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MUNIWASH – COTE D'IVOIRE

EXAMINATION OF DRINKING WATER SUPPLY AND SANITATION PRACTICES OF POOR AND UNDERSERVED POPULATIONS IN BENIN AND COTE D'IVOIRE

SUMMARY

In October 2021, the USAID-funded Municipal Water, Sanitation and Hygiene (MuniWASH) Activity finalized a household survey in 16 municipalities in Benin and Côte d'Ivoire. The goal of this study was to better understand water and sanitation issues at the household level, particularly among poor and underserved (P&U) populations. Through a quantitative and qualitative data collection effort, MuniWASH analyzed the needs and the expectations of these populations.

Despite their low-income status, the study revealed there is a willingness and ability among P&U populations to pay for desired WASH services. Therefore, development interventions for these populations should focus on contextualized solutions to leverage this willingness to pay for services. Examples include the implementation of a tailored communication approach for behavior change and the promotion of low-cost sanitation technology and water supply options tailored to their living environment and needs. Intervention areas should include a strong involvement at the municipal level where public and private sector actors and civil society organizations work closely in implementing activities that contribute to the Sustainable Development Goals (SDGs).

BACKGROUND

The USAID MuniWASH Activity aims to improve access to water and sanitation services in municipalities in Benin and Côte d'Ivoire. In accordance with the SDGs and, in particular, SDG 6: *Universal access to water and sanitation services*, MuniWASH is promoting access to these services for P&U populations, which encompass people living in urban areas and peri-urban areas devoid of most basic social services. These populations, which are often an overlooked target of development actions, often fall in lower wealth quintiles. To achieve this objective, MuniWASH conducted baseline studies in 16 municipalities (eight in each country) to identify and target the specific needs of these populations in terms of drinking water supply, hygiene, and sanitation and to define the contextualized approaches.

In Benin and Côte d'Ivoire, there are similarities and disparities in attitudes and practices within P&U populations from which we can draw lessons to better target them in development actions. This Learning Note analyzes and identifies the main demographic characteristics of these populations in both countries.

APPROACH TO TARGETING POOR AND UNDERSERVED POPULATIONS

MuniWASH's approach to defining the P&U populations was comprised of three steps:

I. Definition of criteria

The eligibility criteria were constructed from a set of variables that reflected the living conditions of households and their level of access to water and sanitation services. The starting hypothesis was that there is a relationship between the level of household income and certain non-monetary, observable socio-economic characteristics, such as material goods. The next step was to identify the most relevant characteristics, and finally, conduct a documentation review with the Equity Tool¹ for household research. Most of the questions to address are already described in this document. Based on these questions,

¹eWebsite: <https://www.equitytool.org/>

MuniWASH refined the criteria list to four:

- Belong to the 4th or 5th wealth quintile (i.e. poor and very poor);
- Have limited or unimproved access to water and sanitation services;
- Reside in one of the precarious neighborhoods or boroughs/slums or peri-urban areas; and
- Live in a neighborhood/district that is not covered or has less than 50 percent coverage of the drinking water supply network.

2. Refinement of criteria

In the next phase, the team reduced the list further by applying the criteria to a test area and holding discussions with key informants and technical resource persons from the water and sanitation sector to select the final criteria. The team determined any household meeting the following conditions can be considered a “poor and underserved” household:

- Belong to the 4th or 5th wealth quintile (i.e. poor and very poor); and
- Having limited or unimproved access to water or sanitation services.

The two eliminated criteria did not identify a significant number of P&U households in addition to the above criteria.

3. Data collection and analysis

MuniWASH conducted data collection through a household survey, where team members first identified and prioritized the needs of P&U populations in terms of water and sanitation service delivery, and then estimated the percentage of each municipality’s population that qualified as P&U populationse for each municipality (Table 1). MuniWASH referenced the Joint Monitoring Program (JMP) for the definition of “limited and unimproved” access and applied the Equity Tool to determine wealth quintiles at the household level. The Equity Tool has a standard set of questions developed to measure relative wealth in over fifty countries.

