COVID-19 and WASH: What we Know and What's Next



COVID-19 and WASH: What we Know and What's Next



The Effects of COVID-19 on WASH Access in USAID High Priority Countries

Rapid Assessment and Scenario Analysis – Results Summary Presentation March 202 I



Prepared by Jeff Albert
Deputy Project Director
Water, Sanitation, & Hygiene
Partnerships and Learning for
Sustainability (WASHPaLS)

Presentation Agenda

- Summary of findings
- Methods
- Context
- Results divided by subsector
- Additional takeaways

Central findings

Deep dives in: DRC, Ghana, Kenya, Mozambique, Nepal, Rwanda, and Senegal



Water Supply

- Complete water supply disruptions have thus far been largely avoided
- Consumers face pandemic-related water access difficulties, with between 1.4% and 6.4% reporting service falling below the WHO/UNICEF Joint Monitoring Programme's "Basic" level
- The financial well-being of water service providers has suffered badly, with smaller providers at particular risk

Sanitation

- Reported declines in sanitation access—latrine components and installation services as well as desludging services—are, so far, much less pronounced than those for water supply
- Suppliers of sanitation products and services were hit by drops in consumer willingness-to-pay as well as higher production and import costs, but have recovered with relaxation of confinement measures

Handwashing

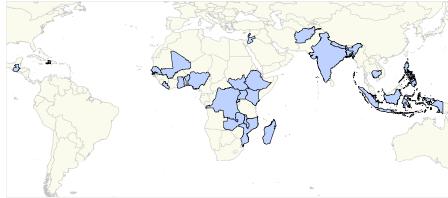
- Consistent with a number of studies, we found selfreported handwashing behavior to be very high during the pandemic period
- Increases in reported handwashing were corroborated by interviews with soap value chain actors, who report elevated demand
- Reduced access to soap where it is reported is a function of reduced spending power rather than price increases or supply disruptions

Methods

Methods

- I. Country-level deep dives in 7 countries consisting of
 - 1. > 300 interviews with key informants reached via snowball sampling
 - 2. > 3000 consumer surveys via SMS in the 6 of the 7 countries
- 2. Econometric analysis using pre-COVID relationships between economic indicators and water/sanitation outcomes captured in DHS and MICS data for 28 countries





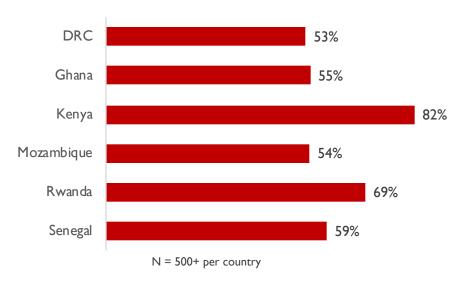
"Deep dive" countries

Countries included in econometric analysis

Context

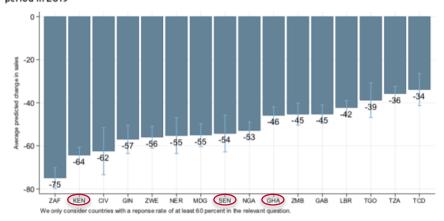
Countries report differing amounts of economic pain

Response to the question "How has COVID-19 changed your employment?" is either "I lost my job" or "I earn less money"



Source: Our own SMS consumer survey via GeoPoll, October 2020 for Rwanda and August 2020 for all other countries.

