# Littering Behaviour and Waste Management

Prepared by Amel Sa'eed Jirde

High-quality Research Support programme (HQRS)

September 2016

Piroska

## Acknowledgements

First of all I would like to thank Allah for giving me the strength, knowledge and health He provided us.

I would like to thank my family for giving me support, and the University of Bristol, OCVP and TS.

# Executive Summary

## Background

The Republic of Somaliland is situated in the Horn of Africa. Its boundaries are defined by the Gulf of Aden in the north, Somalia in the east, the Federal Republic of Ethiopia in the southwest and the Republic of Djibouti in the northwest. It has mountain ranges rising up to six and seven thousand feet in the centre of its land mass and in the east of the country respectively. The total area of the Republic of Somaliland is 137,600sqkms, and it has a coastline of 850kms long.

Annual average precipitation ranges from less than 100 mm on the coast to 500 mm inland, except for limited areas where it may reach 900 mm. Rain variability is very high. Hargeisa, the capital, for instance, with a long-term average of some 400 mm, has recorded variations from 209 mm to 810 mm per annum.

As Hargeisa is at relatively high altitude (1,334 meters above sea level), the average summer high is about 30°C, and the average summer low is about 17°C, with humidity of around 55%. Berbera, on the Somaliland Gulf of Aden coast, and Mogadishu have an average summer high of about 40°C and a low of 30°C. Borama's climate is similar to that of Hargeisa.

Hargeisa is the capital city of Somaliland. It has 8 districts and there a number of hospitals and schools but it doesn't have a proper waste management system i.e. recycling or sewage, which sometimes causes the most problem when rain falls. Hargeisa has four waste management companies Horseed, Keeps, Tabsan and Almis .

This research was conducted for a number of reasons:

- To know what problems litter can cause in the city, e.g. blocked drainage when rain falls.

- To understand the risks it can lead to when there is not enough dumpsters to throw litter into.

This study will focus on littering behaviour and how to manage it internally. The period of time over which this research will be conducted is May-September, 2016. The target geographical area is Hargeisa, specifically 26 June district, accessed through a survey of the population including communities and local government workers.

## Methodology

Research methodology is a collective term for the structured process of conducting research; or, the procedures followed to analyse and interpret the data gathered. Research methodology can be quantitative, qualitative or sometimes both (for example, measuring the number of times someone does something under certain conditions) and qualitative (for example, asking people how they feel about a certain situation). Research methodologies are used to test hypothesizes or theories. A research methodology consists of research design, sampling technique, data collection and data analysis

This study used qualitative method in order to get more feedback from the respondents. An interview guide was used. This is an instrument where mostly general questions are used to collect data mainly from key respondents (Amin, 2005). This instrument also contained open-ended questions as well as close-ended questions. The interview guide will be used for this study because some sections of the study population had more knowledge that could not be fully captured using a questionnaire and some of them didn't know how to write.

## Key Findings

- 53% of the communities in Hargeisa think that the individuals who are responsible for cleaning and collecting litter or waste are the government.
- There are a small number of waste collection companies and vehicles which collect waste.

