

Activity Report: Proper School Solid Waste Handling for Complete Sanitation, Hygiene and Climatic Change Control

PURPOSE

Waste management has continuously been a challenge in our society and schools are no exception and yet we can never separate humans from waste generation because naturally by the activities of humans such as production and consumption, waste will always be generated. Schools like any other organization need to consider cost-effective and environmentally-sound waste management. The best way therefore to make the environment safe both for the present and future generations is by devising ways of managing the waste generated into the environment so that it is safe for humans to thrive in. This would make a good contribution towards SDG 3 (Ensure healthy lives and promote well-being for all ages).

The purpose for the concentration around the schools is because CCAYEF has a component of making schools WASH friendly but however, its concentration is on latrine construction, Menstrual Hygiene Management, Provision of hand washing facilities and software on sanitation. However, the component of waste management is not being handled which was an idea behind this capstone project to close the gap which was successfully done in one School (Kangulumira CU Primary School) with the hope of replicating the training to the other Schools next term.

OBJECTIVES

1. Train members of the School Health Club and their patrons on proper school waste handling so that they can be good agents to positive behaviour change in their schools by delivering a similar training to the rest of the school and refreshers during health parades.
2. Share messages and visual materials to be incorporated on the school talking compound as reminders to learners and staff to trigger behaviour change on proper school waste management.
3. Deliver a general waste handling training. That is; waste sorting at points of generation and use of organic waste in School gardens.

RATIONALE

This capstone project was inspired by my passion for the environment and career aspirations as an environmental sustainability advocate and the fact that waste will always be generated by

nature of human activities, it is therefore important that cost-effective methods of management are employed. For the case of schools, waste segregation at disposal points into bio-degradable and non-biodegradable waste was employed as a practical way to manage school waste for this will allow for collection of organic waste that will be used in school gardens as manure and then the inorganic recyclable waste can be collected for recycling by the authorities. This would reduce on the amount of waste collected for burning in the school and thus minimizing pollution of the air by smoke coming from burning waste. This training to the learners is very important because after home, schools constitute the next most important place of learning where children spend most of their time indoors for study and outside for learning (Ana *et al.*, 2011) and thus the environment has to be kept clean and safe for them to study well. Improving sanitation by way of waste management represents one of the best options to really accelerate health, social, and economic development (Hendriksen *et al.*, 2012).

METHODOLOGY

Initially four schools within CCAYEF's areas of implementation were chosen basing on accessibility and reliability (that was Namulesa Muslim PS, Butiki PS, Musima PS and Kangulumira C/U PS) but due to limited time and other resources available to execute the project, the scope was further narrowed to one School (Kangulumira C/U PS) which was highly organized and could still mobilise the club members even after their examinations. Mobilization of the School was properly coordinated by the CCAYEF WIS officer together with the Senior woman Teacher who doubles as the School Health Club patron helped mobilise the club members for the training after their examinations.

The project was basically a participatory training of the School Health Club in proper School solid waste handling by segregation of waste into organic and inorganic waste at points of disposal. Below is how it was executed.

TARGET

The target group for this project was the School Health Clubs which are already organized and easily manageable and are expected to replicate the training to the rest of the school.

The Kangulumira PS Health Club comprise of 50 members from Primary 4 to Primary 6 that is to say; 31 girls and 19 boys. The club is managed and controlled by the club patron who also doubles as the SWT in collaboration with the SMT.

TOOLS USED

1. The learners were subjected to a pre-knowledge quiz on the subject and a post knowledge quiz after the training. The pre-knowledge quiz was to check their knowledge before the training and the post knowledge quiz was to check how much learning had taken place. The learning will continuously be checked with the transformation in their behaviour towards proper waste segregation and thus waste management within School with the hope of transferring the positive change to their homes as well.
2. Each of the learners were provided with a pen to write out their answers to the quiz since it was a period after examinations, and it was figured out that most of them would not have what to use.



Figure 1: SMT and SWT supervise the SHC Members during the pre-knowledge quiz

3. Visual materials like posters were developed with the guidance of the regional communications intern. Three different types were printed out and these included; an educational poster on importance of waste segregation, one poster with a general message of keeping the School compound clean and then finally two posters talking about what waste to drop in a particular waste bin (waste segregation at disposal points) as shown in annex 5 and 6.



