

# Planning Policy Perspectives on Development of Water, Sanitation and Hygiene Practices in Rural Areas: A Tanzanian Diagnosis and Prognosis

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**Abstract:** There is good evidence that improving Water, Sanitation and Hygiene (WASH) has significant economic and social development benefits. This research used the Opportunities and Obstacles to Development concept (O&OD) from the planning perspective to examine opportunities and obstacles facing the development of WASH practices in rural areas of developing countries with specific reference to Hombolo Village in Tanzania - East Africa. Results from the research reveal those rural areas in countries like Tanzania face enormous obstacles in dealing with WASH related issues. The study has also established that despite of the prevailing obstacles or challenges, opportunities to facilitate the implementation of WASH practices in rural areas do indeed exist and can therefore be harnessed. Such opportunities include the following; first, fighting local people ignorances, cultural mentality and lack of will by providing education on hygiene issues to people in rural areas. As it was observed, hygiene in rural areas like Hombolo village is compromised because many people in these areas are ignorant about hygiene issues, culturally affected and others simply lack the will to keep good hygiene. Secondly, where necessary, support to very poor families with hygiene detergents such as toilet soap should be provided. The findings showed that poverty is a challenge.

**Keywords:** Opportunities, Obstacles, Rural Areas, Diagnosis, Prognosis & Planning

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## 1. Introduction

Addressing issues of Water, Sanitation and Hygiene (WASH) remain a challenge to many countries in the developing World. In Africa, the first African conference on sanitation and hygiene took place in 2002 with the overall goal to accelerate sanitation and hygiene work in fulfilment of the Millennium Development Goals [1]. Despite of this groomed concern, according to AMCOW et al, 2011, by 2008 about 584 million people did not have improved sanitation facilities and of those, 231 million practiced open defecation. These statistics show the magnitude of the challenge posed in dealing with sanitation and hygiene issues on the African continent. In addition, many countries on the African continent are today struggling to cope with chronic water shortages and the inadequacies in the existing water infrastructure [2]. In a joint monitoring report by WHO & UNICEF more than 650 million people do not have access to

clean and safe drinking water and around 315,000 children under-five die every year from diarrhea diseases caused by dirty water and poor sanitation [3]. In developing countries like Tanzania, almost a third of the population live below poverty line which is a crucial threat to WASH practices [4]. In addition, among the poorest, a third of the population defecate in the open, making everyday environment unsafe for children [5]. Literature indicates that, even though progress has been made in some developing countries, it does not indicate the hygienic use or adoption of hygienic practices [6]. The situation is even far much worse in the rural settings of these countries. In a study by UNICEF, globally only 51% of the rural population have access to improved sanitation compared to 82% of the urban population while only 32% of the rural population have access to clean and safe drinking water compared to the 79% of the urban population [7]. The presence of such wide disparities between the urban and rural settings suggests that, something is not going

well in the rural settings and yet from the literature point of view, very little seems to be brought to light.

UNICEF further points out that, in Tanzania, up to one third of deaths in children under- five years are related to poor hygiene. This includes nearly 20 per cent of under-five deaths due to unpreventable diarrhea, as well as deaths among newborn and due to respiratory illness [8]. Hand washing with soap alone, has the highest impact on reducing disease transmission, including diarrhea, lowering the condition by about 47 per cent. However, awareness about the importance of hygiene practices, especially hand washing with soap, is very low. Sanitation has the second highest impact on reducing diarrhea, decreasing the impact by about 36 per cent.

A study by Jacqueline and colleagues revealed that, across Tanzania it is estimated that 93 % of the population has access to a latrine. However, when assessing access to improved sanitation that figure drops to 24 %, depending on the definition of improved sanitation used [9]. It is also important to note that hygiene behavior in Tanzania varies. Although hand washing is widely practiced in the country, it is not always with soap or at critical times such as before preparing food or after disposing of children's faeces.

