CEPA COASTAL CLEAN UP CAMPAIGN 2018

REPORT OF CLEAN UP AND WASTE AUDIT CONDUCTED ON THE 8th OF DECEMBER 2018

POREBADA VILLAGE

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OVERVIEW

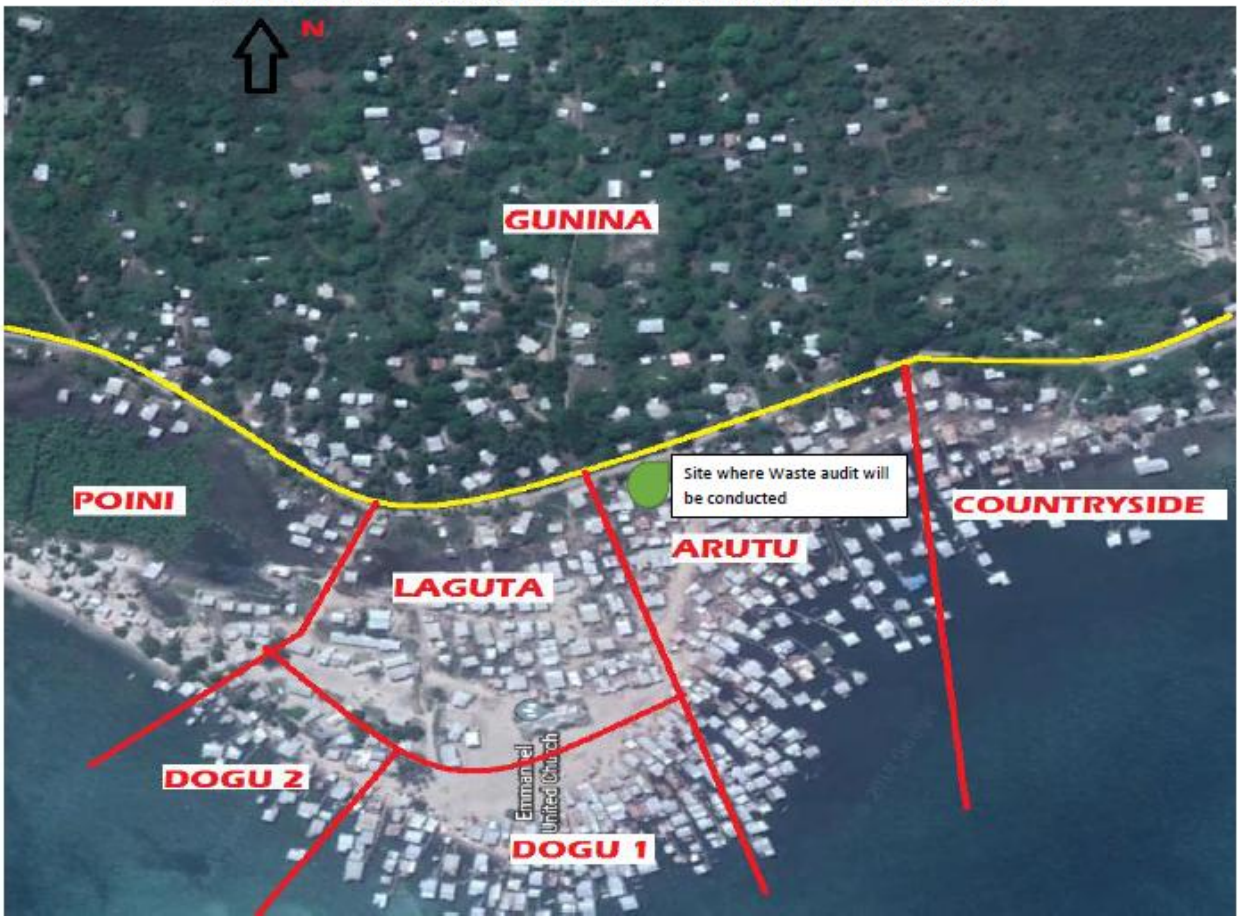
This report is a brief summary of the clean-up and waste audit that was conducted on Saturday, the 8th of December 2018, in the Porebada Village, as part of the CEPA Coastal Clean-up Campaign. The waste audit component was vital to obtain data to present to the manufacturers and importers of plastic bags, with the intent of imposing a complete ban of shopping plastic bags as of March 2019. Recommendations for future activities which may involve CEPA going into the community are also included in this brief report.