Figure 2: SHC Members at Kangulumira C/U PS display some of the posters



Figure 3: One of the SHC members demonstrates proper waste segregation in the bins with the guidance of the posters



Figure 4: Learners answering the post-knowledge quiz after the training

Figure

4. The Schools were provided with two 25 litres bins for collecting waste at school. One for biodegradable waste and the other for non-biodegradable waste. This is to encourage the habit of waste segregation which makes it possible to recycle some of the waste within School for instance; composting or use of organic waste as manure in School gardens. Then the plastic waste can be collected from School by the plastic recyclers.



Figure 5: Waste segregation bins for non-biodegradable and biodegradable waste

A comparison results from the pre and pos-knowledge quiz was analyzed using Microsoft excel and there was a remarkable improvement in the scores of over 60% of the learners as illustrated in the graph below.

RESULTS AND DISCUSSION

5.1 Results from the pre and post knowledge quiz

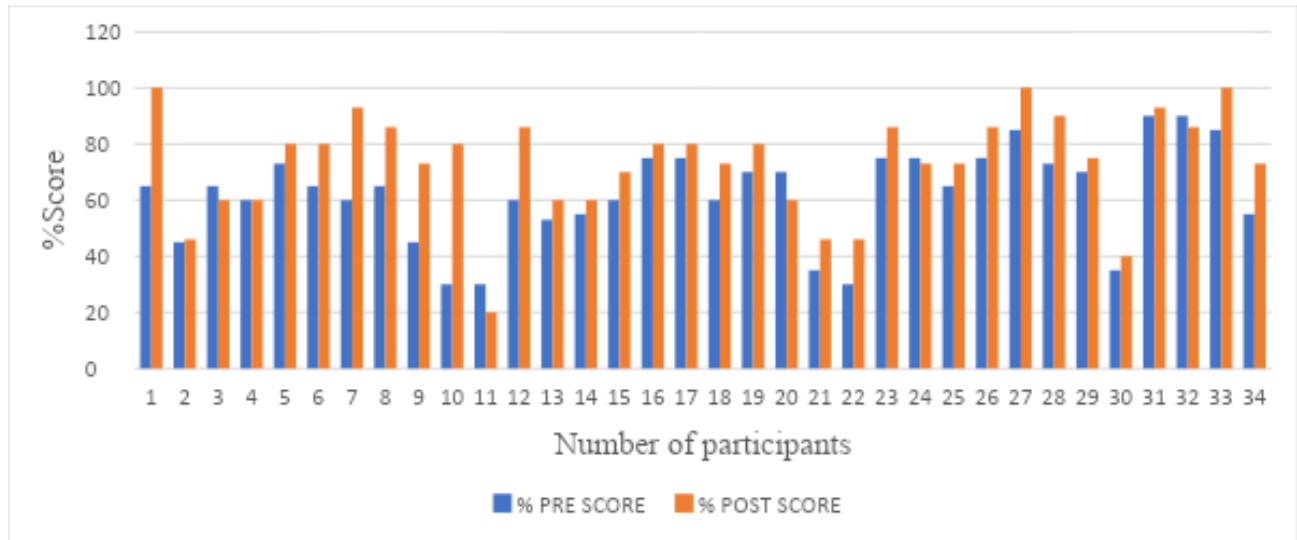


Figure 6: A bar chart showing percentage quiz score

From the bar chart above, the learners scored higher in the post knowledge quiz (on average 71%) than the pre knowledge quiz (on average 62%). This was an indicator that learning took place and that the learner’s knowledge on school solid waste handling was boosted.

The knowledge quiz tested the learners’ understanding of general waste, waste management practices among others. This was assessed before and after the school waste management training and there was a general improvement in the scores.

