

**IMPACT
ASSESSMENT
ON WASH IN
SCHOOLS IN
TAITA
TAVETA &
MOMBASA
COUNTIES**



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To all we say thank you.

Ms. Ruth W. Muthoni
Independent Consultant
P.O. Box 20525-00200, Nairobi
Email: ruth.wangari223@gmail.com
Tel: +254-722361475
Skype: ruth_wangari

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LIST OF ABBREVIATIONS AND ACRONYMS

APHIA Plus	
CC	Community Committee
CDF	Constituency Development Fund
CHVs	Community Health Volunteers
FGDs	Focus Group Discussions
HHI	House Hold Interview
H/Ts	Head Teachers
KCPE	Kenya Certificate of Primary Education
KIIs	Key informant Interviews
MnU	MajinaUfanisi
MOE	Ministry of Education
MOH	Ministry of Health
NEMA	National Environmental Management Authority
ODF	Open Defecation Free
PD	Project Document
PH	Public Health
PHOs	Public Health Officials
P.O.	Programme Officer
UNDP	United Nations Development Programme
UNICEF	United Nations Children Education Fund
WASH	Water and Sanitation
WASREB	Water Services Regulatory Board
WSTF	Water Sector Trust Fund
WHO	World Health Organization
WHWD	World Hand Washing Days
VIP	Ventilated Improved Pit Latrines

EXECUTIVE SUMMARY

The purpose of this survey was to undertake an impact assessment of the WASH in schools' component of the project "*Strengthening citizen's influence on WASH in the newly devolved governance system in Mombasa and Taita Taveta counties in Kenya*", funded by the Danish Peoples Aid through Maji na Ufanisi. The WASH in schools' component aims at improving access to clean water and sanitation facilities and promote lifelong health for children in schools. This ambition is to be realized through the provision of infrastructure and promotion of hygiene among school going children. Specifically, the assessment was guided by two objectives. These included "***a) To provide evidence of the positive impact of improved service delivery at school level to relevant rights holders at the community level; b) To provide a platform to lobby and advocate for the rights holders influence in WASH budget allocation at the county level***".

Descriptive survey design was applied in the study. The target population comprised of 600 learners drawn from the two project schools, two (2) Community Committees (Mombasa LUF & Taita Taveta NMDT comprising of six and four members respectively; 156 duty bearers and 2400 community members. It should be noted however that these figures except those of the learners reflected largely the population of the larger project and not necessarily those targeted with the WASH in schools' component. Purposive sampling was applied in determining the sample including that of the key informant interviews (KIIs), household interviews (HHIs) and the most significant change stories respondents. A structured questionnaire was used for quantitative data collection. From the estimated sample of 180 cases, the response rate returned success rate of 114.6% to reach 211 respondents.

The assessment reached 211 respondents from the two counties. These included 134 children (Taita Taveta 102 and 32 Mombasa) and 77 adults (Taita Taveta 35 & Mombasa 42). At the county level, out of the 102 children from Taita Taveta, there were 26 boys and 76 girls; while from the 32 children from Mombasa, there were 15 boys and 17 girls.

Findings confirmed that the project interventions have had positive impact on the health and well being, enrollment, retention, completion and performance rate; attitude and practice change among the learners, as well as significant gains for the girl child.

An inquiry into the awareness level of the MnU WASH activities in the two schools returned 100% knowledge level.

The project engaged in trainings in personal and environmental hygiene, hands washing promotion campaigns, and health and hygiene promotion. Construction of toilets and water points were mentioned by only a few respondents.

At Rekeke, the project has had significant gains on the various indexes. For example, on the enrolment indicator, in 2018, the school enrolled 21 more children than in 2017 bringing the school pupil population to 544 up from 523 pupils in 2017. This was a 3.8% growth.

Increased girl’s enrolment was attributed to the WASH interventions as confirmed by the schools. Teachers confirmed that girls used to be very embarrassed when they soiled their dresses in school but after the training in menstrual management, this problem has since been addressed. Girls are happy to join the school and stay on undisrupted.

Retention at Rekeke has significantly improved. The teachers interviewed confirmed that since the project begun, the dropout rate is insignificant. In 2017 for example, only 2-3 children dropped out of school while 2018 has so far recoded no drop out. The school confirmed that children are now healthier and able to attend school without distractions. Parents confirmed that so far, completion rate is good including for the over aged learners (16-20 years). They estimated the completion to have increased from 60% to 95% in the last three years.

Performance has also significantly improved at Rekeke. Compared to 2016, the Mean Score improved by an estimated 11+ points in 2017. The performance at the school had significantly increased over the last three years as follows.

Year	Mean Score	Realized Change
2017	188.7	12.4
2016	176.3	5.22
2015	171.08	

At Longo primary, the project also posts significant results. For example, children confirmed to have acquired knowledge on personal hygiene, knowledge on diseases prevention through good personal hygiene practices like drinking boiled or treated water, keeping oneself clean and brushing of teeth; and knowledge on simple water treatment practices and proper waste disposal.

On the same indicators, 100% of the interviewed parents confirmed that menstrual management trainings have had a big impact on the girls wellbeing and attendance to school. Over 90% confirmed there is improved attendance at school with a similar number saying open defecation is no longer a practice at the school and at the community. Regular hand washing, trainings in personal and environmental hygiene and improved hygiene also scored very highly (>95%) in terms of contribution and benefits.

Enrolment at Longo primary has significantly improved following the construction of modern toilet blocks (29 toilets: 15 for girls & 14 for boys) that are well served with water taps and hand washing basins. It also has ample water storage tanks and the school environment is very clean. This together with high performance has kept the enrolment in all classes on a record high.

Enrolment Trends at Longo Primary in the last Four years

Year	Girls	Boys	Total
2018	309	296	605
2017	309	287	596
2016	303	279	582
2015	321	339	660

On **retention** at Longo primary, absence of common WASH related illnesses has been cited as a key factor in the high retention rate at the school. Parents say that children no longer have to go looking for water to keep the school clean like before. Parents and teachers noted that retention has improved over time including that of the girls. The latter is linked with the supply of sanitary materials by the government to the school, even though this has not been done consistently. In addition, the school provides conducive environment for the girls through provision of comfortable sanitary facilities that guarantee their dignity and privacy.

On **completion rate**, teachers at Longo primary confirmed that retention has been at 100% even though elsewhere findings indicated that drop out is minimal.

Good performance at Longo is linked to reduced absenteeism and not having to go looking for water to use at the school and at home. The performance has improved significantly at the school. Boreholes are also available at the community hence children have more time to do their homework after school. Girls as well have been spared the insecurity on the way to fetch water and can now safeguard their dignity. Parents say the school produced the best candidate in the Sub County in 2017 with 420 marks (boy) while in 2016; the best candidate scored 390 marks (girl). 2015 recorded 315 marks from the best candidate. This trend they say can only get better with the current learning environment at the school.

Parent's views were corroborated by those of the teachers who noted the improving trend in the overall performance of the school as follows.

Trend in Performance over the Last 3 Years

Year	Mean Score	Realized Change
2017	224.43 19.42	19.42
2016	205.01 28.03	28.03
2015	176.98	

With this performance, the school has been able to get their learners to National schools including the Kenya High School (girls), Friend Kamusinga Boys in Kakamega, Nairobi school and Kakamega High in the last three years.

Regarding the **impact on the Girl Child** at Rekeke and at Longo primary schools, parents confirmed that lack of water at the school and at home used to affect girls negatively during their menses. At Longo for example, parents say that with the perfect supply of water including inside the toilets, girls are much comfortable and their dignity is safeguarded. Similar sentiments are expressed at Rekeke primary, where even though the supply of water is not as stable as at Longo primary, girls through the menstrual management training, separate toilets that are far apart from those of boys and the supply of the sanitary pads by the government, has very positive influence in their comfort and hygiene at school.

At Longo primary teachers confirmed that more girls are now joining school. They cited the current class 7 in which 49 learners are girls and 36 boys while in class six, the number is quite comparable with 47 boys and 42 girls.

As part of impact on Attitude and practice, in both counties, the communities impacted by the project no longer practice open defecation. They have sunk toilets and bore holes and are able to keep their environment clean. This has had bounties of benefits on the health and well being of the community and learners at large. This was cited as a major shift in attitude and practice, and a major reflection of social accountability at the community level. The Public Health Officer, Longo says that one of the most significant changes by the project has been that in attitude and practice. He cites about 75% of the homes today have sunk toilets unlike before when open defecation was the norm. Homes have improved with the help of children through the transfer of knowledge and information in WASH. He says that the environmental hygiene acquired by the children is a great asset in environmental hygiene and conservation in future. Children are happier and healthier than before.

In Taita Taveta, Attitude and Practice change is also a key achievement of the project. Through the project, communities at Taita Taveta have been sensitized against open defecation. This intervention led to acceptance by the community to use toilets. Consequently, 16 villages have been declared open defecation free (ODF). Over 20 toilets have been constructed and in use.

On the House Hold Economic & Well Being Index, respondents confirmed that from the reduced cases of WASH related illnesses comes the benefit of reduced health burden on the parents and the community. Respondents in both locations confirmed that they now spend much lower on the cost of treatment, enabling them to put their savings and time into other economic activities. At Longo, they cited their engagement in liquid soap making, jik and Dettol from skills obtained from the project earlier on.

CONCLUSIONS

Based on the findings of the impact assessment, the Consultant draws the following conclusions.

- 1) The project has significantly achieved the goal for which it was intended. All the project stakeholders felt that a lot of changes in practice and behavior was attributable to the improved WASH in schools. Key indexes influenced by the project, and as supported by the available data pointed directly to improved enrollment, retention, completion and performance rates in the two schools. The schools have produced outstanding performance for example in 2017 KCPE results in which Rekeke produced the best student (girl) in the Sub County with 330 marks while Longo primary produced the best candidate in the County with 420 marks (boy) in 2017, up from 390 and 378 in 2016 and 2015 respectively. These changes are attributed to healthier children who are able to attend school without disruptions from common WASH related illnesses.
- 2) The project has had a significant change on the girl child. All the KII respondents, parents through FGDs and HHIs and girls themselves confirmed that fortunes have changed positively for them with the trainings in menstrual management. They said previously, girls missed school for at least 5 days every month when they were on menses. Today, they know how to deal with the period and with the supply of sanitary pads, they can now comfortably stay on in school. This has influenced their performance significantly. This view is contrasted by the views from the Control Group schools which are experiencing high WASH challenges due to lack of toilets let alone girl friendly toilets. In the Control Schools, girls stay at home during menses because the highly competitive and limited toilets do not give them the privacy that they require and this erodes their dignity. Consequently, girl's dropout rate is high and their performance is dismal.
- 3) Any acquired positive behavior is only sustained through attitude change. Findings confirmed that the project has had significant influence on the attitude and practice of the learners, their parents, teachers and communities interacting with the project. Learners proactively observe personal, environmental and dental hygiene and even encourage their parents to do so as well. This is contrasted by the Control schools in which, due to limited WASH facilities, most children do not bother to wash their hands after the toilet for example and open defecation is still a norm with dire consequences to their health, retention at school and their performance.
- 4) Findings confirmed that the project has not only impacted the health and education index of the target beneficiary but also the economic well being. Following the reduced level of common WASH related illnesses, the burden of health on the parents has significantly reduced. Parents now have more money to put into other gainful engagements including improved diet of their children.
- 5) The success of the WASH interventions has significantly been influenced by the linkage between what's happening at the schools and at the community level. Awareness creation also targeting the communities and parents specifically has helped to sustain the practice, behavior and change in attitude among the learners. Parents reinforce the practice of personal, dental

and environmental hygiene when children are back home. This has enabled them to become the WASH crusaders at home. Furthermore, they are the first stage at which the young non school going children get to learn about personal and environmental hygiene before they join school. In several instances, learners were also described as the WASH ambassadors at home. This interlinkage has helped to sustain the results of the project.

- 6) The integrated model applied by the project is commendable. The Public Health representative in Taveta further confirmed this observing that by involving the school population, the community and the relevant Government Line ministries, this project has been able to scale up its reach and the results. This model should be scaled up in other areas to increase the project scope. This was contrasted with the APHIA Plus model that only targeted the Community Volunteers and left out the schools and the community.

RECOMMENDATIONS

From the various interactions with the project stakeholders, the following recommendations have been made for the next project period.

