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**WATER, SANITATION AND HYGIENE SERVICES BEYOND 2015:
IMPROVING ACCESS AND SUSTAINABILITY**

Achieving sustainable operation and maintenance of water and sanitation facilities: findings from selected primary schools in Northern Uganda

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A number of stakeholders including the local government, non-governmental organizations and donors have invested large sums of money towards improving access to safe water, sanitation and hygiene practices in Uganda. However, communities still encounter water related challenges because the facilities are poorly maintained. This paper specifically discusses findings of the O&M of rainwater harvesting tanks in selected primary schools in Northern Uganda districts including Gulu, Kitgum, Lamwo, Pader and Agago. Roles of key stakeholder towards good O&M of Water, Sanitation and Hygiene facilities in schools are suggested as means to ensure sustainability of the facilities.

Introduction

This paper draws on primary data collected during a larger study that focused on Operation & Maintenance of Rain Water Harvesting Tanks (RWHTs) from 50 primary schools from Gulu, Kitgum, Lamwo, Pader and Agago districts of Northern Uganda. Assessments have been conducted on operation and maintenance of water and sanitation facilities in communities and data is also available on WASH status in schools. However, limited attention has been accorded towards assessment of the O&M of RWHTs especially in schools which this paper finds crucial. In addition, this paper identifies a gap for undocumented roles for School Management Committees (SMCs) and other stakeholders which affect their active involvement in ensuring good O&M of school facilities. The paper concludes with recommendations drawn from best practices with the aim of promoting sustainable O&M of RWHTs and eventually attain the intended safety water goals.

Objective

The purpose of this paper is to document the current O&M of rain water harvesting tanks in selected primary schools in Gulu, Kitgum, Lamwo, Pader and Agago districts of Northern Uganda. The authors also seeks to document key roles of stakeholder towards good O&M of WASH facilities in schools something crucial for attaining their sustainability.

Methodology

The paper draws on both primary (field work) and secondary data sources (literature review).

The authors reviewed available literature (including reports and available publications) on status of WASH in schools and on general O&M of WASH facilities in communities. However, much of the literature reviewed focus on access to water (boreholes, RWHTS), and sanitation (toilets, bathing shelters, and hand washing facilities) by schools and status of the same facilities. The limited data on O&M of the RWHTs was therefore the motivation factor for this assessment.

Focus Group Discussion

The authors also conducted interactive focus group discussion with School Management Committee members (SMCs), teachers and members of school health clubs, district and Municipal/Town council authorities specifically the education officers. Focus group discussions composed of 5-10 members and a total of 350 members participated. These were purposively selected because of their engagement in management of school facilities.

The authors applied a purposive sampling methodology for selection of targeted schools. Fourty (40) Universal Primary Education (UPE) government owned schools and ten (10) private owned schools were selected. This was aimed at comparing management of WASH facilities in both UPE government owned and private owned schools.

Observation

Field visits were done in selected schools to observe and assess the existing water and sanitation facilities with a focus on use and maintenance of RWHTs.

Findings

For easy comprehension and flow, the findings have been categorized into sub sections indicative of overarching themes.

Water facilities

Three types of water facilities; bore holes, RWHTs and spring wells were found common in targeted schools. Ninety percent (90%) of the schools visited have in the past received 2- 4 Rain Water Harvesting Tanks (RWHT) ranging from 5000 to 20,000 liters each. Thirty percent (30%) of these schools have access to a bore hole within their school compound, 43% schools access a borehole within 200 meters from the school and 27% walk up to 2km to access water from the nearby borehole. Other sources of water though not common, are protected springs and water collected from dams and rivers. A school with three tanks two of 10,000litres each and one of 20,000litres would be in position to store 40,000litres of water during dry season. Assuming each pupil uses 2 litres of water per day, 500 pupils would need 1000 litres per day, so 40,000litres will last for 40 days plus. Fourty days are almost equivalent to two months of a school term, considering 21-22 days when you subtract the weekend days. This would be good enough to take the school through a term during dry season. However, the intended purpose of collecting rain water is not met. The RWHTs are like “white elephants on the school compounds that no longer serve the purpose. Only 20% of the RWHTs visited were operational. Majority are not operational due to a number of reasons. The water collected during the rainy season is neither regulated nor taken care of.