Table 1: Estimated P&U populations for targeted municipalities in Benin and Côte d'Ivoire

BENIN									
Targeted Municipalities	A. Calavi	Allada	Aplahoué	Avrankou	Bohicon	Cotonou	Ouidah	So-Ava	Total
% of P&U populations	22	56	55	75	37	18	31	88	48

CÔTE D'IVOIRE									
Targeted Municipalities	Abengourou	Abobo	Bouaké	Gagnoa	San Pédro	Soubré	Yakro	Yopougon	Total
% of P&U populations	7	2	24	12	14	14	8	1	10

The survey was conducted in the 16 target municipalities, which included 2,277 households in Côte d'Ivoire and 2,072 households in Benin. USAID MuniWASH conducted 16 group discussions and 32 individual interviews with key informants in each country. The Activity formulated a descriptive analysis of the data to present the main characteristics of P&U households in each municipality.

CHARACTERISTICS OF POOR AND UNDERSERVED POPULATIONS

According to the Households Survey report produced in October 2021 by MuniWASH, P&U households are distributed throughout neighborhood types in Côte d'Ivoire: they compose 50 percent of households in developed urban neighborhoods, characterized by broad coverage of water and sanitation infrastructure that ensures sanitary conditions; 39 percent in peri-urban areas; and 19 percent in neighborhoods/slums, which are characterized by underdeveloped infrastructure that provides unimproved and no-to-limited water and sanitation services. In Benin, the data highlight a significant gap between the developed urban district and districts with lower quality infrastructure. The poor and underserved are in underdeveloped districts where they compose 87.1 percent of households, followed by the peri-urban districts (62 percent), and a smaller proportion in urban districts (33.3 percent).

Another notable characteristic of these populations is the gender of the head of household. In Côte d'Ivoire, there is a sizable proportion of women (30 percent) as head of household. Households are large in size (about nine people on average per household), while one in three households (33 percent) has more than 10 people. The gender characteristic is even more pronounced in Benin where 49.4 percent of households are headed by females, and the average number of persons per household varies between 9 and 12.

The survey results show that the drinking-water supply and access to sanitation services are critically low for P&U populations. In Côte d'Ivoire, 91 percent of PU& populations do not have a water subscription with the national utility, SODECI. Among these non-subscribers, 72 percent spend less than or equal to 5,000 XOF² per month to acquire water, 18 percent pay between 5,000 -10,000 FCFA, and 10 percent spend more than 10,000 XOF. In terms of sanitation, we note that 98 percent households have unimproved latrines with more than 50 percent of P&U populations practicing manual emptying. Amounts expended for emptying are between 10,001 and 25,000 XOF for 49 percent of households.

Although similar trends are observed in Benin, there are also some significant differences, particularly on the issues of emptying and sanitation facilities. Depending on the municipalities, the proportion of P&U households subscribing to water services through SONEB (*Société Nationale des Eaux du Bénin*) is low, ranging from 0.6 percent to 10.1 percent. MuniWASH observed that 34 percent of P&U households have no sanitation facilities, and across all municipalities, at least one out of ten households practice open defecation. About 80 percent of the households with sanitation facilities spend more than 30,000 XOF on average per emptying. Additionally, in both countries the household study shows that there are similarities between P&U populations in the size of household, gender of the head of household, places of residence, and quality of water and sanitation services.

DIFFERENCES IN PERCEPTION AND ADAPTION STRATEGIES

The analysis of qualitative data from the household survey shows that there are differences in perception and adaptation strategies among P&U populations relating to water and sanitation issues in Benin and Côte d'Ivoire. In Côte d'Ivoire, many citizens believe that the lack of sufficient drinking water supply is due to

² | XOF= 0.00161 USD

weak investment by the central government. Additionally, the exclusive leasing contract of the water company SODECI (*Société de Distribution d'Eau de Côte d'Ivoire*) coupled with rapid urbanization limits the company's ability to provide full drinking water network coverage in the municipalities.

Adaptation strategies practiced in some municipalities have led to the emergence of informal water suppliers in the private sector that distribute water from boreholes drilled with their own funds. This informal private sector provides water for both drinking and other domestic uses. Generally located in urban areas, these informal suppliers package water in 0.5-liter sachets and sell them for 25 XOF each. By comparison, 20-liter cans are sold at the same price from a tap. In effect, this leads poorer households to spend more per quantity of water than wealthier households. Poor households are often forced to pay more to obtain drinking water from boreholes and choose lower-cost, alternative sources for other domestic water needs.