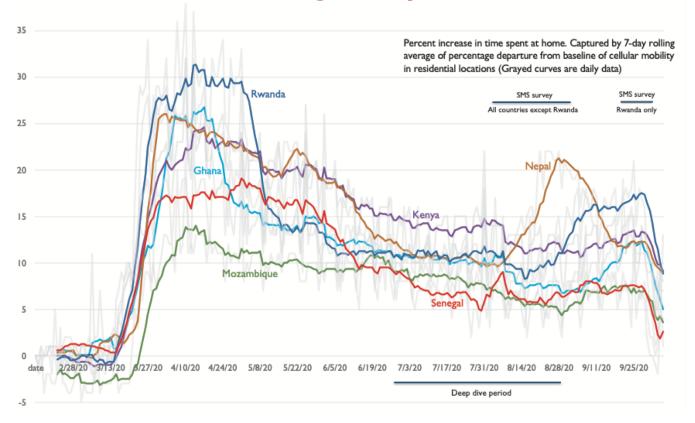




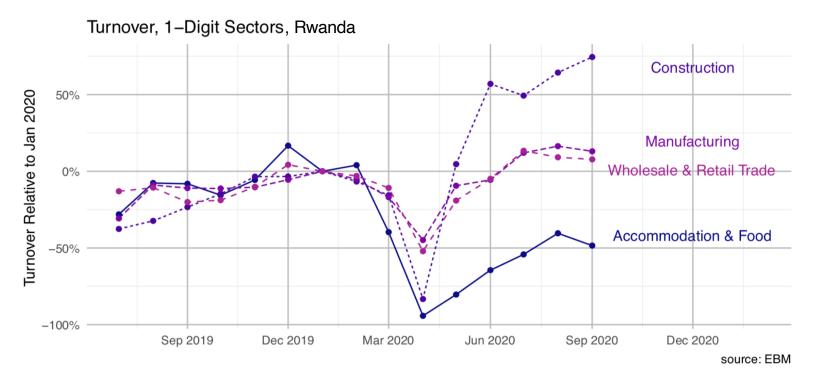
Note: Conditional average, controlling for size, and sector, and timing of the survey. Error bars represent 95% confidence

Source: World Bank Business Pulse Surveys and Enterprise Surveys, reported by Davies et al (2021) "Firms through the COVID-19 pandemic: evidence from sub-Saharan Africa."

Lockdowns differed greatly across countries



Sectoral heterogeneity: "k-shaped" recovery

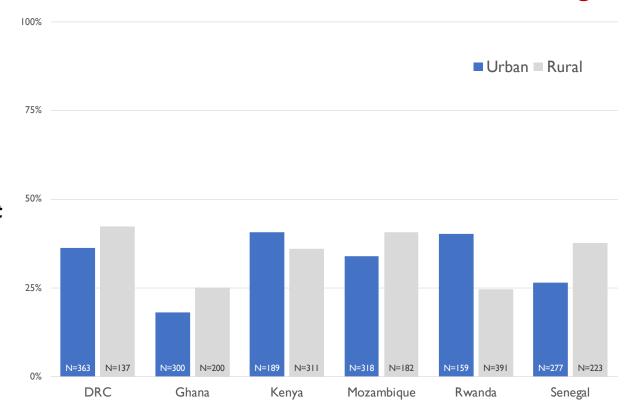


Source: electronic billing machine (EBM) transactions, reported by Byrne et al (2021). "Sectoral heterogeneity in the COVID-19 recovery: Evidence from Rwanda."

Results – Water Supply

Consumers report that COVID-19 is limiting water access, across six deep dive countries, in both urban and rural settings

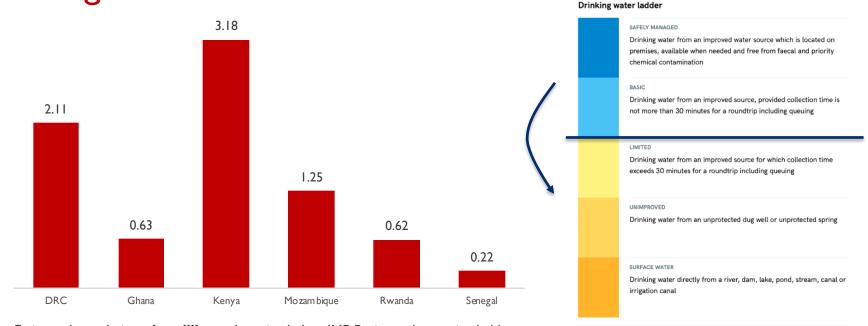
Percentage of respondents answering "Yes" to the question, "Has COVID-19 made it more difficult to get your drinking water?"



