

## Government of Nepal, Melamchi Water Supply Sub-Project 2 Project Implementation Directorate/Kathmandu Upatyaka Khanepani Limited

*Improvements in water, sanitation and sewerage management  
Lay the base for a developed society; make a city beautiful and efficient*

### Appeal from Project Implementation Directorate



Pipeline installation working at Jawalakhel

Project Implementation Directorate, Kathmandu Upatyaka Khanepani Limited is accelerating its work to distribute water from Melamchi to the households in Kathmandu Valley proportionately and scientifically. Efforts are underway to bring Melamchi water to the Water Treatment Plant (WTP) in Sundarijal by September 2017 as per the revised target and distribute to consumers by improving distribution system. Construction of Service Reservoir Tanks (SRT), Bulk Distribution System (BDS), Distribution Network Improvement (DNI) and distribution of taps is under way. The infrastructures are being constructed with long term vision as it is a project of

national glory. Pipelines are being installed at various places inside Ring Road for water supply to each house in Kathmandu. The directorate is striving to minimize inconveniences in vehicular movement and pedestrians caused by the pipeline installation by working in coordination with the Department of Roads (DoR), Kathmandu Metropolitan City and Lalitpur Sub-metropolitan City. Roads are being reinstated immediately after pipeline installation. The directorate apologizes with Kathmandu residents for the inconveniences in the process and appeals everyone to support the endeavour of solving the Valley's water crisis.

### Activities of the Directorate

The directorate is working towards improving urban environment through sustainable and reliable service by upgrading water supply infrastructure in the Valley. It is expanding and improving distribution network to supply Melamchi water.

Out of 670 km. of pipelines initially planned for water supply in the valley, 370 km. have been installed as of June 2016. Similarly, out of 51 km. Pipelines planned for Bulk Distribution System (BDS), 16 km. have been completed till now. Out of 9.6 km. BDS pipeline required for Sundarijal to distribution network, total 9.5km. pipelines have been installed. High Density Polythene Pipes (HDPE-100) are being installed through electro-fusion technology to minimize water leakage.

The directorate is installing BDS, Distribution Network Improvement (DNI) and District Metering Area (DMA) for water supply in Kathmandu valley. The project area is divided into four packages and 11 DNIs to improve the distribution network. Each of the eleven DNIs are further divided into two DMAs. Within each DMA, a Bulk Meter will be installed for a Tole (neighbourhood) with 500 to 2000 households, and each household will have a separate meter. This system will enable the calculation of exact amount of water consumed. Along with these construction works, awareness raising programs are being carried out through Community Awareness and Participation Consultant (CAPC) to inform the people and reduce the impacts of the project in society and environment.



## Projects Under the Project Implementation Directorate

Name of the Project	Date of Agreement	Total Cost (in USD millions)
Kathmandu Valley Water Supply and Sanitation Project (Loan support by Asian Development Bank 1820)	December 2000	44.02
Kathmandu Valley Water Supply Improvement Project (Loan support by Asian Development Bank 2776)	February 2012	130
Kathmandu Valley Wastewater Management Project (Loan support by Asian Development Bank 3000)	July 2013	136
Kathmandu Valley Water Supply Improvement Project(Additional Financing) (Loan support by Asian Development Bank 3255)	December 2015	135

### Directorate Activities

#### Briefing to Departmental Secretary about the Project



**Dr Sanjaya Sharma, Secretary of Ministry of Water Supply and Sanitation taking information about the project.**

Secretary of Nepal Government, Ministry of Water Supply and Sanitation Dr Sanjaya Sharma visited the Project Implementation Directorate on June 5, 2016 and took stock of the work progress and discussed various aspects of the directorate and KUKL. Project Director Tiresh Prasad Khatri and Deputy Director Anil Bhadra Khanal briefed the secretary through a presentation. Likewise, KUKL General Manager, Dr Mahesh Bhattarai briefed the secretary about various aspects of KUKL including its distribution system, physical and financial aspects, and human resources.

