

## Message from PID

**M**elamchi Water Supply Project-Phase I, a project of national pride, is expected to soon start delivering water to the Kathmandu Valley. Construction of a 27.6-km tunnel, a crucial component of the project that will convey water from the source to the Water Treatment Plant (WTP) at Sundarjial, is at the last leg.

Water received from the tunnel will be treated at WTP constructed at Sundarjial, which has a current capacity to treat 85 million litres of water per day (MLD). This will soon be augmented to 170 MLD treatment capacity, when second phase of WTP, currently under construction, is completed by July, 2018 as per the contract. Water treated at WTP will be carried to distribution zones for supply through a Bulk Distribution System (BDS) consisting of 10 Service Reservoir Tanks (SRTs), a 77-km BDS pipeline and a 670-km distribution system pipeline. Water from these reservoirs will feed the network of primary, secondary and tertiary distribution lines to supply to customers. Large-scale rehabilitation and improvement of the network is being undertaken for efficient water distribution, with the target of installing 85,000 household taps.

With the project entering the operation phase, Project Implementation Directorate (PID) and other government agencies, policymakers, contractors, development partners and experts have started to zero in on its smooth commissioning and plugging such gaps, if any, to ensure efficient distribution of water to consumers with limited disturbances.

PID has been holding a series of interactions by involving the line ministry, line agencies, contractors and experts to identify and mitigate any risks that may interfere with smooth operation of the project. The process has allowed for a number of critical issues to be identified and resolved. It is expected to help in the formulation of a strategy to deal with risks associated with project commissioning. This issue of *Kathmandu Paani* has also covered diverse issues such as progress in construction of drinking water and wastewater components, and public awareness initiatives.

At this stage, let's not forget that commissioning of a system of this scale requires careful planning and rigorous checking of pipelines to ensure that pressure tests and water tightness standards are met, faulty joints and appurtenances are timely identified and repaired/replaced, and the flow in the pipeline (with its numerous valves) is calibrated to achieve the design flow balance. This may result in inconveniences in some areas as the works progress. PID requests all to cooperate for a smooth execution of the transformative project.

## Improvements in water, sanitation and sewerage management Set to transform whole of Kathmandu Valley



■ PID's Project Director Tires Prasad Khatri, ADB's Urban Development Specialist Vivian Castro-Wooldridge and PID's Consultant Engineer Dhruva Regmi inspecting Melamchi project infrastructure, at Sundarjial.

## Work Progress of the Directorate Drinking water components

**P**roject Implementation Directorate (PID) is working hard to supply water from the Melamchi river to people living in the Kathmandu Valley. As part of this endeavour, replacement of old and dysfunctional pipe water distribution infrastructure with a new and efficient distribution system is being undertaken. Construction of 10 SRTs is going on smoothly at nine places.

PID has installed approximately 618 km of Distribution Network Improvement (DNI) pipeline out of the 730 km, whereas it has completed 42,000 household connections out of the intended 85,000 connections. Under BDS packages, pipeline installation along busy road sections is about

to be completed. BDS packages require installing a pipeline having total length of 77 km out of which PID has already installed about 65 km of pipeline.

PID has made its best efforts, within the available resources and means, to ensure that the vehicles and the public face minimum inconvenience.

An elaborate Environment Management Plan (EMP) was prepared to this effect and is being adhered to. PID is reinstating the road sections that were dug for laying the pipes at the earliest possible time within its mandate in collaboration with the Department of Roads (DoR), for other areas, where DoR has been provided with funds for reinstatement.

# Kathmandu Valley Wastewater Management Project

When the Kathmandu Valley Wastewater Management Project was launched in 2013 with loan assistance from the Asian Development Bank (ADB) and OPEC Fund, it was anticipated that the improved supply of water upon completion of the Melamchi Water Supply Project (MWSP) may lead to an increase in the volume of wastewater, which, if left unmanaged, could further pollute the river system.

The idea was to systematically collect the wastewater, rejuvenate water bodies and make a positive impact on public

health and the environment by releasing wastewater treated at wastewater treatment plants (WWTPs). This project, with an estimated budget of Rs 14 billion, partially covers 18 municipalities of the Kathmandu Valley. Under this project, installation of interceptors is currently underway on the banks of Manohara, Hanumante and Khasyangkhusung rivers. This project is also installing about 45 km of interceptors along the banks of these rivers and streams.