According to Water Aid Tanzania, Tanzania like many other developing countries is not according WASH issues the priority they deserve [10]. For instance, it is not widely recognised that good sanitation policies and practices underpin socio-economic development. Poor sanitation costs Tanzania TZS301 billion each year (US\$206 million). This sum is the equivalent of US\$5 per person per year or 1% of the national GDP. It is also stated that 26 million Tanzanians use unsanitary or shared latrines; 5.4 million of them have no latrine at all and defecate in the open.

## 2. Methods: Study Concept, Approach, Design and Area

The study employed the O&OD concept to explore the subject matter of inquiry. A case study approach under the cross-sectional design was used. The unit of analysis for this

study was the household. According to the 2012 national population census, Hombolo has a total population of 14,748 and 5,003 households. Using a confidence level of 90%, study sample size was mathematically determined as 98 households. Purposive and random sampling techniques were used to identify study respondents. Ethical values relating to discussion with residents were taken into consideration and approved by local leaders in the study area.

## 3. Results and Discussion

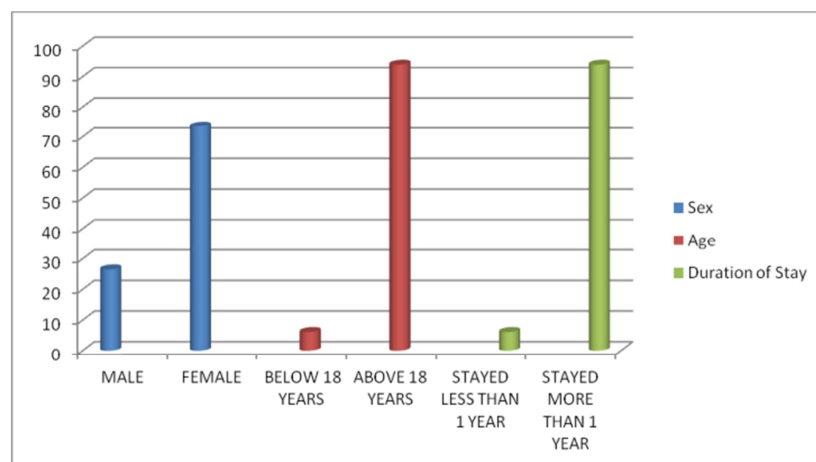
Results of this study mainly focus on two major areas such as obstacles and opportunities that could be explored to encourage the whole process of developing and implementing WASH practices in rural areas.

### 3.1. Geographical Description of Study Area

Hombolo is an administrative ward in the Dodoma Urban district of the Dodoma Region of Tanzania. According to the 2012 census, the ward has a total population of 14,748 and households of 5,003.

### 3.2. Demographic Description for Study Respondents

In order to explore the above two major mentioned areas, the study began by exploring the demographic composition of the study respondents in terms of their sex (Female or Male), age (Below 18 years or Above 18 years) and the duration they had lived/stayed in the village (Less than a year or above one year). Demographic analysis of the respondents shows that, out of the 98 interviewed household members, in terms of sex only 26 (26.5%) were male while 72 (73.5%) were female. Regarding the age aspect, of the 98 respondents, only 6 (6.1%) respondents were found to be below 18 years while 92 (93.9%) were above 18 years. Last but not least, the analysis on duration of stay in the village by the respondents shows that of the 98 study respondents, only 6 (6.1) had only stayed in the village for less than one year while 92 (93.9%) had stayed for more than one year as illustrated in Figure 1 below.



Source: Field data, 2022

**Figure 1.** Demographic Description for Study Respondents.

### 3.3. Diagnosis for Water, Sanitation and Hygiene Situation in Hombolo Village

This section of the paper is dedicated to explaining the situation of Water, Sanitation and Hygiene in Hombolo village and how the residents are coping with the situation for each WASH aspect.