#### Observation Visit for Journalists



**Project Director Mr. Tiresh Prasad Khatri, Project Implementation Directorate, briefing the journalists about the Directorate's work during the field visit.**

The directorate organized a press briefing to inform the journalists about the directorate's work to supply water to Kathmandu households and took them to the construction sites for observation of the ongoing construction works of Melamchi Water Supply Project on June 15, 2016. Project Director Tiresh Prasad Khatri and Deputy Director Anil Bhadra Khanal informed the journalists on the progress of the project and requested them to disseminate accurate information to the people. Directorate spokesperson Lila Prasad Dhakal informed the journalists about various aspects of water supply during the field visit. The team of journalists had observed and taken information about pipe-laying activity in front of Nepal Telecom Office in Jawalakhel, and the under-construction SRT in Khumaltar and Aarubari. Likewise, the journalists observed the under-construction Water Treatment Plant in Sundarijal and the main tunnel of Melamchi project and interacted with spokesperson Dhakal and Deputy Executive Director of Melamchi Water Supply Development Board, Jyoti Kumar Shrestha on work progress, challenges and target of the project.

### School Awareness Program

School awareness programs are conducted through Community Awareness and Participation Consultant (CAPC) under the Directorate with an objective to inform teachers and students about the project, importance of water and relation between water and health. Schools within the water supply infrastructure construction areas were included in the program. More than 6 thousand teachers and students from 76 public schools have been informed about drinking water, health and sanitation and various aspects of Melamchi Water Supply Project by May 2016.



**School Awareness Programme organized in Mahendra Bhawan Secondary School, Gyaneshwar**

### Coordination Meeting with Stakeholders

The project has been hosting regular consultation meetings with stakeholders in the course of coordination with local residents in its working area. The meetings are organized with an objective to provide timely information about construction to the locals, and reduce public grievances by increasing their participation. Special attention has been taken for the continuity of essential services like telephone, electricity lines and water supply with due coordination with relevant agencies in case some services are disrupted. Regular coordination is maintained with traffic police to minimize the inconvenience to pedestrians and vehicles. Until May 2016, 244 such meetings have been conducted so far.

### Coordination with Tole and Lane Organizations (TLO)



**TLO meeting of DNI 8, ward no. 2, Lalitpur sub-metropolitan city**

The directorate is facilitating the formation of Drinking Water Tole and Lane Organizations under the Distribution Network Improvement in the project area. Local participation is expected to grow through such groups. So far, ten such TLO's have been formed. PID is promoting participation of women, Dalits and backward community in such groups. The group acts as a bridge between the directorate and the locals by disseminating technical and social messages about the project to the locals and helping to solve the local grievances. Total 154 local consumers have been affiliated to such groups so far.



## Coordination Between the PID and the Department of Roads (DoR)

Project Implementation Directorate and the Department of Roads (DoR) signed a Memorandum of Agreement (MoA) for reinstatement of roads after pipeline installation for water supply network on June 20, 2016. Director General of Department of Roads Madhav Kumar Karki and Project Director of the Project Implementation Directorate Tires Prasad Khatri signed the MoA in presence of Secretary of Ministry of Physical Infrastructure and Transport Arjun Kumar Karki and Secretary of Ministry of Water Supply and Sanitation Dr Sanjaya Sharma.

The MoA ensures budget for reinstatement of roads maintained by Department of Roads after the pipeline installation. As a result of the MoA, the directorate need not take separate permissions from DoR to dig and install pipelines on 103 kilometres of roads maintained by DoR inside Kathmandu valley (Bansbari-Narayan Gopal Chowk-Panipokhari-Lainchaur section, Chabahil Chowk-Gaushala-New Baneshwor- Maiteeghar section, Thapathali-Jawalakhele-Ekantakuna sections). The DoR will immediately start the process for reinstating the roads where pipes were laid. The existing standard/quality of the roads will be maintained while reinstating.

A coordination committee led by joint-secretary at the Construction and Transport Division of the Ministry of Physical Infrastructure and Transport, and comprising of Director of the Project Implementation Directorate and Director of the Central Regional Road Directorate has been formed for the execution and facilitation of the MoA. The Ministry of Finance was informed while signing the MoA.



Mr. Madhav Kumar Karki, Director General of Department of Roads and Mr. Tires Prasad Khatri, Project Director of Project Implementation Directorate exchanging the Memorandum of Agreement for the reinstatement of roads after laying the pipelines.