## Key Recommendations

- To raise awareness within the population to stop litter
- To educate the community on proper hygiene and sanitation practices
- To provide dumpsters for the population
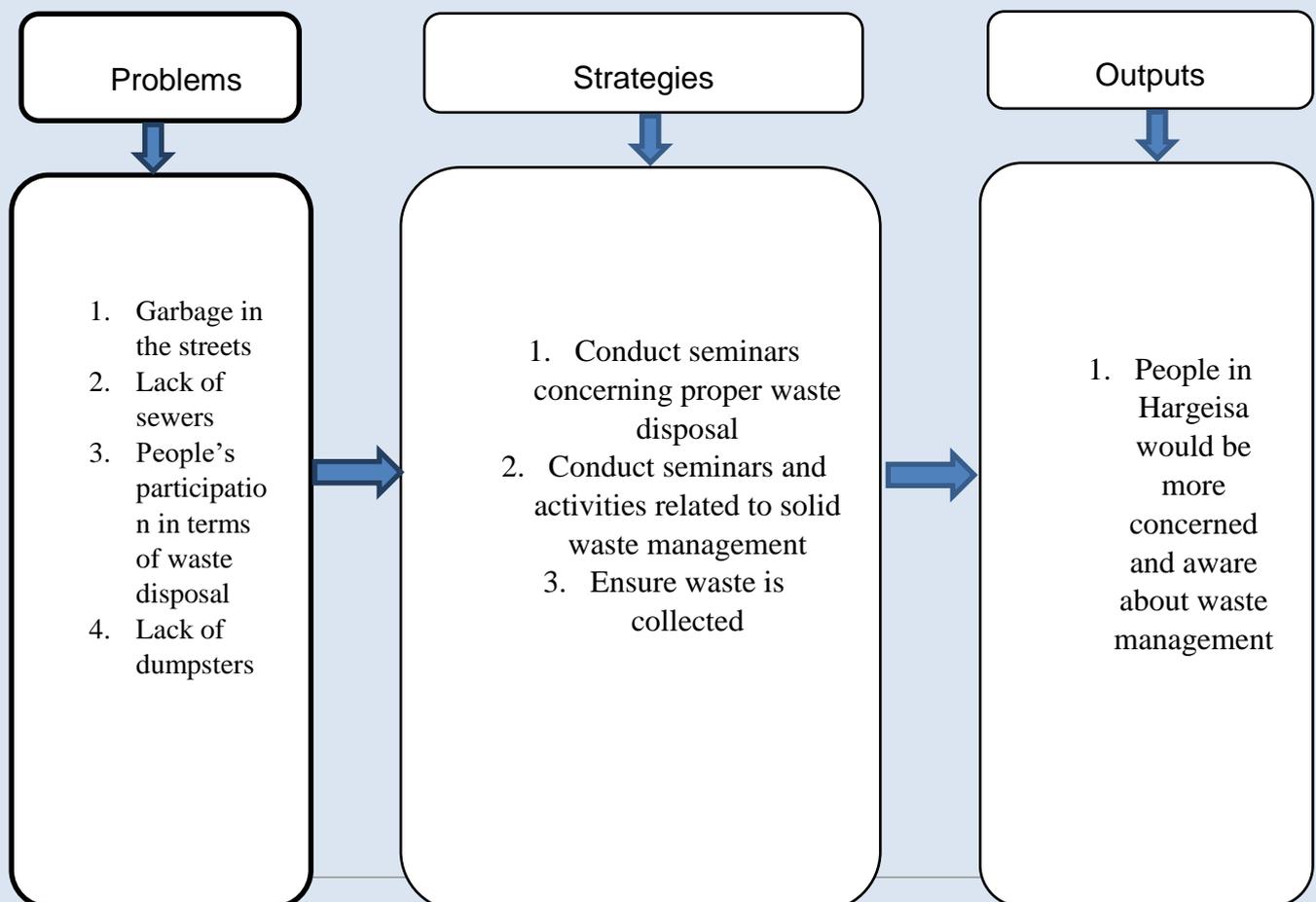
# 1 Introduction

## 1.1 Background

This research study was conducted to contribute to solving the problems litter causes or contributes to. Littering is one of the main problems in many countries and it doesn't seem to stop. This research also aims to cover: why do people litter? Who is responsible for it? Who has to pay for it? What are the challenges of a proper waste management system?

## 1.2 Objectives

The objectives of this research are to:

1. educate the community on proper hygiene and sanitation practices
2. to establish sustainable systems of proper waste management

## 1.3 Theoretical framework

| Problems | Strategies | Outputs |
|---|---|---|
| 1. Garbage in the streets<br>2. Lack of sewers<br>3. People's participation in terms of waste disposal<br>4. Lack of dumpsters | 1. Conduct seminars concerning proper waste disposal<br>2. Conduct seminars and activities related to solid waste management<br>3. Ensure waste is collected | 1. People in Hargeisa would be more concerned and aware about waste management |

# 2 Existing knowledge and how the research will add to it

## 2.1 What is Littering?

"Litter is nothing but a piece of waste or rubbish that has been disposed improperly, without consent and at wrong location. Littering simply means throwing away objects on the ground or leaving them lying on the ground instead of disposing of them in a garbage can, recycling bin or trash container. The waste that originates from houses, industries, and factories should be placed either in recycling bins or waste to energy plants, or at a site meant for disposing of garbage". (http://www.conserve-energy-future.com/various-littering-facts.php n.d.)

