget. The debt servicing amounted to NRs.16.35 billion in 2003, 9.51 times the annual resource gap required to meet the MDTs for water and sanitation (estimated at US\$ 23 million per year) or 2.02 times the amount spent on water and sanitation (estimated at US\$ 46.42 million). In the near future, if the economy remains as usual and if the debt servicing continues to surpass revenue growth as is to be expected, Nepal may suffer serious debt servicing problems. As of now, debt servicing

accounts for more than 19.3 percent of total government expenditure, which clearly illustrates the extent of the burden of debt servicing to Nepal. Tables to support this chapter are attached at Annex 14.

5.1.2 Foreign Assistance in the Water Supply and Sanitation Sector

The share of expenditure on water and sanitation has increased slightly from 2 percent of the total government expenditure before 1980 to around 3 percent during the late 1990's and early 2000's, and accounts for about 13 percent of the total social sector spending.

Government expenditure is increasing over time. Between 1987 and 2003, total government expenditure increased by 6.5 times while over the same period government expenditure in the WSS sector increased by 13.9 times. The increase in investment in the WSS sector has become possible due to enhanced foreign aid in the sector. The share of foreign aid in expenditure in the WSS sector has increased from 19 percent in 1975 to 76 percent in 2001/02. Most of the growth has been contributed by grants. Compared to a situation of total reliance on loans in 1975/76, the proportion of grants has reached 56 percent in 2001/02.

The major multilateral donors are the ADB and IDA. It may be noted, however, that the total foreign aid flow into Nepal has not been able to be judged as the existing accounting system does not capture most of the technical assistance and the contribution of INGOs. It is estimated that such assistance may be as high as half of the total amount of annual incoming aid.

5.1.3 Debt servicing of ADB WSS loans

As discussed in Chapter 2, ADB has emerged as the largest multilateral donor in Nepal and 12% of its total lending to Nepal and 5% of TAs have been for the WSS sector. In 2004 the share of water and sanitation sector disbursement constituted 6.17 percent of the total ADB disbursement. Similarly, debt servicing on ADB WSS loans constituted 5.09 percent of all debt servicing payments from HMGN to ADB and outstanding debt from WSS loans constitutes 6.88 percent of total HMGN outstanding debt to ADB. In 2004 HMGN paid to ADB US\$ 1.9 million in debt serving for WSS projects.

5.2 Debt burden at the project level

Debt burden is not a major issue in rural projects where users are responsible for O&M costs only. However in the Small Towns Water Supply and Sanitation Sector Project (STWSSSP) this is a major emerging issue.

5.2.1 Capital Cost Sharing

The STWSSSP has set a capital cost sharing target of 50 percent which is the most ambitious yet tried in Nepal. In addition, users are also responsible for all O&M costs. In Birendranagar the community will contribute over Rs. 120 million to the project (equivalent to US\$1.6m) possibly the highest community contribution towards any project in any sector in Nepal. If a similar target was set for the Kathmandu water supply reforms and the Melamchi tunnel, each resident would pay in excess of \$200 (NRS 14,500). The 50 percent community contribution is made up of a 5 percent up front cash contribution; 15 percent contribution in cash or kind (raised in cash in most towns); and 30 percent loan

from the Town Development Fund. While STWSSSP is an urban project and policies have been set accordingly, it is being implemented in predominantly rural areas, where the majority of the inhabitants are engaged in rural livelihoods. In Birdendranagar and Ratnanagar a 50 percent contribution equates to a contribution of US\$270 household (equivalent to ten months salary for a poor household) and US\$190 per household respectively, excluding interest on the loan.

While project agreements specify a 5 percent cash and a 15 percent cash or kind contribution, WSUC's in both towns have opted to collect 20 percent cash contribution from users. In both towns around 50 percent of users have paid the cash contribution, and most of the poor have not paid. There is anecdotal evidence that where the water need is acute and the poor paid they are compelled to take out multiple loans to cover their contribution.

In this project the cost recovery approach extends to maintenance support provided by the Department of Water Supply and Sewerage. DWSS plans to establish service centres providing maintenance support and water meter calibration services and charge WUCs a fee for services.

