

Environmental and Social Monitoring Report

1st Semestral Report
February 2012 – August 2012

NEP: Melamchi Water Supply Project-Subproject 2

Prepared by Safeguards Unit of Project Implementation Directorate (PID), Kathmandu Upatyaka Khanepani Limited (KUKL), for Nepal and the Asian Development Bank.

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Kathmandu Upatyaka Khanepani Limited
Project Implementation Directorate (PID)

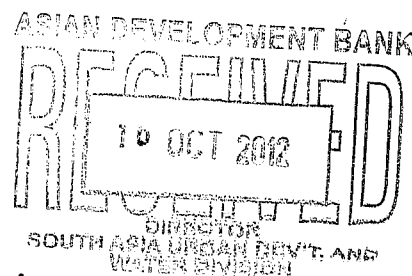
Kathmandu Valley Water Supply & Sanitation Project
(Sub-Project 2)

(ADB Loan No: 1820 NEP (SF))



Bi-annual Report on Environment and Social Safeguards

February 2012 – August 2012



Safeguards Unit
September 2012

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1. Introduction

1.1 Background

Melamchi Water Supply Project (MWSP), an Asian Development Bank assisted project was started in December 2000, aiming to improve the overall scenario of water supply and wastewater systems of the Kathmandu Valley. MWSP covers parts of the Indrawati and Bagmati watersheds and project areas include districts of Kathmandu, Lalitpur and Bhaktapur. The key water diversion facilities, headwork and diversion tunnel and access roads are located within Sindhupalchowk District, whereas, the water treatment plant at Sundarimal, water distribution network, balancing reservoirs and the other ancillary structures, are located within Kathmandu Valley. The implementation of the project was affected during the conflict period due to various local and national issues. In the mean time some of the donors withdrew their support for the project in 2005 and 2006.

Later in 2008, MWSP was split into two distinct subprojects; (i) Subproject 1: Melamchi River Water Diversion Project covering all project activities in the Melamchi Valley, including the Water Diversion Tunnel (WDT) and Water Treatment Plant (WTP) and (ii) Subproject 2: Kathmandu Valley Water Supply and Sanitation Project to undertake distribution network improvement inside Kathmandu Valley. The implementation responsibilities were entrusted to Project Implementation Directorate (PID), which was formed under the KUKL Board of Directors, through a MOU signed on 19 April 2009 between Government of Nepal (GoN) [Ministry of Finance (MoF), Ministry of Physical Planning and Works (MPPW)], Kathmandu Valley Water Supply and Management Board (KVWSMB), Kathmandu Upatahaya Khanepani Limited (KUKL) and Asian Development Bank (ADB).

1.2 Project Scope

A: Under the ADB loan (Loan No. 1820), Scopes of the subproject are as follows:

- Immediate improvements of water supply services in Kathmandu valley through augmentation of surface and groundwater sources;
- Water quality improvement related works;
- Rehabilitation and improvement of water supply and sewer networks at the primary, secondary and tertiary levels as well as house connections in parts of KUKL service area
- Design and construction of the Bulk Distribution System (BDS)
- Wastewater Systems Improvements in a phased manner; and
- Improvement of the Service Management system of KUKL.

B: Under the ADB loan (Loan No. 2776), Scopes of the subproject are as follows:

- Immediate improvements of water supply services in Kathmandu valley through augmentation of surface and groundwater sources;
- Water quality improvement related works;
- Rehabilitation and improvement of water supply and sewer networks at the primary, secondary and tertiary levels as well as house connections in parts of KUKL service area
- Design and construction of the Distribution Network Improvement for Efficient NRW Management
- Wastewater Systems Improvements in a phased manner; and
- Improvement of the Service Management system of KUKL.

2. Project Activities

The project activities under the scope of the project may be categorized mainly into three phases:

- Design and Bidding Phase
- Mobilization Phase and
- Construction Phase

Details of the project activities are shown in table 2.1 to 2.3

2.1 Design and Bidding Phase

Table 2.1: Projects in Design and Bidding Phase

S.N	Infrastructure/Project/Package	Scope of Work/Function	Description/Size and length of Pipe	Location	Status of Contract Award and its Details
i)	Distribution Network Improvement for Efficient NRW Management (Package 1) Contract No. KUKL/DNI/01/04	Rehabilitation and Extension of Distribution Network in the Zones including the DMAs Service connections including installations of valves, bulk meters and loggers, etc.	Total length of 213,159 m of various diameters of HDPE and DI pipes.	Zone 1, 2, and 6 of the KUKL system	Technical evaluation is completed, and ADB has been requested for their no-objection.
ii)	Distribution Network Improvement for Efficient NRW Management (Package 2) Contract No. KUKL/DNI/01/05		Total length of 250,121 m of various diameters of HDPE and DI pipes.	Zones 5, 6, 7 and 8 of the KUKL system	Bids are invited and last date of submission is Sept 14, 2012
iii)	Distribution Network Improvement for Efficient NRW Management (Package 3) Contract No. KUKL/DNI/01/06		Total length of 187,254 m of various diameters of HDPE and DI pipes.	Zones 8, 9, 10 and 11 of the KUKL system	Bids are invited on 27 August 2012 and last date of submission is Oct 11, 2012
iv)	Supply and Reinstatement of Roof at Balaju WTP etc... Contract No. KUKL/DNI/02/07B	Roof Truss installation in Balaju Reservoir Store Shed house and Office Quarter construction on Sundarighat Boundary Wall construction and grill work in windows in Central Lab, Mahankalchour	Roof construction and Site development in Balaju	Balaju,	Bidding documents prepared and submitted to PID on 24 August 2012 and requested ADB for their no objection
v)	Supply, Delivery and Installation of Laboratory Equipment Contract No. KUKL/DNI/03/16B	Supply and Installation of Water Testing Lab equipments.	Lot 1: Supply and Installation of AAs & UV Lot2: Supply and Installation of different Lab Equipments Lot 3: Supply of Chemicals Lot 4: Supply and Installation of Lab furniture		Bids are invited . Last date of submission 30 October 2012.

2.2 Construction Phase

Table 2.2: Packages under Grace Period where work has not started as of August 2012

S.N	Description	Status
1	Construction of Treatment Facility and Related Civil Works at TIA, Tube Well Site/ Contract No.-KUKL/DNI/02/15C	<ul style="list-style-type: none"> • Handover of site to contractor • Preparation of working drawings. • Joint survey completed. • Procurement of some electro-mechanical equipments under process.
2	Cluster Removal Works – 2 at Gokarna in Kathmandu / Contract No.- KUKL/DNI/02/08B	<ul style="list-style-type: none"> • Possession of site by Contractor • Joint Survey work is ongoing • Contractor informed that the production of uPVC pipe has been completed.

Table 2.3: Packages under Construction Phase for which work has progressed.

S.N	Package Details	Locations	Starting Date	Contract Period	Physical Progress (%) As of August
1	Construction of Treatment Facility, RCC Reservoir and related Civil Works (KUKL/DNI/02/15B)	Koteswor	14 th March 2011	6 Months	100%
2	Demonstration Area at Kusunti (KUKL/ DNI/01/02)	Kusunti	21 st September 2010	14 Months	90 %
3	Construction of 150 m ³ RCC. Reservoir (KUKL/DNI/02/07A)	Sundarijal	24 th March 2011	6 Months	100%
4	Pilot Project (KUKL/DNI/01/03)	Kalopool	19 th December 2010	22 months	80%
5	Cluster Removal Works (KUKL/DNI/02/08)	Gokarna	1 st July 2010	25 Months	76%
6	Rehabilitation/Improvement/Shifting of Existing Intakes (KUKL/DNI/02/04)	Nakkhu	17 th March 2011	21 Months	82%
7	Drilling and Development of 15 New Tube wells KUKL/DNI/02.06B (Lot 1 and Lot 2)	Kathmandu Valley	Contract Date: 12 July 2011 Effective Date: 1 October 2011	11 Months 31 August 2012	Lot 1: 10% Lot 2: 10%
8	Sewerage Network Improvement Works (KUKL/WSI/01/03)	Buddhanagar, Shankhamul	25 th July 2011	12 Months	76%
9	Transmission Main (KUKL/BDS/01/01)	Sundarijal to Mahankalchaur	17 January 2012	20 Months	64.78%

*** Data's are based on Consultant's 21st Monthly Report, Contractor's Progress Report.

3. Implementation Progress

As presented in Table 2.3 above there are 10 major packages which are in construction phases. The activities, status and problems faced during construction as of August 2012 are presented below in Tables 3.1 to 3.10

Table 3.1 Demonstrations Scheme Works Package for Kusunti (Contract No.KUKL/DNI/01/02)

S N	Total Works under Package	Progress				Remarks
		Target	Achievement			
1	Distribution Network Improvement Works at Ward Nos. 13 and 14 of Lalitpur Municipality with the target to improve the supply system for around 2400 tap connections.	100%	Average Progress – 90%			1. Local community has opposed <ul style="list-style-type: none">Laying of transmission pipeline from Sainbu Reservoir to Nakhu Bridge andConnection of the pipeline in the DNI Main from Gayatri Pump to Department of Transport Management Which caused to delay in construction works The contractor requested time extension to complete the project by the end of October 2012. DSC2 has recommended EOT of 102 days i.e up to 29 August 2012.
			Pipe type/size	Supplied	Laying and jointing	
			DI pipes			
			300 mm dia	3768m	2518 m	
			150 mm dia	660 m	603 m	
			uPVC pipes			
			90/6 kg/cm2		10380 m	
			90/10kg/cm2		18008 m	
			110/6 kg/cm2		3886 m	
			110/10 kg/cm2		396 m	
			Total		33582m	
		Pressure testing of newly laid pipeline- 33582m				
		Pressure testing of ext pipeline – 6800 m				
		Household connections – 1668 nos.				