## 2.2 Why do people litter?

"Research has shown that the behavior trait of littering is complex and can be attributed to a variety of sources, including deliberate tossing of litter from vehicles, accidental litter from items blowing out of vehicles or from unsecured loads, and litter left behind by pedestrians". Mainly litter is due to laziness and carelessness (http://donttrashaz.com/highway-littering/ n.d.)

"One thing research has proven is that it is tough to label an individual as a "litterer." One may litter in certain situations, but not in another. Littering is not a consistent behavior. Individuals can be influenced by a number of factors, including a belief that an item is not litter (such as a cigarette butt or banana peel), laziness, perceived lack of consequences for their actions, seeing litter already in a given area, or a lack of trash receptacles. Most of people don't know the dangerous of litter and how it cause fire and other things" (http://donttrashaz.com/highway-littering/ n.d.)

Further research will add to this existing knowledge by identifying the challenges facing Hargeisa on proper waste management systems and how to find solutions.

# 3 Methodology

## 3.1 Research Questions

1. How does the population follow hygienic practices and proper sanitation of waste in Hargeisa?

2. What challenges might the government of Somaliland face in establishing a proper system of waste management in Hargeisa?

3. What could be the solutions or the strategies to stop people from littering?

## 3.2 Research Design

This study will use qualitative methods to answer the research questions. The following table summarises the methods used to answer each question:

**Table 1 Methods used to answer research questions**

| Research Question | Method Used to Answer Question |
|---|---|
| 1. How does the population follow hygienic practices and proper sanitation of waste in Hargeisa? | interviews |
| 2. What challenges might the government of Somaliland face in establishing a proper system of waste management in Hargeisa? | interviews |
| 3. What could be the solutions or the strategies to stop people from littering? | interviews |

## 3.3 Instruments

An interview guide was used. This is an instrument where mostly general questions are used to collect data mainly from key respondents (Amin, 2005). This instrument also contained open-ended questions as well as closed-ended questions. The interview guide will be used for this study because some sections of the study population have more knowledge that cannot be fully captured using a questionnaire. These shall be referred to in this study as key informants such as Service Providers, Local and International NGOs, Construction Companies and other business companies.

## 3.4 Sample

- The researcher used a random sample and the sample size was 14 interviewees, 3 local government workers and 11 from the communities who live in 26 June district.

## 3.5 Data Collection

- The data was collected face-to face mostly in Somali language interpreted later on. The researcher (Amel) collected the data due to the requirements of the University of Bristol, OCVP and TS certificate, using unstructured interviews

## 3.6 Data Analysis

- The data analysis of the interviews was conducted in Microsoft Excel and shows the answers in graphs or pie chart. The transcripts were translated into English and then entered into Excel

## 2.7 Ethical Considerations

- Ethical considerations are very important when conducting interviews, questionnaires, focus groups KIs etc. If the interviewee is not happy to be to be named the data collected should be confidential
- The researcher did not force respondents to give information. Instead he obtained formal consent through a request to gather information from the respondent.

- Participants were informed in advance that all information collected through interviews or questionnaires would be treated with outmost confidentiality and the findings will not be used for any other purpose other than that indicated in the study.

## 3.8 Limitations and further research

- Content scope: this study was assessing federalism for Somalia – internal and external challenges.
- Geographical scope: The study was conducted in Somaliland/Hargiesa.
- Time scope: The study was assessing the variables under study for the period 2016.
- Limitations of the Study: the researched faced challenges during data collection e.g. when requesting to gather information form the local government and the communities who thought their names would be mentioned.

# 4 Data Analysis, Presentation and Discussion of Findings According To Objectives

| Name of waste management companies | Number of vehicles collecting waste | Districts of companies are located |
|---|---|---|
| **Horseed waste management** | 12 | Mohamoud Haybe, Ahmed Dhagax, Mohamed Moge and 31May |
| **Almis waste managamenet** | 10 | 26 June |
| **Keeps waste management** | 6 | Koodbuur |
| **Tabsan waste management** | 5 | Gacan Libah and Macalin Haaruun |

Table 1-How many waste management companies are in Hargeisa?

