

Melamchi's Flood was Just a Tip of the Iceberg

By Aditi Subba

'Water from Melamchi finally arrives in Kathmandu,' reads The Kathmandu Post's headline on 7th March 2021. Shortly after this much-awaited news, Valley households started getting busy filling up old empty jars and water tanks. Water pipes no longer remained dry. Residents stopped worrying about waking up at 3 a.m. to fill their buckets. With Melamchi water finally entering the valley, early mornings can now be spent cozy in bed.

The arrangements, however, were short-lived. Unfortunately, this year's monsoon inundated Melamchi village, submerging the Melamchi Water Supply Project's headworks in mud. But supply blockade isn't the only problem to worry about with Melamchi water. In fact, it might just be the tip of the iceberg.

Growing Demands

When the project was established in 1998, 585,000 people lived in the capital. Now, over two decades later, 1,472,000 people do. In 2017, Kathmandu demanded around 360 million liters daily. But Kathmandu Upatyaka Khanepani Limited (KUKL) could supply only 76 million liters a day in the dry season and 123 million liters a day in monsoon. The escalating number of residents in the capital raises a huge question: Will the project ever be enough to fill the valley's long-term demands?

To fill the growing demand, Melamchi's second phase plans on supplying Kathmandu an additional 340 million liters from Sindhupalchowk's Yangri and Larke Rivers. A 9km long tunnel is planned to join Yangri River with Melamchi river and a 2km tunnel for Larke. The three rivers will provide 510 million liters of water per day to the valley. But with Kathmandu's growing population and consumption, is this plan sustainable?

In the early 20th century, the Owens River of USA was diverted 375 kilometers to Los Angeles, California. The diversion eventually dried up the Owens valley. As the need of the city kept growing, authorities started to take water from Mono Lake as well. This angered the area's indigenous communities. Decades of legal battles started. The Owens example resonates with Melamchi's arrangement; one has to wonder if the future holds the same fate for the project.

Environmental Consequences

Owens Lake, once a tranquil source of water for farmers, now is the biggest single-source of dust pollution in the US. 80 years of dust storms and 30 years of legal battles later, Los Angeles is now spending \$1.5 billion to provide 90,000 acre-feet of water each year to keep down the dry lake's dust. What consequences await for Melamchi to fulfill Kathmandu's water needs?

A 2020 study conducted by Nepal Forum of Environmental Journalists (NEFEJ) reported unsatisfactory mitigation measures during the Melamchi project's construction. Several water sources dried-up and fishermen struggled to cope with degrading fish populations. Negligence of environmental protection in future could cost more. Would the government have spare change left for Melamchi's environment then?

We don't immediately realize the unintended consequences of natural resource exploitation. Negative impacts on ecological processes are poorly understood. That makes environmental policymaking a challenge. Degradation hurts communities, but they might not recognize it immediately, or are unable to link with a specific cause. Does our system have the competencies to critically analyze different aspects of ecological consequences in every level and layer?

Unequal Distribution of Benefits

The project's distribution plan provides water access for households inside the Ring Road, localities with higher income and closer to the main road. Experts state that, after the second phase commences, distribution will continue to favor richer households. The poor will continue struggling for water. "Without adequately addressing water access issues for low-income families and renters, Melamchi will likely perpetuate existing social inequalities in the city," states Dr. Olivia Molden, a Fulbright scholar from the University of Oregon.

In 2016, inequality in water distribution in two Indian states – Tamil Nadu and Karnataka – triggered violent demonstrations that spanned over two decades. Population increase created huge demands for water from the Cauvery River. As the Supreme Court reduced Tamil Nadu's share of water, people from both states were embroiled in dispute. What if the unequal distribution of Melamchi's water sparks

similar chaos among Kathmandu Valley residents? Are there any guarantees the project's second phase will resolve the inequity?

Other Alternatives

Melamchi water is only a temporary solution to Kathmandu's water problems. Instead, water experts advise other long-term techniques like capturing rainwater. Rainwater harvesting has gained momentum in the valley over the past couple of years. Standard Chartered Bank and Shanker Hotel have replenished groundwater with surface runoff, harvesting rainwater that provides 40% of its demand and contributes 2.38 million liters of water a year for recharging. "Although rainwater harvesting alone isn't the answer to water scarcity, it is a part of the larger solution which includes recharging groundwater regularly and making maximum use of water that falls from the sky," asserts Tyler McMahon of SmartPaani.

Kathmandu also has amazing networks of historical water infrastructures like stone taps, community wells, and historic ponds that must be restored. Combining new technologies with traditional practices can bring a breakthrough for Kathmandu's water security.

But most importantly, what we need is good governance that isn't intertwined with abuse of authority, lack of transparency, and divergence from public duties. Alas! Could that be too much to ask with our system?