Table 3.2 Demonstrations Scheme Works Package for Gokarna (Contract No. KUKL/DNI/02/08)

SN	Total Works under Package	Target	Progress		Remarks
			Achievement		
1.	Removal of Cluster, laying of pipes and reconnect households including supply and laying of uPVC pipes and fittings and tapping of 500mm dia. This package calls for 5.13Km of 110dia and 6.99 km of 90dia Pipes. This project covers about 535 households.	100%	Overall progress: 76 %		Community is highly opposing pipeline construction works
			uPVC pipes		
			110 mm dia	5078 m	
			90 mm dia	6385 m	
			Total	11463 m	
			• DI Valve and uPVC fittings supplied except of water meter. Household Connections - 425 Nos.		

Table 3.3 Koteswor Tube Well Site (Contract No. KUKL/DNI/02/15B)

SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
1.	Construction of Treatment Facility, RCC Reservoir and Related Civil Works at Koteswor Tube well Site.	100%	100% works completed	No problems encountered

Table 3.4 Kalo Pool Demonstrations Project (Contract No. KUKL/DNI/01/03)

SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
	Distribution Network Improvement Works at Ward Nos. 7 and 8 of Kathmandu Metropolitan City. With the target to improve the supply system for around 4800 HH tap connections.	100%	<p>Average Progress – 80 %</p> <p>Pipe type/size Laying and jointing</p> <p>DI pipes</p> <p>300 mm dia 44.50 m</p> <p>250 mm dia 147.5 m</p> <p>200 mm dia 1119.5m</p> <p>150 mm dia 554.9 m</p> <p>Total 1982.9 m</p> <p>uPVC pipes</p> <p>75 mm – 12440 m.</p> <p>90 mm 10340 m.</p> <p>110 mm 3859 m.</p> <p>125 mm 4151 m.</p> <p>140 mm 1661 m</p> <p>Total 32451 m</p> <p>Pipe testing of newly laid pipes - 31882 +2744=34626m</p> <p>Household connections-2550 nos.</p>	<ul style="list-style-type: none"> The contractor has submitted the request for the EOT of 336 days. DSC on 1 February 2012 has requested to furnish all documentation in support of the request of the EoT Supporting documents have been submitted on 9 February The Client has approved the EOT for 180 days. <p>The contractor has submitted variation no without supporting documents which the employer has instructed in due course of implementation of the project.</p>

Table 3.5 Nakkhu Project (Contract No. KUKL/DNI//)

SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
	Construction of infiltration gallery, collection chamber, laying of ductile iron pipe from Nakkhu intake to Sundarighat. Also included in the project is the	100%	<p>Overall Physical Progress = 82%</p> <ul style="list-style-type: none"> 400 mm DI Pipe laying = 4858m completed 500 mm DI Pipe laying = 104.50 	<ul style="list-style-type: none"> Delay in construction schedule Some variations regarding the relocation of Infiltration gallery and redesign of the pipeline route near

SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
	construction of treatment facility including pump and flocculation chamber, laying of uPVC pipe and 100 m ³ reservoir at Nakhipot.		m completed <ul style="list-style-type: none"> Gabion Work for pipe protection at Nakphu River = 96% completed Gabion works at Bagmati Crossing = 65% completed Pipe encasing work at Bagmati Crossing = 81% completed 90 mm/6kg/cm² uPVC pipe laying = 390m completed 90 mm/10kg/cm² uPVC pipe laying = 672m completed Construction of Water Treatment units is ongoing 	Suspension Bridge and detour of some of the pipeline section. <ul style="list-style-type: none"> Consolidated variation of all the additional works has been submitted to the Client for the approval and the Client has approved the VO1. The construction of intake works has stopped due to high flood in Nakphu river as a result of flood. The contractor requested extra time extension to complete the project by the end of January 2013. DSC-02 is reviewing the EOT proposal. Relocation of intake 300 m upstream due to encroachment of Pig Farm.

Table 3.6: 150m³ Reservoir Construction at Sundarjial (Contract No. KUKL/DNI/02/07A)

SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
	Earthwork excavation for structure, construction of 150m ³ RCC Reservoir and rehabilitation of the intake & Silting Basin	100%	100% completed	

Table 3.7: Drilling and Development of 15 New Tubewells at Kathmandu Valley

SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
	Lot 1- 8 tubewells: Lot 2-7 tubewells -Drilling and Development of tubewells. -Supply and laying of DI Pipe -Supply and Installation of Bulk Meters. -Supply and Installation of Filter Units. -Supply and installation of Pumps, Generators and Electrical Appurtenances.	14.04%	Lot 1 & 2: 10% <ul style="list-style-type: none"> Tube well Development works completed at Dhumbrahi Tube well development work in progress at Dhapasi 7 Mobilization of rig machine at Sangle Khola	<ul style="list-style-type: none"> Well development at Boratar pending. Test pumping at Hepali Height is pending.

Table 3.8: Sewerage Network Improvement Works (Buddhanagar, Shankhamul) (KUKL/WSI/01/03)

SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
	<ul style="list-style-type: none"> Installation of New Sewerage Pipe (500-1200 mm Hume Pipes) Construction of Man-hole 	100%	<ul style="list-style-type: none"> Supply and laying of about 1,000 hume pipes (500 mm – 1200 mm dia) Construction of about 54 manholes Construction of about 100 house connections 	<ul style="list-style-type: none"> The contractor has submitted variation order no 1 with supporting documents including of cost increase of 14.72%, which the consultant has sent to the Client for the approval. Locals demanding smoother roads for pedestrian after trench digging

Table 3.9: Transmission Main From Sundaridal to Mahankalchour (KUKL/BDS/01/01)

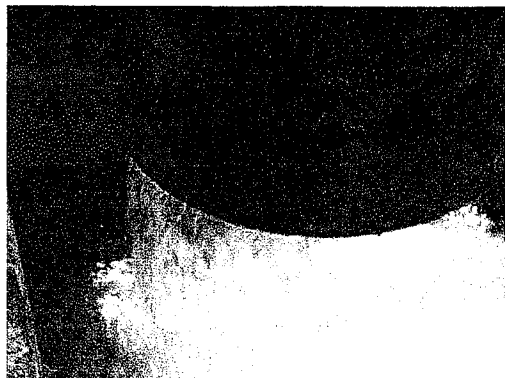
SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
	Supply and construction of approximately 10 Km of 1400mm dia ductile iron pipe.	65%	<ul style="list-style-type: none"> Supply and delivery of DI pipes and fittings completed. Ø300 mm sewer pipe 265 m laying completed. 	Sahayogi Higher Secondary School is not yet agreed issue letter for permit of cutting trees in the compound in BDS alignment; Department of Forest hasn't issued the letter of consent to cut the tree.

Table 3.10: Cluster Removal Works at Gokarna – 2 (KUKL/DNI/02/08B)

SN	Total Works under Package	Progress		Remarks
		Target	Achievement	
	Removal of Cluster, laying of pipes and reconnect households including supply and laying of uPVC pipes and fittings and tapping of 500mm dia.	10%	<ul style="list-style-type: none"> Employer has given permission of site to contractor Joint survey work is going on contractor informed that production of uPVC pipes has been completed 	Contract is under grace period. Contractor has not started work so far. So no problem has been faced.

4. Activities for Resolving Immediate Water Problem

4.1 Immediate Improvement Work I (Sundarijal)

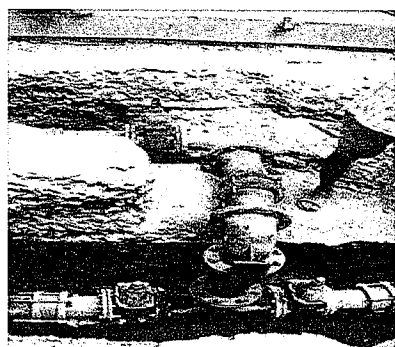


It is a known fact that the Kathmandu Valley suffers from acute water supply shortage. In order to alleviate this problem the Melamchi Water Supply Project was started. However, since Melamchi is long term project, what was needed was the quick relief. For this CIMP identify Sundarijal as an option that can increase the water. In this project 222 meters of 200 dia pipes was laid from power house (Trach) to Sundarijal Sedimentation tank, in order to bring additional water that was being wasted at power house. From sedimentation tank to GK5 1550 meters of 300 dia pipes were added. This pipe brings additional 10 MLD

raw water from Sundarijal to Mahankalchour treatment plant.

4.2 Sabal Bahal (Teku), Kathmandu

Sabal Bahal, located at Kathmandu Metropolitan City, Ward No. 24 is occupied mostly by the so called lower caste newar community indigenous peoples. There are 125 households in this area and many of them have water pipeline connections but for almost last 10 years they are not getting water supply through their pipelines. Rumi Deula, a representative of Deula Samaj, Sabal Bahal belongs to a socially backward and vulnerable community, and has been facing water problems for past 10 years. KUKL has been managing water to this community through its tanker services once in a week for last four years.



The 125 households in the area receive their water only once every two weeks on a rotational basis such that of half the houses (63 households) get water once in a certain week, the remaining 62 households get it once the following week. Earlier the water was distributed for free through KUKL's tankers but now Rs 5 is charged for around 15 liters. People face a lot of difficulty in collecting water from the tankers as they have to carry the water from main road to their houses. The other problem in this regard is that sometimes the people have to return with empty pots, after waiting for the water in queue for a long.

For solving this water problem at Sabal Bahal, the Project has laid 1170 meters of DI transmission pipe line of DN 200 mm size from Kuleshwor Ganeshtan to Teku Shukra Brikshya. There was initial resistance for this by the upstream communities for the fear of reduced water supply in their areas, but PID staff organized series of meetings with both the communities and managed to convince them of the benefits of the work, after which the work is being implemented smoothly.

