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# WATER, SANITATION AND HYGIENE FINANCE (WASH-FIN) NEPAL

## COVID-19 Impact Assessment Report September 2020

### INTRODUCTION

The COVID-19 pandemic brought many countries, including Nepal, to a standstill. The Government of Nepal announced a nationwide lockdown starting March 24, 2020 to curb the spread of COVID-19.

Like other sectors of the economy, the WASH sector was impacted, and it is expected that the impact will be long-term. WASH has always been at the center of the response during any health emergency, especially in terms of providing access to water for all. Therefore, continuity of WASH services is crucial in the fight against the COVID-19 pandemic.

The Water, Sanitation and Hygiene Finance (WASH-FIN)<sup>1</sup> project, funded by the United States Agency for International Development (USAID), undertook a rapid assessment to identify and assess the possible impacts on water utilities in terms of providing, maintaining, and ensuring the continuity of WASH services during the pandemic. The main objective of the assessment is to develop an initial understanding of the repercussions from COVID-19 on water utilities. The results of the assessment are expected to be useful to the sector in calibrating approaches to support business continuity, financial management, enhance good governance, and resilient service provision.

### ASSESSMENT APPROACH

A purposive sampling technique was used to select utilities from varied operating models of Urban and Small Town Water Supply projects across different provinces. This was done in consultation with the Department of Water Supply and Sewerage Management (DWSSM) in July 2020. There are three different types of water supply operating models in Nepal—Urban, Small Towns, and Semi-urban Water Supply schemes—covering 99 projects operated by different service models for the assessment (See Table 1 below). As such, ten water supply schemes were selected for the assessment to allow for a ten percent sample. Table 2 shows a list of the service

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<sup>1</sup> The USAID WASH-FIN project is a five-year technical assistance project. Its primary objectives are to close financing gaps to achieve universal access to water and sanitation and to increase the potential to reach additional beneficiaries at scale in priority countries. WASH-FIN is currently in the fourth year of a five-year implementation in eight countries, including Nepal.

providers selected and relevant service area information. None of the utilities reported having been involved in similar assessments around operational and financial performance impact due to COVID-19.

**TABLE 1: ASSESSMENT SELECTION OF NEPAL WSS OPERATING MODELS**

No.	Operating models	No. WSS schemes	Assessment selection
1	Water Users and Sanitation Committee (Small Town Water Supply and Sanitation schemes)	70	7
2	Water Users and Sanitation Committee (JICA supported schemes)	4	1
3	Nepal Water Supply Corporation (NWSC) Model	22	1
4	Private Board Model	3	1

Four of the service providers in the assessment are from the hilly region with the remaining six representing the Terai region. The utilities from the hilly region have either surface water, springs or both as sources of water, while utilities from the Terai region have groundwater as the only source of water. There is variance between these utilities in terms of coverage (percentage of the population with a household connection), technical, managerial, and financial capacities. The lowest coverage rate is 16 percent and the highest coverage rate is 98 percent.

**TABLE 2: SELECTED WATER SUPPLY SERVICE PROVIDERS**

No.	Name	Operating Model	No. of HHs served	Total no. of HHs in service area	Percentage coverage	District	Region
1	Shri Birat Water Supply Users Organization (Mangadh Water Supply Scheme)	WUSC	4,681	8,679	53	Morang	Terai
2	Simara Water Supply Users Organization	WUSC	4,136	6,500	63	Bara	Terai
3	Jugal Thalkharka Holche Water Supply Users Organization	WUSC	960	1,852	51	Sindhupalchowk	Hilly
4	Bharatpur Water Supply Management Board	Private Board	30,400	70,000	43	Chitwan	Terai
5	Lekhnath Small Town Water Supply Users Organization	WUSC	12,447	14,937	83	Kaski	Hilly
6	Waling Small Town Water Supply and Sanitation Users' Organization	WUSC	2,350	5,000	47	Syangja	Hilly
7	Bardaghat Water Supply Users Organization	WUSC	3,558	3,600	98	Nawalparasi Paschim	Terai