Spotlight: a decline in piped water use in rural Ghana



As of October 2020, an average of 3.7% of our survey respondents per country fell below "Basic" on the JMP drinking water ladder



Estimated populations, in millions, dropping below JMP Basic on the service ladder

Water service providers are in dire financial straits

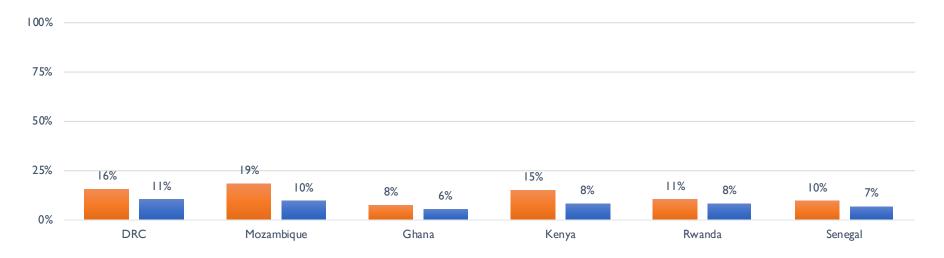
- Losses have been significant, driven by government free water directives, reduced willingness-to-pay, and increased operating costs
- Even where tariff holidays have been targeted (e.g. to low-income areas), non-payment policies are often interpreted as applying to all customers
- Smaller providers are at particular risk, with less resilience due to more modest cash reserves and a lower probability of rescue from either external or sovereign institutions

Results – Sanitation

Consumer-reported sanitation access difficulties are less pronounced than those for water supply

Proportion of a country's overall sample reporting "trouble buying, installing, or upgrading a latrine"

Proportion of a country's overall sample reporting "trouble emptying a full latrine pit or septic tank"



The market for latrine inputs suffered initial shocks, but appears to be recovering in many places

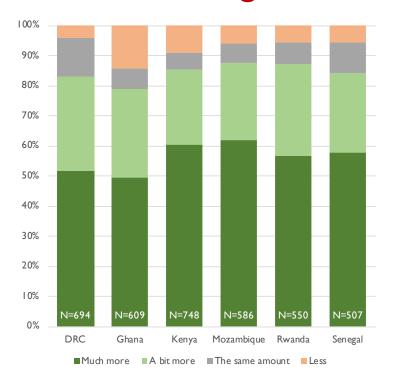
- Sales of latrines dropped precipitously, to zero or near zero during March and April with a turnaround following the relaxation of lockdown measures
- In some markets, though, the decline never occurred
- The immediate future could pose challenges, with prolonged local currency depreciation and increased fuel prices likely to drive up consumer prices

Results – Handwashing

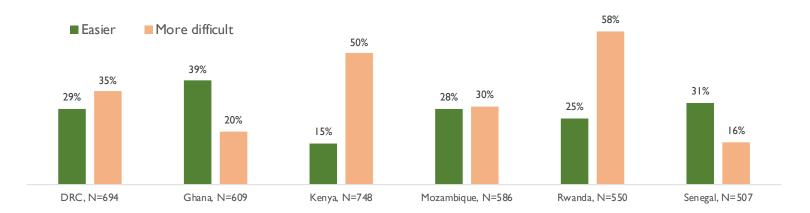
Our survey of consumers reveals a positive post-COVID social norms shift on handwashing

Breakdown of responses to the SMS survey question:

"Do you notice your <u>neighbors</u> <u>and friends</u> washing their hands with soap more often than before COVID-19?"