- 1) The project should assist Rekeke school to have sustainable supply of water. It could explore possibility of drilling bore holes and construct storage tanks. The alternative is to install water harvesting infrastructure coupled with adequate water storage tank. This will ensure the school does not lack water from disconnections by the County Water Department for non payment of high water bills, as is the case with many neighboring schools. In addition to providing water to improve personal and environmental hygiene at the schools, schools could use part of the water to do albeit of farming for income generation, proceeds that could go into the maintenance of the bore holes.
- 2) The National Government used to support schools to participate in the International Hand washing Days. This has since stopped after the function was handed over to the County Government. These events used to create a great platform for community sensitization on proper hygiene and other matters concerning health and well being of their children and the environment. MOE specifically says that this was a single event that used to nurture the value of “sharing” among children, as they shared their soap with those without to wash their hands. The project should try and invest in these events to ensure the momentum created, and the gains accrued are not lost.
- 3) In Taveta Sub County, Maho Ward, which is the largest in the sub county with 18 villages has not been reached with WASH interventions. The Public Health recommends the project to include at least one (1) school and the community at Maho.
- 4) Maji na Ufanisi should scale up the integrated WASH approach to bring on board more beneficiaries. The project should integrate community dialogue for increased influence.
- 5) Unlike at Longo school where the recommended toilet: learner ration exceeds the WHO Standards; toilets at Rekeke primary are barely enough. At Rekeke, teachers recommended an increase by 08 more girls’ toilets and 10 for boys to supplement the available 07 and 06 units respectively. However, the Consultant’s view of the deficit is that according to the

World Health Organization (WHO) Standards for toilet learner ration, 1:25 for girls and 1:30 boy's toilets. This brings us to a deficit of 04 girl's toilets and 04 boys toilets computed against the school population of 268 girls and 276 boys. (Standards: WHO (1:30 Boys and 1:25 Girls).

- 6) Water Storage Tanks have also been significantly highlighted as a key challenge in the school's water management and storage especially at Rekeke. At the school, three tanks exist with one designated for the pre-primary and two for the primary level. Addition 02 tanks have been recommended to improve water storage at the school. At longo primary, the immediate need is that of a perimeter wall to enclose the school and secure the WASH and other infrastructure, which has in several occasions been vandalized by the errant community members.
- 7) The project should support hardware infrastructure in the schools including toilets, bathrooms, water harvesting infrastructure, storage tanks etc. Learners also recommended support with installation of tip taps for hand washing.
- 8) The project should either lobby the County Government for sustained supply of sanitary pads, or supplement the same to continue keeping girls in school. Underwear for the big boys (class 7&8) was also recommended at Rekeke.
- 9) More training in WASH in both locations to ensure the new comers are also sensitized. Awareness to also include open public awareness sessions to curb improper disposal of used baby diapers and other solid waste at Longo. Also to expand the project to reach out to those few communities that still practice open defecation as it has serious health and wellbeing implications on children and adults living in the affected communities.
- 10) The Public health, Longo/Mtongwe recommends lobbying the County Government to install a sewer system in Mombasa. This will ensure a safer waste disposal.
- 11) There is need to lobby the County Government to hand back waste collection and management to the Public Health to make it more effective. NEMA should be an advisor and not an implementer.
- 12) Expand to other schools and involve Public health more actively especially at the planning stage and give them (PH) follow up tasks to enhance the impact of the project.
- 13) From the programme team point of view, the next phase should focus on further training to bridge the knowledge gap; ensure sustainable water supply in the schools through installation of water harvesting infrastructure and storage tanks and focus more on the most deserving areas especially the slum and rural areas. The project should also enhance the focus on girl's menstrual management training but also to include older girls in lower classes; extend campaigns against open defecation to the communities and engage communities more on matters of sanitation and especially on proper waste disposal.

CHAPTER ONE INTRODUCTION

1.1 Introduction

This section focuses on the project outline as well as the outline of the impact assessment task. It elaborates on the project goal and the project location, as well as the aim of the impact assessment. It further outlines the expected outputs of the assessment, describes the report structure and the study limitations.

1.2 The project goal

The project aims at improving access to clean water and sanitation facilities and promote lifelong health for children in schools. It aimed to achieve this through the provision of WASH infrastructure and hygiene promotion among the school children, their teachers, and parents.

1.3 Project location and target

The project is implemented in two Counties of Kenya. These are Mombasa (Longo Primary School) and Taita Taveta (Rekeke Primary School). The project targets children, women and other vulnerable groups.

1.5 Rationale of the Impact Assessment

To assess the impact that the project has had on the school population in the two Counties through interviewing the different project stakeholders to establish their view of the success and the impacts created by the project.

1.6 The objective of the Impact Assessment

- a) To provide evidence of the positive impact of improved service delivery at school level to relevant rights holders and the community at large.
- b) To provide a platform to lobby and advocate for rights holders' influence in WASH budget allocation at the county levels.

1.7 Expected Outputs

1. A concise report of maximum 20 pages which clearly outlines the process, methods, observations, analysis, findings, short description of the assessment on schools and recommendations.
2. Oral/visual presentation of the draft and final report to MajinaUfanisi team.

1.8 Organisation of the Report

Chapter One of the impact assessment report gives a brief introduction to the project capturing among others the project outline, justification of the project, the project targets, and the justification of the impact assessment; its objectives and the expected outputs. *Chapter Two* gives a brief literature review including a brief context analysis and a snapshot of the legal framework within which the project is anchored. *Chapter Three* outlines the methodology adopted in the

study while *Chapter Four* discusses the assessment findings. *Chapter Five* outlines the assessment conclusions and recommendations.

1.9 Study Limitations

The study was limited to the impact assessment of the WASH in Schools component and not the entire WASH project funded by the Danish People's Aid (DPA). In addition, the assessment was limited to two schools. These were Rekeke and Longo primary schools in TaitaTaveta and Mombasa Counties respectively.

Time was a key constraint in the exercise. The report of findings was required by end of January to inform feedback to the project sponsor as well as inform the basis for negotiation for further support to the project. Even then, the Consultant ensured a good balance of time/ urgency and the quality of assessment to ensure a comprehensive coverage of the relevant project aspects.

CHAPTER TWO LITERATURE REVIEW

2.1 Project Context Analysis

Combined, Mombasa and Taita Taveta Counties account for 1, 224, 027 of the Kenya's population, with Mombasa hosting 939, 370 and Taita Taveta 284, 657 people respectively (National Population & Housing Census Report, 2009). The population density in these counties varies widely across the sub counties, with patterns of settlement showing a link to access to essential services. Available data for example indicate that, according to the County Integrated Development Plan (CIDP) for Mombasa, the population is rapidly increasing in the unplanned areas. These areas have deteriorated, inadequate or outright non-existent sanitation infrastructure¹.

Among the most basic services and infrastructure are those related to water and sanitation. Inequalities in access to improved sources of water and proper sanitation are indicative of severe deprivation. These inequalities have historically been attributed to low incomes, cultural, economic, regulatory and institutional set up (UNDP, 2006). This sentiment was upheld by the Mombasa and Taita Taveta baseline reports, which indicated that water in the two counties has remained unreliable, of limited supply and limited quantities, and often times, of low quality. Where water wells exist, they are marred with pollution from the adjacent pit latrines. These sentiments have further been confirmed by the study respondents especially those from the Public Health, who say that pit latrines have been sunk alongside water wells and this has negatively impacted the health gains achieved through hygiene and environmental promotion efforts.

The Kenya Vision 2030 goal on water and sanitation under the social pillar is access to water and sanitation for all by 2030. Kenya is a water scarce country and thus the achievement of this goal will not come easy but requires deliberate effort geared towards the development and expansion of the sector. The renewable water per capita in Kenya stood at 647M³ against the recommended 1000M³ United Nations recommended minimum.

The 2013/2014 review of Kenya's water services sector by the Water Services Regulatory Board (WASREB) also shows that only 53 per cent of town dwellers have clean piped water. This implies that Kenya missed the Millennium Development Goal seven to halve, by 2015, the population without sustainable access to safe drinking water and sanitation. The country is also likely to miss the Sustainable Development Goal six of providing water and sanitation for all by 2030.

According to the Mombasa County Integrated Development Plan (2013-2017), the reticulated water supply system meets only 65% of the county's water demand. Inadequate water and sanitation infrastructure together with the county's rapidly growing population has led to inter alia

¹ Mombasa County Baseline Report, 2014

emergence of water vendors who not only sell water at exorbitant prices but also whose quality of water has not been certified.

Serious water and sanitation issues exist in the county. Following the increasing population size coupled with the emerging patterns of settlement, key WASH concerns are eminent. For example, the population is rapidly increasing in the unplanned areas that have a deteriorated, inadequate or outright non-existent sanitation infrastructure. There is a large population of the county using pit latrines and soak away pits for sewerage system. Given that many of the households depend on shallow wells and boreholes, there is increasing risk of cross contamination, prevalence of water borne diseases and malaria².

Taita Taveta County WASH situation is no better. According to the First County Integrated Development plan, the County has a total of 71,090 households, of which 35% (24,882) have access to piped water. 41,390 households, representing 58% of the total households have access to portable water. The number of households with roof catchment systems stands at 13,400 representing 19% of the total number of households. With scarcity of rainfall, efforts should be made to increase the number of households with roof catchments to tap rain water.

With regard to sanitation, the Taita Taveta CIDP confirm that the majority of households in the County use pit latrines, which are 75.8% of total number of toilet facilities. 67.4% of these are covered pit latrines. The Ventilated Improved Pit (VIP) latrines form 4.5% of total toilet facilities. The other main type of facility is Flush toilets, which accounts for 5.8%. An estimated 63,981 (about 86%) of the total households in the County have access to toilet facilities while about 14% of households do not have any kind of toilet facility.

The farm/garden accounts for the largest garbage/waste disposal type at 44.1%, followed by garbage pits at 23.7%, burning at 22.1%, public garbage heaps at 6.4%, collection by local authority at 2.4%, and collection by private firms at 0.3%. The local authorities have begun to play a more active role in garbage collection to make the environment more habitable³.

2.2 Situation of WASH in Mombasa and Taita Taveta Counties

In 2012, the World Health organization (WHO) and UNICEF estimated that approximately 17 million people in Kenya have no access to water and sanitation services. The most affected population groups are those in poor urban and marginalized rural areas, particularly women and children. The Mombasa and Taita Taveta baseline reports highlighted challenges experienced by schools in the two counties in water & sanitation. The reports noted the combination of poor access to clean water and insufficient functional sanitation infrastructure in schools as a major challenge. While the supplementary water wells keep the water taps flowing in the schools, the reports noted

² Mombasa County Government: First County Integrated Development Plan, 2013-2017

³ Taita Taveta County Government: First County Integrated Development Plan, 2013-2017

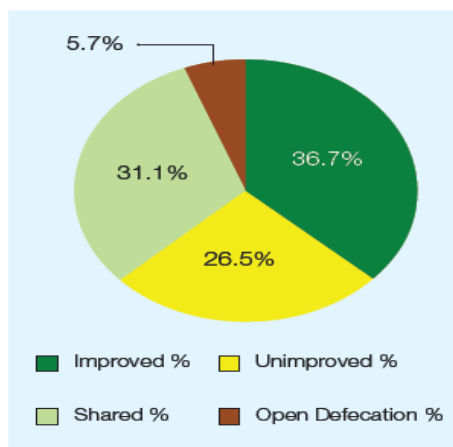
that often times this water is contaminated by pit latrines sunk alongside the wells. These gaps are significantly experienced in the two project locations as discussed further in the report.

2.2.1 Taita Taveta County

Taita Taveta is home to 284, 657 people with the urban population accounting for 23% and those under 5 years accounting for 10.4%⁴. Available data indicate that, in the county, approximately 64% of the population has access to improved water, while 67% have access to improved sanitation. Disparities however prevail across the county.

On the sanitation index, the Ministry of Health (MOH) gives the following coverage breakdown.

Figure 1: Sanitation Index Taita Taveta County



Source: MOE/WSP, 2014

The MOH observes that full coverage of sanitation matters because sanitation is a constitutional right in Kenya, the responsibility for which rests on the shoulders of the County Government. It further observes that universal access to improved sanitation yields maximum health, social and economic benefits. Taita Taveta is ranked number 27 out of 47 in the county sanitation benchmarking by the MOH according to the following key indicators:

⁴ 2009 Population and Housing Census Survey

Table 1: Taita Taveta WASH Benchmarking Indicators, 2014

RANK out of 47	Timely Reporting	Budget for Sanitation /5	Number of ODF Claim /10	Cost per ODF Claim /10	Economic Costs of Poor Sanitation /10	Pupils: Latrine Coverage Girls /10	Pupils: Latrine Coverage Boys /10	Household Latrine Coverage Rate /15	Number of Handwashing facilities per school /10	Rate of Open Defecation /10	Number of ODF Villages (DPHO Certified) /10	Percent of ODF Targets Achieved /10	Percent of ODF Villages /10
27		0	5	0	8	0	0	0	0	0	5	10	5

Source: MOE/WSP, 2014

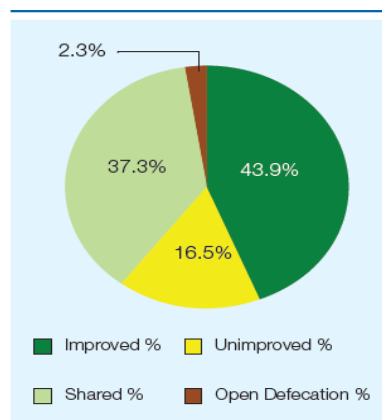
Taita Taveta County loses Ksh283 million each year due to poor sanitation. This includes losses due to access time, premature death, health care costs and productivity. This estimate does not include some costs that could be significant (such as water pollution and tourism) and is therefore likely to under-estimate the true cost of poor sanitation.