INTRODUCTION

Porebada is the largest village in the Hiri West LLG in the Central Province and is about 20kms from Port Moresby, and 9.25km from the Exxon Mobil PNG LNG Plant. The United Church plays an important role in the community with four to five separate congregations which are separated according to the different zones in the village.

There are 7 zones in the village, Country side, Arutu, Laguta, Poini, Dogu 1, Dogu 2 and Gunina. For the purpose of this activity, two key sites were identified and selected to carry out the waste audit and clean up. The main clean up activity took place in Laguta, which is the main centre of the village where the church is located. The waste audit was conducted in Arutu, which was identifed during the pre-awareness visits, as seriously polluted.

AERIAL MAP OF POREBADA VILLAGE INCLUDING ALL DIFFERENT ZONES



Pre awareness and site visits were made during the 13th-15th and the 20th-22nd of November respectively. This was to establish contact with the LLG Ward Councillor, and respective leaders in the community to enable awareness by the team to take place.

AIM

The aim of this activity was twofold;

1) The waste audit component was vital to obtain data to present to the manufacturers and importers of plastic bags, with the intent of imposing a complete ban of shopping plastic bags as of March 2019.

2) The aim of the general cleanup was to bring attention to the community regarding the serious waste management and plastic pollution problems that they face.

METHODOLOGY

Four categories were assigned for collection, and 5x 120L bags each were handed out for per Category. Collection of plastic was done according to the 40-minute set time limit, according to the 4 different categories; PET bottles, Plastic Shopping bags (PSBs), Single use plastics, and others. After the collection was done, all bags were weighed using a scale. The volume of each bag was estimated via visual observation. After the weights and volumes were noted, the bags were emptied, sorted, and the contents counted according to each category, and this data taken according to the data sheets given. A 20% sample of each category was set aside for counting.

RESULTS

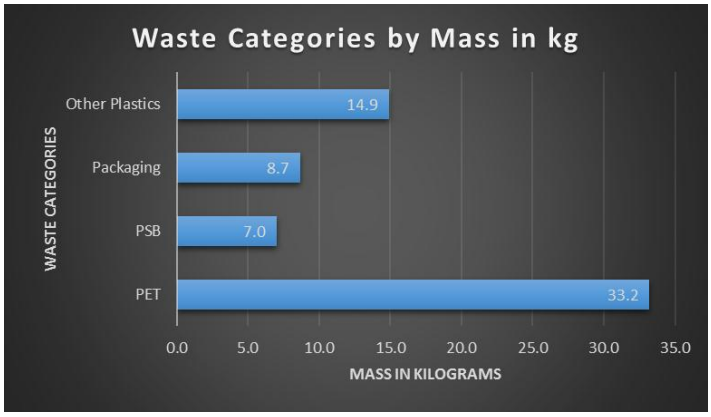
Table 1: Table showing the total weight and volume for each bag per category

Porebada Audit Station (Laguta) Collection Duration: 40 minutes; Participants 8								
Bag	Cat 1		Cat 2		Cat 3		Cat 4	
#	Mass (kg)	Volume(L)	Mass(kg)	Volume(L)	Mass	Volume	Mass	Volume
1	4.8	100.0	1.2	70.0	1.5	60.0	4.1	100.0
2	8.4	110.0	1.4	40.0	2.3	80.0	2.1	70.0
3	2.2	20.0	1.1	30.0	1.5	80.0	1.2	30.0
4	7	80.0	2.1	25.0	0.3	5.0	2.5	30.0
5	5	90.0	0.8	20.0	2.0	70.0	3.2	30.0
6	5.8	60.0	0.4	60.0	1.1	40.0	1.8	30.0
Total	33.2	460.0	7.0	245.0	8.7	335.0	14.9	290.0