Due to lack of a national policy on cost recovery, various ADB projects are following different policies. For example whereas STWSSSP has a 50 percent investment sharing policy, under the ongoing Urban Environment Improvement project communities contribute 8 percent of capital costs for water subprojects. The recent Rural Water Supply and Sanitation Policy, 2004, formulated with ADB support, appears to be much more pro-poor, with a maximum contribution of 20 percent and no compulsory cash contribution.

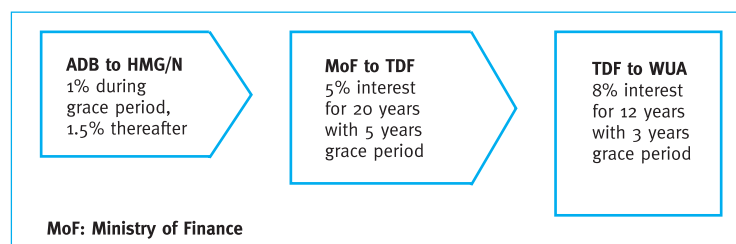
5.2.2 Higher Interest Burden to WUCs

The figure below shows that, while the HMG/N gets the ADB loans at 1 percent interest, by the time it reaches the community level it has increased to 8 percent. Different stakeholders have varying views in this respect. Users feel that government should not on-lend at 8 percent when the loan is taken from ADB at 1 percent and that TDF is not adding value as an intermediary and therefore is not required. TDF believes that the 3 percent spread it receives is not sufficient to cover operational costs and the risk of default of towns and is concerned that the project could endanger its financial sustainability. The grace period on the government loan to TDF is coming to an end yet due to delays in signing subproject agreements with each subproject town and delays in subproject implementation TDF will not receive any repayments for a few years. Government considers that it is bearing the risk of currency devaluation and on lending in local currency and therefore the interest rates are reasonable.

5.2.3 Connection charges

The upfront cash contribution is only part of the connection charge in the small towns. In addition users have to pay for a meter, estimated cost of Rs 1,400, and pay for the cost of pipes and connection from their house to the main line. Hence for the two towns visited total connection charges (upfront contribution plus meter, pipes and fitting) is likely to exceed Rs

Figure 4: Higher interest rates burdening WUCs



5,000. This is higher than in Kathmandu where the revised connection charge, drawn up in consultation with ADB, is Rs 2,000. In Birendranagar meters are being provided free of cost to households who made cash contributions at the start of the project as a kind of incentive to make people pay. However, this strategy is not pro-poor as this subsidy goes to the rich who have extra money available to pay the contribution and not the poor who take time to raise the cash contribution.

5.2.4 The role of the municipality as guarantor

Analysis of Municipality income and expenditure shows that around half of revenue is from internal sources and per capita expenditure is around Rs 350. The Municipalities have not invested in WSS to date and have taken very few loans in the past and currently they have no debts.

Municipalities act as guarantor for the loan in the STWSSSP. However, a general lack of awareness about the loans was noted in the Municipalities and they were found to be ill prepared for managing loan repayments should they be required to. For example no financial analysis has been undertaken by Municipalities of how to pay back loan. In one town the Municipality accountant and secretary were even unaware that the Municipality was guarantor for the loan. A further problem may lie in the belief of Municipalities that water is a basic right; this may mean that attempts at loan repayment are only half-hearted. Given their financial strength, having to repay the subproject loan would put a huge burden on the Municipalities.

5.2.5 Impact of project lengthening on the debt burden

The STWSSP is being delayed significantly with a project completion

date of 2006 and not a single subproject nearing completion. As of end May 2005 physical progress was 39 percent against 62 percent planned progress. Delays are caused by many factors including delays in tendering processes; over centralised decision making; and repeated nation wide *bandhs* affecting transportation.