In parallel, High Powered Committee for Integrated Development of the Bagmati Civilization (HPCIDBC) has also

installed interceptors along Bagmati and Bishnumati rivers and is installing some wastewater collection laterals. Wastewater collected from households will be carried and transferred to WWTPs, which are being constructed under the scope of this project in Sallaghari of Bhaktapur, Kodku (Balkumari) and Dhobighat of Lalitpur, and Guheshwori of Kathmandu, for treatment.

Wastewater collected and treated at these WWTPs will be released into these rivers and streams. PID expects this initiative to contribute positively to environmental well-being and public health.

## Status of progress in the construction of wastewater treatment components

Contract Package	Contractor	Contract Amount in Million NRs	Major Works	Starting Date	Completion Date	Progress till Date	
						%	Works
Rehabilitation and Expansion of Wastewater Treatment Plant at Guheshwori	VA Tech Wabag Ltd, India	2,558.32	Rehabilitation of existing (16.2 MLD) and construction of new (16.2 MLD) WWTPs	August 1, 2016	July 22, 2018	41	Ongoing construction of different units
Construction of Wastewater Treatment Plants at Sallaghari, Kodku and Dhobighat	Safbon Water Service (Holding) Inc, China	3,920.62	Construction of WWTPs at Sallaghari (14.2 MLD), Kodku (17.5 MLD) and Dhobighat (37 MLD)	May 7, 2017	November 6, 2019	-	Basic design and site preparation works
Construction of Intercepting Sewerage System along the Hanumante river	GIETC-Lama-Raman JV, China-Nepal	636.04	25.33 km of interceptor sewers along the banks of Hanumante	May 3, 2016	April 23, 2018	10	5,957 m of Hume pipe laid at different sections along river banks
Extension and Construction of Intercepting Sewerage System along the Manohara river	ZIEC-Sharma-BKOl JV, China-Nepal	758.66	11.36 km of interceptor sewers along the banks of Manohara	November 2, 2016	October 23, 2018	4	1,273 m of Hume pipe laid at different sections along river banks
Construction of Sewer Collectors along the Khasyangkhusung river	Lama-Raman-Golden Good JV, Nepal	411.23	7.68 km of sewer collectors along the banks of Khasyangkhusung	December 15, 2017	June 8, 2019	-	At mobilization stage

## Increased focus on ensuring a smooth commissioning

With the Melamchi Water Supply Project (MWSP)-Phase I nearing completion, PID and other government agencies, development partners, policymakers and contractors are focusing increasingly on locating any gaps that may adversely interfere with successful commissioning of the project, and finding early solutions to abate or mitigate such threats.

Taking this objective into account, PID on October 27, 2017 organised a daylong workshop on risk management in Kathmandu to (a) jointly assess and prioritize possible risks, and (b) start a process for preparation of a risk management plan for smooth commissioning of the Melamchi project to ensure that water flows from

headworks to consumers' taps as soon as possible. Minister for Water and Sanitation Mahendra Yadav inaugurated the workshop.

Participated by over 40 professionals representing the Ministry of Water Supply and Sanitation, Melamchi Water Supply Development Board, PID, KUKL, ADB, consultants and contractors, the meeting jointly looked at the inherent, emerging and future risks at components of the project such as the Source, Melamchi Tunnel, WTP, BDS and SRTs, DNI, institutional and management readiness of KUKL, including associated interface issues.

Previously, on October 18, 2017, officials from the Ministry of Water Supply and Sanitation, PID/KUKL, CASSC, MWSP,

contractors' representatives and ADB experts inspected Sundarijal SRT and other BDS components like Mahankalchaur SRT, the Dhobikhola washout and Panipokhari reservoir, which helped to identify possible risks at site and interfaces.

Speaking at interactions during field visits, PID Project Director Tires Prasad Khatri listed possible risks facing the MWSP and mitigation measures. ADB Consultant Suman Sharma stressed the need to enumerate the risks on priority basis and engage experienced human resources to deal with them. The risk identification and mitigation process has led to the formation of an interagency coordination committee headed by Water and Sanitation Secretary.