#### 3.3.1. Water Situation in Hombolo Village

The UN prioritizes access to water and sanitation as Goal 6 of its sustainable development goals. Among the targets within goal 6 are improved water quality and water-use efficiency. Purposely, this is to ensure that many people have access to clean and safe water. In fact, on the 28<sup>th</sup> of July 2010 the United Nations General Assembly through Resolution A/RES/64/292 declared safe and clean drinking water and sanitation a human right essential to the full enjoyment of life and all other human rights. According to the Global Health and Education Foundation [11], the

World Health Organization (WHO) stipulates that water distribution systems should make drinking water available so that people do not need to travel more than one kilometer from the place where they will use the water. To diagnose the water situation in Hombolo village, this study looked at three key aspects that included; main sources of drinking water, time taken to reach water sources and treatment of water before drinking.

#### (i). Main Sources of Drinking Water in Hombolo Village

This study revealed that in Hombolo village several water sources do exist. However, the most used sources in their order of ranking include the public tap/stand pipes, borehole, protected dug well and unprotected dug well. Results show that 41.8% of the study respondents indicated that they use public tap/ Stand Pipes, 17.8% use borehole, 12.2% use protected dug well and 10.2% use unprotected dug well. Table 1 below provides full details on the water sources in the village.

Table 1. Main Water Sources in Hombolo Village.

Water Source	Frequency	Percent	Valid Percent	Cumulative Percent
Piped water into dwelling	7	7.1	7.1	7.1
Surface water (river, dam, lake)	1	1.0	1.0	8.2
Piped water into yard/plot	3	3.1	3.1	11.2
Public tap/standpipe	41	41.8	41.8	53.1
Borehole	17	17.3	17.3	70.4
Valid Protected dug well	12	12.2	12.2	82.7
Unprotected dug well	10	10.2	10.2	92.9
Protected spring	1	1.0	1.0	93.9
Unprotected spring	3	3.1	3.1	96.9
Rainwater collection	3	3.1	3.1	100.0
Total	98	100.0	100.0	

Source: Field data, 2022.

#### (ii). Time Taken to Access Water Sources

Results show that 54.1% of the study respondents use between 10 – 30 minutes to reach their water sources while 18.4% use an hour and 16.3% use more than one hour. According to the Global Health and Education Foundation, the World Health Organization (WHO) requires that water distribution systems should make drinking water available so that people do not need to travel more than one kilometer from the place where they will use the water [11]. Based on

the above results, it can be pointed out that, because the majority of the population are spending very little time to access water sources, then it also implies that the distance travelled is actually less than one kilometer as required by WHO. This however does not imply that all is well because results also reveal that there are people who are still spending more than one hour to access water and this could mean that they travel more than one-kilometer distance to access water. Table 2 provided the analysis on this matter.

Table 2. Time Taken to Access Water Sources.

Time Taken	Frequency	Percent	Valid Percent	Cumulative Percent
less than 10 minutes	11	11.2	11.2	11.2
Valid between 10-30 minutes	53	54.1	54.1	65.3
an hour	18	18.4	18.4	83.7
more than an hour	16	16.3	16.3	100.0
Total	98	100.0	100.0	

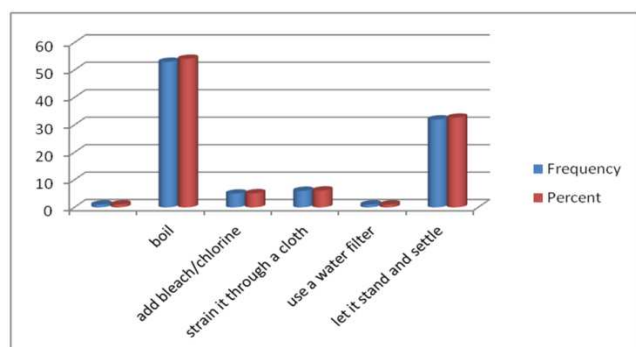
Source: Field data, 2022.