Delays benefit contractors and consultants whose income increases and harm users who end up paying more. Yet contractors and consultants have the power to delay projects and there is some concerns raised that many delays are avoidable. Delays have the following financial impacts on the debt burden a) the cost of materials increase which means that total project cost goes up, b) the loan meter is ticking - loan repayment period and interest starts from the day the loan agreement are signed yet WUCs can not raise revenue from the project until implementation is completed and water is flowing.

5.2.6 ADB Terms and Conditions in Water and Sanitation Sector Projects

ADB conditionalities are stipulated in the loan agreements. These conditions are directed towards improving project implementation as well as pushing policy and institutional changes. ADB loan conditions are generally generic in nature and enforceable in all projects. The format of a typical loan agreement is given in Annex 14. For the projects studied, the schedule in the loan agreement regarding project implementation was found to contain between 29 and 44 clauses, with a trend of an increasing number of clauses. Analyzing the terms and conditions, it was revealed that the ADB has placed conditions that are linked with the banks perspective of cost recovery and safety. For example, ADB has placed the

condition that it can withdraw the bank's interest charges from the borrower's account on behalf of the borrower during project implementation.

In the four earlier projects the *conditions for loan effectiveness* contain one standard clause stating that the loan will be effective 90 days after signing the agreement. However the loan agreement for CBWSSSP has an additional 5 conditions, namely a) established and fully staffed the services of PMU b) cabinet decision to implement the RWSS Sector Strategy and Action Plan c) establishment and operation of monitoring and evaluation unit in MPPW d) open sector account e) budgetary allocation of Central Counter Fund for the first fiscal year of the project. Conditions for disbursement and payment milestones are also stated, which do not appear in earlier agreements. The main milestones are targets for initiation and completion of projects and meeting various targets, including the gender, caste and ethnic minority targets. While it is difficult to say this is a trend, the latest loan has more conditions than previous ones.

Whether these conditions are actually operationalized depends upon how different stakeholders negotiate and contest them. The DWSS and the ADB are regularly in dialogue about how implementation should be done.

5.3 Conclusion

The total scenario indicates that Nepal sooner than latter may be facing the debt trap. Already, it may be termed as a moderate to highly indebted country. There is a need to enhance the revenue base significantly within the nation so as to manage the debt situation. Proper and efficient utilization of resources also may help to attain the goal. Nepal should also take initiatives to obtain debt relief to reduce the burden.

The loan schemes to the small towns have initiated a new era for accessing improved services to the people in these areas. However, the user groups are required to pay higher interest for such loans and the Municipalities have yet to demonstrate their ability to shoulder the risk generated by guarantees.

Implementation of ADB's water policy : Water for All

ADB approved its policy on water- Water For All: The Water Policy of the Asian Development Bank, in 2001. Altogether 15 policy actions related to ensuring WSS services for the poor were identified from the policy during the Inception Workshop. In this section, these policies have been analysed in the context of Nepal, to assess whether or not they have been implemented in reality and to share some thoughts on their status.

The 14 policy actions have been rated high, medium and low to show the status of their implementation based on the evidence gathered through the study.

Ranking Criteria

High:	Full implementation
Medium	Implemented to some extent or some efforts have been made towards implementing the policies
Low	No implementation

6.1 National Policies and Reforms

Policy Action⁴⁰ No. 1	<i>The Asian Development Bank (ADB) will help develop comprehensive water policies in the DMCs.</i>	Implementation	Medium
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A new water policy, National Water Resources Development Policy was drafted in 2003 and was sent to the cabinet for approval. It has however still to be approved. This policy is claimed to be comprehensive as it has tried to apply an integrated approach in the management of water resources and its sustainable utilisation.

Policy Action No. 3	<i>ADB will support the optimisation of agency functions for planning and implementation. It will also focus on the development of effective cross-sector co-ordination mechanisms, such as a neutral sector apex body that can oversee the policy formulation and sector reform process.</i>	Implementation	Medium
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⁴⁰ These numbers refer to the list of 40 policy action in the Interim Review of ADB's Water Policy Implementation, 2004.