Methods of solid waste disposal used

The School had a rubbish pit a few meters away from the classroom block in which mixed waste is deposited and burnt. The practice of burning is a very common practice used by schools to manage their waste. This is because indiscriminate burning as a method to dispose of wastes. This is because of inadequate provision of solid waste management facilities (Boadi & Kuitunen, 2005) and therefore the people find indiscriminate burning an easier method to deal with wastes especially combustible wastes such as papers, polythene, plastics. The school had not yet also had a waste handling training and now that they have had one, they are expected to gradually adopt the waste segregation practice which will enable them easily collect organic waste for manure in the school gardens separated from the recyclable plastic and metal wastes that would be collected by the recycling authorities. The practice of waste segregation at points of disposal would reduce on the amount of waste burning in the school and overall keep the environment clean and pollution free since after home, schools constitute the next most important place of

learning where children spend most of their time indoors for study and outside for learning (Ana et al., 2011).

Challenges faced with School Solid Waste Management (SWM)

Most academic institutions generally take waste characterization/ segregation for granted (Renato, 2015). This therefore makes the whole solid waste management concept difficult for them thus the easiest method for them to use is indiscriminate burning of waste which is unhealthy to the environment because it leads to air pollution and it is also not a sustainable manner to manage school waste. Aside from these, the schools are also faced with a challenge of lack of waste bins, this prevents them from segregating waste and thus resort to indiscriminate burning.

Solutions to the challenges

Schools require sensitization and training just like one done in this capstone project to enlighten the learners about waste segregation as one of the sustainable measures to manage the waste. This would be a gradual process for them to adapt the practice. Starting the process of change from schools would be very beneficial to the communities in a long run since schools by their very nature have the capacity to accommodate innovative SWM practices which would trickle to other communities after being properly institutionalized. These institutions are usually held in high esteem and are often seen by the communities as model (Renato, 2015).

CONCLUSION

People are generally not mindful of waste segregation at points of disposal and yet this is one of the important aspects when speaking about sustainable waste management. Most parts of the population are generally ignorant about the practice and its benefits but once they attain sensitization and behaviour change through continued reminders and support, waste segregation is a sustainable way to manage solid waste at schools and even at home since it allows for the separation of biodegradable waste that can be used as manure in gardens from the recyclable inorganic waste that can be collected for recycling and reduce air pollution caused by indiscriminate burning of waste.

ANNEX

Annex 1: Pre-knowledge quiz

School Waste Management Pre-Knowledge Activity

Name: _____

Class: _____

1. Define the word “environment”.

2. Give three ways of conserving our environment

3. What is waste (rubbish)?

4. What dangers can waste (rubbish) cause to our environment?

5. In the list below, circle the waste management practices that are friendly to our environment

A. Composting

B. Burning waste

C. Using Kavera / polythene bags

D. Littering the school compound

E. Sorting waste

F. Recycling

G. Playing in the mud

5. Write the following items into the box where they belong: Items which decompose OR Items which do not decompose

Potato and cassava peelings
Vegetables
Metals

Plastic bottles
Fruit peelings

Kavera/ Polythene bags
Papers

Items which decompose	Items which do not decompose

Annex 2: Post-Knowledge quiz

School Waste Management Post Knowledge Activity.

Name: _____ Class: _____

1. Match the following terms with the most correct meanings.

Waste Burning	The breakdown of organic waste materials to form manure
Inorganic matter	Method of waste management that is dangerous to the environment
Organic matter	Waste materials that does not easily decompose
Composting	Waste materials that can decompose

2. What is waste segregation? _____

3. What is the importance of waste segregation?

4. Write the following items into the box where they belong: Items which decompose OR Items

Which do not decompose

Potato and cassava peelings

Vegetables

Plastic bottles

Fruit peelings

Kavera/ Polythene bags

Papers

Metals

Items which decompose	Items which do not decompose

5. What product do we get after composting of waste?

6. Name one use of compost manure

7. Name one use of a school dust bin

8. How can we keep our school environment clean?

Annex 3: Poster 1 on behavioural Change messages towards waste segregation



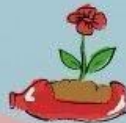
SAY NO TO MIXED WASTE FOR A CLEAN AND GREEN ENVIRONMENT

Waste Segregation: Why & How?



Organic waste
can be
composted.

Plastic, paper
and metal can be
reused and
sold to scrap dealers
for **recycling.**



The amount of waste
that goes to landfill site
is reduced
considerably.