## Coordination with Municipalities



Pipeline installation laying for Bulk Distribution System in Gwarko.

The Directorate has made a special agreement with Kathmandu Metropolitan City and Lalitpur Sub-metropolitan City for immediate reinstatement of the roads after installing the pipelines. The directorate works together with both the metropolitan and sub-metropolitan offices to reinstate the roads to their previous conditions after the conclusion of pipeline installation.

## Kathmandu Valley Wastewater Management Project

The directorate is working on Wastewater Treatment and Sewerage Management with the loan support from Asian Development Bank. Wastewater Treatment Plants are being installed in Guhyashwari, Sallaghari, Kodku and Dhobighat. The existing treatment plant in Guhyashwari will be upgraded and a new treatment unit will be added.

The design of the treatment plants is environment friendly. It ensures greenery in the area and prevents stench from the wastewater by covering the initial unit. There is a plan to generate electricity from treatment plants in Guhyashwari and Dhobighat. Likewise, sewerage management-lines are being installed in Hanumante and Manohara river banks. Branch sewerage lines are also being installed.



Structure of Wastewater Treatment Plant to be constructed in Guhyashwari.

## SCADA system in Water Supply

Supervisory Control and Data Acquisition (SCADA) system will be adopted to supply Melamchi water to consumers. This system monitors and controls the entire water supply system through a centralized control mechanism. It helps water administration by providing quick and accurate information. The system informs the control room about valve opening, closing and leakages. This system is being introduced to automate water supply.

SCADA system is used in many sectors including infrastructure and industrial areas. Through this system information ranging

from water quality in the distribution system from source to the tap and flow of water will be received at the control room. This system can open and close valves installed for water supply at various places in the city and determine the quantity of water to supply from such valves. Meters installed at the valves can also be read automatically. The directorate is preparing to install 837 sensors in Bulk Meters of District Metering Area and Valves in different areas. The directorate is holding discussions at various phases about the technical aspects of SCADA system.



Safeguard Unit Chief Rajiv Joshi in field inspection in Gwarko BDS area.

## Community Meeting

The directorate organizes regular community-level meetings in various areas to promote local participation, listen to their grievances and address them in order to prevent and solve possible obstructions in the project. So far 467 such meetings have been held.

## Orientation on Social Safeguard

The directorate organized an Orientation Workshop on June 17 to discuss social safeguards in project under Distribution Network and Bulk Distribution System. Chief of Safeguard Unit, Rajiv Joshi, said the orientation was organized for effective Occupational Safety and Health related issues in construction sites as well as for effective Social Mobilization. He added the Safeguard Checklist should be strictly followed. Presenting a working paper Team Leader of Community Awareness and Participation Consultant (CPAC) Dr Shambhu Kattel explained the concept of social safeguard, implementation phases, existing obstacles and activities under subproject 2. After that, the participants discussed and agreed to implement social safeguard in the project uniformly.

## Where are the Bulk Distribution Systems and Reservoirs being Constructed in the Valley?

Package	Reservoir	Pipe laying areas
Package 0		Sundarijal, Nayapati, Gokarna, Baluwa, Jorpati, Mahankalchaur
Package 1	Aarubari (8500 cubic meter) Mahankalchaur (8000 cubic meter) Bansbari (9500 cubic meter)	Mahankalchaur to Chabahil Chowk to Narayangopal Chowk to Bansbari SRT, Chabahil Chowk to Gaushala Chowk, Kalanki (Sita Petrol Pump) to Balkhu, Ekantakuna to Talchhikhel Chowk, Mahankalchaur to Aarubari SRT
Package 2	Maharajgunj (7500 cubic meter) Khumaltar (9500 cubic meter)	Narayan Gopal Chowk to Machhapokhari to Balaju SRT, Kalanki (Makalu Petrol Pump) to Khasibazar to Balkhu to Ekantakuna, from Talchhikhel Chowk to Khumaltar SRT, Talchhikhel Chowk to Balkumari to Tinkune to Gaushala Chowk from Thapathali to Maitighar to Anamnagar SRT, Minbhavan Chowk to Maitighar, Minbhavan Chowk to Tinkune Chowk, Minbhavan Chowk to Minbhavan SRT
Package 3	Balaju (7000 cubic meter)	From Balaju Machhapokhari to Balaju Chowk to Kalanki, from Kalanki to Ekantakuna, from Balaju Chowk to Nayabazar to Lainchaur, from Lainchaur to Jamal to Tripureswor to Thapathali, from Thapathali to Pulchowk to Ekantakuna.
Package 4	Tigni (3000 cubic meter) Katunje (6000 cubic meter) Kritipur (6000 cubic meter)	From Gokarna to Bagmati River corridor to Bode water treatment plant to Tigni, from Tigni to Bode to Nikosara to Pandubazar to Katunje, from Sita Petrol Pump to ringroad, Tanglafanta to Kritipur.