## Prioritization of litter prevention by the government
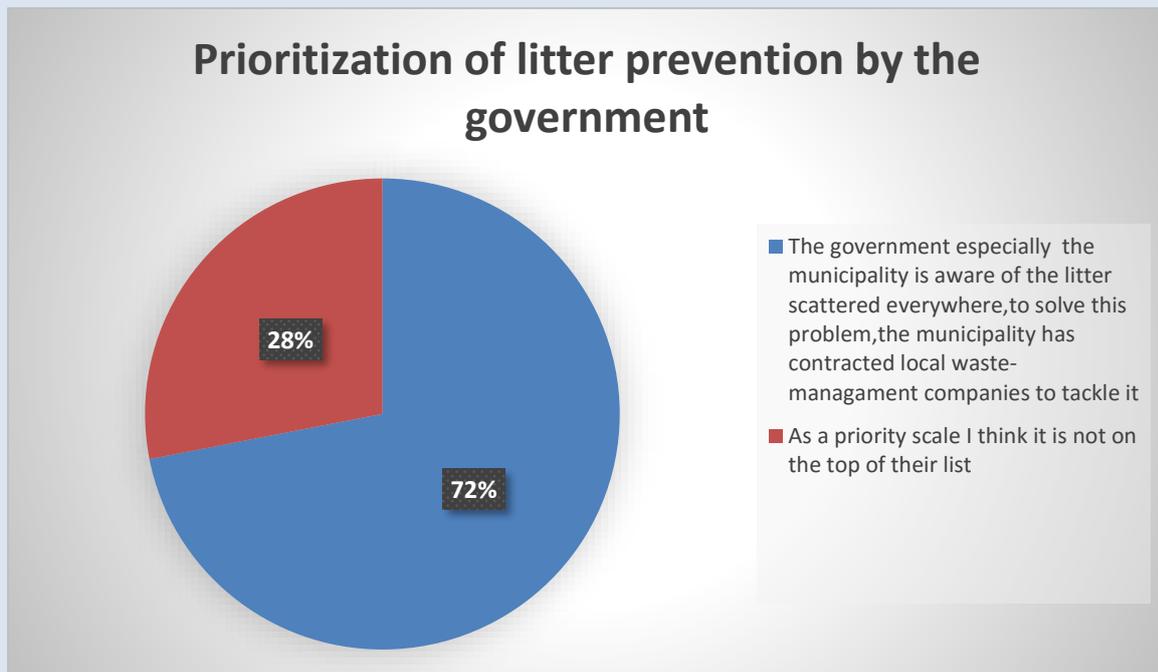


**Figure 1**

As illustrated in Figure 1, 72% of the respondents answered that the government is aware of the litter scattered everywhere, and