Thirty five percent (35%) of the visited tanks are missing gutters, 8% missing taps and 37% are missing both gutters and taps. Schools tend to take good care of these facilities in the 1-3 years and thereafter loose interest. Vandalism by surrounding community and children was one of the key factors mentioned during FGDs for the non-functionality of the RWHTs followed by strong winds that tend to blow off the gutters and iron sheets. This is in addition to the poor workmanship and misconception that partners will continuously support these schools by repairing the non-functioning facilities and or give new ones. As a result, thousands of liters of water are lost on ground during rainy season. Such school tanks would be in position to collect enough water that the school would use through the entire term during rainy or dry season if they were well managed. In that case, there will/would be enough water for hand washing and cleaning as well as other domestic uses.

Sanitation facilities

Another important finding relates to the relationship between the availability of water and promotion of sanitation and hygiene in the targeted schools. Ninety five percent (95%) of the visited schools had access to a toilet facility and 5% were using old and full latrines that needed to be demolished. However, the pupil stance ratio remains high with 102:1 in some schools. Gender concerns were also obvious as 70% of the schools had separate toilets for girls and boys, 21% shared toilets among girls and boys and 9% shared the same toilet with their teachers. Adolescent girls expressed discomfort in sharing toilets with boys and their teachers.

“Schools with limited access to water (i.e. those where water is at 2km from the school) were reported to have dirty latrines for most of the time. This prompted the pupils to defecate and urinate in the open than in the dirty and smelly latrines”.



Photograph 1. RWHT with missing tap and gutters

Source: Amref/Teo /Northern Uganda

Hand washing facilities

Due to limited availability of water, hand washing is generally low in the 50 visited schools. Thirty two percent (32%) of the visited schools had hand washing facilities close to the toilet facilities but only 9% of these had water for hand washing and only 4% had soap. Shortage of water, absence of hand washing facilities and low awareness on the importance of hand washing were cited as major factors hindering majority of schools from practicing hand washing. This leaves a clear mark that hand washing with soap at critical times is seldom practiced despite its potential to save lives and reduce the occurrence of diarrhea diseases.

Private vs UPE schools towards management of WASH facilities in schools

While both private and UPE schools WASH facilities serve similar purpose, there is a difference towards maintenance of WASH facilities in these schools. Private schools care much about sustaining their facilities. This is partly because they make a financial or in-kind contribution towards the facilities and as such attach more value to the facilities (i.e. ownership). Such schools had budgets for O&M funds and parents contributed a bar of soap and 2 toilet papers per child. This is not the case with UPE schools where they are restricted by the government from charging any money from pupils/parents. Through the FGDs, it was noted that UPE schools of more than 500 enrollments qualifies for UGX 1000,000 equivalent to (\$ 363.6) support from local government per term. Out of that, 35% goes for scholastic materials, 20% for co curriculum, 10% for Administration, 15% for Management and 20% for contingency. Water, sanitation and hygiene promotion is categorized under management among other things. This money is too little compared to the needs of the schools and sometimes not received on time. One of the teachers noted that she had apportioned UGX 50,000 (\$18.1) for hygiene promotion through the term. It is also important to note that these communities lived in internally displaced people's camp for a long time and so they were accustomed to free service and are reluctant to take full responsibility of good O&M of the installed facilities. This affects the intended goal of ensuring sustainability and the realization of 100% WASH services may not be possible if the targeted poor and disadvantaged are not encouraged to making a contribution towards the facilities. The contribution can be in form of locally available materials and labour".

In addition, some partners tend to speed up construction/installation of hard ware (Tanks, toilets, boreholes and hand washing facilities) by not giving ample time for the targeted community to actively participate in software activities to gain a sense of ownership to be able to contribute to sustainable O&M of the hard ware facilities. In this case, installed facilities only last for 1-3 years and break.

Moving forward

There is need to advocate for increased budget for WASH in both private and government aided schools including their O&M.