On the sanitation services side, most poor households in Côte d'Ivoire are renters and do not see benefits of investing in latrine construction for a house they do not own. They mostly use unimproved toilets shared with other households. These toilets are usually poorly maintained and give off unpleasant smells. Also, some P&U populations live in densely populated neighborhoods with narrow roads, making access to septic systems and latrines difficult for emptying vehicles. The quality of emptying services generates further dissatisfaction among households. To adapt, many P&U households prefer to hire manual emptiers who empty septic tanks by hand. One head of household explained, "People prefer manual emptying because the approved service providers do not offer quality services; they only draw water and leave the solid materials. With the manual emptying, we are sure that the emptier will also remove the solid matter."

In Benin, challenges with accessing sanitation services are readily apparent with adaptation practices creating more problems than they solve. In particular, the absence of toilets and the prevalent practice of open defecation negatively impacts health and can be linked to the poor sanitation facilities available to P&U populations. The high rate of open defecation (over 10 percent) shows that neither proper containment nor healthy disposal of sludge are practiced by P&U populations. One woman in a focus group in Avrankou said: "Here in Avrankou, we do not have Vacuum Truck Operator service providers because there is not a market for them. People do not build toilets with septic tanks. Most of us used pit latrines, and when they were filled, we closed the pit and dug a new one." These comments were confirmed by a male in a focus group in Bohicon: "Unlike in Cotonou, where there are much more modern latrines, here they are pit latrines that are often very deep. Therefore, they don't fill up fast." In absence of reliable and affordable emptying services, these reports show P&U populations resort to adaptive practices like covering latrines instead of using emptying services, which significantly increases health risks by exposing households to toxic human waste.

In areas with low access to water and sanitation services, adaptation practices like open defecation lead P&U populations to circumvent sanitation service chain. In Benin, the rate of open defecation remains disturbingly high due to local conditions that discourage the construction of latrines, particularly at rental properties, and the confinement of fecal matter within unlined pits is seen widely within family compounds for cultural reasons such as "not living near one's fecal sludge." When considering P&U populations in addressing these issues, WASH programs should invest in understanding the norms of the population before developing intervention strategies. The MuniWASH approach proposed below is in line with this.

APPROACH TO CONNECT POOR AND UNDERSERVED POPULATIONS IN WATER AND SANITATION SERVICES

In Côte d'Ivoire, the major challenges identified through qualitative and quantitative research efforts are the lack of household connections to a drinking water supply network and the low quality of fecal sludge management. A technical solution to increase access to water is private extensions at the end of the public water network. One example of this situation was the subsidized connections to the distribution network made by the NGO "Eau et Vie" in the municipality of Yopougon. Another solution is extending the drinking water distribution network in areas of difficult access and informal settlements through independent operators.

In March 2022, the Ministry of Hydraulics of Côte d'Ivoire announced the arrival of an independent operator who will be mandated with drinking water production and will be able to increase the capacity of the drinking water supply. The distribution will be carried out by SODECLI. Analysis of P&U populations' willingness and ability to pay shows that they will make significant efforts to access water despite the expensive cost of a connection. The extension at the end of the network will increase the supply points in P&U neighborhoods and limit the use of non-potable, alternative sources for domestic water uses.

Some of the sanitation challenges in Côte d'Ivoire include difficulty of access for emptying trucks in slums and informal settlements due to a lack of roads and the dissatisfaction with emptying services. Improved manual emptying technologies have the potential to address both the issue of household access and the issue of poor emptying services. For example, manual emptiers that are trained in safe emptying practices and have the ability to transport waste safely, such as on sealed barrels on animal or motorized carts, can be a solution for better sanitation service delivery. For households that desire to improve their existing containment system, improved on-site sanitation systems or mini septic tanks that can be emptied by small vehicles are possible solutions. In Côte d'Ivoire, there is significant potential among P&U populations due to the existence of a strong willingness and ability to pay for these types of WASH services.