#### (iii). Treatment of Water Before Drinking

Result findings indicate that 51% of the interviewed do actually treat their water before drinking while the remaining 49% do not. Hence, even though those who treat appear to be more, there is a

relatively huge population represented by 49% that is not treating. This implies that understanding the relevance of having water treated before drinking still needs to be emphasized among the population. The most used methods of treating water are boiling

and letting it stand and settle. 54.1% of the interviewed people use the boiling method while 32.7% use the let it stand and settle method. 61.2% acknowledged the fact that they had been provided with education relating to water treating before drinking and that the education was useful. While 38.8% argued that much as education on water treatment had been provided, they did not feel its relevance. These results demonstrate some elements of lack of seriousness on the part of the residents as well as ignorance. It is these two factors that can be held accountable for the failure of some Hombolo residents to take up the necessary actions of treating water after education has been provided. Results on the used methods are as presented in Figure 2.



Source: Field data, 2022

**Figure 2.** Methods of Treating Water.

#### (iv). Synthesis of Key Findings on Water Situation

This study finds that even though the water situation in Hombolo presents a no cause for alarm situation, efforts need to be increased towards ensuring that all people have access to safe and clean drinking water. The study has revealed that some people in the village are still using unprotected water sources such as dug wells as well as having to travel for over an hour in search of

water. In addition, the issue of treating water before drinking using simple methods such as boiling needs to further be brought to the attention of all people. As noted from the results, 49% of the respondents do not treat their water before drinking it.

#### 3.3.2. Sanitation Situation in Hombolo Village

According to the World Health Organization (WHO), sanitation refers to the provision of facilities and services for the safe disposal of human urine and faeces [12]. It constitutes of the establishment and use of facilities required to safely manage human excreta while creating a safe environment for human existence. Globally, the World Health Organization estimates that over 2.4 billion people still do not have basic sanitation facilities such as toilets or latrines [12]. In Tanzania, sanitation situation is not any better as many Tanzanians have no access to improved sanitation facilities according to UNICEF [13]. UNICEF estimates that about 87% of Tanzanians have no access to improved sanitation and hence a true reflection of the message echoed out by the World Health Organization on the state of sanitation globally. This study therefore looked at the issue of sanitation in Hombolo Village in Tanzania with emphasis on the kind of toilet facilities used by household members and sharing of the toilet facility with another households/public.

##### (i). Kind of Toilet Facility Used by Households

The results of this study revealed that the traditional norm of many people using the bush as disposal areas for excreta in villages is not the case with Hombolo Village. Residents in this village use various toilet facilities however the majority (57.1%) use pit latrines with no slab. 8.2% use flash/pour flush toilets while 4.1% use Ventilated Improved Pit Latrines. Table 3 below provides a summary of the kind of toilet facilities used in Hombolo Village.

**Table 3.** Kind of Toilet Facilities Used by Hombolo Village Residents.

Toilet Facilities	Frequency	Percent	Valid Percent	Cumulative Percent
Flash/Pour flush	8	8.2	8.2	8.2
Ventilated improved pit latrine (VIP)	4	4.1	4.1	12.2
Pit latrine with slab	25	25.5	25.5	37.8
Pit latrine without slab/ open pit	56	57.1	57.1	94.9
Bucket	2	2.0	2.0	96.9
Hanging toilet/ Hanging latrine	3	3.1	3.1	100.0
Total	98	100.0	100.0	

Source: Field data, 2022.

According to the results shown in Table 3 above, it can be said that in terms of toilet facilities, the majority of the residents in this village do not have access to 'improved' sanitation facilities. This conclusion is based on the definition of what constitutes an improved sanitation facility and the categorization of sanitation levels by WHO & UNICEF in 2002. According to WHO & UNICEF, an improved sanitation facility is one that hygienically separates human excreta from human contact and by this definition it constitutes of the following toilet facilities; Flush toilet connection to a piped sewer system or septic system, Flush/pour-flush to a pit latrine, Pit latrine with slab and Ventilated

improved pit latrine (VIP latrine) [14]. On the contrary, unimproved sanitation facilities constitute Flush/pour flush to elsewhere (not into a pit, septic tank, or sewer), Pit latrine without slab, Bucket latrines, Hanging toilet / latrine and No facilities / bush / field (open defecation).

