

KUJENGA MAISHA EAST AFRICA-KUMEA

2021

Report for Katani Secondary School Sanitation Improvements & ICT support for Church Ministers



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KUJENGA MAISHA

AFRICA-KUMEA

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TABLE OF CONTENT

ITEM	PG
1.0 Executive Summary.....	1
2.0 Need for School Sanitation Improvements.....	3
3.0 School Health Promotion.....	3-4
4.0 Sanitation Demand for Katani Secondary School.....	4
5.0 Key design features & aspects for VIP Latrines.....	4-5
6.0 Construction of School Ventilated Improved Pit latrines.....	5-6
7.0 Community participation for Construction of VIP latrines.....	6
8.0 ICT Support for Church Ministers.....	7
Annex 1: Photos for construction and development of School VIP Latrines	

1.0 EXECUTIVE SUMMARY

The Katani Secondary school sanitation improvement project benefited from Harold Eckhardt funding due to the poor and inadequate sanitation situation in the school. The need to improve sanitation was based on the increased school population due to the collapse of several private schools in the locality due to the COVID -19 pandemic lockdown. The increased enrollment had pressure on existing sanitation facilities which could not sustain the demand. The school has a population of 442 students (153 boys & 289 girls) and has 12 no. latrines (4 no. for boys & 8 no. for girls) against a requirement of 18 no. latrines (6 no. for boys and 12 no. for girls). Therefore, the school has a deficit or demand of 6 no. latrines (2 no. for boys & 4 no. girls). The construction of 8 no. latrines and the urinal for boys will alleviate the school sanitation burden and hence improve access to hygiene and sanitation. Messages depicting the need for effective hand washing to improve hygiene and sanitation situation and practices in the school. School sanitation is important aspect in attaining improved health through access to adequate sanitation and improved hygiene. Progress in Education can be addressed effectively if schools can have adequate facilities for improved sanitation, hygiene and access to safe water. Girl child education is achieved effectively when they have access to improved sanitation. The following are key objectives in addressing improved sanitation in schools;

- a) Disease prevention and control-90% of diarrhea disease are caused by inadequate sanitation. With improved access to sanitation diarrheal disease will be reduced and controlled.
- b) Access to improved hygiene-Hygiene and sanitation are related therefore access to improved sanitation can easily be reinforced by adaptation of positive hygiene behaviors i.e. handwashing after using latrines
- c) Improved environment-Access to improved sanitation provides incentives for improved environment i.e. control of waste disposal and reduced open defecation
- d) Improved education performance for school students-With improved facilities the school students are always concentrating on education improvements and performance and not dodged by diseases which could affect their learning performance
- e) Minimize medical expenses- Individual households also pay large of money for the treatment of sanitation related diseases especially if their school going students are infected

Therefore, the school sanitation project was initiated at Katani Secondary school in Machakos County was meant to address the poor and wanting sanitation situation in the school that has bearing on inadequate hygiene and school drop outs especially for Girl child. Construction of latrines in school has addressed the sanitation demand and gap realized with view creating improved learning through access to improved sanitation.

2.0 THE NEED FOR SANITATION IMPROVEMENT IN SCHOOLS

2.1 Poor Performance in Education

- i. 2.7% of all students' time is lost to sickness from sanitation related illness.
- ii. Lack of segregated latrine facilities for girls is a major cause of drop out and a constraint preventing girls from full participation in education.

2.2 Environmental Costs

- i. Poor sanitation leads to environmental degradation and the pollution of water sources.
- ii. Degradation of the environmental by indiscriminate disposal of solid and liquid wastes.
- iii. Contamination of the dams and rivers by untreated human waste.