Soap access difficulty is reported by consumers in selected countries (Kenya and Rwanda), even as access has improved elsewhere (Ghana and Senegal)



WASHPaLS SMS survey response to the question, "Since COVID arrived, has it become easier or more difficult for your family to obtain any kind of soap to wash hands?" Fractions reporting "no change" are not displayed, but in each case equal the remainder to reach 100%.

Even while soap is in higher demand, profit margins of larger players are being squeezed

- We have reports of sales increases up to 300%, (yet one large manufacturer we interviewed expects profits to be down 30-35% for the year)
- Margins are down because of I) a transition away from luxury brands and 2) prices of key inputs increasing, sometimes by 30-40%
- There appears to be a rich opportunity for local manufacturers to produce low-priced soaps.

Menstrual Hygiene Management (MHM) product access should be monitored

- We have reports of MHM consumer price increases in Rwanda
- In Nepal we have reports of significant increases in sanitary pad production costs, but also of producers thus far not passing along those increases to consumers

Other key takeaways

Econometric Model Results

Our regression estimates give a feel for the effect of a permanent loss in income equal to that forecast by the World Bank

- For households that did not migrate, our median estimate of the COVID-19 shock impact is that roughly 3 out of 1000 people dropped one step on the JMP water service ladder
- The median estimated income effect on sanitation is about 3x that of water service, with roughly 9 out 1000 people dropping a JMP ladder step

Donors are beginning to support larger water utilities (via direct financial assistance or in-kind support), but smaller (and rural) providers require attention and careful thought about the logistical feasibility to deliver assistance.

USAID Mozambique is testing an innovative measure to directly cover electricity costs, a major component of OpEx.

Women and girls will be more heavily affected by service declines, but the differences are not revealed by our surveys

- We know that women and girls shoulder a larger burden for water supply, particularly when sources are not located at the household itself.
- This reality is not reflected in responses to our SMS surveys, where there are barely any gendered differences
- Across six countries, 32% of men and 33% of women report pandemic-related water access difficulty

arrival of COVID. Some effects on WASH access (like major widespread disruptions in water supply, or returns to OD) will take longer to emerge, as deferred maintenance takes its toll

This study took place 3-6 months after the

Who performed this work

Conception and Design

Ranjiv Khush (Aquaya) Jeff Albert (Aquaya) Rishi Agarwal (FSG) Aditi Krishna (Iris) Morris Israel (Tetra Tech)

Deep Dives

Brian Mwangi (Aquaya) Chloé Poulin (Aquaya) Edinah Samuel (Aquaya) Subhash Chennuri (FSG) Harshika Gupta (FSG) Mahesh Nayak (FSG) Akshay Kohli (FSG) Maneshka Eliatamby (Iris) Prakash Luitel (Iris) Miriam Otoo (Tetra Tech)

Consumer Survey

GeoPoll

Econometric Analysis

David Levine (UC Berkeley) Xinyu Ren

Acknowledgements

This research relied heavily on the generous time of government officials, service providers, service provider associations, and private sector actors across DRC, Ghana, Kenya, Mozambique, Nepal, Rwanda, and Senegal. They are too numerous to name here, but we are deeply grateful to them.

This work also would not have been possible without the support, expertise, and networks of the following:

USAID Mission Staff

- Abdoulaye Boly (Dakar)
- Bindi Borg (Kathmandu)
- Pape Dieye (Dakar)
- Clara Dimene (Maputo)
- Leonor Domingos (Maputo)
- Arvil Gonzalez (Dakar)
- Emmanuel Odotei (Accra)
- Nicole Mukunzi (Kigali)
- Sandy Ngilambi (Kinshasa)
- Carrie Rasmussen (Kathmandu)
- Amanda Robertson (Nairobi)
- Deepana Shanthan (Kathmandu)
- Pragya Shrestha (Kathmandu)
- Erica Trauba (Dakar)

USAID WASH Programs

- WASHFIN (HQ)
- WASH4Health (Ghana)
- ACCES (Senegal)
- Gikuriru (Rwanda)
- Isuku Iwacu (Rwanda)
- KIWASH (Kenya)
- Safaa Paani (Nepal)
- TAYAR (Nepal)

Acknowledgements, cont.