##### (ii). Toilet Facility Sharing

Drawing from WHO & UNICEF, sanitation facilities that are not considered as "improved" (also called "unimproved") among them include public or shared latrine (meaning a toilet that is used by more than one household) [14]. The situation in Hombolo village presents the fact that toilet facilities are

very much shared. Study results revealed that 69.4% (68 respondents) agreed to the fact that they share toilet facilities while 30.6% (30 respondents) indicated that they don't share their toilet facilities with outsiders. In the case of sharing,

60.2% of the respondents stated that most of the facilities are shared by more than five people. Table 4 presents the situation on the sharing of toilet facilities in Hombolo Village.

**Table 4.** Toilet Facility Sharing.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than five	23	23.5	23.5	23.5
	Only five	14	14.3	14.3	37.8
	more than five	59	60.2	60.2	98.0
	others	2	2.0	2.0	100.0
	Total	98	100.0	100.0	

Source: Field data, 2022.

In the face of the sanitation facility standards established by WHO & UNICEF, the results presented in Table 4 reveal that there is a high toilet facility sharing problem in the village [14]. As a result, the village cannot be considered to be having improved sanitation facilities. These results therefore further confirm that the state of sanitation in the village is much demanding and therefore practicing acceptable sanitation standards is very limited.

### (iii). Synthesis of Key Findings on Sanitation Situation

Sanitation situation in Hombolo according to this study calls for additional emphasis on improving toilet facilities in the village. The study has found that majority of the residents use facilities which are categorized as unimproved sanitation facilities by WHO & UNICEF. Besides, there is a lot of toilets sharing which increases the challenge of sanitation in the village.

### 3.3.3. Hygiene Situation in Hombolo Village

According to WHO, hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases. It is one of the essential components of the

WASH practices. As such, this study was interested in exploring the hygiene situation in Hombolo village with specific focus on how people handle hygiene issues in the village. The study began by exploring resident's understanding of what hygiene is about, washing of hands after visiting the toilet and if community members were aware of the need to keep good hygiene in their homes and the community as a whole.

### (i). Study Participants Understanding of What Hygiene is About in Hombolo

The study desired to measure study participants' understanding of what hygiene was about. As noted earlier, hygiene according to WHO concerns conditions and practices that help to maintain health and prevent diseases. In the context of Hombolo, majority of the study participants agree that hygiene is about using the toilet very well and ensuring that solid waste is well controlled. In fact, 49% of the respondents agree to this definition while 12.2% do not know what hygiene is about. Table 5 indicates how people define hygiene in Hombolo.

**Table 5.** What Hygiene is about in Hombolo Village?

	Prescribed Definitions	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somebody having a toilet but not necessarily using it	7	7.1	7.1	7.1
	Somebody having a toilet and using it	26	26.5	26.5	33.7
	Somebody making sure that he uses a toilet and controls solid waste in his/her home	48	49.0	49.0	82.7
	Other	5	5.1	5.1	87.8
	Don't know	12	12.2	12.2	100.0
	Total	98	100.0	100.0	

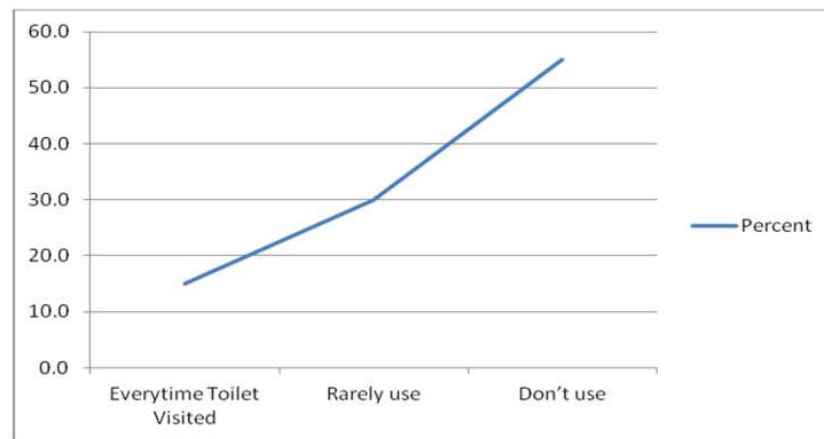
Source: Field data, 2022.

