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**ENSURING AVAILABILITY AND SUSTAINABLE MANAGEMENT
OF WATER AND SANITATION FOR ALL**

**Rural WASH project:
results from baseline survey of 33 districts in Zimbabwe**

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Zimbabwe experienced a decade long economic decline that adversely affected access to water and sanitation services. The spotlight of the effects of this decline has mainly been on urban centers with little being discussed on the situation in rural districts. This paper highlights the findings of a survey conducted in 33 rural districts which aimed to determine the status of the water sanitation and hygiene situation. It highlights the situation in regards to access to services, operation and maintenance as well as the capacity of institutional structures to coordinate and manage water sanitation and hygiene issues. The paper showcases how the results have been used to influence programming of a large rural WASH programme in Zimbabwe.

Background

Zimbabwe's Rural Water and Sanitation Hygiene (WASH) infrastructure was largely affected by the economic downturn that began in the late 1990s which resulted in the decline of all water supply and sanitation infrastructure and services [Country Status Overview (CSO), 2011]. Lack of funding for the sector meant limited development of the WASH sector and no capacity to manage aging rural WASH infrastructure. These challenges resulted in poor WASH services that led to the 2008 cholera outbreak which led to 98,592 cases and 4,282 deaths (UNOCHA, 2009).

In 2012, the Government of Zimbabwe, with support from UNICEF and funding from DFID and SDC embarked on a Rural WASH Project targeting 33 of the 60 rural districts of Zimbabwe. The project aims to provide equitable and sustainable access to, and use of safe water supply and improved sanitation for about 1,726, 000 and 589,760 people respectively. This is being done through the provision of new water sources, repair and rehabilitation of water points (boreholes/deep wells) and piped water schemes, construction of latrines in primary and secondary rural schools, the creation of demand for behaviour change and construction of latrines in rural communities, hygiene education especially on practices related to hand washing at critical times, support to private sector supply chains for WASH commodities and establishing systems for back-up support for operation and maintenance (O&M), as well as strengthening Rural WASH institutions leading the planning, management, and implementation and monitoring of WASH activities (Ahmad, 2016). In 2013, a baseline survey was conducted in 33 targeted districts under the Rural WASH Project to establish the current status of WASH services, and provide programmatic information to guide the project. This paper aims at sharing the process, results, application, and lessons learned from this baseline survey.

Baseline survey goal and objectives

The purpose of the baseline survey was to determine the current status of WASH services, establish qualitative and quantitative benchmarks following the project logical framework, and provide vital information to the project for making key decisions. The baseline survey was designed to provide a comprehensive and detailed snapshot of the WASH situation in project target communities, districts and

provinces at the start of the programme, so that subsequent mid-term and end-line surveys would adequately evaluate program progress. The specific objectives of the baseline survey included the following:

1. Describe the WASH situation with regards to access, equity, safety, use, operation and maintenance amongst the rural communities and schools in the 33 project districts;
2. Determine the knowledge, attitudes, beliefs and practices (KABP) related to WASH including open defaecation;
3. Establish the status and sustainability of operation and maintenance systems including public-private participation and private sector retail distribution networks for WASH commodities;
4. Determine the operational or functional status and capacity of institutional structures at school, community, ward, district and provincial levels, including project management practices and capacity to coordinate, plan, manage, implement and monitor WASH projects and;
5. Establish values (qualitative or quantitative) of baseline indicators in the Rural WASH Project Logical Framework.

Survey methodology

The baseline survey used a mixed methodology approach consisting of quantitative and qualitative methods designed to collect data at various levels.

Field data collection was through the following methods:

- Literature review;
- Key Informant Interviews (KII) at national, provincial, district and community levels;
- Focus Group Discussions (FGD) with various members of the community;
- Household survey;
- A survey of communities' and schools' WASH facilities including water points, latrines and hand-washing facilities;
- The survey included a component on direct observation of the WASH facilities.

The sample size for the household survey was calculated using Cochran's sample size formula. Based on the probability proportion to size weighting technique using district population, the sample size for each district and ward was calculated. The final survey sample of 12,360 was reached by boosting the sample sizes to 300 for districts whose calculated sample sizes were smaller than this figure.

Data collection was done in 33 districts over 40 days by 105 trained enumerators. Data entry was done on MySQL. MySQL is an open source relational database that can be easily used to enter and store data. Quantitative analysis of data was done in SPSS, spatial analysis used ArcView (a geographic information system software that allows the visualization and mapping of spatial data) and qualitative data was analyzed using a thematic approach.