All the necessary construction and civil works have been completed. New service line was connected to the existing line and the pipes were tested for the pressure and leakage. Upon successful completion of the testing service was started at Sabal Bahal. So for first time in more than 15 years residents of Sabal Bahal are getting piped water from KUKL.

4.3 Neuda Chasyal, Lalitpur

Chasyal, one of the areas of Patan suffering from chronic water shortage, is located at ward no. 9 of Lalitpur Sub-metropolitan City. Laxmi Bajracharya, one of the locals, shares her experience as water shortage has made her life miserable and hard to sustain. She says that though having water connection at home, water is not supplied through the connection. It has been several years that they have been paying the water tariff regularly albeit no regular water supply. So she manages water by purchasing it from the local vendors for Rs 5 per 20 liter or



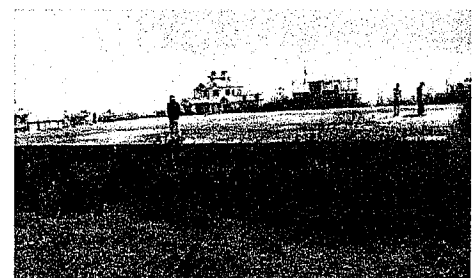
from the water spouts at Mangalbazaar and Chasyal. She has been facing a this problem because of water as she has to stand in the line for almost 2-3 hours a day for getting water and has to carry it through a 20 minutes walking distance. There is a well in their locality but the water quality is not good and cannot be used for drinking purposes. So they use the water from well for other domestic purposes except for drinking and cooking and that they have to buy the water of well for Rs 2 per 20 liter. Sometimes she also has to buy water for drinking purpose from the local distributors which costs Rs 20 per 20 liter.

The project has laid transmission line DN 200 mm DI (length 1175m) from Tubewell at Balkumari to Neuda Chasyal, Lalitpur so that the community's water woes will be addressed. This work has increased water production by approximately 2 MLD per day and is expected to minimize water scarcity as well as systematic distribution once it is connected.

All the necessary construction and civil works have been completed but the interconnections to the main lines are yet to be completed due to public objection.

4.4 Katunje Water Reservoir Tank

A Reservoir of about 2000 m³ capacity to store was constructed around 27 years ago in 1984 A.D at Katunje VDC, Ward no. 8. But since its construction, the tank was never filled and it has been left unused. It is being used by the locals as a grain storage silo and top of the Reservoir is being used as dryer for the grains (Biskun).



The project has carried out works in order to bring it to its proper and intended use. This will help in providing a balancing facility for distribution of water to the Bhaktapur area. The works towards this purpose include laying of new DN 150 mm DI (length 2310 m) new parallel pipeline from - Sallaghari Sewerage Treatment Plant to Pandu Bazaar and DN 350 mm DI (length 650 m) pipeline from Pandu Bazaar to Katunje Reservoir.



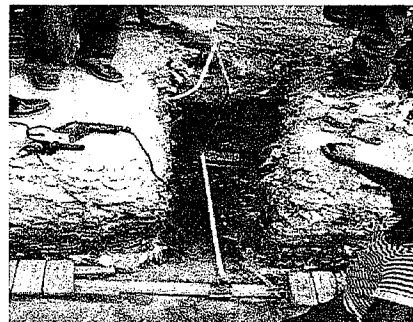
Water from Bode reservoir was sent to Katunje reservoir in order to do the seepage test in order to determine if there are any leakages or other problems in the reservoir. It was found that there was no leakage in the tank so the tank was brought in the service.

4.5 Demonstration Project -1 (Baneshwor Area)

The demonstration area covers the southern part of ward no. 10 and 34 of the Kathmandu Metropolitan city with Bagmati River as eastern and southern boundary, Dhobikhola as western and Arniko Highway as northern boundary. The total area of the demonstration area is 111.29 ha with 52.22 ha in ward no.10 and 59.07 ha in ward no.34.

The project aims towards improvement of the distribution system with reduced leaks and well monitored distribution system with adequate bulk meters installed at different strategic points. For this purpose, the whole project area has been divided into 5 sub-systems.

In order to improve the distribution system of the area, the haphazardly laid pipelines are being replaced by well modeled and designed distribution network comprising of DI and uPVC pipes of different diameters. The 3275 households of the project area will then have new water meter connections. Laying of 3582 meters Di pipe of various sizes out of 3582 meters, 40645 meters uPVC pipes of various sizes out of 40645 meters and 3681 house connection has been completed. This is a pilot project and based on its outcome, the other projects will be carried out accordingly. Service Areas (SA) I is slated for system test soon. As of now it stands that about 80 households are receiving water from the new system.



Likewise, for the distribution system improvement at Kusunti Demo 2 and Demo 3 for Kalopool area is being implemented under the project. The demo project 2 is targeted to cover 2400 households and till date 508 household has been connected similarly demo 3 objects to cover 4800 households and as of date 1250 household has been connected.

4.6 Augmentation of New Intake (Shifting Nakkhu Khola Intake)

Nakkhu Khola is an important surface water sources for KUKL, which is being used to supply Kuleshor area after it undergoes treatment at Sundarighat, Kirtipur. The pump station is located upstream of the Nakkhu – Bagmati river confluence near Bagdole. At present the water source is prone to flood and is affected by pollution of Nakkhu River. The flood damage has caused frequent interruptions of water supply and high pollution interferes with the pumping equipment. Shifting of the Nakkhu



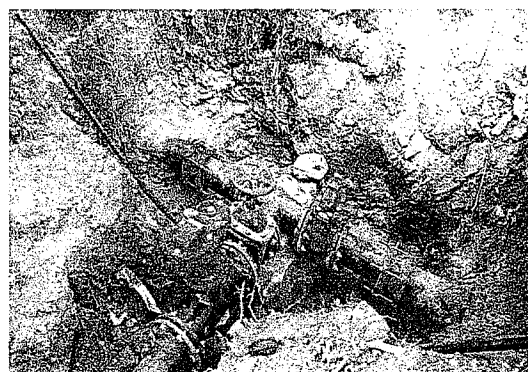
Intake has been planned in Capital Investment and Asset Management Programme (CIAMP) to mitigate these problems. The proposal is to relocate the intake to about 3 Kms. upstream of the existing intake site and it is expected that this shifting will both improve the seasonal reliability of supply as well as the abstraction water quality. Moreover this shifting enables KUKL to abstract water to water treatment plant at Sundarighat under gravity flow.

It will supply 93 lps in the wet season and 36 lps during the dry season by this arrangement. Around 5 km of DN 500 mm DI pipe will be laid to Sundarighat Water Treatment Plant. The treated water will be distributed to water scarce western areas of Kathmandu; like Balkhu, Kuleshwor, Kalimati, Teku, Sabalbahal and Tripureshwor.

A small fraction (2 to 4 lps) of the total supply is proposed to be pumped to the proposed 100 m³ capacity distribution reservoir by laying DN 90 mm (6 kg/sq.cm pressure) 1650 m uPVC pipeline in Nakhipot Area in Lalitpur. This system will support to improve equitable distribution of water to the population in Nakhipot of Lalitpur District.

4.7 Distribution System Improvement (Chhahare- Balaju Treatment Plant)

Chhahare Scheme was constructed in 1960 B.S. laying 125 mm CI pipe of length 5.7 km from Chhahare to Balaju Treatment Plant. There is direct household tap connection from the trunk main of Chhahare. Due to the growing population in the local areas and the direct household tap connection, water from this scheme could not reach at Balaju Treatment Plant for last 10 years.



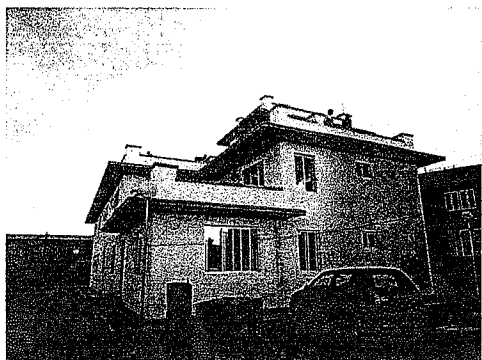
To improve the system, PID has laid new transmission main 150 mm DI pipe of 4750 m from BPC 1 to Balaju Treatment Plant. This new transmission main will be used for bringing water from BPC 1 to Balaju Treatment Plant and older line is being used for distribution system. Water will be distributed through the older line in the local areas during the day time only and it will be used for bringing 5 lps water from BPC 1 to Balaju Treatment Plant during the night hours.

4.8 New Tubewells

In bid to increase water sources in dry season, 5 new tubewells were dug in Mahankalchour Water Treatment Plant, Gangabu Residential Area, Kamalbinayak, Mahadev Khola and Manamaiju. Drilling and Construction of all the tubewells have been completed. However tubewell construction at Kamalbinayak was moved to Bode due to lack of adequate aquifer. Though all the civil works have been completed due to lack of either connection to distribution system, electrical works or the pumps the services through these tubewells have not started. Once started they are to pump in average about 15 Lps. Drilling works completed at Bahiti, Dhumbarahi and Bode (near solar P/S).



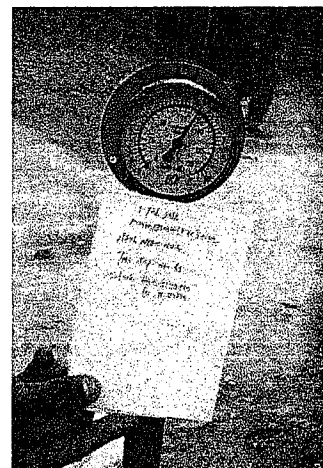
4.9 Central Laboratory



Construction of the Lab Building at the premises of Mahankalchour Water Treatment Plant has been completed. Once all the necessary equipments are installed and the building is fully operational it will serve as the central lab for testing water quality for KUKL leaving current central lab at Sundarighat to serve as the branch lab.