### (ii). Hand Washing After Visiting the Toilet

One of the aspects that demonstrate good hygiene is the washing of hands after visiting the toilet among others. This study analyzed this aspect in the context of Hombolo village and found that 94.9% of the respondent indicated that they do actually wash their hands after visiting the toilet as opposed to the 5.1% who revealed that they don't. In fact, 78.6% indicated that they wash their hands every time they visit the toilet while 21.4% only do wash when they remember. This signifies that the residents of Hombolo actually understand

the essence of washing hands after visiting the toilet. However, a further investigation on this matter revealed that even though the majority do wash their hands after visiting the toilet, they actually don't use soap because it has a cost implication attached. Only 15% of the respondents indicated that they use soap every time they visit the toilet, 30% rarely use and 55% don't use at all. Generally, this trend is not good at all as the majority of the residents seem not to wash hands with soap after visiting the toilet. This increases the chances of spreading hygiene related diseases in the village. Figure 3 below shows the trend of this analysis.





Source: Field data, 2022

**Figure 3.** Use of Soap after Visiting the Toilet.

### **(iii). Community Members' Awareness on the Need to Keep Good Hygiene**

The extent to which people are aware about something determines their response to it. In this study an assessment was done to establish if the residents of Hombolo were actually aware of the need for them to keep good hygiene in their homes and the community as a whole. Results revealed that majority of the people are actually not aware which increases the challenge of dealing with hygiene issues in the village. Of the 98 study respondents, 58.2% indicated that they were not aware of this requirement while 41.8% indicated that they were aware. Implicitly this implies that hygiene sensitization in the village is low.

### **(iv). Synthesis of Key Findings on Hygiene Situation**

Generally, based on the above diagnosis on the matter of hygiene in Hombolo village, it can strongly be argued that hygiene in the village is not being addressed as required. There remain some dark spots in the efforts towards improving the situation in the village. For instance, even though people wash their hands, they do not use soap as it would be expected. Secondly, residents don't seem to understand why they should pay attention to hygiene issues. This lack of awareness creates more threat to any efforts being employed and consequently increases the risk of hygiene related diseases being spread in the village.

## **3.4. Obstacles to the Development of Water, Sanitation and Hygiene (WASH) Practices in Hombolo Village**

### **3.4.1. Water Related Obstacles**

As noted from the analysis on water situation in the village, some people are still using unprotected water sources such as dug wells as well as having to travel for over an hour in search of water. In addition, the issue of treating water before drinking using simple methods such as boiling is equally not a common practice to many. Results from the study revealed that obstacles to improving the water situation in the village as well as ensuring that people drink clean and

safe water are majorly three and include the following.

*First*, lack of seriousness to act among residents in rural areas makes the implementation of WASH practice difficult. This study revealed that even when education is provided on the need and how to ensure that an individual uses safe and clean water, the majority of the rural population simply rubbish that education and stick to their old ways of doing things. For instance, in Hombolo village, according to the analysis on the relevance of the provided education on the need to treat water before drinking, 87.8% indicated that they found this education useful at the time when it was provided. However, the analysis on whether they treat their water before drinking revealed that 49% do not actually take any water treatment measures. This largely signifies lack of seriousness on the part of the residents which can also be summed up as an attitude and mentality problem. The lack of seriousness makes the implementation of WASH practices difficult in most rural areas.

*Secondly*, ignorance on the need for clean and safe drinking water among rural residents. In the case of Hombolo village, 52% of the study respondents acknowledged the fact that many people in the village do not actually see the need to insist on using clean and safe water. To them water is water and as a result it does not matter to them where they get it and whether they have it treated or not. This kind of ignorance level makes it difficult to successfully implement WASH practices in most rural areas in developing countries.