## Details of Distribution Network Improvement in Kathmandu Valley

Package	DNI Pipe laying areas
Package 1	<b>DNI-1:</b> Inside areas of Lainchaur, Tangal, Bagawatibahal, Naxal, Dillibazar, Singha Durbar Gate, Maitighar, Thapathali to Bagmati River corridor, Teku, Bishnumati corridor and Newroad. <b>DNI-2:</b> Inside areas of Dhobikhola, Gaushala, Bhimsengola, Singha Durbar, Putalisadak, Dillibazar, Bhatbhateni, Haandigaun and Ratopul. <b>DNI-6:</b> Inside areas of Pulchowk, Mangalbazar, Gwarko, Satdobato, Mahalaxmistan, Ekantakuna and Jawalakhel.
Package 2	<b>DNI-3:</b> Inside areas of Setopul, Purano Baneshwor, Tilganga, Sinamangal, Tinkune, Madan Bhandari Path, New Baneshwor, Bijuli Bazar, Dhobikhola. <b>DNI-4:</b> Areas of Anamnagar Tyanki, Maitighar, Dhobikhola, Bijulibazar, Maternity Hospital Road, Thapathali Chowk and Maitighar Chowk. <b>DNI-5:</b> Inside areas of Kupandole, UN Park, Shankhamul, Manohara Khola, Balkumari, Ringroad, Gwarko, Mangalbazar, Pulchowk, Hotel Himalaya, Jwagal Chowk and all areas within Kupandole. <b>DNI-7:</b> Areas within Balaju Chowk, Sorakhutte, Lainchaur, Kantipath, New Road, Hanumandhoka, Bishnumati bridge, Endrayanti temple area and all areas inside Balaju Chowk.
Package 3	<b>DNI-8:</b> Areas within Tekudovan, Kupandole, Kandeabastan, Pulchowk, Jawalakhel, Ekantakuna, Bhanimandal, Ringroad, Sanepa bridge, Bagmati River corridor to all areas within Tekudovan. <b>DNI-9:</b> Areas within Bagmati River-Tinkune, Koteswor, Jadibuti, Manohara Khola, Shankhamul Dovan area. <b>DNI-10:</b> Areas within Banasthali Chowk, Balaju Chowk, Bishnumati bridge, Dallu, Bhagawanpau and areas within Banasthali Chowk <b>DNI-11:</b> Areas within Kalanki, Soltimode, Kalimati, Tekudovan, Balkhu, Ring road and all areas within Kalanki.
Package 4	<b>DNI-</b> A, B, C, F, G, H, I, J, K All areas not covered by the DNI 1-11. A- Chhauni-Bafal areas, B- Swoyambhu area, C- Chamati west part, F- Gongabu Buspark area, Myepi, Naya Bazar G- Samakhusi, Ranibari, Lazimpat and some parts of Panipokhari, H- Panipokhari, Baluwatar area, I- Narayangopal Chowk to Nirmal Niwas, areas of Chinese and Russian embassy, Bishalnagar, Tundaldevi, J- Shankha Park, Dhumbarahi, Handigaun, Sukedhara and some areas of Bishalnagar, K- Tahachal and Soltimode area.

Ministry of Water Supply and Sanitation and Project Implementation Directorate/Kathmandu Upatyaka Khanepani Limited apologizes for inconveniences faced by the general public in the course of implementation of the mega-project and appeals for everyone's support in this endeavour.

**For grievances and feedback**

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