# ADB Deputy Director General inspects project infrastructure



■ Mukhtor Khamudkhanov, ADB's Country Director, inspecting Melamchi Project infrastructure along with Deputy Director General Diwesh N Sharan, PID's Deputy Project Directors Himesh Anand Baidhya and Divakar Prasad Dhakal, at Balaju, Kathmandu.

ADB officials, on November 1, 2017, visited the Balaju SRT as part of an inspection of components of the MWSP, together with PID officials, contractors' and consultants' representatives.

PID's Project Director Tiresh Prasad Khatri, Deputy Project Directors Himesh Anand Baidhya and Divakar Prasad Dhakal, and Design Supervision Consultant-5's Deputy Team Leader Nanda Bahadur Khanal informed ADB officials about the progress in the construction of MWSP infrastructure.

The ADB officials participating in the visit included Diwesh N Sharan, Deputy Director General at ADB's South Asia Department; Mukhtor Khamudkhanov, Nepal Country Director; and Vivian Castro-Wooldridge, ADB's Urban Development Specialist (South

Asia) and SAUW Staff.

At a press briefing after the field visit, Sharan said though there is pressure for early completion of the project, there should be no compromise on the quality of work.

Khamudkhanov said PID should closely monitor construction works and stressed the need for interagency coordination. He said the project work needs to be completed on time, but there should be no compromise on the quality of work.

On the occasion, Castro-Wooldridge highlighted ADB's role as a knowledge and development partner. She pointed the need to complete project works in a phased manner and added that ADB is committed to providing financial support for the project.

## ADB mission reviews Loan-3000

A team of officials from the ADB headquarters in Manila visited different components of the MWSP Subproject-2 and interacted with officials from the Ministry of Water Supply and Sanitation, PID, KUKL, contractors and consultants' representatives as part of review of ADB Loan-3000, towards mid-November 2017.

The review mission comprising Ninette R Pajarillaga, Environment Specialist, Urban Development and Water Division at ADB's South Asia Department; Associate Project Analyst at ADB Pamela Kristie Puspus; Safeguards Specialist at Urban Development and Water Division at ADB's South Asia Department Saswati Ghosh Belliappa; Environment Expert Anik Ajmera; was accompanied by Urban Development Specialist and SAUW Staff Vivian Castro-Wooldridge, ADB's Senior Project Officer (Infrastructure) Laxmi Sharma, ADB Consultant Suman Sharma and PID officials, contractors' and consultants' representatives, among others.

During the visit, ADB officials drew the attention of contractors towards the need to make construction sites safer by putting adequate safety measures in place. They also stressed the need to address livelihood-related issues while carrying out construction work.

## Community Awareness and Safeguards Support

A team of Community Awareness and Safeguards Support Consultant (CASSC) has been working to raise public awareness on different aspects of MWSP, on the importance of health and hygiene, environmental well-being, health and safety of workers constructing different MWSP components and people from host communities through school awareness programmes and community meetings.

From mid-July till mid-November, the team organized around 25 school awareness programmes focusing on the importance of Melamchi water, health and hygiene, and the need to keep the environment clean. Through these programmes, CASSC has reached out to around 1,350 people, mainly students and teachers.

Of the 66 grievances registered during

the reporting period, it has helped resolve 41 grievances in coordination with PID, while 25 grievances are in the process of settlement. During the same period, it organized around 40 community meetings in which 660 participants took part.

In coordination with PID, other government agencies and contractors, the consultant has been helping address inconveniences resulting from project construction work.

It has been disseminating information about the project on behalf of PID through its monthly, half-yearly, quarterly reports and the quarterly newsletter *Kathmandu Paani*. CASSC has also been disseminating important messages and notices to public through media to ensure that project construction work moves ahead smoothly.



■ PID's Deputy Project Director Himesh Anand Baidhya briefing Secretary Krishna Raj BC about different aspects of the project, in the presence of Project Director Tiresh Prasad Khatri.