Annex 4: Poster 2 for behavioural Change message towards a clean Environment



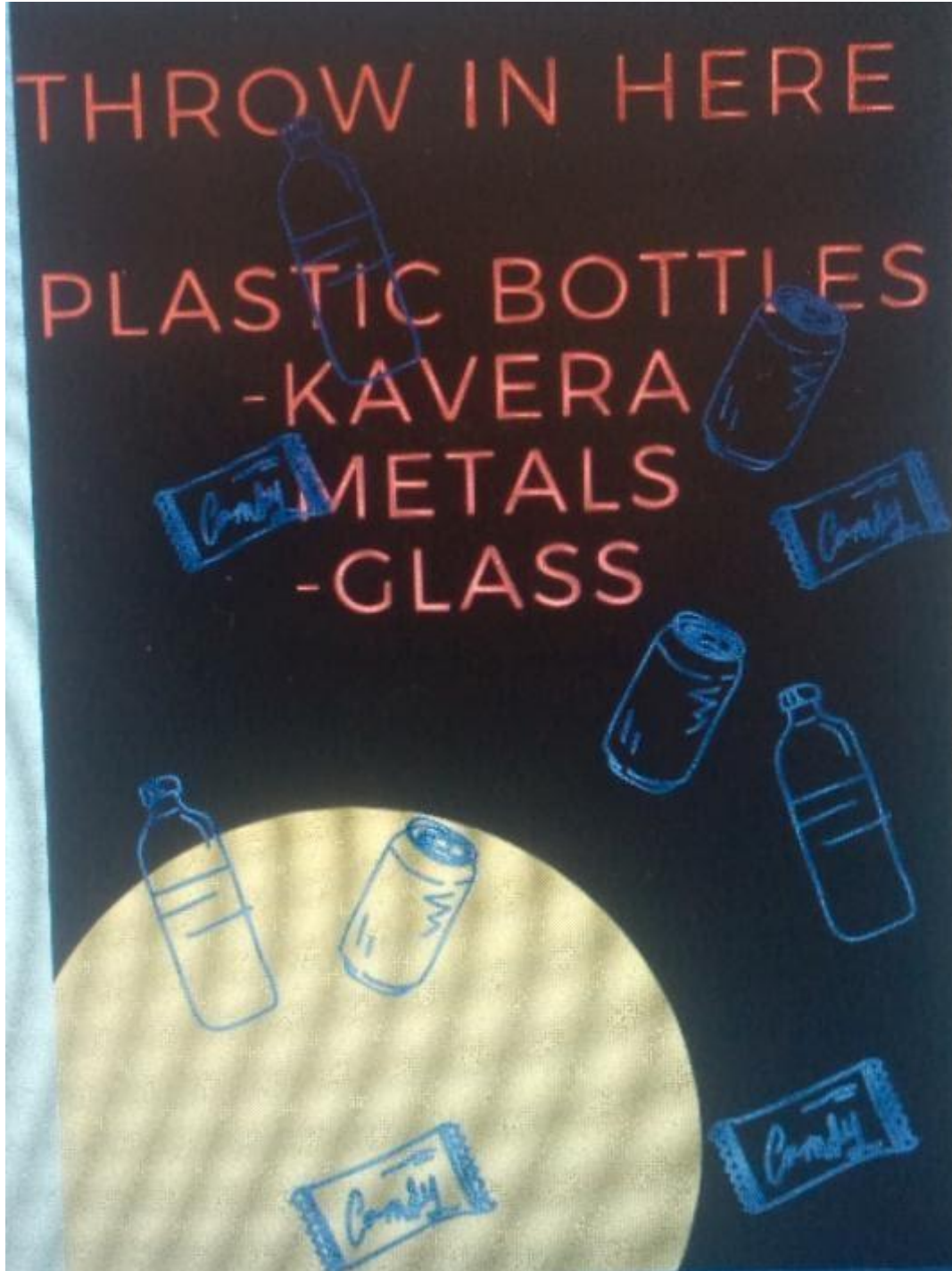
Annex 5: Poster 3 to guide proper disposal of organic waste



Throw in
this bin

- Leaves
- Papers
- Left over
food

Annex 6: Poster 4 to guide proper disposal of inorganic waste



Annex 7: A courtesy photo with the SHC and their two patrons after the training



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