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Policy Nook

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Policy Note: Policy Responses to Ensure Access to Water and Sanitation Services During COVID-19: Snapshots from the Environment for Development (EfD) Network

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This policy note provides a snapshot of water and sanitation measures implemented by governments in response to the COVID-19 pandemic in 14 countries in the Global South: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Chile, Colombia, Ghana, Kenya, Nigeria, Panama, South Africa, Uganda and Vietnam. We find that many countries have taken action to stop utility disconnections due to non-payment. With the exception of Ghana and Vietnam, few countries are instituting new water subsidy programs, and are instead choosing to defer customers' bills for future payment, presumably when the pandemic recedes and households will be able to pay their bills. It is easier for the utilities' COVID-relief policies to target customers with piped connections who regularly receive bills. However, the situation for unconnected households appears more dire. Some countries (e.g., Ghana, Kenya, South Africa and Uganda) are attempting to provide unconnected households temporary access to water, but these households remain the most vulnerable. This health crisis has accentuated the importance of strong governance structures and resilient water service providers for dealing with external health, environmental and economic shocks.

Keywords: COVID 19; water supply and sanitation; subsidies; customer assistance programs;

1. Introduction

Access to high-quality water supply and sanitation services is more critical than ever. In addition to recommendations on quarantines, masks and social distancing, the WHO recommends handwashing with soap under running water for a minimum of 20 s and adhering to general sanitation as the main protocols in reducing the spread of the COVID-19 (Cohen and Kupferschmidt 2020; WHO and UNICEF 2020). In a joint statement, many world leaders agreed that water, sanitation and hygiene, coupled with social distancing are essential to prevent the spread of COVID-19.[1]

However, access to high-quality water and sanitation services remains low in many developing and emerging economies (WHO and UNICEF 17, JMP 2020 – see Table 1). The coverage of people with handwashing facilities in the Global South is low due to shortages of water (Amuakwa-Mensah *et al.* 2020) as well as managerial and financial challenges. Although it is possible that the pandemic will spur an acceleration of efforts to increase access to services and improve service quality, most water professionals and policymakers have so far focused on

[1]https://www.government.se/statements/2020/05/water-sanitation-and-hygiene-world-leaders-call-to-action-on-covid-19/.

Table 1. WASH Indicators in Selected EfD Center Countries

Country	% Population With Access			% Urban Population With Piped Water
	Basic or Safely-Managed Water	Basic or Safely-Managed Hygiene (Handwashing)	Basic or Safely-Managed Sanitation	
Central America*	94	84**	82	96
Chile	99.8	—	100	99.7
Colombia	97	65	90	95
Ghana	81	41	19	40
Kenya	59	25	29	62
Nigeria	71	42	39	15
South Africa	93	44	76	98
Uganda	49	21	18	53
Vietnam	95	86	84	81

Source: Joint Monitoring Programme 2020 and World Development Indicator (WDI). Accessed July 2020 via https://washdata.org/data/household/.
Notes: * = average for the countries of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. **data available only for Guatemala and El Salvador.

preventing the situation from worsening. As we describe, they have done this primarily by forbidding disconnections for non-payment.

Lockdowns and extended restrictions on movement have triggered social and economic crises (Loayza and Pennings 2020), and many governments are trying to cushion the financial blow to struggling households. Since most developing and emerging economies lack systems to provide direct economic relief (e.g., cash payments or employment support) to their citizens, some have resorted to providing discounts or delayed payments on electricity and water bills.

This policy note leverages the global footprint of the Environment for Development (EfD) network to provide a snapshot of actions governments in the Global South are taking to maintain and improve access to water and sanitation services during the COVID-19 pandemic.[2] We have done our best to provide accurate and timely information, but we caution readers that the situation is developing rapidly.

[2]EfD is a network of environmental economics research centers addressing the world's most pressing environmental and development challenges. EfD contributes to evidence-based domestic and international policies for poverty reduction, environmental and resource management, and climate change impacts in the Global South through integrated capacity development, research and policy engagement. EfD centers are hosted by leading local academic research institutions in 15 countries across the world. For more information, see https://www.efdinitiative.org.