50.4% of children in Taita Taveta are stunted. Unimproved sanitation and open defecation have been linked to low height for age scores in children. Stunted children suffer a higher mortality due to infectious diseases such as diarrhea, pneumonia and measles as well as being more likely to have poorer cognitive and educational outcomes. Adults who are stunted are more likely to earn less.

2.2.2 Mombasa County

According to the 2009 Population and Housing Census Survey, Mombasa is home to 939, 370 people that is 100% urban, and those below 5 years accounting for 9.8%. Like other counties in Kenya, Mombasa is struggling with low sanitation coverage, with the urban poor living in the informal settlements being the most affected. MOH provides the following figures on this index.

Figure 2: Sanitation Index Mombasa County




Source: MOE/WSP, 2014

The Ministry says universal coverage of sanitation services is a constitutional right in Kenya, the responsibility for which rests on the shoulders of the County Government. Universal access to improved sanitation yields maximum health, social and economic benefits.

Mombasa is ranked number 24 out of 47 in the county sanitation benchmarking by the MOH according to the following key indicators:

Table 2: Mombasa County Sanitation Benchmarking Indicators, 2014

RANK out of 47	Timely Reporting	Budget for Sanitation /5	Number of ODF Claim /10	Cost per ODF Claim /10	Economic Costs of Poor Sanitation /10	Pupil: Latrine Coverage Girls /10	Pupil: Latrine Coverage Boys /10	Household Latrine Coverage Rate /15	Number of Handwashing facilities per school /10	Rate of Open Defecation /10	Number of ODF Villages (DPHO Certified) /10	Percent of ODF Targets Achieved /10	Percent of ODF Villages /10
24		3	0	0	0	10	8	5	8	5	0	0	0

Source: MOE/WSP, 2014

Just like Taita Taveta, Mombasa County loses Ksh.548 million each year due to poor sanitation. This includes losses due to access time, premature death, health care costs and productivity. This estimate does not include some costs that could be significant (such as water pollution and tourism) and is therefore likely to under-estimate the true cost of poor sanitation.

15.7% of children in Mombasa are stunted. Unimproved sanitation and open defecation have been linked to low height for age scores in children. Stunted children suffer a higher mortality due to infectious diseases such as diarrhea, pneumonia and measles as well as being more likely to have poorer cognitive and educational outcomes. Adults who are stunted are more likely to earn less.

While the project baseline reports reported significant cases of WASH related illnesses including stomach aches, diarrhea, cholera and malaria, respondents in the school WASH impact assessment reported that these cases have significantly reduced at the school level in both counties, with none reporting cases of for example of cholera outbreak in the recent past unlike before. In addition, teachers reported insignificant cases of absenteeism from such illnesses.

2.3 Water & Sanitation Institutional, Legal and Policy Framework

Water supply and sanitation in Kenya is characterized by low levels of access, in particular in urban slums and in rural areas, as well as poor service quality in the form of intermittent water supply. Seasonal and regional water scarcity exacerbates the difficulty to improve water supply.

Until the enactment of the Water Act 2002, water services were centralized under the National Water Conservation and Pipeline Corporation and a few other entities that had been created from 1992. Upon the enactment of the Water Act in 2002, there was decentralization of the water services to 91 local Water Services Providers (WSPs). In 2016 a new Water Act was enacted which

as a result, there was further decentralization of water services to the 47 counties. Development of water policies was left as the preserve of the national government under the Ministry of Water and Irrigation.

Various institutions apart from the Decentralized Water Boards have been set up pursuant to these Acts which include the Water Services Regulatory Board (WASREB) whose main mandate is the development and enforcement of the rules within the water sector to ensure access to efficient, affordable and sustainable services.

The Water Sector Trust Fund (WSTF) was also created under the Act and was restructured from the Water Services Trust Fund to the Water Sector Trust Fund (WSTF). The mandate of WSTF is financing water and sanitation services in the country. The establishment of these institutions is in the effort to organize the water sector in the country and to ensure that the anticipated universal access to water is achieved⁵.

The policy priorities of the water sector are centered on the following areas:

1. Expansion of water coverage to move towards achieving Vision 2030, MTP and MDGS.
2. Expansion of sewerage facilities for both safe and good living environment.
3. Scaling up water storage to improve water security.
4. Scaling up irrigation to reduce dependence of rain fed agriculture and address food security.
5. Catchment conservation targeting the main water sources/ tower.

The Fourth Schedule of the Constitution of Kenya (2010) outlines the separation of functions of the national and the county governments in relation to water, environment and sanitation sectors⁶. Overlaps however exist and transfer of functionalities for example the transfer of the function of garbage management from the Public Health to NEMA in Mombasa. This according to the Public Health has negatively impacted the communities since NEMA is more of a regulatory institution than a service provider⁷. A reversal of the function would lead to improved garbage management in the county.

⁵<https://www.kenyacic.org/sites/default/files/publications/THE%20WATER%20SECTOR%20IN%20KENYA.pdf>

⁶ The Civil Society Fund-Major Development Project (DPA) Project Document

⁷ Views of Public Health Officer, Mtongwe

CHAPTER THREE EVALUATION METHODOLOGY

3.1 Research Design

A Descriptive Survey research design, which is a process of collecting data in order to answer questions concerning the current status of the study subjects, was used to guide the evaluation process. This enabled the comparison of the before and after situation of the beneficiaries as well as a determination of whether the project has realized its overall goal in as far as the school based WASH interventions are concerned.

The evaluation adopted mixed methods approach that combined quantitative and qualitative methods (please refer to section 3.6). A team of one Research Consultant, one Team Leader/Supervisor (MnU staff in Mombasa) and 4 enumerators (2 per County) were involved in the evaluation process.

Prior to the field data collection, orientation of the enumerators was conducted in each County. The training specifically focused on the House Hold Interview (HHI) tool. The enumerators were identified and selected based on their academic qualification, relevant past experience and knowledge of English and Kiswahili language, as well as being conversant with the project locations and the local language. The orientation covered crucial aspects of the evaluation including but not limited to the

- i. Purpose of the evaluation
- ii. Research ethics
- iii. Rapport with respondents
- iv. Application of the data collection tool (HHI)
- v. Data capture and recording of responses
- vi. Data security
- vii. Data cleaning and submission to the consultant
- viii. Emphasis on data authenticity and completeness, among others.

Following the orientation of the enumerators, the tool was pilot tested to confirm the duration of application, test for common understanding of the questions, check if any questions made the respondents uncomfortable, and repetition of questions and logic of flow among others.

3.2 Study Population

For the purpose of this evaluation, the study population is defined as a set of individuals with some common observable characteristics that differentiate it from other populations. In this case, our study population was 600 learners drawn from the two project schools in Mombasa and Taita Taveta Counties, from which the sample was drawn. Other target category comprised of 2 Community Committees: Mombasa LUF & NMDT in Taita Taveta that comprise of six (6) and four (4) members respectively. However, only the group leaders were involved in the study; and 156 Duty Bearers (the latter comprises duty bearers for the larger project but from the population

a small number was drawn for the key informant interviews relevant to the school based interventions).

Secondary target comprised of 2,400 community members (computed as proportion of 12,000 global secondary target divided by 10 sub counties to get 1200 x 2 sub counties) reached indirectly through the community meetings, ripple impacts & media activities. Even then, only a small number out of these 2, 400 community members was involved in the evaluation.

3.3 The Study Sites

Data was collected in two project locations namely Mombasa and Taita Taveta Counties. The evaluation purposefully targeted the two project schools re Longo primary and Rekeke primary schools respectively.

3.4 Sample Size and Sampling Method

3.4.1 Sample Size & Sample Composition

Constrained by available time and financial resources, a purposeful sampling method was applied. This also aided in selecting the stakeholders with the relevant information required to inform the impact assessment. While the assessment aimed to reach 180 respondents, slightly more respondents were reached as follows.

Table 3: Sample Size and Distribution

Study Population	Total # of cases involved
Learners (including 5 from the most significant change stories)	134
FGDs with Adults	33
Key Informant Interviews	21
HHIs (Parents)	20
Most Significant Change Stories (Adults)	3
Grand Total Sample Size	211 cases

3.4.2 Control Group

Two schools were involved in the survey as control group. These schools represented schools not being involved in the project. The control group served as a comparison group comparing the difference between the schools that benefitted from WASH interventions and those not involved. For this purpose, Mtongwe primary and Mweza primary schools were involved.

3.4.3 Key Informant Interview Sample

A total of 21 key informant interviews were conducted with the project stakeholders and one (1) with MnU project staff coordinating the project. Out of these, six (6) were conducted with the representatives of the control group

3.4.4 Sample for the FGDs

A total of Six (6) FGDs were conducted. These included four (4) FGDs with learners (mixed groups and girls separately); and 2 with parents and community members (1 per location).

3.4.5 Sample for House Hold Interviews (HHIs)

A total of 20 HHIs were conducted with 10 parents in each location. Parents who participated in the FGDs were targeted with the HHIs for triangulation purposes.

3.4.6 Documentation of the Most Significant Change Stories

A total of eight (8) participants participated in the documentation of the most significant change stories. These included three (3) parents, four (4) girls and one (1) boy.

3.4.7 Total Sample

The total sample for the evaluation comprised of 211 cases.

3.5 Data Collection Tools

Data collection tools included a Structured Questionnaire to guide all the house hold interviews, a Key Informant Checklist, a Checklist for the FGDs, checklist for independent observation and a camera for taking relevant photographs and videos to enrich the evaluation findings. Short video clips on the most significant change story were also recorded from the project beneficiaries.

3.6 Data Collection Methods

Mixed method approach was used in data collection to allow for capture of different views and perceptions on the project, as well as to allow for triangulation of the study findings.

The following methods were used in data collection.

3.6.1 Literature Review

Literature relevant to the assignment was reviewed to guide the finalization of the proposed evaluation questions and build the case for the evaluation with regard to the specific expected results and outcomes, the measurement indicators, targets and milestones; the details of the strategies and models adopted in the design and implementation of the project intervention and other relevant progresses reported under the various project documents. The materials reviewed included the following;

1. The Project Document (PD) including the Project Log frame
2. Baseline Reports (Mombasa and Taita Taveta)
3. Project Annual Report
4. Relevant online materials
5. Mombasa County Integrated Development Plan (CIDP)
6. Taita Taveta County Integrated Development Plan (CIDP)

3.6.2 House Hold Interviews (HHIs)

House hold interviews were conducted to gather quantitative data. The questions were close ended. A total of 20 HHIs were conducted in the two Counties. The HHIs targeted the parents whose children are attending school in the project schools and some community members.

3.6.3 Key Informant Interviews (KIIs)

An Interview Guide was developed to generate relevant data from the key informants. The target respondents included;

- 1) One (1) MnU Project staff
- 2) 2 Head Teachers & 4 staffs) of the control group schools
- 3) County Education Official – Rekeke
- 4) County Education Official – Mtongwe/Longo
- 5) County Water Officer Taita Taveta
- 6) 2 County Public Health Officials (1/Loc)
- 7) 7 Senior Techers (4 at Rekeke and 3 at Longo school)
- 8) 2 Community Committee Representatives (1/Loc)

A total of 21 KIIs were conducted.

3.6.4 Focus Group Discussions (FGDs)

Six FGDs were conducted in the two project locations. These comprised four with the learners and 2 with parents and community members. Each FGD was assigned 45 to 60 minutes. The consultant facilitated the FGDs while an enumerator assisted with taking notes. Questions used in the FGDs were open ended to facilitate in-depth discussions and diversity of views.

3.6.5 Documentation of the most significant change stories

The beneficiaries who shared their experiences through the most significant change stories were identified during the FGDs. Attributes considered included like the ability to talk openly, willingness to share their experiences, possibility to showcase the most significant change i.e. has been able to attend school without disruptions due to WASH health & hygiene related problems for example; the most improved academically as a result of the sustained project interventions; having been in the same school since the start of the project etc. The consultant was able to identify the most outspoken and those that seemed to have ample details to share as discussions went on.

3.7 Pilot Testing of the Data Collection Tools

Only the HHIs tool was pilot tested to ensure the enumerators captured the data properly. The respondents included in the pilot testing of the tools were not involved in the actual data collection to avoid data and target contamination. Two cases were identified for the pilot test.

3.8 Data and Data Safety Management

The application of the HHI tools took one day in each location. At the end of the day, the enumerators submitted completed tools to the supervisor to avoid data loss.

3.9 Data Entry

The Consultant handled all the data entry since the HHI scripts were few.

3.10. Data Quality Management

It was primary that the consultant ensured that the data collected related to the evaluation purpose and employed data collection methods and procedures that were rigorous, defensible and that produced empirically verifiable evidence that is valid, reliable and credible. To do this, the consultant ensured that the questions asked to the respondents were short, clear and to the point yet not embarrassing to the respondents; data collection tools were pilot tested and adjusted accordingly, data was cleaned of any gaps and irregularities and data loss was prevented.