3.0 SCHOOL HEALTH PROMOTION

3.1 Rationale for school hygiene and sanitation

- a) **The aim of school sanitation and hygiene** is to promote good sanitation and hygiene conditions and practices in school with the aim of reducing girl child dropout rates, improving academic performance and preventing water and sanitation –related diseases
- b) **Schools will be a major focal point for sanitation promotion.** Students can be powerful change agents within their homes through their knowledge and use of sanitation and hygiene practices learned at school.
- c) **Ensure that every school has adequate sanitation facilities** i.e. latrines, safe drinking water, hand washing facilities. Sub –county authorities will plan and budget for school sanitation and ensure that all new schools have latrines before they are certified.
- d) **Involve the community in planning and developing school sanitation facilities.** The PTA or School management committee should work with water and sanitation committee to organize community input to the construction of school latrines and hand washing facilities. Get parents to contribute finances or labour but these should not be made obligatory.
- e) **Inspect latrines as a standard part of school inspection.** If the latrines are not, in satisfactory condition, give the school a deadline to improve these facilities –if there is no improvement by the given date, the school should be closed.
- f) **Make sanitation and hygiene more practical.** Teach sanitation not only as a school subject, but also as new habits for daily living, form school health clubs and introduce practical activities such as how to make simple hand washing facilities and mosquito traps. Encourage students to use these new habits (e.g. washing hands after using the latrines) both school and at home, involve all students in cleaning school latrines on a Rota basis-and avoid using this activity as a form of punishment. Conduct daily inspection parades, including the inspection of students and the school latrines, encourage students to transfer the skills to their own home.

- g) **Build the interest and commitment of school staff.** Provide training for all teachers and head teachers on sanitation and hygiene. encourage teachers to be role models in their own behaviour, to teach students how to use sanitation facilities correctly and to promote sanitation and hygiene in all school activities.

4.0 SANITATION DEMAND FOR KATANI SECONDARY SCHOOL

The school has the following sanitation need and demand based on the public health assessment and guidelines as per the public health act in the Country. The shows the demand for sanitation improvements in the target school.

Students	Population	No. of required sanitation facilities	No. of existing sanitation facilities	No. of sanitation facilities in demand
Boys	153	6	4	2
Girls	289	12	8	4
Totals	442	18	12	6

Based on the above projections the school has inadequate sanitation facilities for both boys and girls.

The school requires additional 2no. latrines for Boys and 4no. latrines for Girls. If the school does not meet the basic demand for sanitation facilities it will be closed down as per the public health act. Therefore, supporting the school to have sanitation facilities will improve the situation and alleviate closure of the school due to inadequate sanitation facilities.

5.0 KEY DESIGN FEATURES AND ASPECTS OF THE VENTILATED IMPROVED PIT LATRINE (VIP)

5.1 Design Overview

The VIP is seen as an improvement over the Single Pit Latrine because continuous airflow through the ventilation pipe prevents odours and acts as a trap for flies as they escape towards the light. When correctly designed, built, used and maintained, Single VIPs can be completely odour-free. Flies that hatch in the pit are attracted to the light at the top of the ventilation pipe. When they fly towards the light and try to escape, they are trapped by the fly-screen and eventually die. The ventilation also allows odours to escape and minimizes the attraction for flies.

5.2 Operation and Maintenance

General operation and maintenance (O & M) tasks include regular cleaning, ensuring the availability of water, hygiene items, soap and dry cleansing materials, conducting minor repairs and monitoring pit fill levels. Dead flies, dust and other debris should be removed from the fly screen to ensure good air flow. As pits are often misused for solid waste disposal, which can complicate pit emptying, awareness raising measures **should** be a part of installation program. VIPs for general public use may have a sludge build-up rate too fast for absorption into the soil and will thus require regular emptying. If regular desludging is needed the accessibility for desludging vehicles must be considered.

5.3 Health and Safety

If used and managed well, a Single VIP can provide a clean, comfortable, and acceptable toilet. Single VIPs need to be equipped with Handwashing Facilities. They need to be equipped with Handwashing Facilities and proper handwashing with soap after toilet use needs to be addressed as part of hygiene promotion activities. As with all pit-based groundwater contamination can be an issue and soil properties such as the permeability of the soil and groundwater level should be properly assessed to limit exposure of water sources to microbial contamination. The Sphere minimum standards on excreta management should be consulted for further guidance. Emptying of the pit **should** be carried out in such a way as to minimize the risk of disease transmission including personal protective equipment and hygiene promotion activities. If the latrine is for communal use additional illumination at night, security guards for protection and accessibility for all users is required.