Implementing Organizations

- AAAS (Senegal)
- Catholic Relief Services
- ENPHO (Nepal)
- Food for the Hungry
- Global Communities (Ghana)
- ICRC
- iDE
- IRC
- KIRDARC (Nepal)
- KWAHO (Kenya)
- Mercy Corps
- NEWAH (Nepal)
- OXFAM
- Plan International
- Sanergy (Kenya)

- Sanivation
- Save the Children
- SNV
- WaterAid
- World Vision
- Women for Human Rights (Nepal)
- Water and Sanitation for the Urban Poor (WSUP)

Other Donors

- DflD/UKAID
- Embassy of Finland in Nepal
- Islamic Development Bank
- IICA
- KfW/GIZ
- World Bank

Other Key International Institutions

- The Global WASH Cluster (GWC)
- UNICEF
- World Health Organization (WHO)
- WHO/UNICEF Joint Monitoring Program (JMP)

Supplementary Slides

Our SMS survey indicates differences in reported migration

Has COVID-19 and the lockdown led you to move to a new home?

	Yes, within my	Yes, to outside of my
	city/town	city/town
DRC	17%	10%
Ghana	8%	4%
Kenya	19%	14%
Mozambique	17%	8%
Rwanda	29%	25%
Senegal	14%	9%

We don't have consumer survey data for Nepal, but private bottled ("jar") water providers report major revenue declines resulting in part from major out-migration from Kathmandu.

The best objective performance information we have suggests rural service disruptions may have already begun (or possibly, ended)

charity:water shared production data from its rural sensor programs in Ethiopia and Nepal.

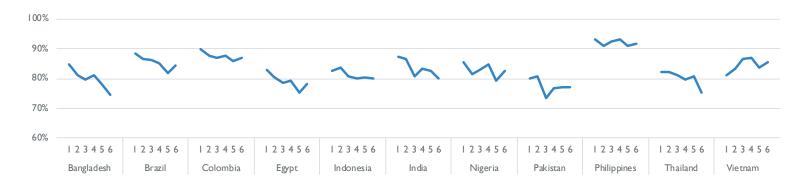
In Ethiopia, 142 handpump sensors recorded data for both March/April 2019 and March/April 2020. **Mean production dropped by 25% in 2020 compared to 2019** (a significant reduction).

In Nepal, 157 rural standpipe sensors recorded hourly data for both June 2019 and June 2020. **Mean production dropped by 8% in 2020** (though this difference is too small to infer an actual decline).

Supply chains for chemicals and hardware have been affected

- We have multiple reports of shortages of chlorine for disinfection and flocculant/coagulants (alum as well as polyacrylamides)
- UNICEF in Kenya predicts that some small-to-midsize water suppliers could fail to meet drinking water standards because of chemical shortages
- Spare parts procurement pipe, fittings, valves, meters has slowed in some geographies
- 4 of 30 small private network operators we interviewed in Mozambique reported supply chain issues as a problem for acquiring chemicals or hardware

Durability of reported behavior changes is uncertain



Percentage of the respondents listing "washing hands" in response to the question, "What measures have you taken to prevent infection from COVID-19 in the past week?" in the MIT Covid-19 Beliefs, Behaviors, and Norms Survey. X-axis labels correspond to two-week long survey waves, with wave I starting on 6 July 2020, wave 2 on 20 July 2020, wave 3 on 3 August 2020, wave 4 on 17 August 2020, wave 5 on 31 August, and wave 6 on 14 September. Source: MIT COVID-19 Survey.