3.11 Role of the MnU P.O in Mombasa (Supervisor)

The Supervisor accompanied data enumerators to confirm HHIs interviews were being conducted properly. He was responsible for the data collected from the HHIs. He retrieved and submitted the data to the consultant every day. He played a coordination and oversight role of the enumerators in their respective locations. He was the consultant's focal person on the ground during the field data collection.

With regard to the other logistics, the P.O assisted with securing all the KIIs appointments; oversaw selection of the FGD participants and ensured their mobilization and organization in coordination with the project schools (learners & parents); and those involving the community members. He introduced the Consultant to the relevant KIIs stakeholders/respondents.

3.12. Data Interpretation & Analysis

After the data entry, it was screened and cleaned up to ensure it contained no gaps, there is a logical flow, and data entries are not misplaced among others. Data was then coded (quantitative data) and categories generated (qualitative data). Quantitative data was then entered in spread sheets for analysis.

3.13. Data Presentation

Data summaries were presented in graphs, bar charts and frequency tables among others. A good balance of quantitative and qualitative analysis was also done.

CHAPTER FOUR ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter provides a detailed interpretation and analysis of the impact assessment findings. Findings are organized around the various assessment variables disaggregated by county, sex and the category of learners. In limited cases, aggregated analysis is used.

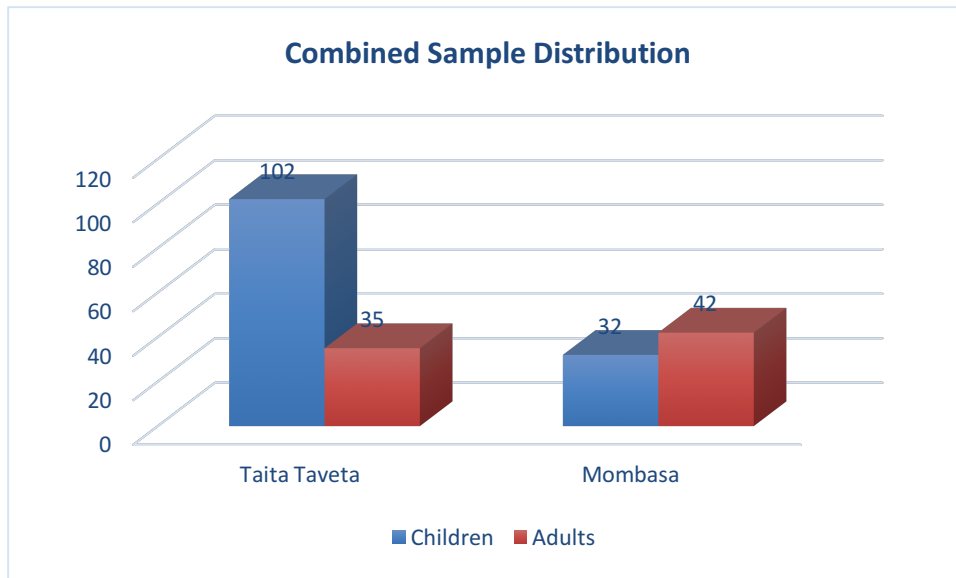
To ensure county specific profiles are given, findings have been analyzed separately for Taita Taveta and for Mombasa County. Combined conclusions (but where necessary county/school specific) have been drawn.

4.2 Sample distribution and characteristics

4.2.1 Combined Sample

The study reached a total of 211 respondents. These comprised of learners, both girls and boys as well as adults comprising of men and women. Figure 1 illustrates the distribution.

Figure 3: Combined Sample Distribution By Respondent Category & County

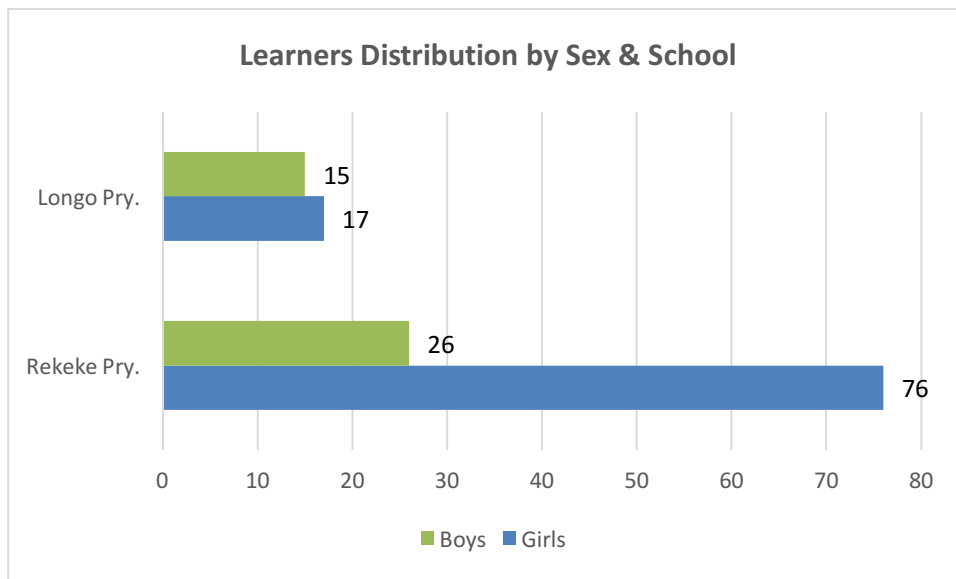


Taita Taveta registered more respondents than Mombasa County in the children category (102 versus 32 cases). One of the reasons for this was that most of the children who were trained by the project in Mombasa had completed class eight hence the number that's conversant with the project is much lower. In addition, none of the girls at Longo primary had been trained in menstrual

management since those trained had since left class 8. This affected the learner's population that could participate in the FGDs.

4.2.2 Sample of Learners by School

Figure 4: Learners Distribution by Sex and School

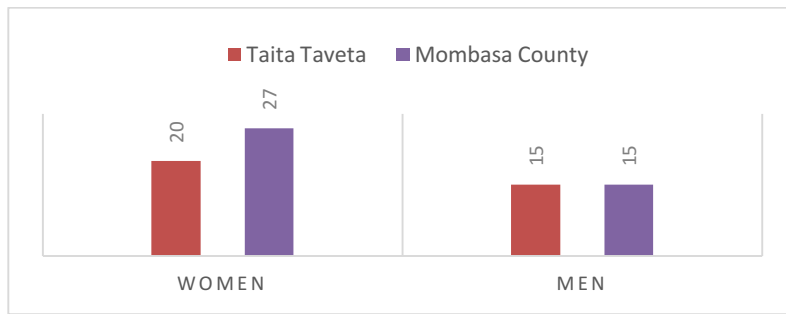


More girls participated in the study than boys in both schools with Rekeke primary registering the highest number, 76 girls against 17 at Longo primary. At Rekeke, the number was higher since the pubescent girls who benefitted from menstrual management training and supply of sanitary pads were still at the school unlike at Longo primary, where they had since completed class eight. Also at Longo primary, overall, the learners who had interacted directly with the project interventions were fewer hence the low participation.

4.2.3 Adult Respondents by Sex and County

Women and men participated in the various discussion categories during the evaluation. Figure 5 distributes the respondents by sex and county.

Figure 5: Adult Respondents by Sex & County



More women participated in the evaluation in Mombasa County (27) than in Taita Taveta (20). No reason can be given for this distribution. Mombasa County recorded the same number of women and men respondents unlike in Taita Taveta where the number of women surpassed that of men by 12 respondents. In the men category, the number was the same for both counties.

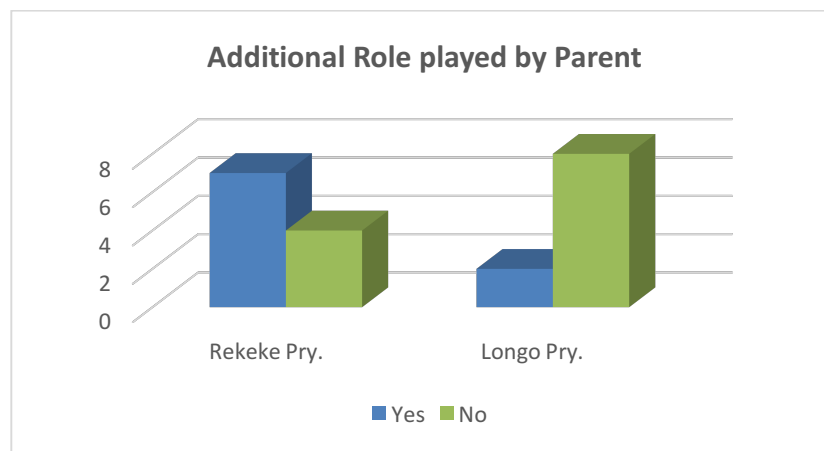
4.3 Level of Awareness of the MnU WASH Project in Schools

This indicator sought to establish if the respondents were aware of the MnU wash project in the two schools and at the community. The need to establish the link between the school and the community was to further try and establish if learners were able to observe health and hygiene back at home, and if they were able to link the WASH interventions at school and at the community level. All the interviewed respondents (100%) including the learners confirmed to have knowledge about the WASH interventions in schools. They all elaborated well the link between WASH practice at school and at home.

4.4 Additional Role Played by Parents in the Schools

This variable sought to establish if parents played any additional role at the schools other than being a parent. Figure 6 gives the summary by school.

Figure 6: Additional Role Played by Parents by School

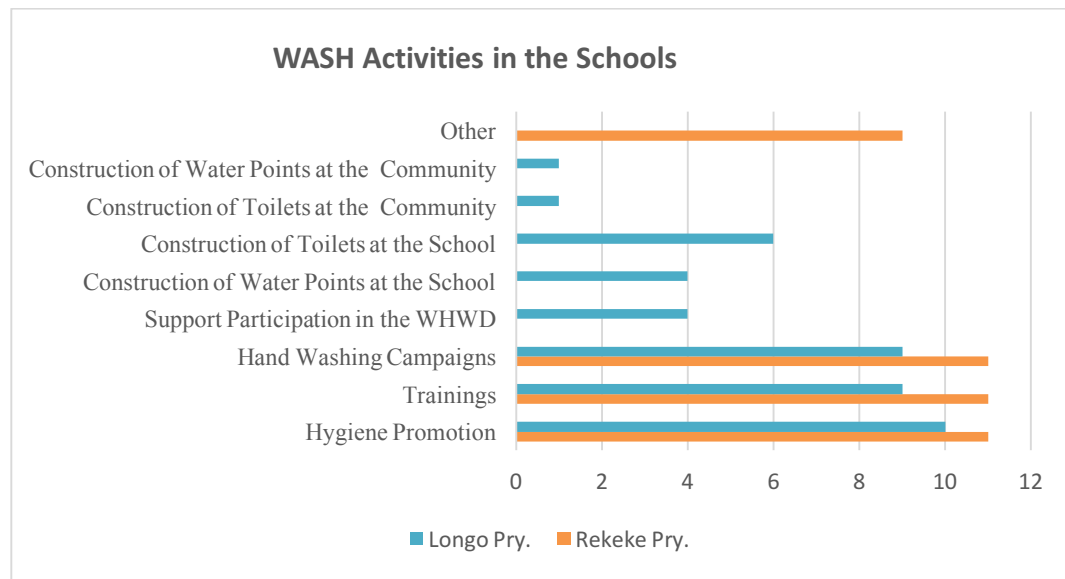


From the findings, more parents played an extra role at Rekeke primary compared to Longo primary. Some were members of the Board (4), CEC (1) and “Other” (2). At Longo primary, one (1) parent served as a supplier of detergent while the second one did not disclose the nature of the role played.

4.5 Nature and Type of the Project Activities

This variable sought to establish the nature and type of activities that the project was involved in, in the two schools. Respondents reported the following activities, as having been implemented in the schools targeting pupils, teachers, parents and the school committees among others.

Figure 7: Nature & Type of WASH Activities in the Schools



From the HHIs, parents from both schools profiled the activities that the project has been involved in in their schools. Hand washing campaigns, trainings and hygiene promotion received the highest rating as well as “Other”. Under the “Other” category, some of the activities mentioned included training in dental management, combing of hair, water treatment, benefits of drinking clean safe water, 10 ways of proper hand washing, installation of leak tins, environmental hygiene and proper disposal of sanitary towels among others.

4.5.1 Trainings in Personal Hygiene

Trainings were conducted targeting the learners, teachers and parents.

Respondents benefitted from trainings in various topics. These included hygiene promotion through hand washing (citing the need to wash hands after using a toilet, before and after a meal), personal hygiene including brushing teeth, washing the body, washing clothes, wearing shoes to school to avoid contamination from dirty toilets; environmental conservation including avoiding to litter the school compound and proper waste disposal; proper use of the toilet and tree planting at school and at the community.