4.10 DNI Pilot Project Scheme Works for Kalopool

Supply and laying of 1993 meters of various diameters of DI pipes, 32,633 meters of various diameters of uPVC pipes and 34626 meters of pipe testing of newly laid pipes completed. Altogether 2200 numbers of house connections completed. After completion of all pipe laying, pressure testing and house connection it will be connected to the distribution main.



4.11 Demonstration Scheme – DNI for Kusunti Area



Supply and laying of 3123 meters of various diameters of DI pipes, 33,500 meters of various diameters of uPVC pipes and 6800 meters of pipe testing of newly laid pipes completed. Altogether 1781 numbers of house connections completed. After completion of whole works and connection to the distribution main the problem of the water may decrease.

4.12 Cluster Removal Works at Gokarna

Laying of 11,463 meters of various diameters of uPVC pipes and 11,463 meters of pipe testing of newly laid pipes completed. Altogether 501 numbers of house connections completed and construction of 4 out of 6 chambers completed with 2 connected to the system. The completion of work might reduce the asking rate of water for more than 800 household of Jorpati VDC.



5. Compliance of Loan Covenants Related to Environmental Safeguards

Table 5.1: Checklist of Loan Covenants Related to Environmental Safeguards
[Amended and Restated Loan Agreement, Loan No. 1820-NEP (SF)]

Project Specific Covenants (Environmental)	Status/Issues
<p>Schedule 5, Para 20 (b)</p> <p>MWSDB and WUO shall prepare and submit to ADB, within one month of the end of the reporting period:</p> <p>The six-monthly monitoring reports on environmental and social issues affecting the project, within one month of the end of each relevant period; and</p> <p>Annual reports on the monitoring of surface and groundwater in Kathmandu Valley within one month of the end of each fiscal year.</p>	<p>Partially Complied</p> <p>A package for monitoring of various environmental parameters of water, wastewater, air, and noise quality is being formulated. KVWSMB has initiated issuing licenses for using groundwater in the valley.</p>
<p>Schedule 5, Para 24</p> <p>The borrower shall ensure that by 31 March 2008, the existing environmental management plan (EMP) and resettlement action plan (RAP) shall, in each case, be updated and be divided into two separate plans, one dealing with Subproject 1 activities and the other dealing with Subproject 2 activities, and that such division will be made on a consistent basis and be retained for the duration of the project.</p>	<p>Complied</p> <p>The environmental management plan (EMP) and resettlement action plan (RAP) have already been updated and divided into two separate plans. There is no major resettlement issue including displacement of households and families in Subproject 2</p>
<p>Schedule 5, Para 26</p> <p>The borrower shall ensure that the Project is implemented and all project facilities are constructed, maintained and operated in strict conformity to (a) all applicable national environmental laws, regulations and procedures, (b) ADB's Environmental Policy (2002), and (c) the environmental mitigation and monitoring measures detailed in the approved environmental impact assessment (EIA), the SEIA, the relevant SIEEs and the relevant EMP for each of the Subprojects.</p>	<p>Complied</p> <p>The EMP of Subproject 2 has included provisions to mitigate against construction phase impacts confirming to the (a) all applicable national environmental laws, regulations and procedures, (b) ADB's Environmental Policy (2002), and (c) the environmental mitigation and monitoring measures detailed in the approved environmental impact assessment (EIA).</p>

Project Specific Covenants (Environmental)	Status/Issues
<p>Schedule 5, Para 27(a)</p> <p>The borrower undertakes to implement the following:</p> <p>Simplification of the environmental and social safeguards management system, including transferring to (i) MWSDB and WUO (as the case may be) overall responsibility for safeguards design, implementation and reporting, and strengthening and increase capacity of MWSDMB's and WUO's safeguards division(ii) EMP monitoring consultant responsibility for environmental effects monitoring, and EMP monitoring.</p>	<p>Being Complied</p> <p>Simplification of the environmental and social safeguards management system is currently undergoing. PID of KUKL is responsible for design, implementation and reporting the safeguards system/activities. Monitoring of EMP is expected through the newly mobilized Design and Supervision Consultancy (DSC) and Safeguards unit of PID. Capacity of safeguards division/PID to design and monitor the safeguard plans/programs needs to be improved.</p> <p>CAPC- Consultant recruited for Capacity Building of PID.</p>

6. Compliance of Environmental and Social Safeguards in Major Construction Activities

Monitoring checklist has been developed as per approved EMP, and IEE submitted by PPTA-4893 and field monitoring for Environmental and Social Safeguards has been started. The issues mentioned below were given priority during monitoring.

- Arrangement of lights, guards, fencing, warning signs, caution board, safety caution ribbon/tape
- Safety of all persons entitled to be upon the site by use of PPE like safety belt, gumboot, respiratory mask, hand gloves, helmet, jackets with reflectors etc.
- Sprinkling of water for checking of road dust
- Proper traffic diversion and implementation of traffic management plan
- Proper storage of construction materials
- Labor camp management
- Proper restoration of road / working sites after completion of specific work
- Disposal of excess excavated materials
- Safety and protection of adjacent properties

Table 6.1: Overall Compliance Status of Major Construction Activities

SN	Package Number/ Name	EMP being Implemented (Yes/No)	Overall EMP Compliance (Fully Com./Largely Comp./Partially Comp./Not Complied)	Actions Proceed / Additional Corrective Measures Required	Correction Measures to be taken
1	KUKL/DNI/02/15B Koteshwor Tube well site	Yes	Complied	Project Completed.	Not required
2	KUKL/DNI/01/02 Kusunti	Yes	Partially Complied	Use of PPE by all personnel and labours present in site is necessary at all times	Contractors are requested to make PPE mandatory for the laborers.
3	KUKL/DNI/01/03 Kalopool	Yes	Partially Complied	Use of PPE by all personnel and labours present in site is necessary at all times	Contractors are requested to make PPE mandatory for the laborers.
4	KUKL/DNI/02/08 cluster removal @ Gokarna.	Yes	Partially Complied	Use of PPE by all personnel and labours present in site is necessary at all times	Contractors are requested to make PPE mandatory for the laborers.
5	Rehabilitation/Improvement/Shifting of Existing	Yes	Largely Complied	Measures are been taken in adequately so no additional	Contractors are requested

SN	Package Number/ Name	EMP being Implemented (Yes/No)	Overall EMP Compliance (Fully Com./Largely Comp./Partially Comp./Not Complied)	Actions Proceed / Additional Corrective Measures Required	Correction Measures to be taken
	Intakes (Nakkhu) (KUKL/DNI/02/04)			corrective measures required	to make PPE mandatory for the laborers.
6	Construction of 150 m ³ RCC. Reservoir (KUKL/DNI/02/07A at Sundarijal	Yes	Complied	Project Completed.	Not required.
7	Drilling and Development of 15 New Tubewells KUKL/DNI/02/06B	Yes	Partially Complied	Use of PPE by all personnel and labours present in site is necessary at all times	Contractors are requested to make PPE mandatory for the laborers.
8	Sewerage Network Improvement Works (KUKL/WSI/01/03)	Yes	Partially Complied	Use of PPE by all personnel and labours present in site is necessary at all times. Use of Road sign informing the danger.	Contractors are requested to make PPE mandatory for the laborers. Contractor is requested to use more signs to create awareness among public.
9	Transmission Main from Sundarijal to Mahankalchour (KUKL/BDS/01/01)	Yes	Partially Complied	Procurement and Storing of the pipes is ongoing so for now no additional corrective measures required.	

Table 6.1 Demonstrations Scheme Works Package for Kusunti (Contract No. KUKL/DNI/01/02)

S.N.	Total Works under Package	Problems	Demand of people	Mitigation Measures	Remarks
1.	Distribution Network Improvement Works at Ward Nos. 13 and 14 of Lalitpur Municipality with the target to improve the supply system for around 2400 tap connections.	<ul style="list-style-type: none"> Laying of transmission pipeline segment from Sainbu Reservoir to Nakhu Bridge has been opposed by the local community leading to delay in starting the construction works. Connection of the pipeline in the DNI Main from Gayatri Pump to Department of Transport Management has been opposed by the local community leading to delay in starting the construction works. 	<ul style="list-style-type: none"> Locals of Sainbu are reluctant to distribute the water from their source to others as there will be a scarcity of water for them. They demand that we first guarantee the water to them first. 	<ul style="list-style-type: none"> To address this issue, a cost estimate of 1500 m length of pipe laying has been prepared and submitted to the Client. To address this issue, hydraulic design is under consideration to tap water from 350 mm dia. uPVC or 500 mm DI existing pipelines. Both the options are abandoned. PID have agreed with the community to lay the pipeline as per its original design and instead Project office has to bear all the cost for pipe laying works of 1600 m length from the reservoir to Nakkhudole to resolve the existing water supply problem with due consideration of future extension of road and sewer line construction. Some compensation is agreed to pay against bank interest for unused DI pipes and fittings. Even though the contractor could not carried out DI and uPVC pipe laying work for community due to continued obstruction of by local people three times. 	<ul style="list-style-type: none"> DSC 02 reviewed the variation 1 and submitted for the approval to the Client and the Client has approved the VO1. The contractor requested extra time extension to complete the project by the end of October 2012. DSC2 has recommended EOT of 102 days i.e up to 29 August 2012.