Most soap access problems are a function of affordability

- The minority of respondents to our SMS survey who said that obtaining soap had gotten more difficult due to COVID-19 overwhelmingly listed price over lack of availability as the reason.
- Other surveys have found higher consumer prices. Finmark Trust's survey of nearly 4,900 Rwandans indicating a 9% increase between April and May, plausibly due to increased demand as well as travel constraints.

Donor responses reported to date

Donors have begun to take action to support the larger providers, though the scale of that action varies

Country	
DRC	World Bank (from existing \$350M-10 yr project) – construction of water points in 3 largest cities, emergency procurement of chlorine KfW: \$3.6-4.8M for treatment chemicals over 6 months
Ghana	World Bank: \$25M top-up to an existing \$125M investment
Kenya	World Bank: \$75M over 6 months – via national regulator (WASREB)
Mozambique	World Bank: roughly \$10.5M to FIPAG, the national water supply asset owner
Nepal	World Bank: No urban rescue package planned. WASH support will occur via existing rural program (Rural Water Supply and Sanitation Fund Development Board).
Rwanda	World Bank: \$10-12M for social protection – payment of public works employee salaries during lockdown; no immediate rescue for the national utility (WASAC) to weather revenue losses JICA: purchase of flocculant/coagulant, 10m³ storage tanks, and contracting of tankers; next round of "urban upgrading" likely to include wat/san investments in unplanned settlements
Senegal	World Bank: Redirecting \$5.46M for new rural water supply development and network extensions

COVID-19 and WASH: What we Know and What's Next



USAID WEBINAR:

COVID-19 and WASH: What We Know and What's Next

Building Back Better Resilient and Inclusive Urban Water Supply and Sanitation Systems



Gustavo Saltiel Global Lead for WSS



What We Know: COVID-19 has impacted water utilities in multiple ways

- Loss of revenue
- Increased O&M costs
- Water consumption by commercial and industrial customers decreased
- Household consumption increased
- Sudden shifts in demand patterns have generated operational impacts
- Deferment of critical investments



What We Know: Utilities can play a key role in **Building Back Better from COVID-19**

- Considering a wide range of shocks and stresses when restoring services and planning infrastructure development.
- Incorporating water-basin approaches and green solutions.
- Adopting Circular Economy approaches
- Ensuring the inclusive approaches/engagement of local communities when assessing risks.
- Engaging the private sector to mobilize private financing/ participation
- Building WSS infrastructure creating job opportunities for local private sector and communities

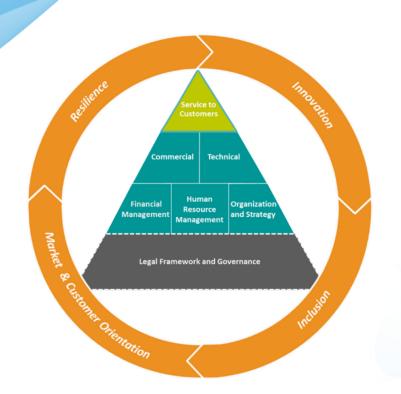


What We Know: COVID has created an opportunity for building resilience

- Capital investments incorporating resilience into planning efforts to improve sustainability of service delivery.
- Diversifying sources of financing thereby increasing investments in resilience.
- Using existing frameworks such as the City Water Resilience Approach (CWRA), the World Bank's Resilience Rating System.
- Development partners working with governments to create proper institutional incentives to mainstream resilience into WASH services



What's Next: The Utilities of the Future



A future-focused utility, which provides reliable, safe, inclusive, transparent, and responsive WSS services through best-fit practices that allow it to operate in an efficient, resilient, innovative and sustainable manner





What's Next: The Utilities of the Future

What's Next: A holistic support package to Build Back Better from COVID-19

- The Utilities of the Future (UoF)
- Policy, Institutional and Regulatory (PIR) Incentives
- Maximizing Finance for Development (MFD)
- Circular Economy and Resilience in Urban Water
- City Wide Inclusive Sanitation (CWIS)