# Melamchi Water Supply Project: Frequently Asked Questions

## Q1: What is the Kathmandu Valley Water Supply Improvement Project?

**A1:** The Kathmandu Valley Water Supply Improvement Project has been designed to provide safe, sufficient, reliable and sustainable water services to people in the Kathmandu Valley.

It is implemented in two phases. Phase I of the project, now underway, involves construction of the Melamchi tunnel to increase the quantity of water available for distribution. This water will be treated in a new facility at Sundarijal before reaching the transmission and distribution system that delivers water to properties in the city. Phase I also includes major initiatives to replace most of the water distribution network inside Ring Road. Phase II will start in 2019 and involve (i) increasing the supply of untreated water from Yangri and Larke rivers through the Melamchi tunnel, (ii) a major expansion of the Sundarijal water treatment plant, and (iii) additional replacement of the existing distribution network.

## Q2: When will I have more water available for my property?

**A2:** It is expected that most KUKL customers, on both the old and new network, will have more water available by the end of 2018. Some civil works still need to be completed before the additional water supply from the Melamchi valley can be added to KUKL's water supply system. The Melamchi tunnel is expected to be completed in early 2075 BS. Melamchi water will be treated at the Sundarijal water treatment plant, subjected to necessary tests and distributed to individual households through the distribution network.

## Q3: I have an old KUKL service connection and my house is not yet connected

## to the new distribution system. Will I receive water when the additional supply of water is available?

**A3:** Yes, KUKL customers still on the existing network will also experience service improvements when the new works are complete. The water transferred to the Kathmandu Valley through the Melamchi tunnel will significantly increase the volume of water available for distribution to most KUKL customers, both on the existing and new networks. The improvement of the distribution network in all of KUKL's service area is happening in a phased manner.

### Tentative schedule for Melamchi water distribution

Major tasks	Tentative date for completion
Construction of the Melamchi tunnel*	Mid-June, 2018
Transfer of water to Sundarijal WTP through Melamchi tunnel	Mid-August 2018
Testing, commissioning of BDS (Pipes with 300-1,400 mm diameter, water reservoirs having capacity of 3,000 to 9,500 cubic metres)	Mid-October, 2018
DMA-wise testing, commissioning of distribution network components and water distribution	Mid-December, 2018

\*Tunnel construction work is challenging. Unexpected events may delay the work.

## Q4: How can I apply for a new KUKL connection?

**A4:** You may approach your local KUKL branch office and pay water connection charges. The new connection rates are currently about NRs 8,000. Where the distribution network is being replaced, you must provide proof of payment to the PID of KUKL before they install your new service connection. PID will provide you with a water meter when they install the connection.

## Kathmandu Upatyaka Khanepani Limited (KUKL)

KUKL is a public service utility established under the Private-Public Partnership Model. It will operate the Melamchi project upon its completion. Its responsibilities will increase with the completion of MWSP Phase-I. Keeping this in mind, efforts are underway to increase the institutional capacity of KUKL to deliver quality services.

## For Melamchi Tunnel and Treatment Plant-related Work

### Melamchi Water Supply Development Board

Website: <http://www.melamchiwater.gov.np>  
Devkota Marga, Mid-Baneshwor, Kathmandu  
Tel: 01-468963, 01-4468964, 01-4468965  
[info@melamchiwater.gov.np](mailto:info@melamchiwater.gov.np)

### For Problems Related to Service Reservoir Tanks and Distribution Network Improvement

KUKL, Project Implementation Directorate (KUKL-PID)

Tanka Prasad Ghumti Sadak, Anamnagar  
Phone: 01-4222986/01-4224986  
[info@kuklpid.org.np](mailto:info@kuklpid.org.np)

Website: <http://www.kuklpid.org.np>

### For Water Supply, Billing and Management Issues

Kathmandu Upatyaka Khanepani Limited (KUKL)

Toll-free: 166001-22202

Tel: 977-1-4262202, 4262205

E-mail: [info@kathmanduwater.org](mailto:info@kathmanduwater.org)

Website: <http://kathmanduwater.org>

## Notice

Ministry of Water Supply and Sanitation and Project Implementation Directorate apologize for inconveniences faced by the public during the implementation of the mega-project and appeal for everyone's support in this transformative endeavour.

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