5.4 Costs

A pit latrine with slab is a low-cost technology, as minimal materials and minimal skills for constructions are needed. Costs will depend on local material prices. The costs of emptying and transporting pit latrine sludge or covering the pit and constructing a new pit also need to be considered. When constructing a new pit, the slab of the previous pit can be reused, if still in usable condition.

5.5 Social Considerations

The design of Single Pit Latrines should be discussed with the community beforehand. It should reflect local user preferences (sitter vs. squatter, anal cleansing practices, direction, positioning, screens etc.) and should account for the accessibility and safety of all users, including men, women, children, elderly and disabled people. The potential handing over to beneficiaries and the roles and responsibilities for O & M need to be agreed upon early on and closely linked to respective hygiene promotion activities to ensure appropriate use and O & M of the facilities.

5.6 Strengths and Weaknesses

- a) Can be built and repaired with locally available materials
- b) Low (but variable) capital costs depending on materials and pit depth
- c) Small land area required
- d) Flies and odours are normally noticeable
- e) Low pathogen reduction with possible contamination of groundwater
- f) Costs to empty may be significant compared to capital costs
- g) Sludge requires secondary treatment and/or appropriate discharge
- h) The latrine slabs can be re-used for another latrine

6.0 CONSTRUCTION OF SCHOOL VENTILATED IMPROVED PITLATRINES

KUMEA adapted the VIP Latrines technology for sanitation development and improvement for the school. The VIP latrine design, with its fly control component and lack of odour, is seen as appropriate for facilities that are exposed to heavy use, such as schools. They are designed to be safe for the user and are built to last for a long time (at least 3 -5 years.) They have a superstructure that is slightly offset from the pit and a tall, vertical vent pipe with fly screen that is fitted outside of the latrine superstructure.

The main advantages of well maintained Ventilated Improved Pit Latrines (VIP) are as follows:

- a) Low annual cost of maintenance
- b) Easy construction and maintenance.
- c) All types' anal cleansing materials may be used.
- d) Absence of odours and minimal fly and mosquito nuisance.
- e) Minimal water requirements.
- f) Low level of municipal involvement.
- g) Minimal risks to health

KUMEA constructed 8no. door VIP type of latrines (4no.for Boys and another 4no. door VIP latrines for girls) to address the sanitation demand and gap in the school. The project also constructed urinal facility for the boys to reduce the practice of urinating on the fences and around the latrine walls.

7.0 COMMUNITY PARTICIPATION FOR DEVELOPMENT & CONSTRUCTION OF THE LATRINES

As part of project strategy to enhance effective management and ownership of the project. The school participated in some project activities to enhance partnership and develop capacity for operation and maintenance of the facilities. The school contributed the following materials

1. Building sand -7tons
2. Digging of the superstructure for building foundation of the latrines
3. Provision of water during construction
4. Provision of some walling materials i.e. blocks
5. Provision of reinforcement bars

Due to the participation of the school the project was able to construct URINALS for the boys which was not in the initial plan to ensure the school has adequate urinals for the boys

8.0 ICT SUPPORT FOR CHURCH MINISTERS

Part of the funding will be used to fund purchase of mobile phones to enhance communication of the Apostles in the region hence provide adequate support in the growth of the church ministry. The phones were purchased for 50no. Apostles in the Region-East Africa. The list for the beneficiaries has been attached to the report. The following are the beneficiaries of the phone gadgets