8	Nepal Water Supply Corporation, Branch Office Nepalgunj	NWSC	4,612	28,204	16	Banke	Terai
9	Surkhet Valley Water Supply Users Organization	WUSC	18,539	35,000	52	Surkhet	Inner – Terai
10	Attariya Small Town Water Supply Users Organization	WUSC	3,616	5,100	70	Kailali	Terai

## ASSESSMENT FINDINGS

**Change in Water Supply Hours and Volume Supplied.** To assess the impact on service delivery during the pandemic, the ten selected water utilities were asked about their change in water supply hours and change in volume of water supplied. Seven experienced no change in supply hours, and three experienced a reduction in supply hours by 25 percent or less.

The utilities were also asked about the change in volume of water supplied. Five utilities reported no change, whereas the three utilities from hilly region noted a reduction by 25 percent or less. This was attributed to limited mobility of WSP staff to conduct regular operation and maintenance due to lockdown.

Meanwhile, two utilities noted an increase in volume supplied. The utilities that reported an increase in volume of water supplied indicated this was due to changed behavior amidst the pandemic, for example, increased frequency of hand washing and personal hygiene. However, limited meter reading was conducted during lockdown, and as such there is insufficient data to support this finding. Instead, it is based on the utility estimates based on production indicators.

The reduction in supply hours and quantity was particularly observed by three water utilities situated in the hilly regions where the water systems were damaged by heavy rainfall. The utilities were not able to mobilize technical staff for repair and maintenance due to lockdown mobility restrictions.

**Meter reading.** Due to the nationwide lockdown, meter reading capacity was reduced, and utilities reported that customers also requested to halt meter reading. As a result, revenue collections were also impacted. Nine utilities were unable to perform regular meter reading and billing during the lockdown period. As such, they billed their customers at an average monthly rate based on the respective customers' past three months of billing information. These utilities informed customers that any adjustment required against the actual meter reading data (after the lockdown eased and regular business activity resumed) would be made on the subsequent monthly bills over the course of three months.

**Revenue (tariff) collection.** Nine service providers reported a reduction in collections, including four that reported no collections at all. The remaining five utilities reported a drop-in collection between 25-50 percent. The one utility that reported usual collections during the pandemic generally kept its offices open but only for a couple of hours per day.

**Mode of Payment.** Before lockdown, nine utilities reported that 80 percent of their collections took place at the service provider counter and 20 percent was done online. However, during the lockdown period, 58 percent of the total collections were made via online channels and the rest were made at the utility counter. The change in payment modality is attributed to the pandemic.

**Provision of temporary free water supply during lockdown.** In response to COVID-19, the Government directed utilities not to disconnect consumers from water services because of inability to pay bills on time. One utility reported waiving the minimum monthly tariff to all customers for the first month of lockdown (April 2020) and none of the utilities reported disrupted water supply during lockdown due to late payments. All the sampled utilities reported waiving late fees/penalties on outstanding bills from the lockdown period. Six utilities provided free water points to quarantine centers and other strategic locations. Apart from water supply, two utilities provided free chlorine. Seven utilities organized awareness campaigns through mobilization of electronic media for handwashing and established handwashing stations in close coordination with municipalities.

**Funding Availability.** Five utilities reported having reserve funds. They used those reserve funds to cover short-term financial needs (i.e. pay loans, purchase personal protective tools, incentives for field staff who worked during crisis, etc.). The remaining five utilities did not have reserve funds available.

**Loan Repayment.** Of the six utilities with outstanding existing loans, three reported having paid their debt normally, two utilities used reserve funds to make their debt payments, and one utility deferred payment.

**Government Subsidies.** None of the utilities received funds from local or provincial governments to cover any losses in revenue due to COVID-19.