The baseline used a participatory approach whereby all relevant ministries of the National Action Committee for WASH, the coordinating body of the WASH Sector, were involved in all stages of the survey. The ministries involved included the Ministry of Environment Water and Climate, Ministry of Health and Child Care, Ministry of Local Government, Public Works and National Housing, Ministry of Primary and Secondary Education, Ministry of Women Affairs, Gender and Community Development, Department of Social Services while ZIMSTAT the national statistical agency guided the technical aspects of the survey. This team of subject specialists guided the development of the terms of reference, the development of the data collection tools and reviewing of all survey documents produced.

Survey findings

Household drinking water

Analysis and reporting on drinking water status was in line with UNICEF/WHO JMP definition of improved water sources. Results from the survey revealed that 64.6percent of the rural population use protected water sources. Households that relied on boreholes as the main drinking water source constitute the majority at 48.1percent, 8.4percent from protected dug wells, 16percent from unprotected dug wells and 14.7percent on surface water from rivers or dams.

Safe drinking water coverage rates have remained largely static over the years with an increase in use of unsafe water sources. It was also revealed that in drier and saline areas borehole water which is deemed safe

is not always preferred because of poor palatability. One key informant in Masvingo Province remarked that *“We have a little bit of a problem because some boreholes have salty water.... people would prefer river water to salty borehole water”*. Issues of salty water that affect drinking water palatability were rampant in the target areas and the use of unprotected and unsafe water rather than drinking salty water from boreholes was common.

Treatment of drinking water

The majority of households, 87.3percent, reported not treating their drinking water as they perceived it to be safe, 3.7percent always treated, 6.8percent sometimes treated and 2.2percent rarely treated their drinking water. Comments from the KIIs and FGDs on water treatment include:

- *“People know that they can use other treatment methods such as chemical tablets, jik and so on, but the availability of these are a challenge” (KII, Mat South).*
- *“People are aware of the need to purify water but they do not practice that because they wonder how they can boil water to drink for 15 people on a daily basis in one household” (FGD Boys & Girls).*

Results from the KII and FGDs revealed that although household knowledge on the need to treat water was high, practice was very low due to challenges in accessing the treatment chemicals.

Distance to the drinking water sources

Results from the survey show that household representatives reported walking an average distance of 1.07km to the nearest water sources (both improved and unimproved). This is more than the national recommended distance of 500m. Results also show that adult women above 15 years of age constitute 84.7percent of the common household water collectors: 11.4percent reported adult men above 15 years of age, while less than 5percent reported female (2.6percent) or male (1.4percent) children under the age of 15 years. Most of the water was ferried from the water source on the head (71percent) with the rest using wheel barrows and ox drawn carts among other means. This clearly shows that the burden of water collection from long distance rests with the women.

Management of water points

Trained water point management committees (WPMC) existed in 45percent of the water points visited; with 38percent of them reported as functional, 42percent were supported by a trained village pump mechanic (VPM) and 34percent of the VPMs were equipped with tool kits. This shows that community based management exists in rural communities to a limited extent. The major challenge was absence of equipped VPMs in communities, resulting in those with access to tools charging higher and unaffordable water point repair fees. On average, households paid US\$3.40 towards water point O&M costs per break down. A number of households also contributed in kind, mostly through male household member’s labour. The challenges discussed above typically lead to long down time for boreholes with households resorting to unsafe water sources.

Water, food security and livelihoods

Thirty percent (30percent) of the observed water points supported livelihood activities that included livestock watering as 30percent of the water points had cattle troughs and 29percent supported vegetable gardens with the objective of enhancing food security. About half of all water points observed in Matabeleland North and South Provinces had drinking troughs for animals, compared to only a fifth in the other provinces. The use of water points for other livelihood activities should be taken into account in the design of water projects to ensure that the yield is sufficient to meet the needs of the communities. Failure to take that it account results in some uses being compromised. For example it was reported in FGDs and at the stakeholders meeting that water points that support other livelihood projects also compromised household access to adequate drinking water during the drier periods.

Household sanitation

Latrine coverage is low in Zimbabwe. The results show that a proportion of 57.8percent of households had a latrine of one type or another that included BVIPs (35.3percent), pit latrines (11.2percent), and 2.6percent other types of latrines/toilets. Forty-two percent (42.2percent) of households practiced open defaecation. Open defaecation was commonly practiced within the project districts, by boys mostly, followed by girls and men in all provinces. Irrespective of availability of sanitation facilities, communities identified boys as likely to continue practicing OD. Households with their own latrine took on average 3.95 minutes to get to

the facility while those without a latrine facility took an average of 8.99 minutes (median of 2 and 7 minutes respectively). Distance to the sanitary facility impacts its usage and the further it is, the less likely it will be used. Household latrines need to be near to encourage use.