NAME	COUNTRY	NO. OF PHONES RECEIVED
1. AP Jonathan Mutua	Kenya	1
2. AP Peter G. M'Imaria	Kenya	1
3. AP Enos Likoko (Board)	Kenya	1
4. AP Francis Katana	Kenya	1
5. AP Joseph Waingare	Kenya	1
6. AP Chrispin Kinyuah (Board)	Kenya	1
7. AP Henry Muyera	Kenya	1
8. AP James Ongae	Kenya	1
9. AP Jacob Nyamai (Board)	Kenya	1
10. AP Peter Mutisya	Kenya	1
11. AP Bernard Ochieng (Board)	Kenya	1
12. AP James Mutinda	Kenya	1
13. AP David Mwaniki	Kenya	1
14. AP Nicholas Lorua	Kenya	1
15. AP John Sire	Kenya	1
16. AP John Ngaga	Kenya	1
17. AP John Wesonga	Kenya	1
18. AP (IR) Samson Ogutu	Kenya	1
19. AP (IR) Daniel Njuguna	Kenya	1
20. AP (IR) Patrick Janga	Kenya	1
21. AP (IR) Patrick Mdanje	Kenya	1
22. AP (IR) Hunney Anyiko	Kenya	1
23. AP (IR) John Mbiti	Kenya	1
24. AP (IR) Peter Okubasu	Kenya	1
25. AP (IR) Zacharia Gathondo	Kenya	1
26. AP (IR) Daniel Okeno	Kenya	1
27. AP (IR) Francis Kingura	Kenya	1
28. AP Zachary Deuly (Board)	Tanzania	1
29. AP Sebastian Maneno (Board)	Tanzania	1
30. AP George Chitemo	Tanzania	1
31. AP Kennedy Kabome	Tanzania	1
32. AP Joseph Celestine	Tanzania	1
33. AP Enoch M. Ntibingwe	Tanzania	1
34. AP Leonard Malila	Tanzania	1
35. AP Pheston Kabuje (Board)	Tanzania	1
36. AP Steven Nhende	Tanzania	1
37. AP Anyemike Igonda	Tanzania	1
38. AP Emanuel Machecho	Tanzania	1
39. AP Watson Kalyembe	Tanzania	1
40. AP Hamisi Meleine	Tanzania	1
41. AP (IR) Wilson Mtiga	Tanzania	1
42. AP (IR) Japhaet Runyoro	Tanzania	1
43. AP (IR) Vincent Wofile	Tanzania	1
44. AP Francis Mwesigwa	Uganda	1
45. AP Richard Kavuma	Uganda	1
46. AP James Kimera	Uganda	1
47. AP Pius Bitayi	Uganda	1
48. AP Yohonan Byoona	Uganda	1
49. AP (IR) Francis Webisa	Uganda	1
50. AP Morris Ukuni	South Sudan	1
TOTALS		50No.

ANNEX 1: PHOTOS OF PROJECT ACTIVITIES

PHOTOS OF VENTILATED IMPROVED PIT LATRINES (VIP) UNDER CONSTRUCTION & COMPLETED AT KATANI SECONDARY SCHOOL



1. Excavation of the pit latrines



2. Construction of the foundation walls & ring beams for the Girls latrines



3. Construction of the foundation walls & ring beam for the boys' latrines



4. Girls latrines ready for slab construction



5. KUMEA Staff inspecting construction works



6. Construction of Urinals for the boys

SCHOOL VIP LATRINES FOR BOYS



7. FRONT VIEW OF THE BOYS VIP LATRINES WITH HYGIENE & SANITATION MESSAGES



8. SIDE VIEW OF THE BOYS VIP LATRINES



9. SIDEVIEW OF THE BOYS VIP LATRINES



10. URINAL FOR THE BOYS VIP LATRINES

SCHOOL VIP LATRINES FOR GIRLS



11. FRONTVIEW OF GIRLS VIP LATRINES WITH HYGIENE & SANITATION MESSAGES



12. SIDEVIEW OF GIRLS VIP LATRINES



13. REAR VIEW OF GIRLS VIP LATRINE WITH HYGIENE & SANITATION MESSAGES



14. ACCESS VIEW OF THE GIRLS VIP LATRINES