2. Government Water and Sanitation Policy Responses to COVID-19 Pandemic by Country

2.1. *Central America* (*Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua*)

Except for Nicaragua, countries in Central America adopted various measures to maintain and improve access to water and sanitation services during the COVID-19 pandemic (see Table 2). For instance, in Costa Rica, Decree 076-S urged urban and rural water providers to stop disconnections and to reestablish water services in disconnected households during the pandemic emergency (since March 22), regardless of whether the customer had an outstanding bill. This policy applies throughout the pandemic emergency and any payment arrangement must be started only after the official end of the emergency.

Although measures like this are important to foster universal access to safe water, the impacts of such measures on the financial health of water providers will likely be negative. An exploratory study conducted by the government of Costa Rica on 219 rural water providers has shown that although default rates are generally low (less than 10%), there was an increase in defaults from February to April 2020, most likely associated with the economic crisis caused by COVID-19. If defaults increase in the future, this might jeopardize the financial viability of rural water provision services, and delay preventive and corrective infrastructure investments (Madrigal *et al.* 2020).

In addition to policies to help those connected to the piped water network, there were also initiatives from governmental and non-governmental organizations to provide water free of charge (typically from tanker trucks) for those unconnected to a piped water network. We find evidence of this in Costa Rica, El Salvador, Guatemala and Honduras.

2.2. *Chile*

As part of the President's declaration of a state of catastrophe (March 19, 2020), the government implemented several measures related to the water supply sector. First, the government requested that utilities help customers, including reconnecting socioeconomically vulnerable customers who had unpaid water bills. From March until the end of September, the country's largest water utility (Aguas Andina, serving Santiago) delayed water bills for 190,000 households. However, the utility has stipulated that accumulated water bills must still be repaid.

Chile has an existing water subsidy scheme (Contreras and Gomez-Lobo 2019). The existing program covers between 15–85% of the cost of the first 15 m^3 per month of water and sewer services for households in the bottom four deciles of

Table 2. Water-related Policies or Measures Implemented at National Level in response to COVID-19

Country	Urban Utilities Forbid Dis-Connections	Urban Utilities Reconnect Debtor Households	Special Provisions for Informal Settlements or Unconnected Households	Utilities Provide Bill Discount Program (Targeted/ Untargeted) or Delay Bills	Emergency Programs to Increase Wash in Rural Areas	Handwashing and Hygiene Campaigns
Central America						
Costa Rica	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
El Salvador	**Y**		**Y**	**Y**	**Y**	**Y**
Guatemala	**Y**		**Y**	**Y**	**Y**	**Y**
Honduras	**Y**		**Y**		**Y**	
Nicaragua						
Panama			**Y**		**Y**	
Chile	**?**	**Y**		**Y (targeted, pre-existing)**	**Y**	
Colombia	**Y**	**Y**		**Y (Bogota, targeted)**		**Y**
Ghana	**Y**		**Y**	**Y, untargeted**		**Y (NGO)**
Kenya	**Y (Nairobi)**		**Y**			
Nigeria						**Y (NGO)**
South Africa	**Some**	**Some**	**Y**	**Y (targeted, pre-existing)**	**Y**	**Y**
Uganda	**Y**		**Y**	**delay**		
Vietnam				**Y (untargeted)**		**Y**

income. The final subsidy amount depends on the city, the water fee and the household's socioeconomic status. For those enrolled in the country's *Chile Solidario* anti-poverty program, the subsidy is up to 100% of the first 15 m^3 per month. In response to the pandemic, the same eligible households who have a monthly water consumption below 10 m^3 per month may delay paying their bill as long as the country is under the State of Catastrophe. Again, unpaid bills accumulate and must be repaid.

To help rural customers, the Ministry of Public Works announced a USD 6 million subsidy on May 29, 2020. The central government will transfer the money directly to each rural drinking water association. The association will decide how (and how much) money will go to the households in their community. The funds are expected to reach 700,000 rural households over three months.

2.3. *Colombia*

According to the Housing Minister, over 250,000 families that were previously disconnected as a result of non-payment of utility bills were reconnected (IAGUA 2020a; Ministry of Housing 2020). The cost of reconnection, normally paid by the customer, was waived. All households, including high-income families, who could not pay their bills were given the chance to pay in several installments. Over five million low-income households are estimated to have taken advantage of this program (Ministry of Housing 2020). The government also forbid service providers from increasing water rates during the pandemic, froze planned increases in the aqueduct (raw water) rates and suspended taxes on water purification inputs (IAGUA 2020b).