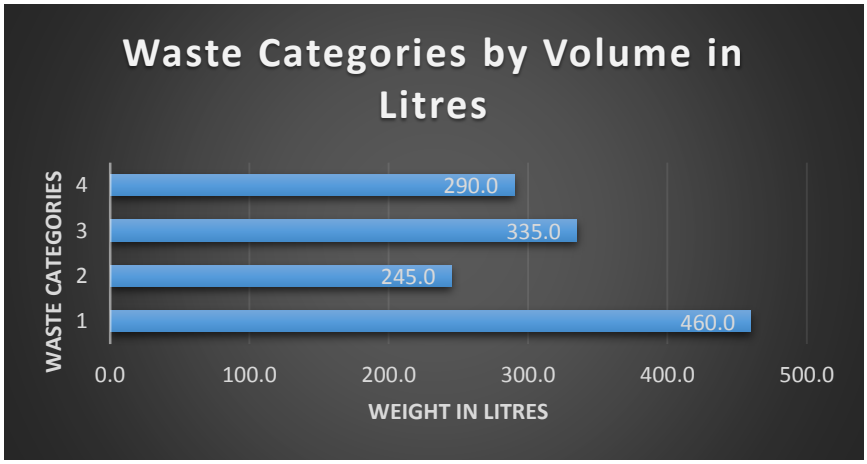
Table 2: Table showing the total mass and volume of waste collected

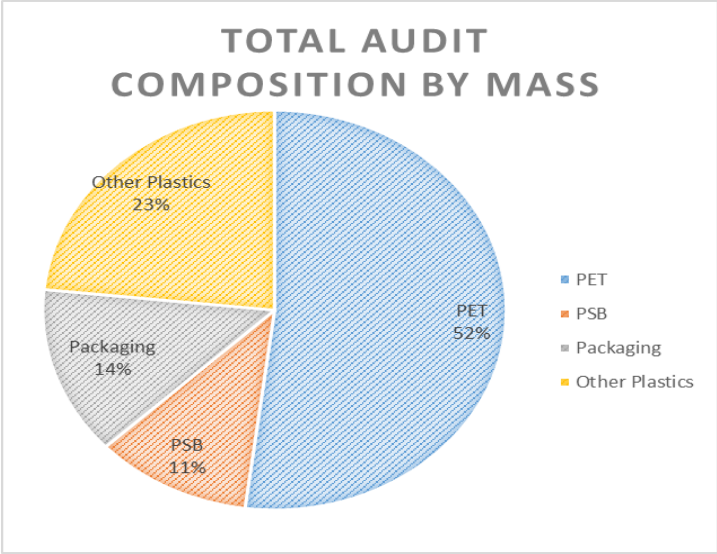
	Mass in Kilograms					Volume in Litres		
	Cat 1 PET	Cat 2 PSB	Cat 3 Packaging	Cat 4 Other Plastics	Cat 1 PET	Cat 2 PSB	Cat 3 Packaging	Cat 4 Other Plastics
	4.8	1.2	1.5	4.1	100.0	70.0	60.0	100.0
	8.4	1.4	2.3	2.1	110.0	40.0	80.0	70.0
	2.2	1.1	1.5	1.2	20.0	30.0	80.0	30.0
	7	2.1	0.3	2.5	80.0	25.0	5.0	30.0
	5	0.8	2.0	3.2	90.0	20.0	70.0	30.0
	5.8	0.4	1.1	1.8	60.0	60.0	40.0	30.0
Totals	**33.2**	**7.0**	**8.7**	**14.9**	**460.0**	**245.0**	**335.0**	**290.0**
Total mass of waste collected	**63.8**				**Total volume of waste collected:**		**1330.0**	