4.5.2 Training in Girls Menstrual Management

Girls were trained in menstrual management. This included training in proper use and disposal of sanitary pads, personal hygiene during menses including regular change of pads to avoid infections.

4.5.3 Training in Environmental Hygiene

Learners and parents were trained in environmental hygiene. This included sensitization in toilet use to avoid open defecation; the benefits of maintaining a clean school environment including classes and toilets. The intervention also involved tree planting in school and also in agriculture. The Community Committee representative observed that the project helped to create awareness to the children on the link between water and the environment.

4.6 PROJECT IMPACT ON THE BENEFICIARIES

4.6.1 Overall Views of Project Impact in the Two Counties

Views gathered from the Programme Coordinator MnU, Mombasa Office, indicated that the project has resulted in significant results overall. These include attitude change among the parents and pupils in personal and general hygiene, girl's absenteeism is reducing because of the availability of sanitary pads and training in menstrual management, environmental hygiene has really improved and schools have taken the initiative to plant trees in the compound. He cited the case of Rekeke learners who bring water from home for the trees on daily basis. There is no longer foul smell from the schools like before following sensitizations in proper waste disposal.

4.7 COUNTY SPECIFIC FINDINGS

4.7.1 PROJECT IMPACT: REKEKE PRIMARY, TAITA TAVETA COUNTY

Demographically, Rekeke primary has a total population of 544 learners. These include 276 boys and 268 girls. It has two streams running from class 1-8 and also has a pre-primary unit. The findings below are drawn from the learners, parents, community members and teachers, as well as relevant Government Line Ministries in respect of Rekeke primary school.

4.7.1.1 Impact from the Children Perspective

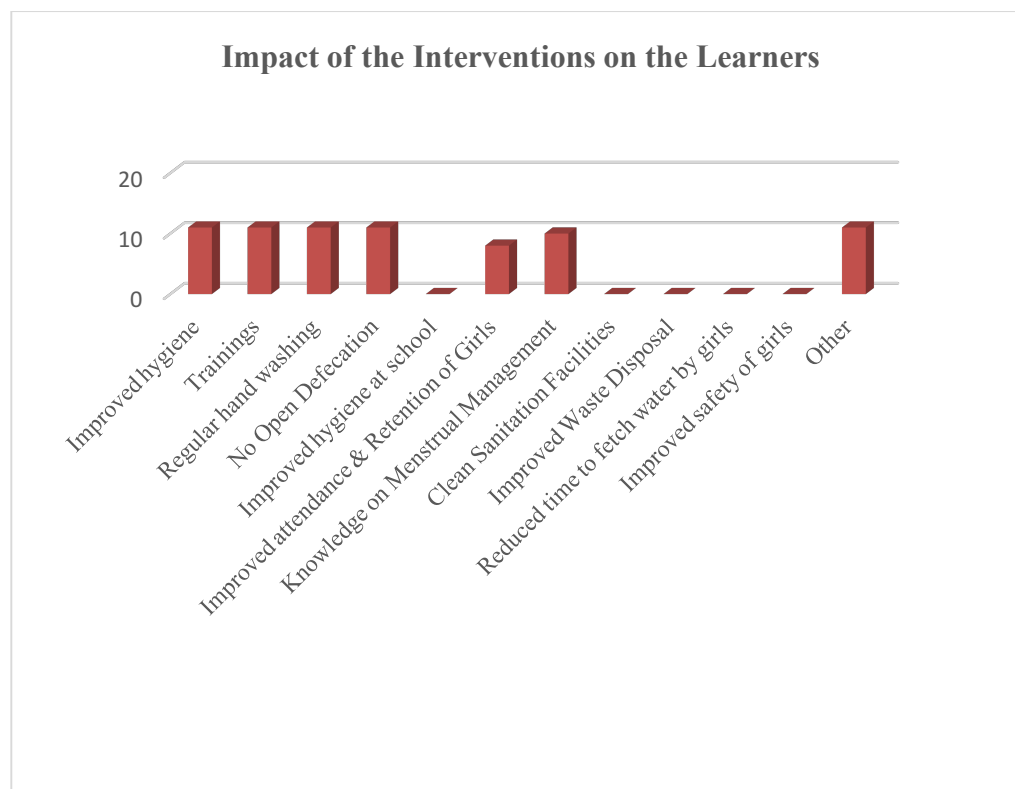
Children confirmed to have drawn significant benefits from the project. For example, they said from the hygiene promotion trainings, they are now able to observe personal hygiene including frequently washing their hands after visiting the toilets and before meals. These and other personal hygiene practices have helped to reduce the level of WASH related illnesses amongst the pupils. They specifically cited diarrhea, cholera, stomach aches that were very common amongst children before the start of the project, and which now have significantly reduced. These gains were linked to such interventions as hygiene promotion by the project, their participation in the Hand Washing

campaigns supported by the project, which has also taught children the benefit of drinking clean water for good health.

4.7.1.2 Impact from the Adults Perspective

These findings were further corroborated by the key informant interviews as well as the FGDs with the community and the house hold interview respondents. Overall, HHIs returned the following feedback.

Figure 8: Impact of WASH interventions on Rekeke Learners According to the HHIs



At Rekeke, learners had benefited from improved hygiene, outcome of the various trainings including in regular hand washing, avoidance of open defecation and girl’s ability to manage their menstrual cycles. There is also improved girl’s attendance and retention at the school as a result. These findings were further corroborated by other KII interviewees as discussed below.

4.7.1.3 Impact on the Health Index

The Public Health Official (PHO) confirmed that before the WASH project begun especially in Taveta, the sub county used to experience Cholera outbreaks up to three times every year. These were associated with poor hygiene including open defecation, water contamination from human waste, poor personal hygiene including failure to wash hands after defecation and consumption of dirty contaminated water. To date, through the project interventions and the contribution of other

actors, there are no longer Cholera outbreaks, many villages (16 out of the 18 villages) in the sub county have been declared Open Defecation Free (ODF) and significant strides are still being made to ensure the remaining two villages are also cleared from open defecation.

Further, the PHO confirmed that through the project interventions, they have recorded significantly low cases of diarrhea among the <5s. These views were further supported by the County Water Department that observed that, with increased personal and environmental hygiene comes increasing health benefits. The Community Committee observed that the initiative has reduced WASH related illnesses among school going children, and they now know that water is their Constitutional Right. The initiative also created awareness among the children on the need to wear shoes to school. Resultantly, about 98% of the children wore shoes on the day of the interviews.

This view is corroborated further by the teachers who observed that cases of visits to the dispensary have significantly reduced owing to the improved hygiene. The school environment is since very clean, toilets are clean, classes are kept clean and children wash their bodies and clothes regularly. These has significantly influenced the health index of the learners recording very low rate of absenteeism.

Parents said the trees planted in the school give children shade and fresh air in an environment marked by very high temperatures. They also break the wind that often destroys roofing of the school. They also confirmed that children now know the benefit of regular hand washing leading to the reduction of illnesses like diarrhea, simple colds, mosquitoes as a result of litter free environment hence reduction in Malaria. Open defecation has also stopped. Jiggers have been eradicated and children are very clean.

4.7.1.4 Impact on House Hold Economic & Well Being Index

The gains in improved health situation at the house hold level have further translated into lower cost of health since families are healthier and the level of WASH related illnesses have reduced. Families are now able to channel their limited incomes to other economic and welfare needs. Furthermore, they now have more time to engage in gainful economic activities, and this has helped to improve the good health of the entire families.

Parents confirmed that as a result of the training in agriculture, some children have started kitchen gardens at home from which they make some income to supplement purchase of their learning materials.

4.7.1.5 Impact on Enrollment, Attendance, Retention & Performance Index

Children confirmed that they are now able to attend school without missing because they are no longer disrupted by ill health or lack of reading and learning materials. They attributed this to the improved personal hygiene that has kept them healthy. They also said their parents are also healthy and able to look for money to buy them the materials they need to remain in school. On the performance indicator, the children reported that their performance has now improved since they don't miss school or fail to concentrate because of WASH related complications.

4.7.1.5.1 Enrolment

Corroborating the views of the children on improved enrolment, the Public Health Official (Taveta) reported that even without statistics, she could confirm that more children are now attending school than before and are able to remain in school all through. Completion rate has also increased.

These views were further confirmed by the Ministry of Education representative, who observed that enrolment, retention and completion rates had increased in the last three years at Rekeke school. Confirming this view further, Mr. David Mwajewe, a Senior Teacher at Rekeke primary confirmed that in 2018, the school enrolled 21 more children than in 2017 bringing the school pupil population to 544 up from 523 pupils in 2017. This was a 3.8% growth. Table 4 illustrates the two indicators in the last three years.

Table 4: Enrolment Rate & Performance at Rekeke Primary in the Last 3 Years

ENROLLMENT				PERFORMANCE
Year	Girls	Boys	Total	(Mean Score)
2018	276	268	544	
2017	264	259	523	188.15
2016	244	262	506	176.30
2015				171.08

Source: Ministry of Education, 2018

Asked if the school could attribute the changes in girl's enrolment to the WASH interventions, the school confirmed this to be true. Teachers confirmed that girls used to be very embarrassed when they soiled their dresses in school but after the training of the girls and their teachers, this problem has since been addressed. Girls are happy to join the school and stay on undisrupted. Teachers and parents have sustained their support for the girls since their training and have assumed their roles actively.

Parents and the community members say that even though they don't have statistics, enrollment of children in the school has improved as vices that held them back including child labor and ignorance have been positively influenced by the project. Girls as well now attend school comfortably. *"Today, children and parents have agreed to remain in school"*, observed one parent.

4.7.1.5.2 Retention

At Rekeke, the teachers interviewed confirmed that since the project begun, the drop out rate is insignificant. In 2017 for example, only 2-3 children dropped out of school while 2018 has so far recorded no drop out. The school confirmed that children are now healthier and able to attend school without distractions. Menses also kept many girls out of school or caused them to miss an equivalent of a week every month but today that's no longer a factor in their schooling.

Parents confirmed that so far, completion rate is good including for the over aged learners (16-20years). They estimated the completion to have increased from 60% to 95% in the last three years.

4.7.1.5.3 Performance

The MOE representative cited performance improvement at the school noting that compared to 2016, the Mean Score improved by an estimated 11+ points in 2017. Mr. David confirmed that performance at the school had significantly increased over the last three years as follows.

Table 5: Performance in the Last 3yrs at Rekeke Pry.

Year	Mean Score	Realized Change
2017	188.7	12.4
2016	176.3	5.22
2015	171.08	

Source: MOE, Taita Taveta

Parents and community members talked proudly of the increasingly improving performance of Rekeke school. *“Tuliitwa kujulishwa kuhusu matokeo ya 2017 hata sisi tukajipigia makofi kwa progress yetu. Graph yetu inaendelea kupanda for the last 3-4 years with the best student – girl _acquired 330 marks (We clapped for ourselves when we were informed of the improved performance in 2017. Our graph is continually moving higher in the last 3-4 years producing our first candidate _girl- with 330 marks.”*, A voice of a proud parent of the school.

4.7.1.6 Impact on the Girl Child

Girls reported that before the project, they experienced some challenges that affected their learning. These included low knowledge and information on menstrual management as best put by one girl, *“Tulichafukiwa na nguo tukiwa kwa darasa (we soiled our dresses while in) class but after the training we can now talk to our teachers.....We didn’t know how to use pads and feared opening up to our parents”*.

Girls confirmed to have been trained on dangers of engaging in early sex and the benefits of personal hygiene. These trainings have given them knowledge on how to use pads, proposer disposal of soiled pads and cleanliness during menses. They confirmed that the project has had a significant influence on their education since more girls have enrolled, most remain in school and their concentration is undistracted and thus perform better.

Corroborating the views from the Taita girls, the PH Official observed that personal hygiene is today a talk and a practice for every child including the girls. Children including girls have become very outspoken including girls on matters of proper hygiene and especially on menstrual management. Girls no longer shy from talking about menses unlike before. From the rigorous campaign that has been done by the project at the community level, the once very rigid and absconding fathers and men have now become crusaders and actively involved in the girls growing up and the changes that come with it. According to the PHO, previously there were recorded high cases of rape, early pregnancies and forced marriages amongst girls since no one dared to discuss

menstrual issues with their daughters, and this denied the girls the crucial knowledge on pros and cons that come with the onset of menstrual flows. Girls were very closed up but through sensitizations by the project and the Community Health Volunteers (CHVs), things have dramatically changed. Girls can now speak up, are very empowered and can defend themselves, and parents and men can now speak for the girl child. While according to the PHO Taveta was leading with the cases of out of school girls, today most of the girls are in school. In the last years KCPE, the best student from Rekeke Primary was a girl who only came second after an outsider was booked to sit for his KCPE at the school.

Confirming this, the MOE official observed that the project has been a major turnaround for the girl child citing the comfort that now girls enjoy while in school as they no longer have to worry about soiling their dresses. The corroborated effort by the government to supply pads in the schools has helped to retain the girl child in school, reducing absenteeism and hence improving their performance. She says MOE is now working with the schools to ensure they all construct a changing room for girls to further secure their dignity.