they have already contracted local waste management companies to tackle it. 28% of the respondents said that it is not on the top of their list.
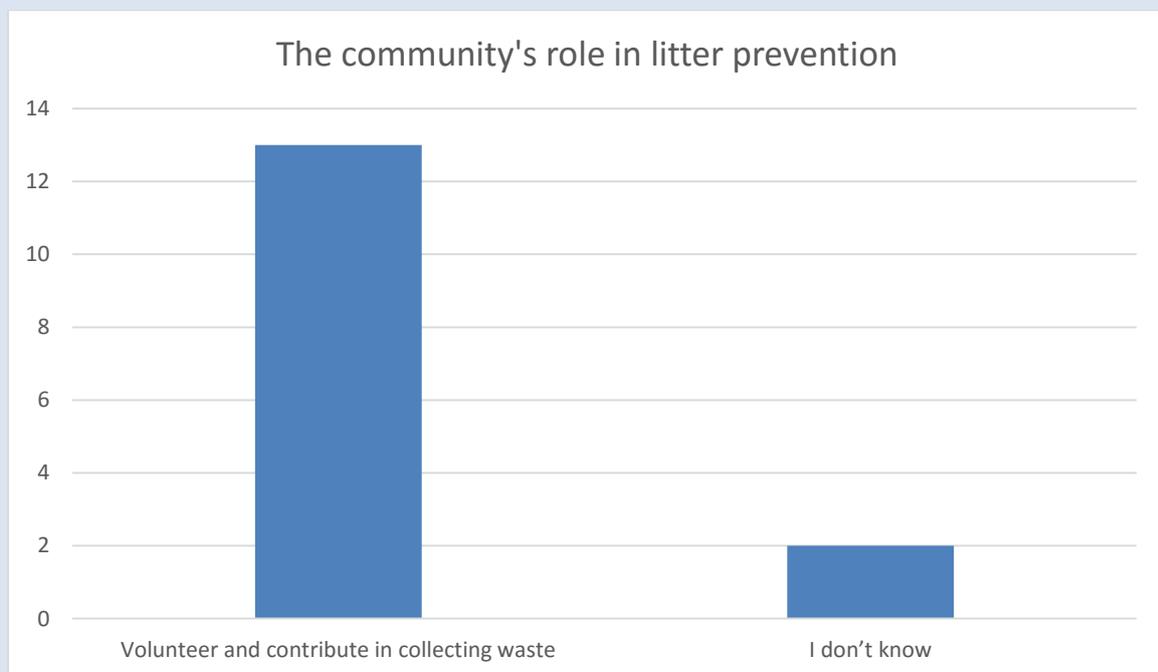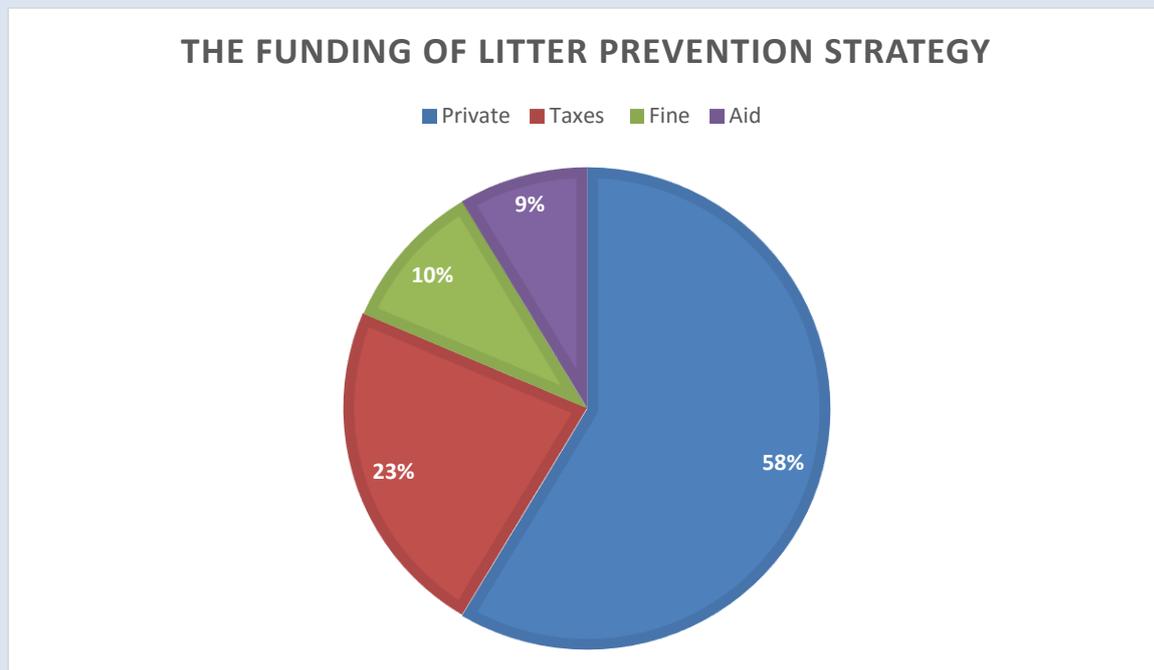