**Regular Operations and Resources.** All sampled utilities continued their regular repair and maintenance works throughout the lockdown period. Eight utilities reported continuation of pipeline extension work, including two utilities that continued replacement and rehabilitation works. None of the utilities reported failures in performance and service provision. However, nine utilities reported administrative hindrances around personnel mobilization, especially during the initial phase of lockdown. Utilities from hilly/mountain areas were particularly affected by the limited mobility as they couldn't mobilize their personnel to maintain water supply, which was damaged due to heavy rainfall, due to remote location of their water sources. Those with groundwater sources (Terai region) were not affected significantly. Due to lockdown mobility restrictions, three utilities had to coordinate closely with the Local Administration for mobility of staff in cases where the community was far from the water source and travel to a different municipality was required. This type of scenario was a problem for WSP staff during the initial lockdown, but later government declared this type of travel open for all essential services.

Utilities took high precautions while mobilizing staff to the field by providing proper Personal Protective Equipment (PPE) and maintaining physical distancing while working. All utilities reported making full salary payments to their employees during the lockdown. Three utilities rewarded employees with a one-off additional bonus (ranging from 50 percent to 100 percent of their monthly basic salary) for the time and effort that they put in to keep the utility up and running despite the unprecedented situation.

Five utilities reported not encountering major problems in availability of chemicals and construction materials. All utilities reported normal purchase of inputs like electricity, fittings, and chemicals during the lockdown (two utilities did not have to purchase chemicals as they had enough stock but reported that the chemicals won't last long if the lockdown continues). However, two utilities reported that chemicals and fittings were unavailable in the local market and that after coordinating with the district administration office and vendors, these utilities opted not to wait for the local providers to have stock and instead sourced from outside their local market (but within Nepal).

Utilities indicated that they continued to be able to purchase construction materials for the repair of system breakage, pipeline extension, rehabilitation work, etc. It is important to note that there is variance in the need for materials and inputs. For instance, utilities from the Terai region rely more on electricity due to pumping

required for groundwater extraction, while those from the hilly region depend less on electricity as they have gravity fed systems.

**Water quality.** None of the utilities reported water quality issues at the time of assessment. They were continuing with regular system care (*i.e.* cleaning reservoirs, intake, and regular maintenance of pipeline breakage). However, two utilities noted a shortage of chemicals. If the lockdown continues further and the supply chains are disrupted, then it is likely to impact water quality and consumption directly (no chemicals) or indirectly (higher price).

## **ANALYSIS OF FINDINGS**

The primary concern utilities reported is related to the duration of the pandemic and the compounding of shortcomings and accumulation of risks. The assessment reveals early high impact areas around cash flow and staff mobility. There will be increased customer inability and unwillingness to pay because of economic hardship induced by the pandemic, thereby further reducing revenues and constraining working capital to finance operation, which in turn impacts performance and delivery and erodes capacity to undertake new projects and continue the ongoing ones. With limited and possibly eroding availability of reserve funds, there is a risk of a backward slide for utilities that have made gains and amplified challenges for utilities already struggling before the pandemic. Mobility for repairs and meter reading and access to inputs critical for maintenance and water quality treatment is also a concern and could erode financial and operational viability.

The assessment findings show that water utilities were impacted by the pandemic but not seriously within the initial period assessed. Analysis indicates that the impact will be dependent on the duration of the lockdown, with a longer period of confinement increasing impact.

The utilities consider water quality as a major concern and thus have done their best to maintain the quality of potable water. Moderate impact was found in terms of resource availability such as chemicals and construction equipment. However, if the lockdown extends then there might be shortages in chlorine/bleaching powder, which would affect treatment. Given that utilities are already searching for supplies in neighboring markets, this may be an opportunity to coordinate bulk purchases with other utilities, which may allow for reduced costs.

High impact was observed for meter reading and billing, tariff collections, and human resource availability. This action relieved customers but increased the financial burden on utilities. As the pandemic continues, other factors like unemployment, financial market instability, and credit and liquidity might affect customers' willingness to pay, resulting in financial stress on utilities. In the near term, this will hamper utilities' regular operations, upcoming projects, ongoing construction work, etc. If this persists, over the long-term it could result in serious operational and financial problems.