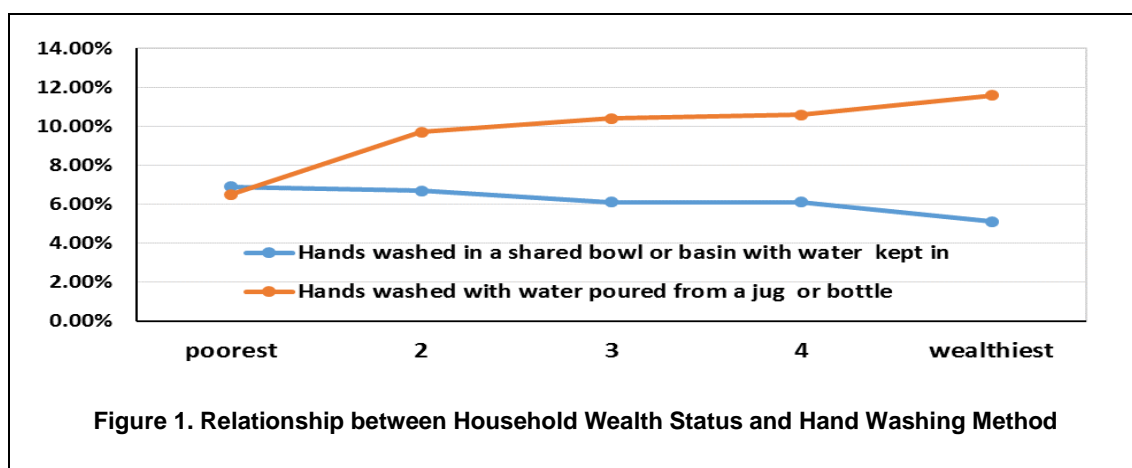
Demand led approaches require that communities build their own latrines. This survey done prior to introducing demand led sanitation, showed that only 30.1percent of households had constructed sanitation using their own resources. Latrine construction funding was identified as one of the key challenges to improved sanitation coverage in the visited households, villages, wards and districts with one informant noting that, “Sanitation issues have been very difficult to address because of the funding mechanisms used. When there is any funding, the allocation to support the sanitation component is usually insignificant. When funding is distributed at Ward level, it is very insignificant. There is no motivation in the community to build latrines.” (KII, Masvingo). This observation points to the reason for low sanitation coverage in rural Zimbabwe.

People with disabilities also highlighted a number of challenges encountered in using sanitation facilities. A proportion of 48.2percent of people with disabilities reached by the survey practice OD. Challenges cited in use of latrines include:

- Entrance of the standard Blair Ventilated Improved Pit latrine is not wide enough for the wheelchair or wheelbarrow to enter;
- Lack of toilet sets meant that they held onto dirty latrine floor to squat;
- Poor lighting due to the design resulted in visual difficulty locating the hole in the slab;
- Difficulty in cleaning after defaecation due to constricted space in the latrine.

Hygiene and prevalence of diarrhoea

Self-reported handwashing showed that 88.5percent of the respondents washed their hands before eating, 74.2percent after defaecation and urinating. It was noted however through observation that more than 50percent of households had no hand washing facilities in or near the toilets neither was there hand washing detergents at household hand washing facilities. The results clearly show that knowledge does not always translate into practice. Even though people know the critical times to wash hands there is no evidence of practice. Results from the survey also show common handwashing practices as run to waste without soap 48.9percent, 30.8percent use a shared bowl with no soap, and 9.6percent use a shared bowl with soap or ash. As can be seen from Figure 1, analysis of results also revealed a co-relation between households’ wealth rank to a hand washing method. The wealthier the household the more likely for it to practice recommended handwashing methods.



About 32percent of households had children under-fives suffering from diarrhoea within the 2 weeks preceding the survey. Household response to diarrhoea was very low as 81.1percent reported having not provided the child with any form of medication, 6.7percent provided some form of medication and 6.4percent gave ORS. Only 11.0percent sought treatment from the clinic. Poor handwashing practices and poor diarrhea management practices should be targeted for behavior change during hygiene promotion in the programme.