**Figure 2**

## THE FUNDING OF LITTER PREVENTION STRATEGY

■ Private  ■ Taxes  ■ Fine  ■ Aid

9%

10%

23%

58%

**Figure 3**

As illustrated in Figure 3, 58% of the respondents said the funding of a litter prevention strategy should be private and no one has to know when funded; 23% of the respondents said it should be paid through taxes; 10% said through fines; and 9% said through aid.
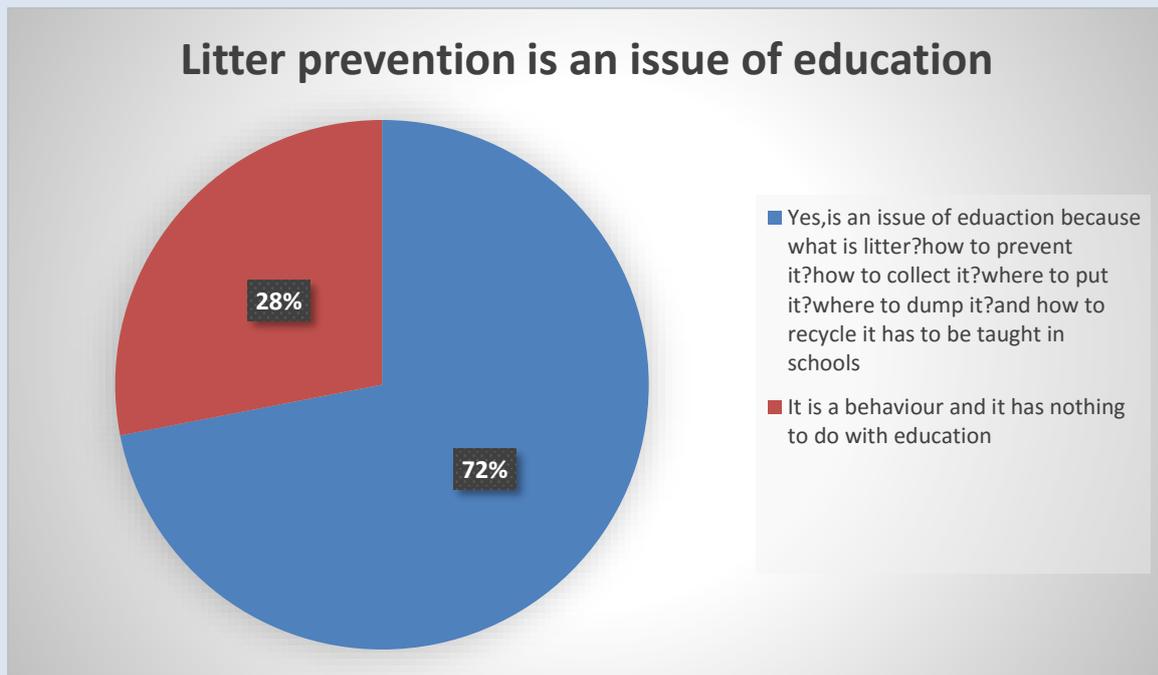
**Litter prevention is an issue of education**

28%

72%

- Yes,is an issue of eduaction because what is litter?how to prevent it?how to collect it?where to put it?where to dump it?and how to recycle it has to be taught in schools
- It is a behaviour and it has nothing to do with education

**Figure 4**

As illustrated in Figure 4, 72% of the respondents said that litter prevention is an issue of education and 28% of the respondents said that litter prevention is a behaviour and has nothing to do with education