Additional support was given to households in some regions of the country. For example, Bogotá issued a decree providing a bill discount of COP $15,056 (USD 4) to vulnerable households. This temporary benefit supplemented existing water subsidies and was meant to offset the expected increase in water bills due to increase in water consumption during the lockdown. It is equivalent to approximately 1.41 m^3 of water consumption on average. The program relied on an existing government classification system to identify vulnerable households and determine eligibility for the bill discount program.[3]

A similar national-level program to provide subsidies to households through water bills was announced by the government under the emergency declaration.

[3]In Colombia, households are classified according to socioeconomic strata in order to qualify for subsidies on utility bills and other services characteristics. These are based on housing quality, income and other factors. Low-income households are those in strata 1 and 2, middle households are strata 3 and 4, and high-income households are strata 5 and 6.

Vulnerable households began receiving these benefits in April in some regions, but the decree was rejected by the constitutional court in July (La Republica 2020). During the four months it operated, the national association of water companies estimated that the monthly cost of this program was around COP $57 billion (USD 15 million). The four-month total was 0.02% of Colombia's annual GDP.[4] Water companies continue to apply the subsidy programs in place before the pandemic.

2.4. *Ghana*

Ghana is a fairly water-rich country yet many households do not have a reliable, safe domestic water supply. Only 36% of Ghana's population has safely managed drinking water and only 40% of urban households have access to piped water services (Table 1). Ghana Water Company Limited (GWCL) is the service provider for all urban areas in the country, while the Community Water and Sanitation Agency (CWSA) is responsible for rural water supplies. Ghana has taken significant action to maintain and improve access to water and sanitation services during the COVID-19 pandemic. In April, the government promised to pay the entire water bill for all domestic customers, urban and rural, for the months of April, May and June. This policy was subsequently extended through September.[5] The government pledged to reimburse GWCL's costs, which average Ghs95 million (USD 16.4 million) per month. The Ministry of Finance (2020) reported that GWCL has invoiced and been paid for the first two months. The total commitment from the government to GWCL of approximately USD 51 million excludes the outstanding accounts payable to GWCL of the various ministries, departments and agencies who have not paid their water bills (Daily Graphic 2020). In addition, the government has spent over Ghs80 million (USD 13.8 million) on handwashing stations and other essentials for schools that have re-opened. These policies have resulted in a significant increase in water use. GWCL (2020) reported that although the company budgeted for a 10% increase in water consumption due to the COVID-19 pandemic, actual consumption increased by 23% and 25% in April and May.

To help households that are not connected to the network or who receive intermittent service, the government through the GWCL provided communities with 10 m^3 containers and contracted with public and private water tankers to keep the containers filled. Furthermore, during a three-month window, stand-pipe suppliers and other vendors could register with the district offices of the GWCL and be

[4]https://www.andesco.org.co/2020/08/03/que-pasara-con-los-subsidios-para-servicios-publicos-que-tumbo-la-corte/.

[5]https://citibusinessnews.com/govt-restores-free-water-for-3-more-months-free-power-for-lifeline-consumers/.

reimbursed by GWCL for the costs of supplying community members at no charge. The government also encouraged connected houses with a reliable flow to supply other community members at no charge. The government also subsidized the costs of disinfecting markets, lorry terminals and schools.

The efforts described above have not reached all households and communities. For example, although new disconnections are forbidden during the pandemic, customers who had previously been disconnected for lack of payment were not reconnected and thus ineligible for the free water supplies. Similarly, the GWCL has required that customers clear all existing debt/arrears or pay an amount negotiated with District or Regional offices to be re-connected.[6] A recent online survey by the Center of Economics and Financial Studies (CEFS, Ghana) asked respondents whether they are happy with the free water bills. Three-quarters said they were, with 6% saying "no" and 19% saying "indifferent".