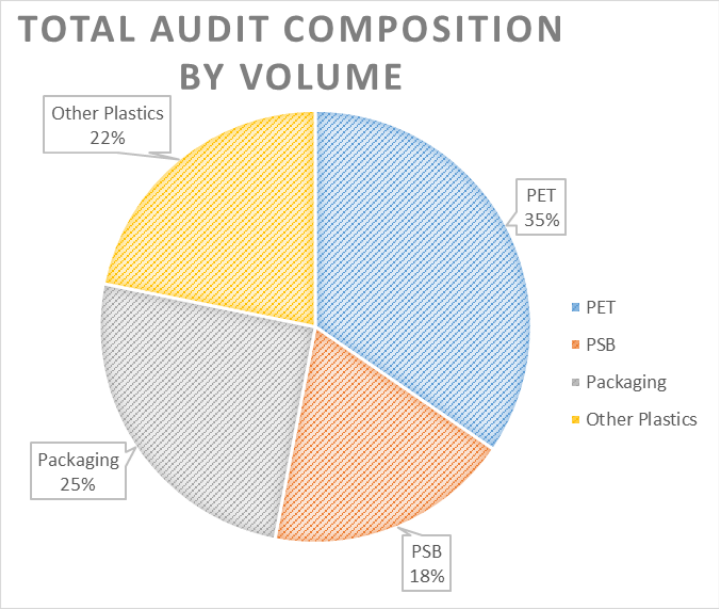
Graph 1: Graph showing waste percentage composition of waste collected according to Mass



Graph 2: Graph showing waste categories according to Volume







DISCUSSION

- There were only 8 auditors present. This greatly affected the amount of bags collected, as well as the sample size. Due to time limit, each auditor at least ensured to fill up a maximum of 2 out of the 5 bags allocated for each category. This ensured at least a 20% sample.

- **A total of 63.8kg of plastic was collected during the audit, which equated to 1330 L in total**. The general trends observed in the data are as follows; PET bottles make up the greatest composition of the audit, followed by other plastics, single use packaging and plastic shopping bags (PSBs). If this was a sample representing one zone in the village, this amount, extrapolated to the other 6 zones, would give a resultant 446kg of plastic estimated to be collected if audit stations were set up in each zone.

- Since each bag was 120L in volume, and 20 bags allocated for the exercise, the total desired volume was 2400L. However, due to the limitations stated above, only 55.4% of this was able to be utilized for the collection.

- There were discrepancies in the data audit sheets with respect to the counting and sorting according to manufacturers. Certain brands were not captured, and some brands were not specific enough. Also with respect to whole and partial pieces count, the tables had to be modified by the data collector in order to list the correct totals.

- For PET bottles, the greatest contributing manufacturers were found to be Coca Cola Amatil and Pacific Industries. For Single use plastics, Trukai products and Asian imported cup juice, such as the SANY brand was the highest contributor to the audit. For other packaging, Styrofoam food packs were observed to be the greatest contributor. PSBs were difficult to identify due to the partially disintegrated state and non- clarity of labels, however, the general trend observed during the sorting was that there was an abundance of counterfeit oxo biodegradable plastics as opposed to the biodegradable ones. The biodegradability of these PSBs were determined through visual observation. If they disintegrated when touched then they were noted as biodegradable.

RECOMMENDATIONS AND CONCLUSION

- Porebada village, being densely populated and lacking a designated communal rubbish disposal area, is extremely polluted and in great need of a localized waste management plan and system. However, this will depend on the Leadership of its Ward Councillor and Community Affairs representative. It was observed that current leadership at ward level is weak, resulting in lack of community participation during the clean-up and audit. The only form of leadership or organized system in the village is through the United Church congregation, in which the CEPA team had to utilize to disseminate information about the audit and plastic bag ban. Despite continuous reminders from the church to the community prior to the clean-up, only a few villagers participated. Time, logistics, and security were also limiting factors for the CEPA team in carrying out awareness. It is noted that, when going into densely populated communities, more one on one awareness is needed in the future.

- A basic household survey should be carried out in the community in future to determine how much plastic is consumed and purchased on average. Conducting waste audits are ideal for determining the amount of plastic carelessly discarded, however in future, it would be desirable to have data on consumer habits to compare against the quantity of plastic generated as household domestic waste.

- CEPA will need to begin discussions with Central Provincial Government regarding the ban and the effect it will have on the average villager's lifestyle. Majority are consumers of plastic and produce large amounts of plastic waste as observed during the audit.