**WHY DO YOU THINK PEOPLE LITTER?**

■ Laziness  ■ lack of dumpsters

40%

60%

**Figure 5**

As illustrated in Figure 5, 60% of the respondents said the reason most people litter is laziness and 40% of the respondents said is due to lack of dumpsters.
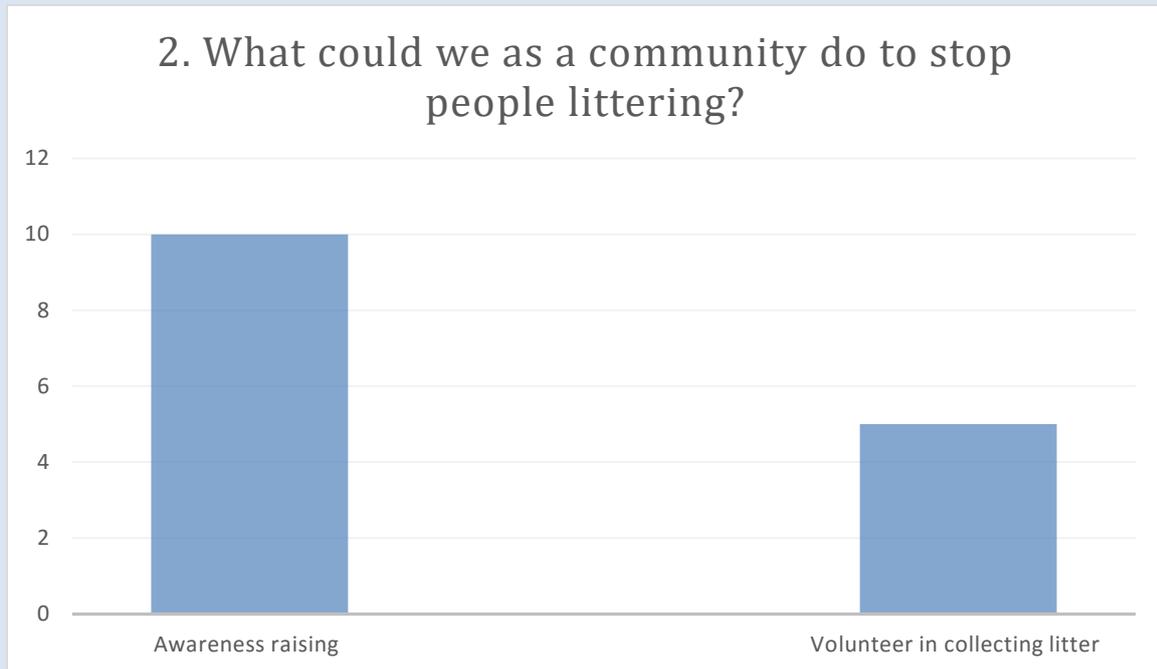
## 2. What could we as a community do to stop people littering?

**Figure 6**

As illustrated in Figure 6, 75% of the respondents said awareness-raising will be the best solution to littering; 25% of the respondents said to volunteer in collecting litter.
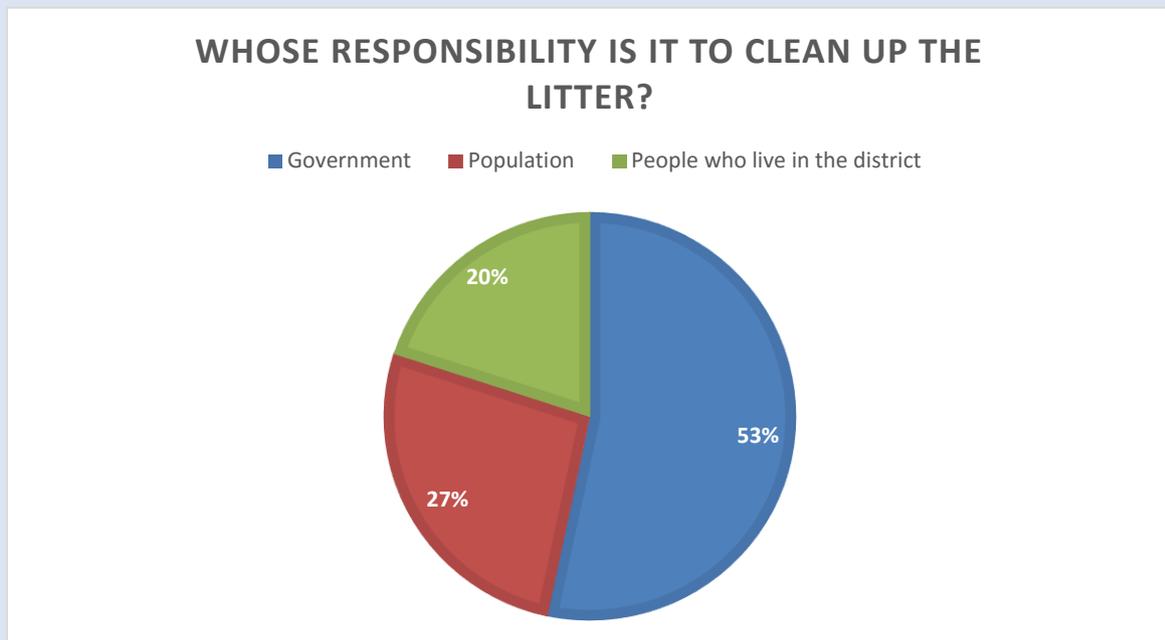


WHOSE RESPONSIBILITY IS IT TO CLEAN UP THE LITTER?