Table 6.2 Demonstrations Scheme Works Package for Gokarna (Contract No. KUKL/DNI/02/08)

S.N.	Total Works under Package	Problems	People's demand	Mitigation Measures	Remarks
1.	Removal of Cluster, laying of pipes and reconnect households including supply and laying of uPVC pipes and fittings and tapping of 500mm dia. This package calls for	<ul style="list-style-type: none"> Very significant community resistance to the project is preventing the pipeline construction works from starting. 	<ul style="list-style-type: none"> To distribute the water after proper distribution to the locals first. To reinstate the road as before To lay the new pipeline in 	<ul style="list-style-type: none"> Work has been started with consultation and agreement with local people, political leaders and VDC. Compensation of amount Rs. 963060.00 was agreed to pay for idle stay of manpower and equipments of the contractor for the first extended contract period. With the demands of the community, variation order of laying of pipes in the missing routes 	

5.13Km of 110dia and 6.99 km of 90dia Pipes. This project covers about 535 households.	Ward No. 6 of Gokarna VDC	and inclusion of six nos. of fire hydrants has been approved. • After consultation and assurance the locals let the work resumed.	
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Table 6.3 Koteswor Tube Well Site (Contract No. KUKL/DNI/02/15B)

S.N.	Total Works under Package	Issues/ Problems	People's demand	Mitigation Measures	Remarks
	Construction of Treatment Facility, RCC Reservoir and Related Civil Works at Koteswor Tube well Site.	No problems encountered	N/A	N/A	As no problem encountered no-mitigation measures needed

Table 6.4 Kalo Pool Demonstrations Project (Contract No. KUKL/DNI/01/03)

S.N.	Total Works under Package	Issues/ Problems	People's demand	Mitigation Measures	Remarks
	Distribution Network Improvement Works at Ward Nos. 7 and 8 of Kathmandu Metropolitan City With the target to improve the supply system for around 4800 HH tap connections.	<ul style="list-style-type: none"> The contractor has submitted the request for the EOT of 336 days. DSC again on 1 February 2012 has requested to furnish all documentation in support of the request of the Extension of time. Supporting documents for the EOT have been submitted on 9 February, 2012 which is under review by the consultant. 	This is concerned with management issue.	<ul style="list-style-type: none"> The Client has approved the EOT for 180 days. The contractor has submitted variation no without supporting documents which the employer has instructed in due course of implementation of the project. 	<p>Interconnection works, chamber fittings & house connection works</p> <p>Around 80% of work has been completed.</p>

Table 6.5 Nakkhu Project (Contract No. KUKL/DNI/II)

S.N.	Total Works under Package	Issues/ Problems	People's demand	Mitigation Measures	Remarks
	Construction of infiltration gallery, collection chamber, laying of ductile iron pipe from Nakkhu intake to Sundarighat. Also included in the project is the construction of treatment facility including pump and flocculation chamber, laying of uPVC pipe and 100 m ³ reservoir at Nakhipot.	<ul style="list-style-type: none"> The land where the design to construct the filtration unit belonged to an individual (plus disputed among the brothers) and not owned by KUKL or any public institutions so, the construction of the reservoir delayed 	<ul style="list-style-type: none"> To built the filtration unit on other location rather than the originally designed spot. Additional demand like construction of basketball court, toilets and taps etc. 	<ul style="list-style-type: none"> A land 500 m upstream of the original location belonging to Mr. S. R. Baniya was selected and made an agreement. In place of the land the project agreed to construct a retaining wall to his other land. The additional demands were dropped as soon as the issue of the land was solved. 	<p>100%</p>

Table 6.6: 150m³ Reservoir Construction at Sundarighat (Contract No. KUKL/DNI/02/07A)

S.N.	Total Works under Package	Issues/ Problems	People's demand	Mitigation Measures	Remarks
	Earthwork excavation for structure, construction of 150m ³ RCC Reservoir and rehabilitation of the intake & Silting Basin	100% completed	No environmental problem aroused.	NA	

Table 6.7: Drilling and Development of 15 New Tubewells at Kathmandu Valley

S.N.	Total Works under Package	Issues/ Problems	People's demand	Mitigation Measures	Remarks
	Lot 1- 8 tubewells -Drilling and Development of tubewells. -Supply and laying of DI Pipe -Supply and Installation of Bulk Meters. -Supply and Installation of Filter Units. -Supply and installation of Pumps, Generators and Electrical Appurtenances.	<ul style="list-style-type: none"> Well development at Boratar pending. Test pumping at Hepali Height is pending. 	<ul style="list-style-type: none"> Locals were demanding that the water be distributed to them first. To reduce the noise made during the drilling 	No measures required till date	

Table 6.8: Sewerage Network Improvement Works (Buddhanagar, Shankhamul) (KUKL/WSI/01/03)

S.N.	Total Works under Package	Issues/ Problems	People's demand	Mitigation Measures	Remarks
	<ul style="list-style-type: none"> Installation of New Sewerage Pipe (500-1200 mm Hume Pipes) Construction of Man-hole 	<ul style="list-style-type: none"> The contractor has submitted variation order no 1 with supporting documents including of cost increase of 14.72%, which the consultant has sent to the Client for the approval. 	<ul style="list-style-type: none"> Locals demanding smoother roads for pedestrian after trench digging 	<ul style="list-style-type: none"> The Client approved the VO1 with due concurrence of ADB. Contractor instructed to minimize the hassle faced by the locals 	

Table 6.9: Transmission Main From Sundarjal to Mahankalchaur (KUKL/BDS/01/01)

S.N.	Total Works under Package	Issues/ Problems	People's demand	Mitigation Measures	Remarks
	Supply and construction of approximately 10 Km of 1400mm dia ductile iron pipe.	Sahayogi Higher Secondary School is reluctant to provide permit for cutting trees in the compound in (BDS) alignment; Department of Forest hasn't issued the letter of consent to cut the tree.	School's demand is to construct a building by PID having 15 rooms.	Conducted several meetings to solve this issue in presence of school staff and other concerned stakeholders.	This issue is being discussed with CDO in this regard.

Table 6.10: Cluster Removal Works at Gokarna - 2 (KUKL/DNI/02/08B)

S.N.	Total Works under Package	Issues/ Problems	People's demand	Mitigation Measures	Remarks
1	Removal of Cluster, laying of pipes and reconnect households including supply and laying of uPVC pipes and fittings and tapping of 500mm dia.	<ul style="list-style-type: none"> Contract is under grace period. Contractor has not started work so far. So no problem has been faced. 	NA	No mitigation needed	

7. Public Consultations

Public consultation is the process of exchanging information with those persons and organizations with a legitimate interest in a project and/or who are likely to be affected by the project (stakeholders). It is a two-way process that informs and involves the community in developing a project, and informs the proponent about issues and concerns, which can then be addressed in project design. Information disclosure involves stakeholders in monitoring the development and implementation of a project and fosters openness in decision-making by presenting documents and other project materials for public scrutiny. The following consultations were held with the stakeholders as of August 2011.

Table 7.1: Public Consultation Details

S.N	Work Package	No. of Meeting	Date	No. of Participants		Issues	Remarks
				M	F		
1	KUKL/DNI/01/02 Demonstration Area At Kusunti	2	3 Mar 2012	20	5	This meeting was held with locals of Sainbu VDC in order to obtain consent for distributing water from Sainbu Reservoir to Kusunti Area	Locals stated that they themselves were deprived of drinking water and they demanded water for themselves and it was decided to provide water (4 inch dia.) to them as well.
			16 Mar 2012	40	6	Held meeting at CDO Office, Lalitpur as agitated locals of Sainbu VDC were demanding to raise the water source and they were reluctant to let Kusunti Area use their water resource.	It was decided to hold further meetings to finalize the issue.
2	KUKL/DNI/01/03 Pilot Project At Kalopool	1	19 Mar 2012	10	2	Held a meeting after local demanded to know the process of work in Ganeshsthan area and they were worried about the problems they may face because of the narrow road which would affect their business.	Assured the locals stating that using many number of worker, we would complete the work as soon as possible and to take any means necessary to not to hinder the locals' daily works.
3	KUKL/DNI/02/08 Cluster Removal Works at Gokarna	1	3 June 2012	24	6	Held a meeting with locals where pipe laying was done along the footpath of Melamchi Road. Locals were reluctant to give permission to open up the footpath for trenches.	Locals gave consent only after we assured to reinstate the footpath as it was before.

S.N	Work Package	No. of Meeting	Date	No. of Participants		Issues	Remarks
				M	F		
4	KUKL/DNI/02/04 Rehabilitation/Improvement/Shifting of Existing Intakes (Nakkhu)	4	4 June 2012	10	5	Meeting held at site for Filtration Unit at Nakkhipot to resolve the issue regarding the land for the construction of the land.	Decided to held further meeting at CDO's office
			17 June 2012	30	8	Held the meeting to resolve the issue of land for construction of treatment unit where locals put additional demand like construction of basketball court, toilets and taps etc.	After consultation and relenting on their demands, they agreed to let us work.
			4 July 2012	4	1	Held meeting with locals who stopped the work and they were not letting us use the land which was a disputed land.	It was decided to find a location 130 meters upstream of original location and construct the Unit.
			7 July 2012	10	4	Held a meeting with Mr. Shiva Ram Baniya and his family members for the site to construct the Filtration Unit	It was decided that for using his land, we will construct a retaining wall on his remaining land to prevent erosion by the river.
5	KUKL/WSI/01/03 Sewerage Network Improvement Work	1	7 May 2012	10	7	Held meeting with agitated locals who were complaining that their daily activities were affected because of mud and water at trench.	Assured to finish work as soon as possible and to put gravel on the road for the easy access.
6	KUKL/BDS/01/01 Transmission Main from Sundarijal to Mahankalchour	1	13 June 2012	25	10	This meeting was held in order to inform the public that the pipe laying works were about to start and to inform the public about the compensation that are yet to be taken by some landowners whose land has been taken.	They demanded for rational distribution of water to them as well.