Some recent examples of World Bank's Water GP response to COVID

- Argentina: \$575 (of which, \$300 M WB) for the Buenos Aires WSS Program for Results addressing the health and environmental risks posed by COVID-19 in GBA Vulnerable Areas.
- Shimla (India): \$80 M WSS Improvement Program for Results including a Performance Improvement Plan for building resilience to address the post-COVID-19 building-back-better for universal access
- Ethiopia: ensuring all HCFs have continuous access to water. Pumps and boreholes in Addis replaced and rehabilitated to provide services.
- Haiti: focusing on immediate measures: purchasing chlorine, installing handwashing stations, soap and water supply in critical areas. Providing financial resources to water utilities.

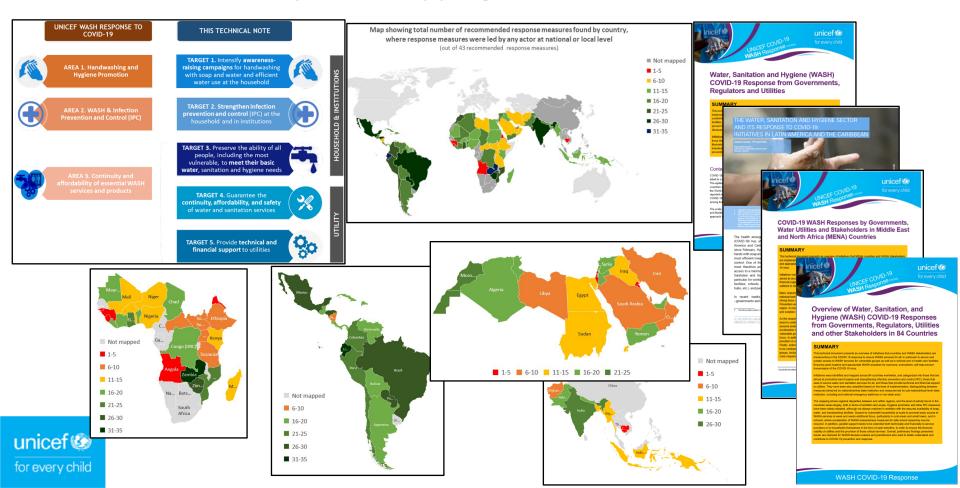
Thank you!



COVID-19 and WASH: What we Know and What's Next



COVID-19 WASH Response Mapping

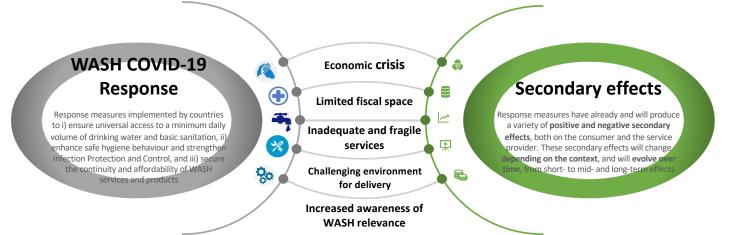


On-going analysis of COVID-19 secondary impacts to the WASH sector

Objective: To gain knowledge and understanding about the socio-economic and financial impact of COVID-19 on the WASH sector, based on literature review and discussion with WASH stakeholders.

Research questions

- A) What are main COVID-19 secondary effects on WASH?
 - Analysis of both positive and negative effects on WASH sector, from different perspectives and angles
- B) How does the context influence on these secondary effects
 - Analysis of the influence of the enabling environment on the type of effects and their manifestation
- C) Which are the linkages between the response and positive and negative effects?
 - Analysis of the cause-effect relationships between specific response measures and the effects created, both positive and negative