There is also need for implementing organizations and local government to spend more time (6-8 month) and through the project period on implementing software activities like mobilizing targeted communities to actively participate in project implementation, training communities on WASH issues including O&M, involving them in technological options and site identification as well as encouraging them to contribute

towards the project before rushing for construction of facilities. This will improve on their involvement, contribution and ownership and once they value the work done, the more the chances for ensuring good O&M.

There is need for school and other targeted communities to make a contribution to the facilities. This will enable them take full responsibility for O&M and have more ownership over the facilities and as such maintain the facilities better than if no contribution was made. There is also need to encouraging the UPE schools to ask the parents to contribute to the maintenance of the facilities through the PTA funds.

There is also need to document key roles of stakeholders in promotion of institutional WASH. These should be shared and inspectors of schools and District Education Officers should be responsible for ensuring that different stakeholders play their roles. This paper suggests the following key roles for the different stakeholders in school.

Roles of School Management Committees (SMCs), Parents Teachers Associations (PTAs)

- Spearhead planning and implementation of developmental activities in schools.
- Oversee good O&M of all school facilities (including WASH facilities).
- Mobilize for O&M funds from parents and other well wishers.
- Encouraging the schools to make a contribution towards the facilities in order to attain their ownership and sustainability purposes.

Roles of head teachers and staff

- Educate pupils about hygiene (personal hygiene, hand washing and general cleanliness of the surrounding environment).
- Ensure that there is someone overseeing the general cleanliness and maintenance of the school WASH facilities .Some little money can be solicited from parents for payment of this person.
- Ensure that tanks are periodically cleaned (inside) and gutters to ensure safety of water collected. This should be done atleast once in a term especially at the beginning of the rain season.
- Act as role models in promotion of good sanitation and hygiene best practice.

Roles of School Health Clubs (SHCs)

- Spearhead WASH activities in schools, developing and implementing WASH work plans with support and guidance from SHC patrons and science teachers.
- Act as role models in promotion of good sanitation and hygiene best practices.
- Spearhead community mobilization and sensitization through music, dance and drama.

Roles of pupils

- Proper use of WASH facilities.
- Participate in cleaning of WASH facilities.
- Act as watchdogs to fellow pupils while using WASH facilities.

Roles of parents

- Contribute funds towards maintenance of school WASH facilities
- Educate their children about hygiene and proper use of WASH facilities
- Be exemplary to their children by practicing good sanitation and hygiene best practices such as constructing a latrine and hand washing facility in their homes, practicing hand washing with soap at critical times

Roles of District Education Officer (DEO)/Urban Education Officer and Inspectors of Schools

- Advocate for increasing schools WASH budgets to cater for O&M of the WASH facilities in schools.
- Monitor school WASH facilities and provide technical guidance towards good O&M of the facilities.
- Enact byelaws and follow up their implementation for effective O&M of WASH facilities in schools and health facilities

Conclusion

Rain water harvesting systems in schools could be a very important source of water for the well-being of children and their teachers. However, they have fallen into disuse of bad attitude and poor O&M practices by school administrators' pupils and parents. As expected, poor access to water leads to dirty toilets and as

such poor maintenance of the toilet facilities (= dirty and smelly) compromises the campaign to end Open Defecation (OD).

If schools do not make a contribution to the facilities, they are less likely to maintain the facilities well. Therefore, asking the parents to contribute to maintenance costs for the facilities is a good way to ensure sustainability of the facilities

If rainwater harvesting facilities are too small in terms of capacity, there will not be sufficient water stored which de-incentives the schools from continuing the maintenance of such facilities.

By analyzing data collected from pupils, teachers and Urban Education Officers, it emerged that there is need to upgrade sanitation situation in schools. School toilets are often dirty and unfriendly, RWHTs not operational.

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Acronyms

DEO: District Education Officer	RWHT: Rain Water Harvesting Tanks
FDG: Focus Group Discussion	SMC: School Management Committee
OD: Open Defecation	UPE: Universal Primary Education
O&M: Operation and Maintenance	WASH: Water, Sanitation and Hygiene
PTA: Parents Teachers Association	

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