Table 7.2 Meeting with Site Engineer and Contractor's Engineer & Outcomes of the Meeting

Location	Meeting Date	Issues	Outcome
Nakkhu KUKL/DNI/02/04	March 17, 2012 April 29, 2012 June 11, 2012 July 14, 2012 Aug 14, 2012	Location of the Intake Water Treatment Units	Intake has been shifted 130 m upstream of the original location i.e. 438 m upstream of collection chamber Water treatment units has been shifted at Nakkhipot reservoir site with the agreement with local community.
Sewerage Network Improvement Works Buddhanagar KUKL/WSI/01/03	June 27, 2012 July 23, 2012 Aug 22, 2012	There was muddy road, open ditches, mounds of earth placed at some places hindering pedestrian's movements, business and lifestyle	Road to be cleared and be made accessible for Vehicle and pedestrian movements.
Cluster removal at Gokarna. KUKL/DNI/02/08	March 20, 2012 Aug 29, 2012	Damage of Road due to rainfall Objection of the locals to dig the trenches in front of their shops/homes.	Contractor laid the sub-base material in the damaged road. Assure the locals that the status of their footpath will remain as before the start of the works.
Kalo Pool Demonstrations Project KUKL/DNI/01/03	March 10, 2012 April 8, 2012 May 10, 2012 June 12, 2012 Aug 10, 2012	Damage of Road due to excavation of trenches Stoppage of works of pipe laying at Jayabageshwori site by locals / Traffic citing problems caused by the mounds of earth and traffic jam	Reinstate the road as soon as possible To complete the task as soon as possible and compaction / reinstatement of the road.
Demonstrations Scheme Works Package for Kusunti KUKL/DNI/01/02	March 6, 2012 April 14, 2012 June 8, 2012	Hindrance to public due to damage of Road due to excavation of trenches	Complete the task as soon as possible and reinstate the road as soon as possible
Transmission Main from Sundarijal to Mahankalchour KUKL/BDS/01/01	August 4, 2012	Objection of Locals to commence the sewerage works till Tihar so that they can enjoy the festivals without any hindrance (muddy road)	Held a meeting with locals and they let the work resume.

8. Issues and Recommendations

Table 8.1: Issues and Recommendations

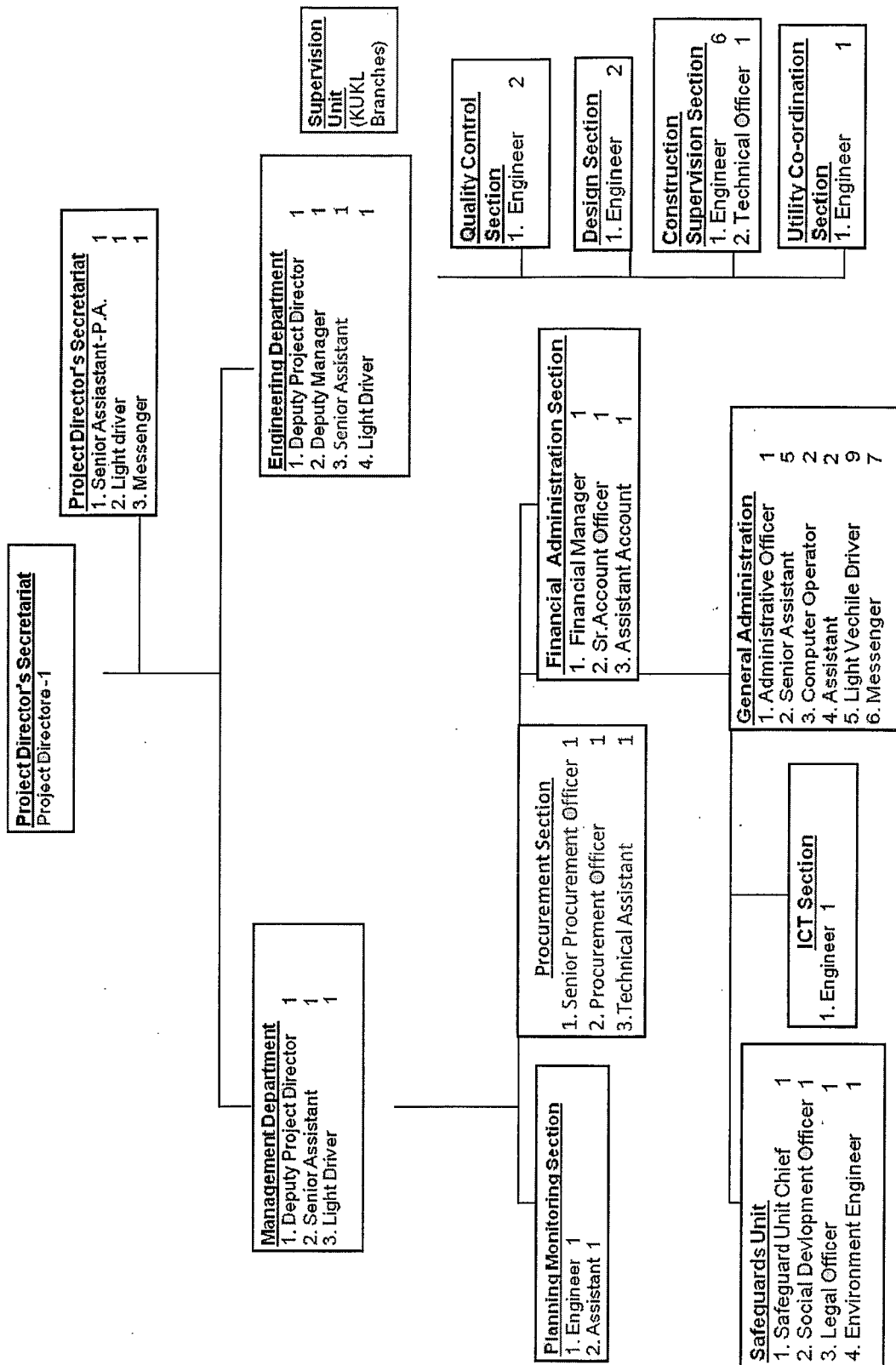
S.N	Issues	Recommendations	Measures
1	Non-compliance works	Sensitizing contractor Withholding of partial amount of payment is suggested	Give Instructions to complete the works
2	Disposal of excess debris	At many sites the excess excavated materials were seen in the vicinity area of the executed works.	Instruction given to clear the derbies and store in proper ways
3	Use of PPE (Personal Protective Equipment)	At of the sites, negligence from the laborers regarding use of personal protection was observed and hence it is recommended that all the laborers strictly follow the safety procedures. On part of the contractors, all required PPE shall be made available on-site and mandatory use of PPE by the labors.	Instructions to make PPF mandatory are given.
4	Obstruction of works by local people	The issues raised/demands by locals that are of long term effects and out of the scope of the project should be resolved by the asset owner, service operator and government intervention deemed necessary on policy related matters.	Hold meetings with locals and try to mitigate the obstruction by holding discussions, meetings, etc.

9. Conclusion

There is construction works ongoing on various sites of 9 projects on volumes and the status of environmental and Social Safeguards in those sites are satisfactory. In those sites where the construction has started EMEP have been largely in compliance.

9. Annex:

Organizational Structure of PID



Annex-2: Detailed Environmental and Social Safeguards Monitoring Checklist

Status (Fully Complied/ Largely Complied/ Partially Complied/ / Not Complied/ Not Applicable)										
S.N.	Environmental Components related to Project Activities	Packages								
		Demo Area at Kusunti (KUKL/ DNI/01/02)	Pilot Project at Kalopool (KUKL/ DNI/01/03)	Nakhu Khola Improve ments Works Package (KUKL/ DNI/02/05)	Construction of 150 m ³ Reservoir & related works at Sundarital (KUKL/ DNI/02/07A)	Construction of Water Treatment Facility, RCC Reservoir & Related Civil Works at Koteshwor (KUKL/ DNI/02/15B)	Cluster Removal at Gokarna (KUKL/ DNI/02/08)	Rehabilitation & Development of Tube wells (KUKL/ DNI/02/06B)	Transmission Main From Sundarital to Mahankalchour (KUKL/ BDS/01/01)	Sewerage Network Improvement Works Buddhanagar KUKL/WSI/01/03
A.		Preparation for Construction								
1.	Pegging of the land area (permanent and temporary) required by the project	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied
2.	Prepare RP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3.	Identify the temporary areas required by the project and locate them with proper marking	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied
4.	Consult relevant persons and submit applications to get approvals	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied
5.	Submit such agreement and permits to SC for official information	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied
6.	Construct Workforce Camp	Fully Complied	N/A	N/A	N/A	Fully Complied	Partially Complied	Fully Complied	Fully Complied	Fully Complied

Annex-2: Detailed Environmental and Social Safeguards Monitoring Checklist

S.N.	Environmental Components Related to Project Activities	Demonstration Area at Kusunti (KUKL/DNI/01/02)	Pilot Project at Kalopool (KUKL/DNI/01/03)	Nakkhu Khola Improvement Works Package (KUKL/DNI/02/05)	Construction of 150 m ³ Reservoir & related works at Sundarjal (KUKL/DNI/02/07A)	Construction of Water Treatment Facility, RCC Reservoir & Related Civil Works at Koteswor (KUKL/DNI/02/15-B)	Cluster Removal at Gokarna (KUKL/DNI/02/08)	Rehabilitation & Development of Tube wells (KUKL/DNI/02/06-B)	Transmission Main From Sundarjal to Mahankalchaur (KUKL/BDS/01/01)	Sewerage Network Improvement Works Buddhanagar KUKL/WSI/01/03
* 7.	Employ local and affected people as per EMP	N/A	N/A	N/A	Partially Complied	N/A	N/A	N/A	N/A	N/A
8.	Baseline photographs of project area (including buildings and temporary sites) and river water quality	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied
9.	Prepare traffic plans	Largely Complied	Partially Complied	Largely Complied	N/A**	N/A**	Partially Complied	N/A	Largely Complied	Partially Complied

* Contractors did not employ local people as per EMP because of lack of the labors with required skill set in the area where the projects are being implemented except in case of sundarjal where local were employed to dig the trench, but to do all other works required skill set was missing in the locals.