**Figure 7**

As illustrated by Figure 7, 53% of the respondents said is the government's responsibility to clean up the litter, 27% of the respondents said it is the population and 20% said it is the responsibility of the people who live in the district.
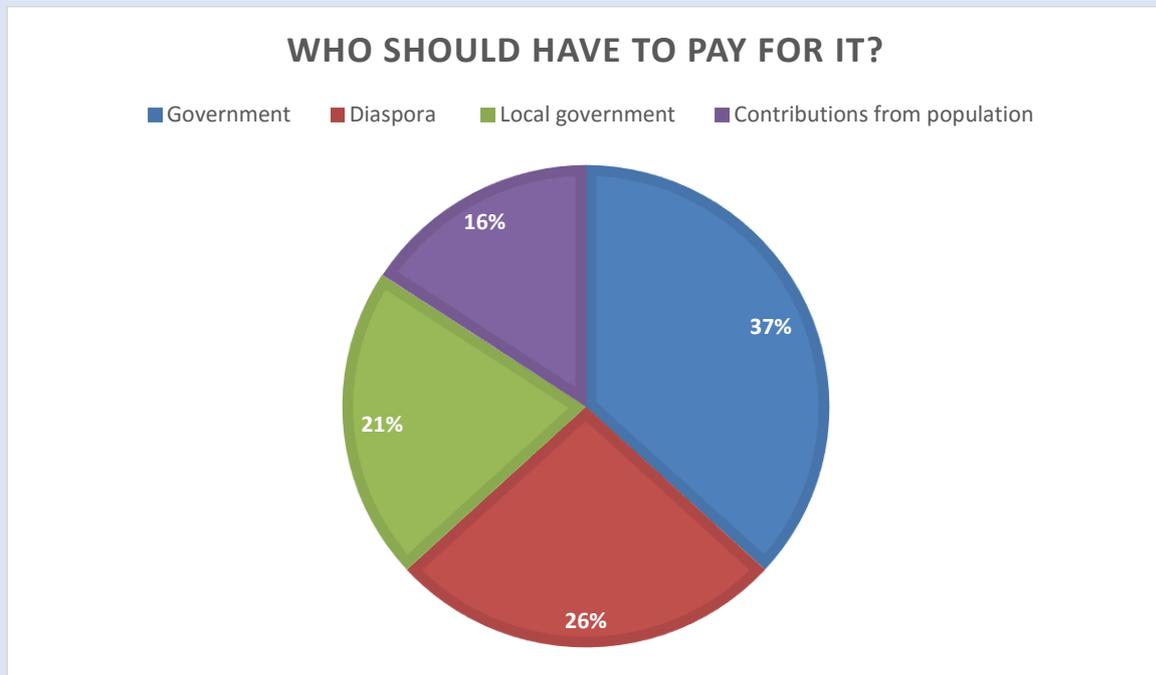
## WHO SHOULD HAVE TO PAY FOR IT?

■ Government  ■ Diaspora  ■ Local government  ■ Contributions from population

16%

37%

21%

26%

**Figure 8**

As illustrated in Figure 8, 37% of the respondents said the payment of collecting litter should be by the government, 26% of the respondents said it should be the diaspora, 21% said it is should be the local government and 16% of the respondents said by contributions from the population.

# 5 Conclusions & Recommendations

The researcher found that the majority of the participants believe that the government are responsible for everything; providing dumpsters is another problem. Participants suggested solutions to overcome the challenge by raising more awareness through which the community can change behaviour.

I would recommend for the community of Hargeisa:

- ✓ To start volunteering to clean up their country
- ✓ The government to do awareness raising via social media
- ✓ The government to fine anyone caught littering
- ✓ the government to provide the local government with more vehicles and dumpsters

# 6 Bibliography

1. n.d. *http://donttrashaz.com/highway-littering/.*

2. n.d. *http://www.conserve-energy-future.com/various-littering-facts.php.*