Community members and the parents say that the introduction of shower in the school has helped to restore the dignity of the girl child. In addition, sensitizations on the role of the parents have helped to bring fathers on board on matters of reproductive health of their daughters. Fathers are now very supportive and open with their daughters including in ensuring that the girl has adequate pants to ensure proper menstrual hygiene; advises the girls against sexual activities at adolescence stage. They say ignorance before the project amongst girls and parents led girls to fall victims of early pregnancies and school drop outs, a vice that has also reduced. This later view is however somehow disputed by the MOE that confirms that many girls are still victims of early pregnancies and school dropout and the issue possibly needs to be approached differently.

From the children perspective, girls can now come to school because of the clean environment, there is reduced drop out of the girls thus completion rate has improved, their performance has increased citing the best candidate in 2017 was a girl with 330 marks, clean and separate toilets for boys and girls have boosted girl's morale to attend school, knowledge and skills in menstrual management has improved their health and hygiene as well as other education indicators.

For the girl child, the Community Committee feels that through the project and the contribution of the other players, availability of water at home has reduced the risk of girls going to fetch water from long distances exposing them to sexual related violations; girls have more time for private studies, enough rest after school and more energy to attend school. They enjoy a cleaner environment, have increased knowledge on menstrual management hence more girls can be retained at school and their performance has improved.

Girls asked for more pads, water in the toilets, more toilets and toilet papers.

4.7.1.7 Impact on Attitude and practice

Communities never used to sink toilets, a view shared by the Public Health Official and the community members. With the support of the Kenya Red cross and the APHIA Plus government initiatives, communities at the Taveta Sub County sunk toilets to address the problem of open defecation. They labeled the toilets “*Choo ya Daktari/the Doctor’s Toilet*” and never used them apparently because the PH Official “Demanded” that every household should have a toilet. The concept of a “Toilet” according to the community was a concrete structure with tin roofing. They didn’t use the toilet because no one created to them awareness on why it was important to use a toilet than to defecate openly. Today, the community confirmed that they dig and use toilets to eradicate open defecation and foul smell at the community. The community also influenced the school to increase the number of toilets. This resulted from the sensitizations on proper hygiene received from the project. This led to the inclusion of girl’s shower for use during menses, and this helped to keep them at school.

With coming in of the MnU WASH project, which used an integrated approach of reaching out to the school community as well as the ‘village’ community, helped to enlighten the entire community on the benefits of proper waste disposal and personal hygiene? This intervention led to acceptance by the community to use toilets, and this was further confirmed, as discussed elsewhere in the report by the now 16 villages that have been declared ODF.

The project has also had very high influence on the attitude and practice amongst the learners. They passionately described their personal and environmental hygiene. They looked clean, healthy and approximately 98% of those who participated in the FGDs wore shoes or sandals to school. They were happy that their school is also ODF and no litter lay on the compound, all because they have been taught and have accepted to live the values. From the Ministry of Education (MOE) representative, the project has significantly influenced the practice and attitude of the learners in personal hygiene. MOE says, “*Real Learning has taken place*”.

The PHO Taveta says before the project, most community members didn’t have toilets but used “Korongos” meaning drainage system. After the trainings, they have now upgraded from the Korongos to conventional toilets. Results of this are 20+ toilets that have been constructed and in use. This has had a big impact on environmental hygiene, personal hygiene and dignity of the community members.

Parents say their children have become real crusaders of hand washing and often reminded parents to follow the practice. One parent said, “*Wamekuwa waalimu sana kwa wazazi wao (They have become teachers to their parents)*”.

4.7.1.8 What the Children Liked Most about the Project

Children from class 4-6 gave responses like brushing the teeth, washing hands with soap, washing the face, *kukata kucha* (cutting of nails), *kuvaa viatu* (wearing shoes); improved performance in our school; while those in class 7&8 liked the training in personal hygiene and menstrual management.

4.7.1.9 What Should Be Done Differently to Improve the Project

From the children's perspective, the project should fix taps in the toilets, install rain water harvesting system, provide horse pipe, ensure sustainable supply of water in the school, increased environmental activities in the school, *vitabu* (books), *viatu* (shoes), tooth brushes and increase the number of toilets to accommodate all children.

4.7.1.10 Establishment of WASH Clubs in the School

No WASH clubs have been established in the school to date. Teachers cited no specific training was provided on how to establish and run the clubs.

4.7.1.11 Peer Educators in the School

While the children in class 7&8 said that three (3) children have been trained as peer educators, those in class 4-6 said there is none. Those that said the peer educators exist said they are involved in planting of trees, digging pit latrines and pruning of trees.

4.7.1.12 Participation in the World Hand Washing Days (WHWD)

Recently the school hasn't participated in the WHWD as explained elsewhere in the report.

4.7.1.13 Summary of the Positive Results from the Project

In summary, children confirmed that quite a number of positive things had resulted from the project. These included knowledge in hand washing after the toilets, improved hygiene levels at school and at home, no open defecation at school and at home, improved girls menstrual management, clean toilets and classes, nurtured the learners ability to take care of their school compound, access to clean water (though it was a one off tankering), improved retention, performance and completion as more children are staying on in school, more girls are in school and there is also reduced WASH related illnesses.

4.8 PROJECT IMPACT: LONGO PRIMARY SCHOOL, MOMBASA

4.8.1 The School Profile

Longo is a public government school. It has a population of 605 learners (309 girls, 296 boys). It has 29 toilets (15 for girls and 14 for boys), all constructed with funding support by VITENS International and the Constituency Development Fund (CDF). The school has 04 bore holes hence enjoys a sustainable water supply, even though this resource has led to some antagonism with the community with dire negative consequences including vandalism of the modern WASH infrastructure at the school. Water points are adequate in the toilet blocks, also hand washing basins and clean water drinking points. The school has well nurtured trees that give ample freshness and air purity to the population. Water harvesting infrastructure is in place. This was supported by Maji na Ufanisi even though no additional infrastructure was constructed. No perimeter wall is in place and this has posed major challenges. Communities and rogue youths get access to the school and as reported have in some cases vandalized the classrooms and the WASH infrastructure with dire consequences on the learners. One water tank was cut with a knife. Teachers say that the structure of the toilet blocks is a major challenge as the septic tank keep overflowing making the beautiful

toilet blocks unusable and at times inaccessible to the learners. Any support to fix this and the fence is most appreciated.

4.8.2 Nature and Type of the Project Activities

This variable sought to establish the nature and type of activities that the project was involved in. All respondents had a good grip of the activities that the project supported. Respondents reported the following list of activities, as having been implemented in the schools targeting pupils, teachers, parents and school committees among others.

4.8.2.1 Trainings in Personal Hygiene

Learners mentioned trainings in personal hygiene including hand washing, whose evidence of perfection was demonstrated by two pupils, Amos Rama of Standard 7 and Susan Eman of standard 6. (Please see the video clip); brushing of teeth, keeping oneself clean and water treatment. Children views were corroborated by those of the teachers, parents and community members as well as other key informant interviews. They cited hand washing and other personal hygiene trainings as a key component in the project interventions.

4.8.2.2 Training in Girls Menstrual Management

There were contradicting views on this activity. Girls denied having been trained in this area. Teachers and parents said the trainings had been done. Teachers clarified however that the lot that had been trained had since left the school and additional trainings hadn't been done even though the trained teachers have been orienting the pubescent girls on menstrual management.

4.8.2.3 Training in Environmental Hygiene

Learners as well as teachers and parents benefitted from training in environmental hygiene and water treatment among others. Children were trained on how to keep their school compound clean, proper litter disposal and trees planting and nurturing. Consequently, an Environmental Club was established to ensure environmental hygiene is observed in the school. The project is however working very closely with the County Government to educate children on adolescence stage management.

Children reported that they now have ample knowledge on personal hygiene, diseases prevention and proper waste disposal and are happy at the improved hygiene in their school, clean toilets, there is no longer open defecation on the school compound or at the community, they feel the retention has been good because not many children are missing school from WASH related ailments and most importantly, they confirmed there is improved performance. They are happy that they no longer suffer from cholera and typhoid unlike before, since they can boil or treat water. Cases of Bilharzias and Malaria are also no longer common.

4.8.3 What children liked most about the Project

Children liked the trainings, which they say marked their turning point in personal, dental and environmental hygiene.

4.8.4 Impact of the Project on the Beneficiaries

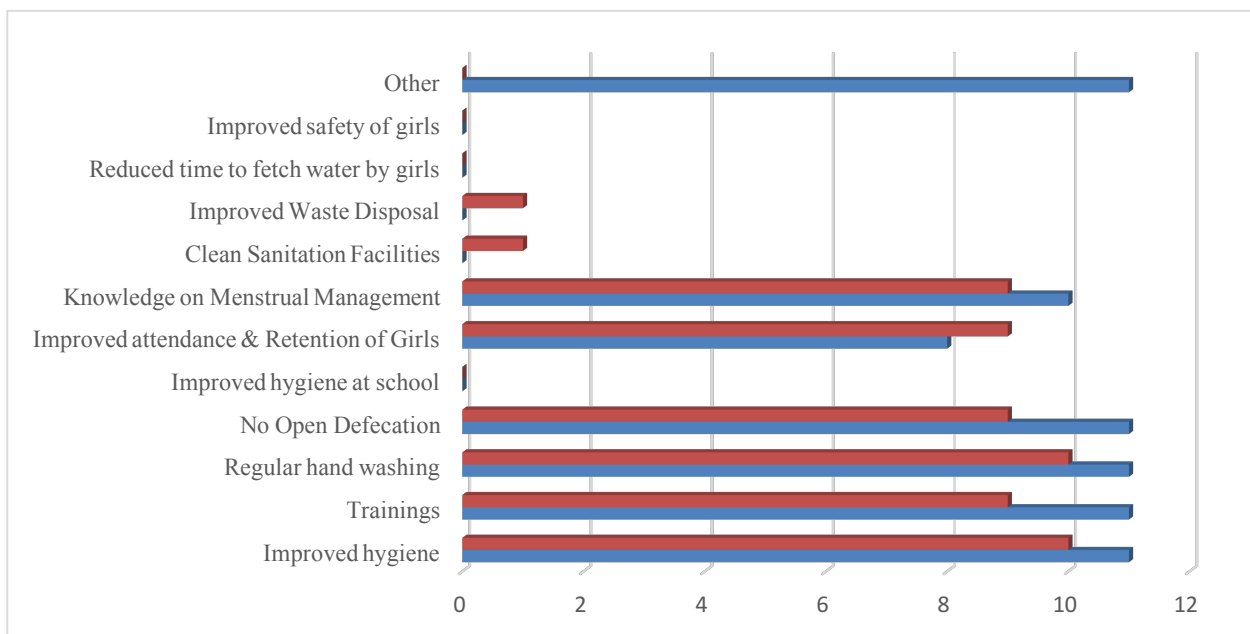
4.8.4.1 Impact from the Children Perspective

From the project, children confirmed to have acquired knowledge on physical hygiene, knowledge on diseases prevention through good personal hygiene practices like drinking boiled or treated water, keeping oneself clean and brushing of teeth; and knowledge on simple water treatment practices and proper waste disposal.

4.8.4.2 Impact from the Adults Perspective

The children views were further corroborated by the key informant interviews, FGDs with the community, interviews with teachers and the house hold interview respondents. For example, from the HHIs, the following feedback was obtained.

Figure 9: Responses on Impact of Interventions from the HHIs



Like at Rekeke primary, certain indicators had realized higher influence. These included the impact on knowledge levels of girls on menstrual management hence their improved attendance and retention. Others included no open defecation, the culture of regular hand washing, trainings in various areas and improved hygiene among the learners.

Further feedback pointed to the various indicators that had been positively been influenced as discussed further below.

4.8.4.3 Impact on the Health Index

Parents and the community members noted that the project interventions especially on personal hygiene had positively impacted on the health and well being of the learners. Cases of WASH related illnesses have reduced. They reflected on the period before the project started when community members practiced open defecation, a situation that was horribly complicated when rains came and everything including human waste was integrated with the stagnant water. This situation caused significant cases of diarrhea, malaria, cholera and Bilharzias. This has since reduced following proper human waste disposal. Ring worms that were mainly passed on from child to child through contaminated unclean hands have now been eradicated. They were however quick to add that some communities that have not been reached by the project still practice open defecation causing major threat to human life.

The teacher's views were that the health index at the school has improved. Toilets are cleaner, children constantly wash their hands and have internalized the key steps in hand washing (see video clip), and they have demonstrated knowledge of proper teeth brushing and are very aware and practice personal hygiene. The school compound is clean and the plastic bags are no longer brought to the school. All these have significantly influenced their health and well being.