*Thirdly*, poverty is another obstacle hindering improving access to clean and safe water so as to effectively implement WASH practices. As revealed in Hombolo Village, 36% of the study participants indicated that poverty is a challenge because at times when an individual has no money to pay for soap, pay for piped water or contribute the monthly service charge for public stand points or borehole, such individual is forced to turn to other unsafe water sources. As a result, effective implementation of WASH practices is hindered.

*Other identified obstacles* as revealed by the study respondents include poor leadership, corruption among local leaders and limited interest by governments to improve rural water situations.

### 3.4.2. Sanitation Related Obstacles

The Sanitation situation in Hombolo as revealed by the results of this study calls for additional emphasis on improving toilet facilities in the village as the majority of the residents use facilities which are categorized as unimproved sanitation facilities by WHO & UNICEF with a lot of toilets sharing which increases the challenge of sanitation in the village. This situation is also attributed to three major obstacles that include the following.

*First*, limited knowledge on sanitation issues among rural residents. As revealed in the case of Hombolo village, 51% of the study respondents find the issue of knowledge deficiency on sanitation matters as a major obstacle to effective implementation of WASH practices. The absence of this knowledge opens room for people to act in the manner they wish and pay less attention to things like building proper toilets as revealed in Hombolo Village.

*Secondly*, ignorance among rural residents is another impediment to effective implementation of WASH practices in rural areas of developing countries. As revealed in the case of Hombolo village, ignorance is the second major obstacle. People don't seem to see the need to have proper toilet facilities and this greatly impacts on how they approach WASH practices.

*Thirdly*, weak enforcement from village authorities which leaves many people with a free will to decide on whether to do the right thing of having proper sanitation facilities or to simply continue with their traditional ways of acting. In the case of Hombolo village, this aspect was ranked third with over 26% noting it as a challenge to effective implementation of WASH practices.

### 3.4.3. Hygiene Related Obstacles

Even though this study revealed that there is a good understanding of what hygiene is about among rural people, it also revealed a serious loophole/dark spot in the manner in which people in rural areas tend to handle hygiene issues. For instance, in the case of Hombolo, the majority wash their hands but not with soap which increases the possibility of transmitting hygiene related diseases. With respect to such findings, key obstacles to effective implementation of hygiene issues in rural areas include the following.

*First*, lack of education on hygienic issues is a major obstacle to the successful implementation of hygiene practice in rural areas. Results of this study show that many people in rural areas always lack education on how to handle hygiene issues and as a result the possibility of successful implementation of WASH practices equally fails. 54% of the study respondents from Hombolo village find this aspect a big challenge in their village.

*Secondly*, ignorance on hygiene issues is seen as a second major obstacle to practicing good hygiene in rural areas. As revealed by this study, 24% find it a problem which results in people not caring about hygienic issues in Hombolo village.

*Thirdly*, poverty as a result of associated costs which must be met in order to practice good hygiene also presents a challenge to the effective implementation of hygiene

practices in rural areas. As noted in the case of Hombolo village, many people don't practice good hygiene such as washing hands with soap because they cannot afford to buy soap. In such situations, hygienic issues are handled partially and not as it should be.

## 4. Opportunities to the Development of Water, Sanitation and Hygiene (WASH) Practices in Hombolo Village

### 4.1. Opportunities for Improving Access to Safe and Clean Drinking Water in Rural Areas

Water is life and plays an important role in lives of all human beings. The success of WASH practices very much depends on the availability of water that is sufficient and of quality to people. This presupposes that water as a component of the WASH practices need to be given due attention. This study has identified two major opportunities that can be taken advantage of so as to improve access to safe and clean water in rural areas.