Capacity of institutional structures

The WASH sector in Zimbabwe is managed through an inter-ministerial committee, the National Action Committee. Composed of relevant ministries and government departments. This committee coordinates and oversees the development and management of Water, Sanitation and Hygiene activities in the country. This committee includes the Ministry of Environment Water and Climate, Ministry of Health and Child Care, Ministry of Local Government, Public Works and National Housing, Ministry of Primary and Secondary Education, Ministry of Women Affairs, Gender and Community Development amongst many others. At national level this committee is chaired by the Permanent Secretary in the Ministry of Environment Water and Climate. This structure is replicated at provincial level forming the Provincial Water Supply and Sanitation Committee (PWSSC) which guides and coordinates development and management of Water, Sanitation and Hygiene activities at provincial level. At district level the structure is the District Water Supply and Sanitation Committee (DWSSC) which has a similar mandate at district level. The National Coordination Unit (NCU) is the secretariat to the National Action Committee for WASH responsible for coordinating all sector wide activities.

Irrespective of the sector efforts to ensure smooth sector coordination mechanism, analysis of findings from discussions and interviews with key informants identified the following as some of the existing institutional capacity gaps that had a crippling effect on smooth sector coordination and implementation of the WASH sector.

- The National Coordination Unit, as the secretariat to the National Action Committee for WASH and the most instrumental, is short staffed. It has three technical staff and two support staff to coordinate sector-wide activities.
- Financial flows from national government and sector donors had remained low resulting in critical ministries receiving inadequate WASH budget allocations.
- Although PWSSC and DWSSC capacity to coordinate sector activities had been improved, this is undermined by poor resource allocations including funds and transport for logistical responsibilities.

Application of the survey results

The major use was to inform programming in the various districts.

- Results we used to revise the targets that had been allocated to districts using old and outdated data (2004 WASH Inventory). Targets for new borehole drilling and borehole rehabilitation were recalculated using results obtained on access to improved safe drinking water and the census population figures to ensure equity.
- Findings were also used to re-program the water supply component in the target districts. Initially all districts had an activity on “new borehole drilling”. However, the results showed that in some dry and saline areas boreholes were inappropriate. Affected districts therefore traded off boreholes allocated to them to appropriate water supply systems such as piped water schemes.
- Challenges of funding sanitation facilities by communities identified by the survey strengthened the advocacy and adoption of the upgradable BVIP by the GoZ, which allows households to use locally available resources to construct the latrine superstructure as they work towards a full BVIP.
- Survey results provided baseline values for project indicators from which appropriate and realistic targets were then projected. This resulted in the revision of the log frame targets in line with the actual situation on the ground.
- Results were also used to develop appropriate annual milestones which are being used to track project progress.
- Results have been used to guide gender and disability mainstreaming in the programme. A special PMT taskforce was set at national level to facilitate development of guidelines for the design and construction of disability friendly latrines. In addition deliberate the project is ensuring the construction of at least 1 disability friendly latrine in schools benefitting from the project.
- Results were used in increasing support to the national coordination structures which has allowed for their full participation in monitoring and supervision of this project. PWSSC, DWSSCs and the National level PMT are supported with a monitoring and coordination budget.

Lesson learned and further areas for investigation

The baseline survey provided extremely useful information not only for benchmarking the current status but also making adjustments to the Rural WASH Project to address key areas of recommendations. Lessons learnt from conducting the baseline is that:

- Participatory processes in conducting a baseline survey with many stakeholders as in the WASH sector in Zimbabwe requires flexibility and compromise to accommodate critical stakeholders. The negotiation process may delay the survey therefore extra time should be factored into the process.
- Involving relevant Government stakeholders was found to be critical for acceptance of the survey results at district, provincial, and national level.
- Observation techniques factored into the survey gave insight into situations where self-reporting resulted in over reporting.

Below are the further areas for additional investigation in future surveys/researches:

- Collecting water samples for testing was not covered in this baseline survey. However, overwhelming evidence from key informants and focus group discussions highlighted the need for water quality testing including in water sources regarded as “safe”. There is need for a water quality test study to establish the prevalence of salty and contaminated drinking water sources including sources that are considered “safe”. Use of spatial analysis to determine the extent of the problem of salty and contaminated water is most ideal.
- The survey noted a higher prevalence of irreversible old-age related disabilities and vulnerabilities which required further research to adequately address the WASH needs of this particular group.

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Notes

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any agency or the Government of Zimbabwe.

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