2.5. *Kenya* (*Nairobi*)

After the first case was confirmed in Nairobi in early March, the Ministry of Water, Sanitation and Irrigation instructed the Nairobi City Water and Sewerage Company (NCWSC) and other Water Sector Agencies to implement measures aimed at curbing the spread of COVID-19. NCWSC is one of the 88 water service providers (WSP) in Kenya, and currently provides approximately 80% of Nairobi with 6 hours of supply per day from piped connections. NCWSC stopped disconnecting households for non-payment, and instituted a program to help customers who are struggling to pay their bills. Customers apply in person at their local NCWSC branch office and negotiate a payment plan.

Comparing May 2020 with May 2019, water production dropped substantially, though this was primarily due to a landslide-caused break in a main raw water supply line to the city rather than the COVID-19 pandemic. Because of safety concerns and restrictions on movement, meter readings fell by 25%. The number of bill-paying customers fell from 127,000 in May 2019 to 89,000 in May 2020, indicating a substantial reduction in the number of customers paying their bills. Revenues in May 2020 were 30% lower than in May 2019. It is unclear whether this change in customer bill payment was associated with dissatisfaction with the service disruption, economic hardship due to COVID-19, the suspension of disconnections or a combination thereof.

To help unconnected households living in informal settlements, the Ministry of Water, Sanitation and Irrigation set aside Kshs.620 million (USD 5.7 million) to

[6]https://www.myjoyonline.com/news/national/allow-tenants-to-use-water-for-free-ghana-water-company-tells-landlords/.

drill and equip 93 boreholes and elevated storage tanks with a capacity to store 24,000 l of water. The new boreholes are expected to provide water at no cost to 600,000 residents.

2.6. *Nigeria*

Nigeria has low levels of access to improved water and sanitation services (Table 1). Cash support and food assistance has been provided to some poor households to cushion the financial impact of lockdowns, but water supply has not been a focus. We found no evidence from stakeholder discussions or newspaper reporting that water utilities in the country placed a moratorium on disconnections, reconnected previously disconnected households, subsidized or delayed bills, or provided special services to unconnected households. Because of the low levels of piped connections, most Nigerian households rely on multiple sources like tanker suppliers, rainwater harvesting, and neighborhood boreholes. There is anecdotal evidence that the price of these sources is rising in some cities (Washington Post 2020; This Day 2020). It is not clear whether this is because of higher demand or increased logistical challenges for vendors due to COVID-related restrictions.

Several NGOs appear to be working with the government on hygiene and water and sanitation campaigns. For example, WaterAid is partnering with the federal government and some states to improve hygiene behavior and install hand washing facilities in public places (WaterAid 2020). Also, the International Committee of Red Cross (ICRC) and Nigeria Red Cross Society (NRCS) has continued to improve access to hygiene facilities and clean water for displaced people as a means to limit the spread of COVID-19 (ICRC 2020).

2.7. *South Africa*

In South Africa, the National Department of Water and Sanitation manages and protects the country's water resources while municipalities are responsible for providing water and sanitation services. During the COVID-19 lockdown, different tiers of government worked collaboratively to distribute water to communities that lack access to piped water connections in the home. The National Department of Water and Sanitation set up a COVID-19 Command Center for Water and Sanitation which prioritized providing water to densely populated informal settlements and rural areas (South African Government 2020). The national government, in collaboration with municipalities, distributed water to under-served areas via tanker trucks on a daily basis and installed storage tanks. In Cape Town, the plan is to eventually connect new storage tanks to the formal reticulated system (PMG 2020).

Cities implemented a range of policies to maintain and improve access to water and sanitation services. Cape Town sped up the process for registering households for its existing customer assistance program who had not already been automatically enrolled.[7] The program provides qualifying households (with piped connections) 10.5 m^3 per month of water for free (PMG 2020). Households that did not qualify for the indigent program but were struggling financially due to the nationwide COVID-19 lockdown could arrange a payment plan with the City (City of Cape Town 2020).

The City of Johannesburg reconnected households whose water (and electricity) had been cut off due to non-payment (BusinessTech 2020a). The eThekwini Municipality (Durban) did not reconnect nonpaying water users (Comins 2020). The City of Cape Town does not disconnect water supply from residents but can restrict water use for accounts that are in arrears. However, this practice was suspended before the lockdown in March 2020 (PMG 2020).