At the water resources administration and management level, institutions have been organised into two sectoral line ministries. The Ministry of Water Resources is responsible for hydropower, irrigation and disaster prevention and the Ministry of Physical Planning and Works is responsible for drinking water. Sub-sectoral implementation departments, including Department of Irrigation, Department of Electricity Development, Department of Water Supply and Sewerage, etc. are placed under these two ministries.

To mitigate the risk of a fragmented water sector, the Water and Energy Commission Secretariat (WECS) was established in 1981 as a co-ordination and advisory body in the water sector. But its ability to co-ordinate the numerous agencies involved in the water sector has not been effective because it does not have explicit authority. The highest authority for decision making on water-related issues is the National

Water Resources Development Council (NWRDC), which has wide representation from political parties, senior government officers and non-government spokespersons. WECS serves as the secretariat of the NWRDC.

WECS is the overarching body that assists the government in formulating water-related policies and projects in a coordinated way. The ADB, guided by its Water for All Policy, is assisting government to strengthen WECS as a neutral apex body for reviewing strategic plans, monitoring the action plans as well as the compliance of all policies, Acts and Regulations for water resources development. Discussions are going on about giving WECS the mandate to oversee all the issues of water resources development including water supply, but till date it only deals with hydropower and irrigation.

Rural Water Supply and Sanitation National Policy 2004 and Rural Water Supply and Sanitation National Strategy 2004 have been formulated. These documents have provisions for developing a system for maintaining water quality, establishing appropriate mitigation measures to manage water users' rights, improving institutional structure of rural water supply and sanitation sector, establishing public-private partnership, etc. In practice, these provisions are yet to come into effect.

The Water Resources Act 1992 needs to be revised as per the spirit of the Local Self Governance Act (LSGA) 1999, which gives the authority to local bodies to plan, design, implement and operate water related projects in their respective territories. But, this is not currently being done.

<p>Policy Action No. 4</p>	<p><i>Support will be provided for the review and revision of water legislation particularly in the areas of water rights and allocation among competing uses, water quality standards, resource conservation, private participation, and institutional responsibilities for water sector functions at national, regional or basin, local, and community levels.</i></p>	<p><i>Implementation</i></p>	<p><i>Medium</i></p>
<p>Action Policy New</p>	<p><i>ADB will assist the DMCs in developing and adopting water action agendas that have clearly defined objectives and milestones linked to resources.</i></p>	<p><i>Implementation</i></p>	<p><i>High</i></p>

His Majesty's Government through WECS has formulated the first comprehensive Water Resources Strategy of the country in 2002 and developed a National Water Plan accordingly in 2004 with the financial support from World Bank and CIDA.

The strategy and the plan provide a systematic framework for water resources development and identify action plans to avoid and resolve conflicts, and achieve Nepal's water-related development objectives. For the development of water supply and sanitation sector, the documents have proposed various activities and set the following indicators:

- » By 2017, 85% of the population will have improved quality water and good service level; 100% of the population will have safe sanitation facilities;
- » By 2027, 100% of the population will have good quality water supply; and all will have safe sanitation facilities.

These documents were not prepared with the support from ADB, hence they can not be attributed to ADB influence. However, they do address the issues included in the ADB policy.

Rural Water Supply and Sanitation National Policy 2004 has mentioned that proper methodology and norms will be developed in identifying the poorest households within the community and such households will be provided with specified target grants. But, like other provisions mentioned earlier this provision has also not come into effect. In addition, the policy mentions that delivery of water supply and sanitation facility will be provided to the users who have "capacity as well as willingness to pay". The institutional framework being proposed under the Melamchi Water

Action Policy New	<i>The needs of the poor will be specifically factored into legal, institutional, and administrative framework.</i>	Implementation	Low
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Supply Project includes a Low Income Customers Support Unit to support poor consumers – again this is yet to come into effect.

6.2 Improving Water Services

Action Policy No. 19	<i>ADB's sector strategies within countries will identify the need for introducing phased programmes to increase the autonomy and accountability of service providers, either as new enterprises or by reorganising existing agencies.</i>	Implementation	Medium
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Ordinance on drinking water management has been promulgated in 2005, which provides an autonomous board for urban water management. The board will have the authority to acquire or construct water supply systems and manage them by formulating by-laws. It is supposed to be accountable and transparent to water users. However, no such board has been formed yet.