In Benin, data related to high rates of open defecation and on-site sanitation practices confirmed the need to adopt a large-scale behavior change communication campaign as well as the need to establish a strong supply chain for the provision of sanitation products and services. Campaigns should emphasize the health impacts of fecal pollution and waterborne diseases, especially on vulnerable segments of the population such as children. Additionally, development practitioners must address the P&U populations who do not practice open defecation but rely on toilets that are unimproved or that are shared with other households whose level of maintenance or access puts them at great risk of contamination. The challenge for this segment is to move people up the sanitation ladder to an improved, non-shared sanitation service. Once they have gained a better understanding from the behavior change campaigns, municipal authorities, civil society organizations, and private services providers might then join forces to present to households with appropriate technologies.

This necessitates the implementation of training and capacity building programs to develop a qualified and operational workforce. It also requires the development of a market-based approach to match supply and demand for sanitation products to the benefit of households. Behavior change communication campaigns will also play a role in raising awareness of sanitation products and services. In such campaigns,

municipalities and civil society organizations should use all traditional and modern communication channels by involving resource persons (customary and religious leaders, health personnel, teachers, etc.). The involvement of these resource persons can contribute to reaching households, impacting society and promoting sustainability. In the end, municipalities can further institutionalize the reduction of open defecation by adopting laws and policies. These approaches can help to optimize investments in WASH infrastructure for the benefit of P&U populations.

The analysis of similarities and differences between P&U populations in Benin and Côte d'Ivoire provides important context for the development of an approach to improve provision of water and sanitation services. Customizing the approach to the specific contexts in each country allows for better targeting of these populations.

LESSONS LEARNED

Prioritizing P&U populations has led to the development of appropriate methods and tools to better understand the needs in urban areas. The profiles of P&U populations often share the following elements:

- Live in all parts urban areas including under-developed districts;
- Women are mostly the head of household;
- Household size is above the national average;
- Households are in the 4th or 5th (lowest) wealth quintile;
- No access or limited access to WASH products and services.

Contrary to common beliefs, there is a willingness and ability to pay for water and sanitation services among this population group. They expressed their willingness and ability to pay, and they considered the proposed technological options to be accessible, affordable, and of good quality. Generally lacking in-depth knowledge of available technology options, P&U populations tend to want proven solutions that are easy to use and maintain. For water they prefer private connections in the household, and for fecal sludge management, they prefer latrines that eliminate odors. Urban areas often facilitate adoption of modern lifestyles including improved water and sanitation practices, but problems with access to water and sanitation lead to unhygienic practices. As an example, public spaces once reserved for recreational activities are being transformed into open defecation sites. In Benin as well as in Côte d'Ivoire, public drinking water supply services do not operate in underdeveloped areas, such as slums and informal settlements.

In the current context of decentralization in the two countries, interventions in the water and sanitation sector for the benefit of P&U populations must have a strong institutional anchoring in the municipalities, where municipal actors – supported by private service providers and civil society organizations – will work alongside to promote proven solutions in this sector. This can be formalized through a Public-Private-Civil Society partnership with a communication strategy and tools adapted to each context. Research and pilot implementation activities must be integrated and scaled up to meet the WASH needs of P&U populations.

CONCLUSION

To succeed in improving service delivery for P&U populations, stakeholders and implementers need to tailor actions and technological options to suit the target population. Despite their low-income status, the study revealed there is a willingness and ability among P&U populations to pay for desired WASH services. Therefore, development interventions for these populations should focus on contextualized solutions to leverage this willingness to pay for services. Intervention areas should include a strong involvement at the municipal level where public and private sector actors and civil society organizations work closely in implementing activities that contribute to the Sustainable Development Goals (SDGs).

This study of similarities and disparities in water supply and sanitation practices between P&U populations in Benin and Côte d'Ivoire made it possible to analyze the needs and expectations of an often-excluded population group. The concentration of these populations in highly dense, unstructured spaces does not facilitate easy water supply and sanitation solutions. In addition, the disparities indicate the need for a contextualized and custom approach. Customized solutions are essential because the existing services, such as private connections and fecal sludge management, are often only available to wealthier populations, excluding poor segments of the population from the provision of services.

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