Depending on the duration of the lockdown, this bill pay modality could manifest into a primary payment option for long-term use in the future. As consumers adopt digital channels, including mobile banking, to pay their bills, utilities may have an opportunity to reduce travel time and costs, which could contribute to increased revenue as well as providing services more efficiently. Raising awareness of the benefits of digital payment solutions might be advantageous for the short- and long-term.

Except for one utility, which deferred payment, the six utilities with existing loans did not report problems meeting their debt payments. It is important to note that this was reported only a few months into the pandemic; continued lockdown coupled with trends reported in terms of decline in revenues could reduce ability to repay debt in the future.

Five utilities reporting available reserve funds may be able to manage revenue losses and increased operational costs for the short run. The challenge is that not all utilities have reserve funds to fall back on. Therefore, the utilities that lacked reserve funds may not be able to weather a prolonged shutdown period or other shocks. Moreover, the utilities lack financial strategies in place to cope with such emergencies. In the wake of the pandemic, shortages of funds that bring financial stress can hinder regular operation and financial strength. Financial assistance may be required to keep operations going depending on the duration of the pandemic.

## **ACTIONABLE OPTIONS TO CONSIDER MOVING FORWARD**

Based on the findings and analysis above, initial recommendations around actionable options that warrant more attention going forward, include:

- Development of utility resilience and recovery plans and additional funding streams for utilities to build back better in response to the pandemic and prepare for mitigation of future resilience risks.
- Conduct vulnerability assessment of high-risk water supply schemes; for example, in hilly region or utilities with other known vulnerabilities.
- Build up inventory of essential parts, materials, and chemicals to buffer against potential disruption in supply chains down the line; seek opportunities for bulk purchases with other utilities, which may allow for reduced costs.
- Advocate for and accelerate the appropriate adoption of digital monitoring and other digital applications for operational activities to address mobility challenges and increase service efficiency; utilities with debt and/or in a stronger financial position would be logical targets for this.
- Update tariffs and related financial policies to align with the true cost of providing the service and be able to address economic risks in the long run.
- Development of a model to target vulnerable and marginalized customers. At present, utilities are waiving fees under a blanket approach but if the situation persists, then a more targeted approach could help with revenue stabilization. At the same time, a funding source would need to be identified to cover the costs of continued fee waivers.
- Increased financial support may be required to keep operations going depending on the duration of the pandemic; for example, deferral of principal payments, refinancing outstanding loans or establishing emergency credit lines for working capital. If the lockdown persists, deferring loan payments might not be enough to sustain water utilities already struggling to manage their cashflow.

## **CONCLUSION**

This rapid assessment study of the ten utilities was conducted three months from the date of lockdown imposed in Nepal. As such, water utilities had not faced a critical crisis point but were beginning to encounter challenges and anticipating more significant impact in service delivery should the crisis continue. Impact will fluctuate across utilities due to variance in capacities, logistical management, and resource availability. This brings up the question on whether National Government support should target weaker utilities with lower resilience to manage the crisis impact. Alternatively, utilities that have made gains should not be allowed to fall into decline. In either instance, development of objective metrics or a system for priority targeting of support could be strategic.

Both operational and financial impacts of COVID-19 pandemic pose serious threats to the ability of service providers to supply households with water and maintain a sustainable operation without long-term damaging slippages. As this was a limited scope assessment, further assessments may be required to inform what national

and local actions are needed to improve financial and operational resilience of water utilities for continued service.

## **WATER, SANITATION, AND HYGIENE FINANCE (WASH-FIN)**

*The five-year, \$40 million Water, Sanitation, and Hygiene Finance (WASH-FIN) project is funded by the United States Agency for International Development (USAID) and began in October 2016. Implementation is led by Tetra Tech with support from Open Capital Advisors, Segura Consulting, and Global Credit Rating. Focus countries include Cambodia, Kenya, Mozambique, Nepal, Philippines, Senegal, South Africa, and Zambia. For more details, visit <https://www.globalwaters.org/WASH-FIN>.*

*Contact details: Ella Lazarte [mlazarte@usaid.gov](mailto:mlazarte@usaid.gov) or Sam Huston [sam.huston@washfin.org](mailto:sam.huston@washfin.org)*