6.3 Conserving Water

Action Policy No. 28	<i>ADB will consistently advise governments of the need to adopt cost recovery principles in their water policies and strategies. Consumers will be expected to meet the full operating and maintenance costs of water facilities and service provision in urban and rural water and sanitation schemes subject to subsidy considerations.</i>	Implementation	High
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New projects have adopted this policy. For example, the Small Town Water Supply and Sanitation Sector Project and the Urban Environmental Improvement Project were designed with the cost recovery principle. In some cases users are required to contribute to capital costs of projects and not only the cost of O&M. Serving the poor and cost recovery are not exclusive however the cost recovery principle must be applied sensitively else the two principles will work at cross-purposes.

Earlier ADB funded WSS projects did not have any subsidy programmes for the poor or marginalised. Recently, new projects have been designed with phased elimination of direct subsidies, such as the Urban Environmental Improvement Project. In the ongoing Melamchi Water Supply Project tariffs have been revised and an affordable minimum block has been maintained.

But, the study team disagrees with this policy as it adversely affects the poor. Our study has clearly shown that many poor people are being deprived of services from ADB supported DWSS projects simply due to lack of money to pay upfront cash. Therefore there is a greater need for targeted subsidies.

A government formed commission had recommended in 1987 to establish a regulatory body to regulate WSS sector but nothing happened. Now, an ordinance has been promulgated in 2005 on Drinking Water Management Board that has provision for establishing an autonomous board to manage and regulate the WSS sector. But, execution of the ordinance has yet to be seen. Now it can only be hoped that the board will address the issue of water rights of the poor to have access to equitable water services. The ordinance on water tariff fixation commission has also been promulgated in 2005, which gives authority to the commission to fix reasonable water tariffs.

Action Policy No. 29	<i>ADB will promote the phased elimination of direct subsidies to the poor for accessing basic water services in line with an increase in affordability levels. ADB will support subsidies for water services... where a limited quantity of treated water for the poor is regarded as a basic human need.</i>	Implementation	High
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Action Policy No. 30	<i>Regulatory agencies will be helped to develop water rights in a manner that protect the rights of the poor to equitable water services. ADB will promote the establishment of regulatory systems through policy dialogue with the DMCs and by leveraging loan and technical assistance programmes to this end.</i>	Implementation	Medium
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Action Policy No. 36	<i>Getting the poor to participate, ADB will promote the recentering of such communities and individuals. ADB will promote participation in the management of water resources at all levels and collaborate in fashioning partnerships between governments, private agencies, NGOs, and communities. The poor must be enabled to influence decisions that affect their access to water for both consumptive and productive uses</i>	Implementation	Low
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6.4 Fostering Participation

Rural Water Supply and Sanitation National Policy, 2004 and Rural Water Supply and Sanitation Strategy, 2004 (formulated with ADB support) give emphasis on participation of gender, caste and poor people in decision making regarding water supply and sanitation sector. However fieldwork showed women and poor people's participation to be very low. Participation of users is not adequately sought at different project stages. Users' role is confined to provide labour contribution during project construction and maintenance and to pay tariff/fees as determined. The poor were found not to be included in decision making bodies and therefore unable to influence decisions. Similarly, there is no collaboration and partnership among government, private agencies, NGOs and communities in the management of water resources.

Who represents the civil society is not clear in the ADB's policy. If by civil society is meant NGOs/CBOs, it needs to be pointed out that during design and implementation of ADB supported projects involvement of such NGOs/CBOs will be sought. In practice, during design and implementation such involvement of NGOs/CBOs was mixed. The STWSSSP appears to have been hastily designed without the consultation of civil society. On the other hand, the CBWSSSP was designed with extensive consultation with concerned stakeholders for a period of two years and the Melamchi Water Supply Project design also involved consultation with civil society.