** Both Sundarjal and Koteswor project are being implemented in the land owned by KUKL so there will be very little traffic disturbance.

Annex-2: Detailed Environmental and Social Safeguards Monitoring Checklist

Status (Fully Complied/ Largely Complied/ Partial Complied/ / Not Complied/ Not Applicable)										
S.N.	Environmental Components related to Project Activities	Packages								
		Demonstration Area at Kusunti (KUKL/ DNI/01/02)	Pilot Project at Kalopool (KUKL/ DNI/01/03)	Nakhu Khola Improvement Package (KUKL/ DNI/02/05	Construction of 150 m ³ Reservoir & related works at Sundarjal (KUKL/ DNI/02/07A)	Construction of Water Treatment Facility, RCC Reservoir & Related Civil Works at Koteswor (KUKL/ DNI/02/15-B)	Cluster Removal at Gokarna (KUKL/ DNI/02/08)	Rehabilitation & Development of Tube wells (KUKL/ DNI/02/06-B)	Transmission Main From Sundarjal to Mahankalchaur (KUKL/ BDS/01/01)	Sewerage Network Improvement Works Buddhanagar KUKL/WSI/01/03
B 1.		Construction Phase: Physical Environment								
1.	Adopt cut and fill principle during earthworks	N/A	N/A	N/A	Fully Complied	Fully Complied***	N/A	N/A	N/A	N/A
2.	Disposal of excess materials in designated area	Partial Complied	Partial Complied	Partial Complied	Largely Complied	Largely Complied	Partial Complied	Largely Complied	N/A	Partial Complied
3.	Apply Bio-engineering for controlling of erosion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4.	Avoid bed Quarrying	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5.	Avoid Dumping of waste in the river	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	N/A	Largely Complied	Largely Complied
6.*** *	Construction of toilets in the camps project site	Fully Complied	N/A	N/A	N/A	N/A	N/A	Largely Complied	Complied	N/A
7.	Proper storing of materials in the project area	Fully Complied	Largely Complied	Largely Complied	Fully Complied	Fully Complied	Largely Complied	Largely Complied	Fully Complied	Largely Complied

*** In the case of Koteswor, it is only applicable for the construction of reservoir.

**** Kusunti has constructed toilets for the workers, however in the case of Sundarjal and Koteswor there are already existing toilets that the workers are utilizing.

Annex-2: Detailed Environmental and Social Safeguards Monitoring Checklist

Status (Fully Complied/ Largely Complied/ Partial Complied/ / Not Complied/ Not Applicable)										
S.N.	Environmental Components related to Project Activities	Packages								
		Demonstration Area at Kusunti (KUKL/ DNI/01/02)	Pilot Project at Kalopool (KUKL/ DNI/01/03)	Nakkhu Khola Improve ments Package (KUKL/ DNI/02/05)	Construction of 150 m ³ Reservoir & related works at Sundarjal (KUKL/ DNI/02/07A)	Construction of Water Treatment Facility, RCC Reservoir & Related Civil Works at Koteswor (KUKL/ DNI/02/15-B)	Cluster Removal at Gokarna (KUKL/ DNI/02/08)	Rehabilitation & Development of Tube wells (KUKL/ DNI/02/06-B)	Transmission Main From Sundarjal to Mahankalchour (KUKL/ BDS/01/01)	Sewerage Network Improvement Works Buddhanagar KUKL/WSI/01/03
8.	Safe handling of toxic wastes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9.	Proper dumping of excess materials	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Partially Complied
10.	Proper Quarrying operations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11.	Precautions for Air, Noise and Vibration control									
a.	Movement of Vehicles	Partially Complied	Partially Complied	Partially Complied	N/A	N/A	Partially Complied	Partially Complied	Partially Complied	Partially Complied
b.	Earthworks	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied
c.	Stockpiling of construction waste and construction materials	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied
d.	Operation of construction machineries and equipment including crusher	Largely Complied	Partial Complied	Fully Complied	Fully Complied	Fully Complied	Partial Complied	Fully Complied	Fully Complied	N/A

Annex-2: Detailed Environmental and Social Safeguards Monitoring Checklist

Status (Fully Complied/ Largely Complied/ Partially Complied/ / Not Complied/ Not Applicable) Packages										
S.N.	Environmental Components related to Project Activities	Demonstration Area at Kusunti (KUKL/ DNI/01/02)	Pilot Project at Kalopool (KUKL/ DNI/01/03)	Nakkhu Khola Improvements Works Package (KUKL/ DNI/02/05)	Construction of 150 m ³ Reservoir & related works at Sundarijal (KUKL/ DNI/02/07A)	Construction of Water Treatment Facility, RCC Reservoir & Related Civil Works at Koteshwor (KUKL/ DNI/02/15B)	Cluster Removal at Gokarna (KUKL/ DNI/02/08)	Rehabilitation & Development of Tube wells (KUKL/ DNI/02/06-B)	Transmission Main From Sundarijal to Mahankalchaur (KUKL/ BDS/01/01)	Sewerage Network Improvement Works Buddhanagar KUKL/WSI/01/03
e.	Horn honking	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied	Fully Complied
B2.	Construction Phase: Biological Environment									
1.	Vegetation clearance for construction of project structures	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2.	Fuel wood and NTFPs collection by workforce and vegetation clearance construction activities	Largely Complied	Largely Complied	Largely Complied	Fully Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied
B3.	Construction Phase: Socio-Economic Environment									
1.	Compensation and rehabilitation as per RP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Largely Complied	N/A

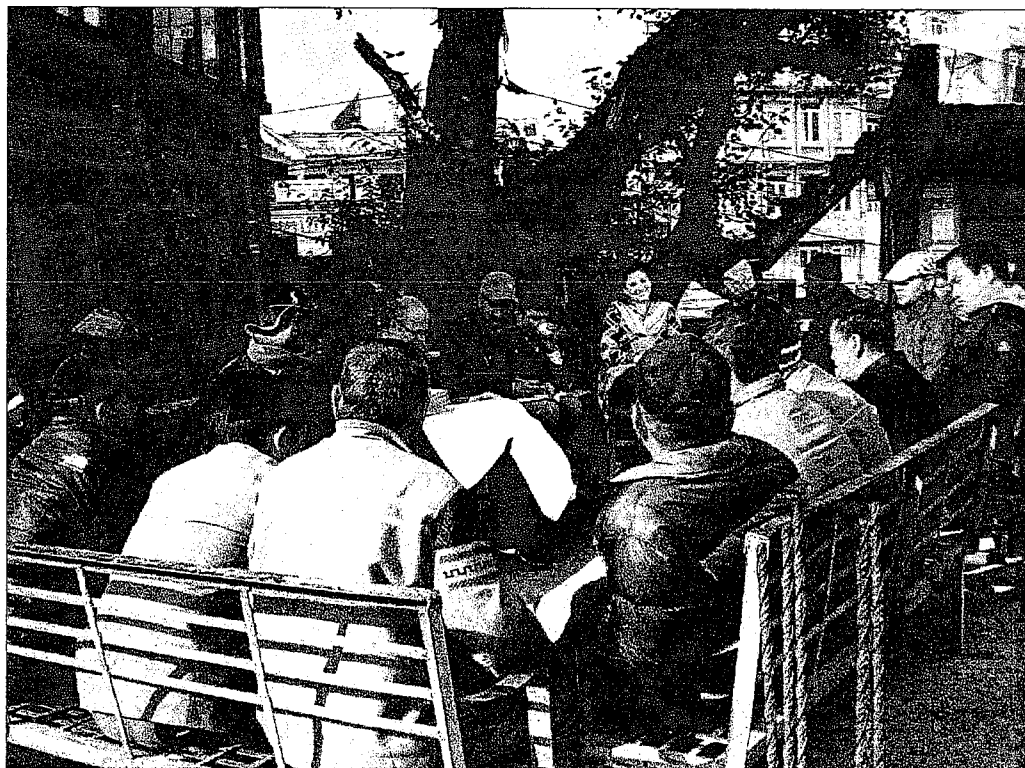
Annex-2: Detailed Environmental and Social Safeguards Monitoring Checklist

Status (Fully Complied/ Largely Complied/ Partially Complied/ / Not Complied/ Not Applicable)										
Packages										
S.N.	Environmental Components related to Project Activities	Demonstration Area at Kusunti (KUKL/ DNI/01/02)	Pilot Project at Kalopool (KUKL/ DNI/01/03)	Nakku Khola Improvements Package (KUKL/ DNI/02/05)	Construction of 150 m ³ Reservoir & related works at Sundarijal (KUKL/ DNI/02/07A)	Construction of Water Treatment Facility, RCC Reservoir & Related Civil Works at Koteshwor (KUKL/ DNI/02/15-B)	Cluster Removal at Gokarna (KUKL/ DNI/02/08)	Rehabilitation & Development of Tube wells (KUKL/ DNI/02/06-B)	Transmission Main From Sundarijal to Mahankalchaur (KUKL/ BDS/01/01)	Sewerage Network Improvement Works Buddhanagar KUKL/WSI/01/03
2.	Reinstatement of damaged community services and infrastructures	Fully Complied	Fully Complied	Fully Complied	N/A	N/A	Fully Complied	N/A	N/A	N/A
3.	Avoid influx of outside workforce, money and unwanted activities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4.	Project activities relating to health and safety issues at work areas	Largely Complied	Partial Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied	Largely Complied
5.	Avoid dislocation of archeological artifacts, if any	N/A	Largely Complied	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6.	Proper traffic management at construction sites	Largely Complied	Partial Complied	Largely Complied	N/A	N/A	Largely Complied	Largely Complied	Largely Complied	Partial Complied