Municipalities in South Africa depend heavily on revenues from utility customers to fund the provision of municipal services. Despite the negative financial impact that the COVID-19 lockdown has had on many households, water and sanitation tariffs actually increased by 4.5% in Cape Town (in July 2020), 6.6% in Johannesburg and 9.9% in the eThekwini Municipality (BusinessTech 2020b; Dlamini 2020). Rate increases planned before the pandemic, however, were even steeper. For example, the originally planned tariff increase for eThekwini was 23% (eThekwini Municipality 2020).

2.8. *Uganda*

One week after Uganda registered its first case in March 2020, President Museveni announced three main interventions by the National Water and Sewerage Corporation (NWSC) to counter the pandemic. First, the government suspended disconnections for non-payment. Customers will, however, have to pay any accumulated arrears if they choose not to pay their bills on time. Second, the NWSC and Kampala Capital City Authority (KCCA) installed 300 water points in high-risk public spaces (e.g., markets, transport hubs) in the central business district and city suburbs to promote handwashing, hygiene and disinfection. At the time of writing, NWSC was planning to replicate this strategy elsewhere in the country. Third, NWSC partnered with two private sector businesses to build 23

[7]Households are automatically enrolled in the indigent support program in Cape Town if their municipal property value is lower than R300,000 (approximately USD 21,000). Households can also apply for indigent status if their property value is higher than R300,000 but their total monthly household income is less than R6,000 (approximately USD 400).

low-cost, emergency water reservoirs in informal neighborhoods that are not yet served by public standpipes. The tanks would be refilled using water tanker trucks. The initiative is expected to benefit an estimated 30,000 residents. Customers are supposed to be charged the official NWSC public tap tariff of UGX 25shs (USD 0.01) per 20L jerrycan.

Uganda faces special challenges as one of the largest refugee-hosting countries in the world. For refugees, the COVID-19 outbreak and associated containment measures will likely impact timely maintenance of facilities, as well as access to populations to conduct widespread risk communication on disease prevention.

2.9. *Vietnam*

Nearly everyone in Vietnam has access to piped water services, and Vietnam has been relatively successful in limiting the spread of COVID-19. In early April, the Prime Minister requested all provinces and cities to lower domestic water tariff and wastewater discharge fees to provide financial support to households in response to the economic hardships associated with movement restrictions. In response, most provinces and their water utilities reduced the bills of rural customers 10%, on average, for the months of April, May and June. Bills for urban customers were reduced by 5–10%. Some provinces decided to further reduce water bills to zero for "poor" and "near-poor" households and for households in quarantine sites, including two entire communes.

3. Conclusions

One question is whether any of these measures have done anything to reduce the spread of COVID-19. It is too soon to tell and beyond the scope of this policy note to speculate.

Our scan of countries' attempts to maintain and improve access to water and sanitation services during the COVID-19 pandemic has highlighted several themes.

First, many countries have taken action to stop disconnections due to non-payment. In addition, with the exception of Ghana, Colombia and Vietnam, many countries are not instituting new water subsidy programs, and are instead choosing to defer customers' bills for future payment, presumably when the pandemic recedes and households will be able to pay their bills. This raises important questions about the sustainability of utility finances. Many of service providers were already in poor financial health before the pandemic (Walton 2020).

Second, although it is easier for utilities to help customers with piped connections who regularly receive bills, unconnected households have received less help. Unconnected households in urban informal areas or in rural areas collect

water from a variety of sources (e.g., public wells and taps, private water vendors, handpumps, surface water sources, etc.). The use of these alternative water sources may make it difficult to adhere to "stay at home" recommendations, further exposing them to virus spread. This is similarly true for connected households with intermittent service, who must supplement their supply by obtaining away from home.

Third, the case of Vietnam demonstrates that in places where COVID-19 has been relatively well-managed with public health measures, there was relatively little need for dramatic policy responses in the water and sanitation sector.

Finally, the crisis has accentuated the importance of strong governance structures and resilient water utilities for dealing with external health, environmental and economic shocks. Improving the flexibility of regulatory frameworks and the sustainability of water utilities is a necessary step for ensuring access to water and sanitation for all in an ever-changing world.

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