The Public Health Officer, Mtongwe/Longo says despite the myriad challenges experienced in attempting to resolve WASH issues in the Sub-County, the intervention by MnU in collaboration with the other stakeholders has contributed significantly to improved health index in the area. He noted disease prevention through breaking the cycle of transmission through contaminated hands, good WASH infrastructure and consistent supply of water has come through very handy in reducing common WASH related illnesses citing the significant drop in cases of ringworms, which were often transmitted through contaminated hands, diarrhea and Cholera. He was however quick to add that these gains are threatened by the high water wells contamination from the soak pits.

4.8.4.4 Impact on the House Hold Economic & Well Being Index

From the reduced cases of WASH related illnesses comes the benefit of reduced health burden on the parents and the community. Respondents confirmed that they now spend much lower on the cost of treatment, enabling them to put their savings and time into other economic activities. They cited their engagement in liquid soap making, jik and Dettol from skills obtained from the project earlier on.

4.8.4.5 Impact on Enrollment, Attendance, Retention & Performance Index

4.8.4.5.1 Enrolment

With the support of VITENS International, the school boasts of modern toilet blocks (29 toilets: 15 for girls & 14 for boys) that are well served with water taps and hand washing basins. It also

has ample water storage tanks and the school environment is very clean. This together with high performance, has endeared it to the community and has kept the enrolment in all classes on a record high. Teachers cited the Government Decree that no child should be turned away as a situation that has left the school with very bloated class sizes.

Statistics shared by the school indicate the following trend in enrolment in the last three years;

Table 6: Enrolment Trends at Longo Primary in the last Four yrs.

Year	Girls	Boys	Total
2018	309	296	605
2017	309	287	596
2016	303	279	582
2015	321	339	660

Source: Longo Primary

4.8.4.5.2 Retention

Absence of common WASH related illnesses has been cited as a key factor in the high retention rate at the school. Parents say that children no longer have to go looking for water to keep the school clean like before. Parents and teachers note that retention has improved over time including that of the girls. The latter is linked with the supply of sanitary materials by the government to the school, even though this has not been done consistently. In addition, the school provides conducive environment for the girls through provision of comfortable sanitary facilities that guarantee their dignity and privacy.

4.8.4.5.3 Completion

Teachers confirmed that retention has been at 100% even though elsewhere findings indicated that drop out is minimal.

4.8.4.5.4 Performance

With the reduced absenteeism and not having to go looking for water to use at the school and at home, the performance has improved significantly at the school. Boreholes are also available at the community hence children have more time to do their homework after school. Girls as well have been spared the insecurity on the way to fetch water and can now safeguard their dignity. Parents say the school produced the best candidate in the Sub County in 2017 with 420 marks (boy) while in 2016; the best candidate scored 390 marks (girl). 2015 recorded 315 marks from the best candidate. This trend they say can only get better with the current learning environment at the school.

Parent's views were corroborated by those of the teachers who noted the improving trend in the overall performance of the school as follows.

Table 7: Trend in Performance in the Last 3 Years

Year	Mean Score	Realized Change
2017	224.43	19.42
2016	205.01	28.03
2015	176.98	

Source: Longo Primary School

With this performance, the school has been able to get their learners to National schools including to Kenya High School (girls), Friends Kamusinga Boys in kakamega, Nairobi school and Kakamega High in the last three years.

4.8.4.6 Impact on the Girl Child

Parents say that lack of water at the school and at home used to affect girls negatively during their menses. With a perfect supply of water including inside the toilets, girls are much comfortable and their dignity is safeguarded. Even as the lot that had been trained on menstrual management having since completed class eight, the knowledge and skills live on as the Guidance and Counseling teacher, who was a beneficiary of the training confirmed to have taken up the role of training the current girls on personal hygiene during menses. Consequently, girls are freer with their teachers and are able to approach them whenever they need support on menstrual management.

With the awareness created on the benefits of sinking and using pit latrines, the community confirmed that this has now been done and this has a very positive impact on the girl child while at home during their menses.

From an enrolment point of view, teachers confirmed that more girls are now joining school. They cited the current class 7 in which 49 learners are girls and 36 boys while in class six, the number is quite comparable with 47 boys and 42 girls.

4.8.4.7 Impact on Attitude and practice

The communities impacted by the project no longer practice open defecation. They have sunk toilets and boreholes and are able to keep their environment clean. This has had bounties of benefits on the health and well being of the community and learners at large. This was cited as a major shift in attitude and practice, and a major reflection of social accountability at the community level.

Teachers confirmed that children are making frantic efforts to remain clean. Even though there is an award for the cleanest child every end of the term, the practice wouldn't have been sustained without proper training and encouragement to keep clean. In addition, children now prefer to pack their lunch in lunch boxes than polythene unlike before. This they attribute it to the need to keep the school compound clean.

The PH Officer says one of the most significant changes has been that in attitude and practice. He cites about 75% of the homes today have sunk toilets unlike before when open defecation was the norm. Homes have improved with the help of children through the transfer of knowledge and

information in WASH. He says that the environmental hygiene acquired by the children is a great asset in environmental hygiene and conservation in future. Children are happier and healthier than before.

4.8.5 HOW THE PROJECT SCHOOLS COMPARE WITH THE CONTROL GROUP

Two schools were included as a control group. These were Mtogwe primary and Mweza primary. A snapshot of each is outlined below.

Table 8 Analysis of Control Group One: Mtogwe Primary

<u>Mtongwe Primary</u>
<p>This school has not had any WASH support. The school is an integrated school with 750 pupils in the regular classes (400 girls and 350 boys). It has 2 special units (1 for Cerebral Palsy and the second for children with mental health). Both units have a total children population of 43 children (22 cerebral palsy: 18 girls & 4 boys and 21 mental health: 14 girls; 7 boys). This number could significantly go up since 100 children have registered to join the units this year hence admission is in progress⁸. There are 26 teachers (male 8 and females 18) and 4 support staffs bringing the total to 30 staffs. This brings the entire school population to 823 people. <u>The entire population is served by only 16 toilets.</u></p>
<p>In terms of WASH, the school has only 3 toilets for girls and 3 for boys. Based on the WHO Standards for Toilet: Learner ratio of 1:25 girls and 1:30 boys, <u>this presents a deficit of 14 toilets for girls and 09 for boy's.</u> Due to this high toilet deficit, children who are mentally challenged have had to share toilets with the regular learners. This has exposed the children to sexual violence with cases of sodomy being reported in the toilets.</p>
<p>Teachers' toilets are 4 for females and 4 for males. The Cerebral Palsy children have 2 toilets (1 for girls and 1 for boys).</p>
<p>The toilet deficit is prohibitively high and a big crisis is experienced every day when all the children visit the few toilets especially during break time. Queues are long and children wait and waste a lot of time until they all access the toilets. Some children especially the young ones soil their uniform as they can't hold for long and in most cases, open defecation remains the only option when children cannot hold for long. Consequently, WASH related illnesses are high (diarrhea, vomiting, stomach problems and ring worms); the burden of treatment lies on the teachers since children fall sick at school and they have to take them for treatment, yet their parents are very poor and can't afford to foot the bills; there's generally low performance (see table 9) due to lots of time wasted while queuing for toilets or the only single water point; girls toilets fill up very quickly due to sanitary pads disposal, presenting a huge challenge trying to empty them yet there's no dumping site for the pads; girls performance is very low due to sanitation issues which have resulted in them missing school for about 5 days every month due to menstrual flows with no sense of privacy at the school (pubescent girls use same toilets with those in lower primary); environmental hygiene is a serious issue at the school. Retention is very</p>

⁸ Even with this serious shortage of WASH facilities in the school, the school cannot reject a child following the government policy that you cannot reject a child who wishes to join school

poor especially girls due to early pregnancies resulting from lack of knowledge on adolescence stage and implications coupled with girls accepting small favors from men including cash that they could use to buy sanitary pads due to high poverty levels at home. In 2017 for example, the school lost 5 girls with 2 cases due to early pregnancies while in 2016, 4 girls dropped out of school. The poverty index is very high but looking at the cases of drop out, to a great extent, girls are the culprits.

Table 9 Performance at Mtongwe Primary By Year

Year	Roll	Mean Score
2017	120	206.56
2016	114	204.66
2015	93	233.79
2014	115	183.88
2013	114	204.60
2012	137	174.53
2011	153	194.26
2010	74	231.57
2009	57	203.81
2008	115	193.68

The only available interventions in the school

A one-off training in hand washing was done by Unilever comprising of only 4 sessions. Minor changes have been recorded due to lack of follow up trainings and supply of hand washing soap plus the school has limited supply of water. The practice hasn't taken root and slowly getting extinct.

A girl's forum is held with pubescent girls (class 4-8) by the Deputy Teacher to discuss issues of menstrual management, the menstrual cycle and related implications for the adolescence stage and early sex. Guidance and Counseling Unit is well established and boy's issues are also addressed in separate forums.

Key Recommendations

Following an assessment carried out in 2014 by the Sub County Public Health Office on "Sanitary inspection" in the school, the following key recommendations were made to improve WASH in the school;

- Provide proper structure for teacher's toilets i.e. construct new ones for the present are cracked on the walls and very small partitions
- Provide doors in boy's toilets and construct urinal which is easy in cleaning and does not emit bad smell
- Provide water in the toilets with hand washing basin and maintain hygiene

Recommendations from the KII Interview

- Toilets are the biggest challenge in the school. Support in increasing the number as per the deficit analyzed above
- Include girl friendly/sensitive toilet model
- Provide sanitary bin for girls to help manage soiled pads than disposing in the toilets

- Provide trainings in personal and environmental hygiene
- Disability friendly toilets needed to protect children with disabilities from especially sexual abuse

Other Evidence of WASH Challenges

A visit to the toilets by the evaluation team was met with foul smell, dirty toilets with urine flooding on the floor, boy’s toilets have no doors; empty bottles were lying on the floors; a very messy/dirty hand washing area next to the girl’s toilets etc. See below photos.



Photo 1: Run Down Messy Water Point



Photo 2: Girls toilet flooded with urine



Photo 3: Dirty toilets (Attitude & Practice)



Photo 4: Plastic bottles often block the toilets

Figure 10: WASH Images from Mtongwe Pry. (Control Group)

Table 10: Analysis of Control Group 2: Mweza Primary

Mweza Primary School

Like Mtongwe primary, Mweza primary has not received WASH support. The school has a primary unit, ECD, adult education and secondary school. The total school population is 740 learners comprising of 458 primary learners (238 boys and 220 girls); 100 ECD (45 girls & 55 boys); 32 adult learners (17 females & 15 males) and 150 secondary school students (100 in Form 1 & 50 in Form 2). The school has 15 teachers. Adding the teachers' population to the total, the school overall **population is 755 people**.

With this big population, the school is served by **only 12 toilets** (6 for boys & 6 for girls). *There are no teacher's toilets and they have to share the few toilets with learners.* The toilets have no doors and no water point is closer to the toilets. Water has to be carried in buckets to the toilets for a distance of over 500mtrs, making it completely impossible to keep the toilets clean or to get children to wash their hands after using the toilets. The school has only one borehole, 1 very small storage tank (1000ltrs) and the water often runs out. The storage tank mainly serves the ECD and the secondary unit, leaving the rest of the population barely able to access water. The ECD class is especially very far from the toilets and no child can barely hold back to reach to the toilet (about 500mtrs). This has resulted in an unfortunate culture of open defecation behind the classrooms.

Effects of poor sanitation in the school

The principal confirms that;

- Enrollment is very low indicating that in this year, they have only enrolled 24 children in class one, which ideally has a capacity of 50 children.
- Sharing the toilets with adults (teachers and the support staffs) coupled with the very limited units has led to open defecation in addition to erosion of teacher's dignity and motivation especially because the toilets have no doors & at times pupils have bumped on their teachers while using the toilets. This is especially very in-dignifying for the female teachers.
- There's high absenteeism among the girls especially the pubescent during their menses. This significantly affects their retention and performance
- The ECD class is very far from the toilets leading to open defecation
- Open defecation has been a single major cause of the very high incidences of WASH related complications in the school, coupled with the fact that children barely wash their hands after visiting the toilet
- Toilets are not clean since there is no water nearby. Its far.
- There's high rate of toilet blockage due to kids having to carry water in small plastic bottles, which often find their way into the toilets. This places financial constraint on the school especially when the blockage renders the toilets unusable
- Performance in the school is below average mean score (<250). See table 12.

Table 11: Performance Trend at Mweza Primary

Year	Mean Score	Deviation
2017	243.5	
2016	237.96	-3.95
2015	241.9	+23.39
2014	218.51	+40.74
2013	177.78	-4.7
2012	182.49	+10.53
2011	171.96	+2.91
2010	169.05	2.55
2009	171.6	-26.06

Recommendations (By the Principal)

- Improve the WASH infrastructure (renovate those existing & construct new ones)
- Install water in the toilets. (There is a feeding programme in the school and mostly children eat without washing their hands)
- The only trained Health Club teacher is the one who sensitizes the learners on hand washing. No external support has been received
- Install sinks in the kitchen to improve hygiene in food handling. Also in the staff room and in the admin block
- Install water storage tanks (the only bigger tank is broken)
- Install rain water harvesting infrastructure
- Need to train girls on menstrual management
- Pads are given to girl's ones per term (2 pkts). In most cases, those that finish theirs stay at home during the days

The Principals views were further validated through observation. The following photos says it all;



Figure 11: WASH Images from Mweza Primary

4.8.6 What Children from Longo Liked Most about the Project

4.8.7 Establishment of WASH Clubs in Schools

The school runs a Health and Environmental Clubs, both that are involved in WASH activities. They do peer education on personal and environmental hygiene, adolescence stage and implications.