COVID-19 and WASH: What we Know and What's Next





USAID MOZAMBIQUE



COVID-19 and WASH: What We Know and What's Next

Webinar - USAID Water Team

WASHPaLS Study **Talking Points**

Clara dos Santos Dimene March 11, 2021

Context – WASH and COVID-19

Limited access to basic WASH services

- 55% (40% in rural) basic water services
- 29% (0.5% rural) basic sanitation
- 19% health centers no access to water
- 17% do not have toilet for patients

Source: JMP 2017 & Flash Appeal Report

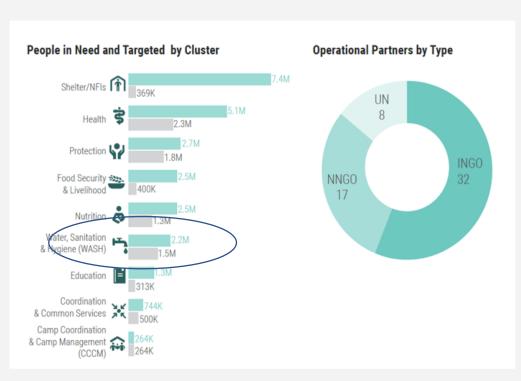
COVID-19 cases updated

- 61,170 Positive COVID-19
- 44,276 Recovered
- 674 Deaths

Source: GRM

GRM COVID Response Plan Requirements

Around \$50 million



Source: Flash Appeal COVID-19 Report – Dec 2020

Considerations from the Study Findings

- 1. Describes the Mozambique's WASH mobilization and the ongoing initiatives for COVID-19 response.
- 2. Describes how WASH services were impacted by the pandemic, and the challenges of providers, governors and stakeholders, to ensure continuity of service during the pandemic.
- 3. Difficult to determine whether financial difficulties in accessing and providing water are due to COVID or the pre-existing economic recession.
- 4. Financial impact from COVID was the highest in Mozambique compared to the other countries studied.

Considerations from the Study Findings₍₂₎

- 5. The proportion of consumers with financial challenges in accessing water and providers revenue reduction due to the pandemic were high.
- 6. Challenges and response on sanitation during the pandemic.
- 7. Opportunity to explore other emergency mechanisms to support service continuity and providers sustainable business development. Ex. USAID's Service Continuity Grant.
- 8. Sectoral and multi-sectoral stakeholders' coordination has been a crucial approach for the results on COVID-19 response. Ex. WASH-Cluster.

COVID-19 Response Initiatives

- 1. GRM Contingency Plan on measures and resources to ensure service continuity during the pandemic.
- 2. Sector Partners' quick mobilization (WASH Cluster/TWIG) and coordination to aid particularly in the northern region where the poverty rates are higher/terrorism increased.
- 3. USAID/Mozambique Initiatives:
 - Service Continuity Grant to reduce operational costs burden to rural, small towns & peri-urban water systems
 - Financial Stress Assessment to estimate impact of COVID on small private providers financials
 - Informative tools on water rational use to water regulator agency



Impact of the COVID-19 pandemic on future WASH programming

- 1. COVID-19 presents an opportunity for programmatic activities to better address sustainable and long-term basic services in places like schools, health facilities and other public areas.
- 2. Response activities raised the gap on consolidated monitoring and informative tools with updated data to support decision making.
- 3. Need to invest in ensuring community's capacity to maintain and sustain programmatic interventions, for better preparedness to face emergencies.
- 4. Stakeholder's coordination proved to be very important for identifying the response to needs, avoiding duplication of efforts.



USAID MOZAMBIQUE

Thank you





COVID-19 and WASH: What we Know and What's Next



COVID-19 and WASH: What we Know and What's Next



Water for the World provides a foundation for preventing transmission and reopening safely

Scaling up and adapting existing Water for the World investments can:



Maintain and extend reliable water supplies



Unlock financial support for service providers



Facilitate access to WASH supply chains & commodities



Adapt business models to ensure solvency

Water for the World investments in critical areas of need

Network of partners with rapid expansion capabilities