*First*, increase efforts in providing education on the need to treat water through simple methods such as boiling. As established in this study, many rural people tend not to see the need for water treatment necessary even when they have been given some education. This should not deteriorate efforts relating to provision of education on this matter. Rather persistence in the provision of this kind of education should be continued. In fact, from Hombolo village, 42.8% find the provision of education as the strongest opportunity that should be used to improve WASH practices in their village.

*Secondly*, avoid politicizing water issues in rural areas is another opportunity that should be explored. To a great extent, politicians especially those of the ruling party tend to use this as a basis for their elections. They promise to provide water to their voters in the rural areas but eventually never act. In this study respondents clearly put it that due to limited interest of governments in rural water issues, rural areas have no access to clean and safe water. This is because governments and their politicians tend to use this problem as a political leap jump and eventually do nothing. From Hombolo 28.5% avoiding of politicizing water issues as a step towards improving WASH practices in rural areas.

### 4.2. Opportunities for Improving Sanitation Issues in Rural Areas

As established in this study, sanitation is about having proper facilities for disposing human wastes such as urine, faeces and any other solid waste. This study has identified two major opportunities that could be explored in order to improve sanitation issues in rural areas.

*First*, provision of education on sanitation issues among the rural populations will facilitate the smooth implementation of WASH practices in rural areas. As revealed in this study, the majority of rural people don't have

acceptable sanitation facilities such as toilets for disposing off their waste. This according to Hombolo residents is attributed to many factors but one of those factors is the lack of education on sanitation issues and hence people see no need of putting up proper sanitation facilities. In fact, 81.6% of the study respondents from Hombolo village see this opportunity as a crucial factor towards the smooth implementation of WASH practices in rural areas.

*Secondly*, enforce laws relating to putting up acceptable sanitation facilities so that people in rural areas can effectively practice WASH practices. The failure to enforce laws requiring people in rural areas to establish proper sanitation facilities gives them a free will to act as per their wish. This consequently makes it difficult to implement WASH practices in rural areas. This opportunity was supported by 18.4% of the study respondents from Hombolo village.

#### 4.3. Opportunities for Improving Hygiene Issues in Rural Areas

The World Health Organization (WHO) looks at hygiene as conditions and practices that help to maintain health and prevent spread of diseases. In relation to this study, these practices in the case of Hombolo village were found to be inadequate and therefore implying that hygienic issues are still a challenge in this village. In order to respond to this challenge and improve the manner in which people deal with hygienic issues in rural areas, this study has identified two major opportunities that need to be employed.

*First*, fight ignorance, cultural mentality and lack of will by providing education on hygiene issues to people in rural areas. As observed, hygiene in rural areas like Hombolo village is compromised because many people in these areas are ignorant about hygiene issues, culturally affected and others simply lack the will to keep good hygiene. Situations of this nature hamper the implementation of WASH practices in rural areas.

*Secondly*, where necessary, support to very poor families with hygiene detergents such as toilet soap should be provided. The findings of this study show that poverty is a challenge towards implementing hygiene in rural areas as some families cannot afford to buy soap. Hence, by providing this kind of support, it will be very possible to promote good hygiene practices in rural areas.

## 5. Conclusion

Rural development depends on the level of health manifested by the rural population. The inability to effectively implement WASH practices in these areas implies that the development of these areas will equally be compromised. As such it is of paramount importance that the issue of improving WASH practices in rural areas be seen as a necessity since it equally stands as a strong driver of rural development. As pointed out by UNICEF, globally, significant progress was made to increase access to water and sanitation during the Millennium Development Goals (MDG) era [14].

Over the last two decades more than 2 billion people gained access to improved drinking water and almost 2 billion to sanitation. However, significant rural-urban disparities are still evident with the rural population being the underserved in this area when compared to their urban counterparts. This implies that more effort is still needed to ensure that WASH practices in rural areas are fully embraced.

As revealed in this study, issues of access to clean water, sanitation facilities and hygiene are still demanding and therefore call for attention. This study therefore winds up by calling on all stakeholders to engage in more proactive actions that support the development and implementation of acceptable WASH practices as opposed to the reactive responses.

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