4.8.8 Peer Educators in the School

No Peer Educators in the school.

4.8.9 Participation in the World Hand Washing Days (WHWD)

The school has participated once with sponsorship from Lifebuoy (Unilever) from which learners were sensitized on dental hygiene. However, this was a one off support.

4.8.10 Role of Parents in WASH at the school

At Longo primary, parents have been active in advocacy for WASH in schools. They have followed up with CDF, which resulted in the construction of school facilities and added modern toilet blocks at the school. Other roles played include the following;

- Emphasis on putting into practice knowledge and skills acquired from WASH interventions by the learners even at home
- Practicing what they (parents) have been taught by the project
- Ensuring children used treated water at home
- Participated fully to ensure the success of the interventions at the school

4.9 Role of Other Key Stakeholders in WASH in Schools

4.9.1 Ministry of Education (MOE)

The Ministry of Education plays a significant role in WASH in schools. For example, at Taveta Sub County, MOE emphasizes on hand washing and personal hygiene in schools owing to the significant link between this practice and improvement in access (enrolment), retention and performance of learners. MOE also links with the County Government to bring water to the schools and also supplies storage tanks in some schools. The current County Education Commissioner for water was a former teacher. This presents increased possibility for closer collaboration between the Water Department and MOE.

4.9.2 Public Health

The County Health Unit oversees WASH, health and hygiene aspects at the community. It coordinates response to health interventions in the area. It is the conduit between the County Government and the community, and often is involved in lobbying the County Government on the improvement of WASH and health index of the public. It carries out assessments on WASH & Health situations and advises the County Government through the existing governance structures for action. In the project especially at Rekeke, the PHO was very instrumental during the trainings and sensitizations in hygiene promotion in the school.

Even then, the PH Officer (Longo) confirms that while WASH is one of the most basic necessities at school and at home because of the related health implications, it has remained a very big challenge since the coming of devolution. The County government has become more hierarchical and has failed to consider the need for a proper sewer system. Consequently, soak pits are used all over at the community level and often times are dug next to or closer to the water wells. This has resulted in serious water contamination with dire health consequences.

The PHO (Longo) regrets the level of disempowerment of the PH offices at the local level, and the frustrations ensued in the hands of the “Elite” whose approach is unreasonably complicated and data oriented than practical and bottom-up like in the past.

4.9.3 County Water Services Department

Some of the roles that the County Water Services Department plays include the following.

- Developing, updating water and sewerage designs and construction standards;
- Advisory role to all other Government Agencies on construction of water and sewerage systems
- Capacity building of the County Governments
- Policy formulation
- Development of Water and Sewerage strategies
- Monitoring and evaluating the impact of investments
- Coordination of water services development Programmes
- Resource mobilization
- Coordination of sanitation issues

4.9.4 Community Committee (CC)

Community Committee ensured successful implementation of the project interventions at the community level through community mobilization and organization. It supported timely delivery of activities and promoted community acceptance of the project. It also participated in water, hygiene rights promotion as well as training parents on the water rights. The effective networking between the former CC Chair at Taveta for example resulted in strengthened rapport between the project, the County and the National Governments.

4.10 Stakeholder's Engagement in Advocacy for WASH in Schools

No structured advocacy has been organized by any project stakeholders for increased budget allocation for WASH in schools. However, efforts are being made to link with the various County Government Departments to influence for this. No tangible results have been realized although MOE for example has been supplying sanitary pads for girls in the schools including the project schools.

Unlike Longo, Rekeke primary has had to pay for water at the market rates, something that has challenged its ability to maintain sustainable water supply in the school. Department of the Public Health has been supplying water treatment chemicals to the schools.

4.11 The Future and Sustainability of WASH in Schools

The Public Health Official at Taita Taveta observed that the closure of APHIA PLUS programme created a big vacuum on matters of health and hygiene. Maji na Ufanisi filled this void. However, the future is not guaranteed owing to resources challenges. One way to possibly ensure sustainability of the project interventions is through avoiding giving allowances to community members during monitoring visits and community dialogue sessions. This will help to create genuine ownership of the results of the project, leading to future sustainability in the event the project ceases its support.

Exploring more sustainable sources of water at the schools is more sustainable than relying on billed water. Schools may not always be in position to raise the required sums for meeting the bills. Boreholes are seen to be an ultimate option, owing to the very high water table at the Taveta Sub County for example, which could significantly reduce the cost of drilling.

APHIA PLUS programme relied only on the Health Clubs to promote WASH in schools but ignored community dialogue. The project should integrate community dialogue for increased influence.

Parents and the community members at Taveta rated the success of the WASH in school's interventions at **4 out of 4** but needs to be improved further.

Table 12 : Assessment of Further Project Needs

This table presents the needs flagged by the various respondents in the respective Counties	
<p><u>Longo Primary</u></p> <ul style="list-style-type: none"> ➤ Support inter-school's competitions on hygiene, hand washing and toilets cleaning days ➤ Supply shoes to the neediest cases to protect them from contamination from visiting toilets bare foot ➤ Provide soap at the hand washing points ➤ Encourage the parents to financially support the project ➤ Supply blooms and other toilet washing equipment ➤ Supply water storage tanks ➤ More trainings ➤ Supply dust bins to the school ➤ Rehabilitate broken taps 	<p><u>Rekeke Primary</u></p> <ul style="list-style-type: none"> ➤ Supplement supply of the sanitary pads ➤ Further trainings on personal and environmental hygiene ➤ Further trainings on menstrual management ➤ Support participation in the world hand washing day ➤ Sustainable water source & installation of water harvesting infrastructure and increase storage

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the findings of the impact assessment, the Consultant draws the following conclusions.

- 1) The project has significantly achieved the goal for which it was intended. All the project stakeholders felt that a lot of changes in practice and behavior was attributable to the improved WASH in schools. Key indexes influenced by the project, and as supported by the available data pointed directly to improved enrollment, retention, completion and performance rates in the two schools. The schools have produced outstanding performance for example in 2017 KCPE results in which Rekeke produced the best student (girl) in the Sub County with 330 marks while Longo primary produced the best candidate in the County with 420 marks (boy) in 2017, up from 390 and 378 in 2016 and 2015 respectively. These changes are attributed to healthier children who are able to attend school without disruptions by common WASH related illnesses.
- 2) The project has had a significant change on the girl child. All the KII respondents, parents through FGDs and HHIs and girls themselves confirmed that fortunes have changed positively for them with the trainings in menstrual management. They said previously, girls missed school for at least 5 days every month when they were on menses. Today, they know how to deal with the period and with the supply of sanitary pads, they can now comfortably stay on in school. This has influenced their performance significantly. This view is contrasted by the views from the Control Group schools which are experiencing high WASH challenges due to lack of toilets let alone girl friendly toilets. In the Control Schools, girls stay at home during menses because the highly competitive and limited toilets do not give them the privacy that they require and this erodes their dignity. Consequently, girl's dropout rate is high and their performance is dismal.
- 3) Any acquired positive behavior is only sustained through attitude change. Findings confirmed that the project has had significant influence on the attitude and practice of the learners, their parents, teachers and communities interacting with the project. Learners proactively observe personal, environmental and dental hygiene and even encourage their parents to do so as well. This is contrasted by the Control schools in which, due to limited WASH facilities, most children do not bother to wash their hands after the toilet for example and open defecation is still a norm with dire consequences to their health, retention at school and their performance.
- 4) Findings confirmed that the project has not only impacted the health and education index of the target beneficiary but also the economic well being. Following the reduced level of common WASH related illnesses, the burden of health on the parents has significantly reduced. Parents now have more money to put into other gainful engagements including improved diet of their children.
- 5) The success of the WASH interventions has significantly been influenced by the linkage between what's happening at the schools and at the community level. Awareness creation also targeting the communities and parents specifically has helped to sustain the practice, behavior and change in attitude among the learners. Parents reinforce the practice of personal, dental and environmental hygiene when children are back at home. This has enabled them to become

WASH crusaders at home. Furthermore, they are the first stage at which the young non school going children get to learn about personal and environmental hygiene before they join school. In several instances, learners were also described as the WASH ambassadors at home. This interlinkage enabled to sustain the results of the project.

- 6) The integrated model applied by the project is commendable. The Public Health representative in Taveta further confirmed this observing that by involving the school population, the community and the relevant Government Line Ministries, this project has been able to scale up its reach and the results. This model should be scaled up in other areas to increase the project scope. This was contrasted with the APHIA Plus model that only targeted the Community Volunteers and left out the schools and the community.

5.2 RECOMMENDATIONS

From the foregoing analysis, the following recommendations have been made for the next project period.

- 1) The project should assist Rekeke school to have sustainable supply of water. It could explore possibility of drilling bore holes and construct storage tanks. The alternative is to install water harvesting infrastructure coupled with adequate water storage tank. This will ensure the school does not lack water from disconnections by the County Water Department for non payment of high water bills, as is the case with many neighboring schools. In addition to providing water to improve personal and environmental hygiene at the school, the school could use part of the water to do albeit of farming for income generation, proceeds that could go into the maintenance of the bore holes.
- 2) The National Government used to support schools to participate in the International Hand washing Day. This has since stopped after the function was devolved to the County Government. These events used to create a great platform for community sensitization on proper hygiene and other matters concerning health and well being of their children and the environment. MOE specifically says that this was a single event that used to nurture the value of “sharing” among children, as they shared their soap with those without to wash their hands. The project should try and invest in these events to ensure the momentum created, and the gains accrued are not lost.
- 3) In Taveta Sub County, Maho Ward, which is the largest in the sub county with 18 villages has not been reached with WASH interventions. The Public Health recommends the project to include at least one (1) school and the community at Maho in the next phase as a pilot.
- 4) The strategy that MnU used that involved Integrated Approach working with the schools, the community and the local leaders jointly has been lauded as the best compared to those unilateral models used by APHIA PLUS and the Kenya Red cross, and should thus be maintained and replicated elsewhere. APHIA PLUS relied only on the Health Clubs to promote WASH in schools but ignored community dialogue. The project should integrate community dialogue for increased influence.

- 5) Unlike at Longo school where the recommended toilet: learner ration exceeds the WHO Standards; toilets at Rekeke primary are barely enough. Based on the WHO toilet:learner ration, there is a deficit of 04 girl's toilets and 04 boys toilets computed against the school population of 268 girls and 276 boys. (**Standards:** WHO (1:30 Boys and 1:25 Girls).
- 6) Water Storage Tanks have also been significantly highlighted as a key challenge in the school's water management and storage especially at Rekeke. At the school, three tanks exist with one designated for the pre-primary and two for the primary level. Addition 02 tanks have been recommended to improve water storage at the school.
- 7) The project should support hardware infrastructure in the schools including toilets, bathrooms, water harvesting infrastructure, storage tanks etc. Learners also recommended support with installation of tip taps for hand washing.
- 8) The project should either lobby the County Government for sustained supply of sanitary pads, or supplement the same to continue keeping girls in school. Underwear for the big boys (class 7&8) was also recommended at Rekeke.
- 9) More training in WASH in both locations to ensure the new comers are also sensitized. Awareness to also include open public awareness sessions to curb improper disposal of used baby diapers and other solid waste at Longo neighborhoods. Also to expand the project to reach out to those few communities that still practice open defecation as it has serious health and wellbeing implications on children and adults living in the affected communities.
- 10) The Public health, Longo/Mtongwe recommends that there is need to lobby the County Government to install a sewer system in Mombasa. This will ensure a safer waste disposal.
- 11) There is need to lobby the County Government to hand back waste collection and management to the Public Health to make it more effective. NEMA should be an advisor and not an implementer.
- 12) Expand to other schools and involve Public health more actively especially at the planning stage and give them (PH) tasks to follow up on to enhance the impacts of the project.
- 13) From the programme team point of view, the next phase should focus on further training to bridge the knowledge gap; ensure sustainable water supply in the schools through installation of water harvesting infrastructure and storage tanks and focus more on the most deserving areas especially the slum and rural areas. The project should also enhance the focus on girl's menstrual management training but also to include older girls in lower classes; extend campaigns against open defecation to the communities and engage communities more on matters of sanitation and especially on proper waste disposal.

ANNEXES

ANNEX 1: TAITA TAVETA RESPONDENTS

ANNEX 2: MOMBASA COUNTY RESPONDENTS

ANNEX 3: TERMS OF REFERENCE

ANNEX 4: DATA COLLECTION TOOLS