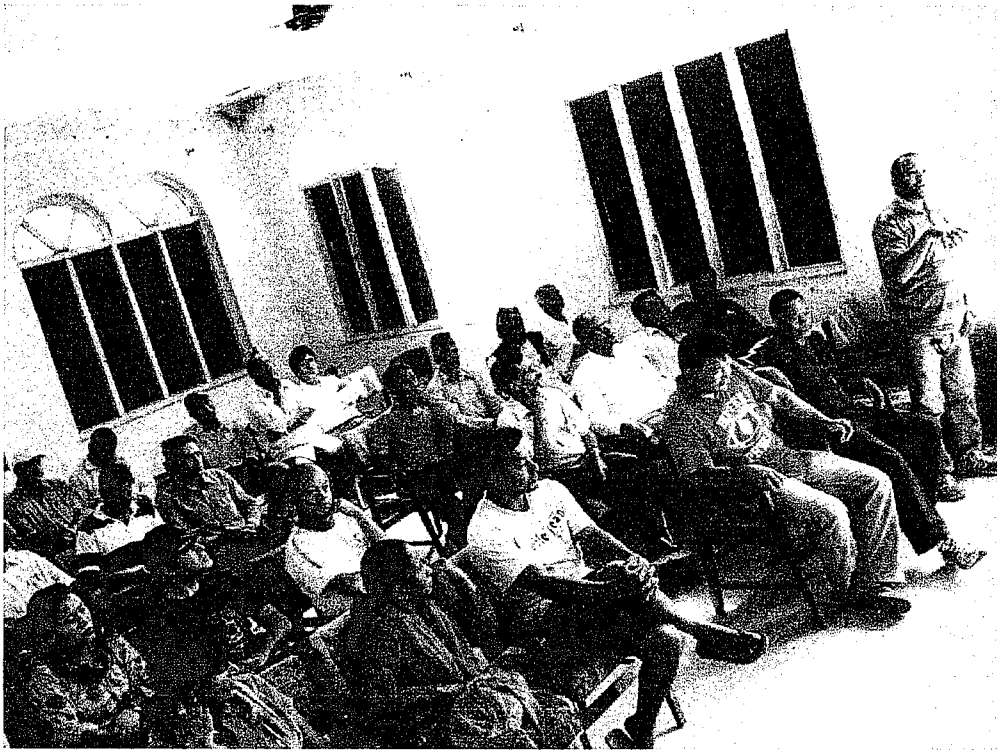
Annex: 3: Photographs



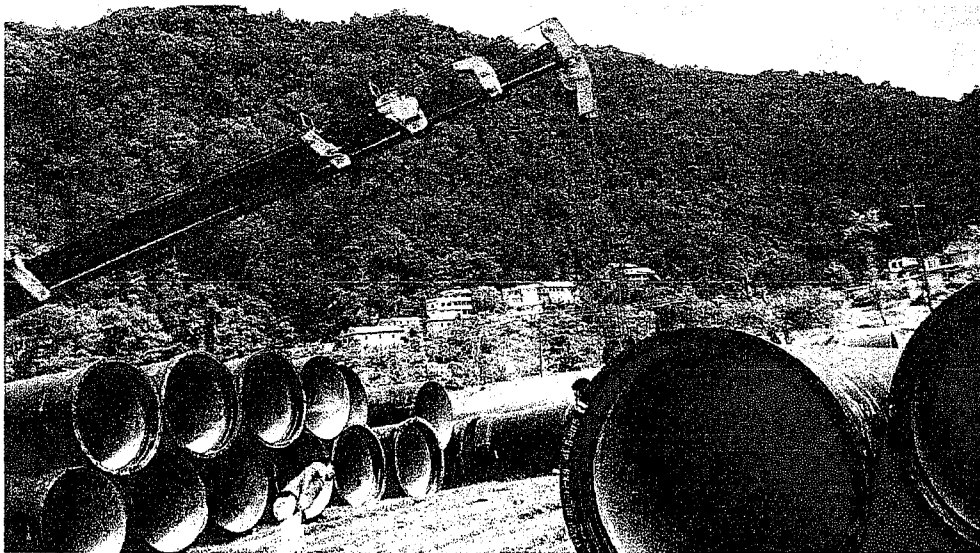
Construction of Retaining Wall @ Nakkhu Site



Meeting with locals @ Jorpati VDC on 9 January 2012



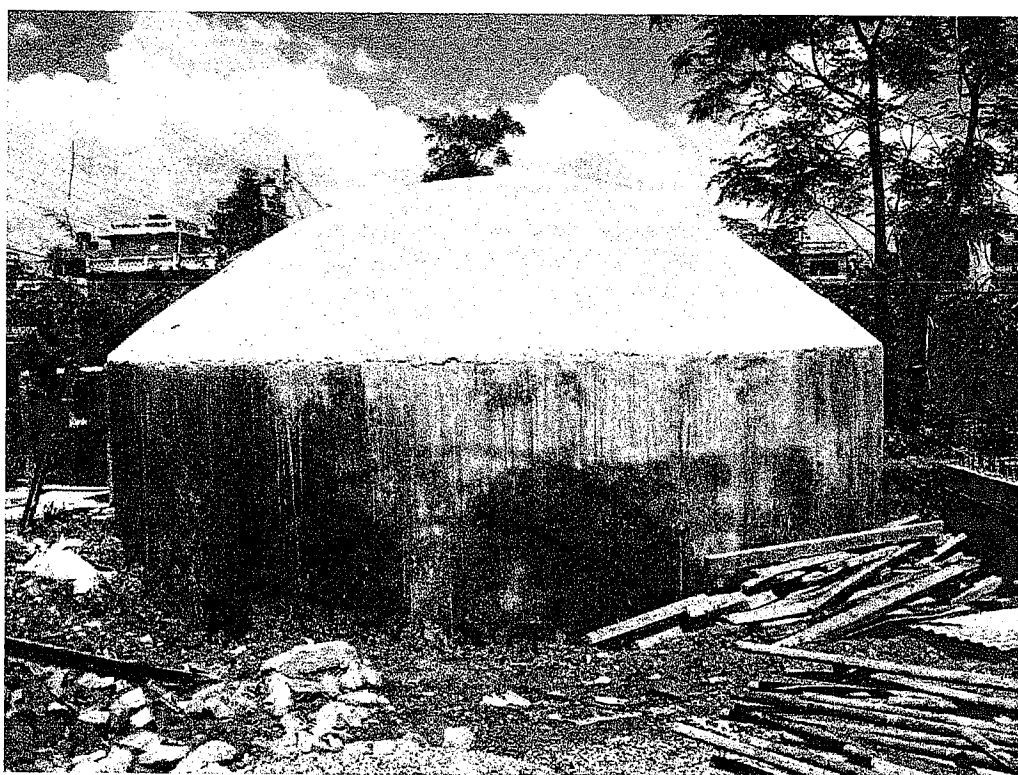
Meeting for informing public of BDS works @ Nayapati VDC on 13 June 2012



Pipe Stock Yard for BDS Project @ Sundarijal Water Treatment Plant



Meeting with the locals in the presence of CDO Officer of Lalitpur @ Nakkhipot Reservoir



Completed RCC Reservoir at Nakkhipot



Field Visit by ADB Mission on 11 June 2012



Trench digging works ongoing at Jayabageshwori Site (Kalopool Project)



Labors preparing for Trench digging at Kusunti



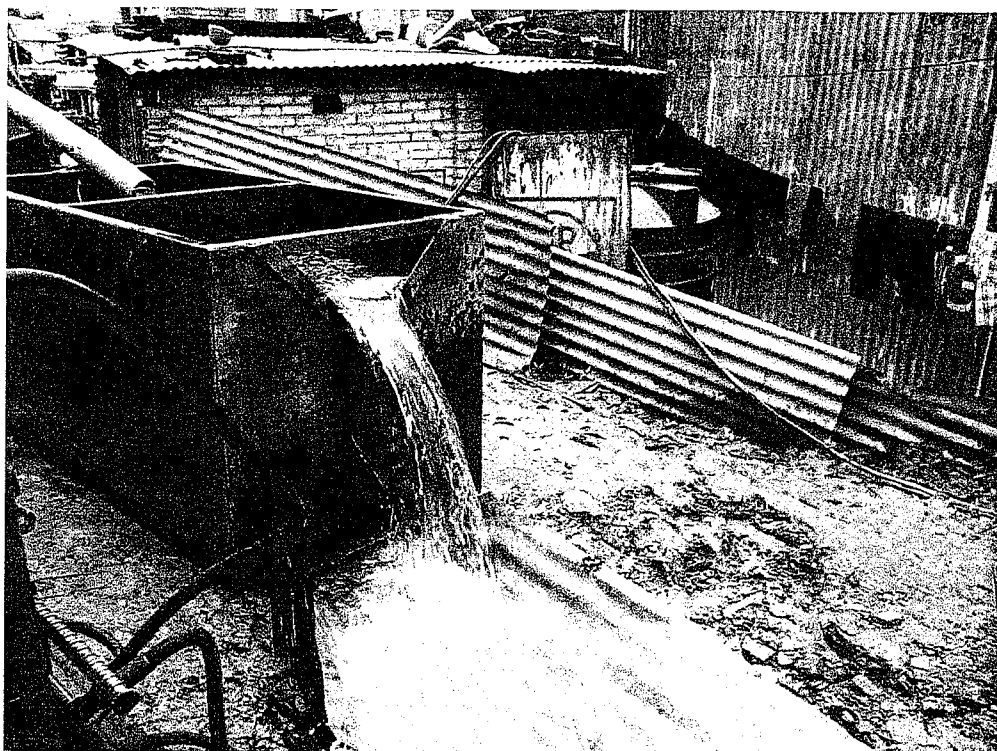
Signs for informing the public about the ongoing works at Kalopool



Meeting with locals and Users' Committee at Arubari VDC regarding BDS Project.



Meeting with locals and Users' Committee regarding Kusunti Project.



Drilling site at Dhumbarahi



Construction of Manholes at Buddhanagar