Laws and policies have affirmative provisions on women participation in project activities including decision-making but in practice women

Action Policy No. 37	<i>Water projects supported by ADB will incorporate carefully designed components that promote the participation of civil society in identifying needs and issues, designing solutions, and establishing mechanisms for monitoring and dispute resolution.</i>	Implementation	Medium
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Action Policy No. 38	<i>ADB will strengthen women's ability to participate more effectively through discrete programmes targeted at educating women, empowering them and enabling their involvement in community-based decision making. The key elements in a gender approach are (i) gender analysis at the design stage, (ii) incorporating explicit gender equity provisions in the objectives and scope of the activity, and (iii) disaggregating data in monitoring and management information systems along gender lines</i>	Implementation	Low
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participation is low. Women are involved in WUCs or in decision-making processes only to fulfil the formality. They have no influential role. Likewise, a gender approach is not considered while planning, implementing and evaluating water sector activities. But, Small Town Drinking Water and Sanitation project supported by the ADB has developed an evaluation framework, which seeks to disaggregate data along gender lines while monitoring.

Action Policy New	<i>Tools, including guidelines for the design and implementation of successful participatory process in water sector activities will be developed.</i>	Implementation	Low
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CBWSS has Gender, Caste and Ethnic participation strategy. STWSSP has project implementation guidelines comprising project philosophy, role of WUSC, contribution modality and others. However, at the field level, it is rarely used.

Action Policy No. 39	<i>ADB will promote the development of sustainable plans for capacity building; these will include the establishment of indigenous institutional arrangements for skill development at basic and advanced levels. The plans will incorporate processes that allow the sharing of sub-regional or regional experiences.</i>	<i>Implementation</i>	<i>Medium</i>
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6.5 Improving Governance

A sector-training centre has been established to provide training to DWSS personnel, WUC members and schoolteachers, but the desired outcome has not been seen. The PCR of the Fourth RWSSSP mentions that the facility remained under used, and contributed little to the strengthening of the sector institutions. When the National Water Supply Sector Policy was drafted and later approved in 1998, it highlighted the need of the DWSS to change from its role of an implementer to that of a facilitator. However, this role change has not been reflected in the field where the DWSS continues to be a major implementing agency. In the STWSSSP the WUC is expected to perform the role of a service provider yet in many towns capacity is low and capacity building activities inadequate. Capacity building efforts are not focussing on building capacity to serve the poor under the projects.

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Wateraid Nepal

Water and sanitation are essential for poverty reduction. WaterAid's vision is of a world where everyone has access to safe water and affordable sanitation. WaterAid believes that the key to achieving universal coverage in water supply and sanitation is improved implementation practices and increased resource allocation within the sector policy framework which is more effective, efficient, transparent and accountable, and is fully owned by the government, NGOs and civil society.

As the only INGO in Nepal that exclusively focuses on enhancing access of the poor and vulnerable communities to safe water, affordable sanitation and improved hygiene behavior practices, WaterAid Nepal is uniquely positioned to support, and contribute to, the implementation of national priorities and sector reforms through increased civil society participation.

WaterAid Nepal endeavors to take a proactive role on the sector development by greater participation for improved policy and practices.

We advocate for more and better resources for meeting the sector PRS and MDTs targets, improved sector governance, and increased sector knowledge and profile through rooted advocacy efforts, research and learning.

WaterAid – water for life

WaterAid is an international non governmental organisation dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education to the world's poorest people.

These most basic services are essential to life; without them vulnerable communities are trapped in the stranglehold of disease and poverty.

WaterAid works by helping local organisations set up low cost, sustainable projects using appropriate technology that can be managed by the community itself.

WaterAid also seeks to influence the policies of other key organisations, such as governments, to secure and protect the right of poor people to safe, affordable water and sanitation services.

WaterAid is independent and relies heavily on



For more information, please contact:

WaterAid Nepal

Shanta Bhawan, Lalitpur, Nepal

Postal: P.O. Box: 20214

Kathmandu, Nepal

Tel: (977-1) 5552764, 5552765

Fax: (977-1) 5547420

e-Mail: wateraid@wateraidnepal.org.np

UK charity registration number 288701

www.wateraid.org