

1.0 Introduction

In July 1997 Development Workshop performed a study on scavenging activities in the city of Luanda. The study was performed to gather concrete and accurate information, and to dispel misconceptions on scavenging activities.

The objective of the study was to identify which items are being scavenged, who is scavenging, where scavenging is occurring, and what is done with the scavenged items. With this information it would be possible to assess the possibilities of reducing the volume of household waste and possible areas for job creation or future project interventions.

The study was divided into three phases:

- i. Observing scavenging activities at the dumpsites in the peri-urban area;
- ii. Observing scavenging activities at the container locations in the city; and
- iii. Observing scavenging activities and conducting focus group studies at the major landfills/dumpsites of Luanda.

The areas identified above represent the various types of collection areas in the city as well as areas thought to have the greatest concentration of scavenger activity.

2.0 Methodology

2.1 Peri-Urban Setting

This study forms a component of a larger project intervention in solid waste. The project area was Hoje-Ya-Henda in the municipality of Cazenga. The areas of Cazenga and Hoje-Ya-Henda are presented in Figure 1, Appendix A.

Hoje-Ya-Henda represents a typical peri-urban area for Luanda. It is densely populated, informally settled, contains a high number of internally displaced people, and lacks most city services (water, sewers, electricity and solid waste removal). The solid waste in this area is typically disposed of at the various informal dumpsites around the community. The dumpsites are located along the roadways or in some cases at an empty lot. Removal of these dumpsites is infrequent, some having not been removed for five years. These unregulated dumpsites also act as the public latrine and playground for the children.

On the assumption that the bigger the dumpsite the more activity it would have, the project selected the larger dumpsites in the community. In total, XX dumpsites were observed during a five day period. The dumpsites were observed for a period of six to seven hours per day (four hours in the morning and two to three in the afternoon/early evening) to record the number of person rummaging through the dumpsite in search of desired items, estimated age, sex, and which items were collected. The age of the person was recorded as one of four groups; child (12<), adolescent (12-20), adult (20-40) and senior (above forty).

Information was collected by the field personnel (called project researchers). When possible, the researcher engaged in conversation with the person scavenging to gather additional information. Observations and the results of the interview were recorded on a questionnaire. At times, several people, generally children scavenged together and in this instance, the total number of people were counted but only one questionnaire was completed. A sample questionnaire is attached in Appendix B.

2.2 City Container Locations

The second phase of the study included observation of several container locations in the concrete city. In preparation for this phase the sites were scouted before the study. Locations around the city were selected to provide a general geographic coverage and to cover the various economic divisions (residential or commercial). On several occasions during the study, ELISAL emptied the containers being monitored. In these instances, the mobiliser moved to a nearby location where the containers were not empty.

The project observed 11 sites over a period of five days. Sites with several containers (1.1m³) were

preferred. At the time of the study there were an estimated XX container locations in the city.

Each site was observed for one day for about three hours in the morning and two to three hours in the afternoon. Observations of scavenging activities were recorded on a questionnaire. When possible the researchers engaged in conversation with the person scavenging to collect additional information. When the researcher was occupied with one individual or group and another appeared, the researcher made a note of this and counted the number of people in the second group.

An example of the questionnaire is presented in Appendix B.

2.3 Landfills/Major Dumpsites

Luanda has three major landfill locations. The main landfill, referred to as Gamek, is located in the municipality of Golf II. The majority of solid waste collected from the city over the past XX years has been and continues to be transported here. The Gamek site is sprawling dumpsite covering XX ha. Urbana 2000 reports that Gamel is near capacity and will be closing within the next few years.

Mulenvos is the future landfill for Luanda and has been used on occasion by ELISAL and Urbana 2000. Mulenvos, located in the municipality of XX, is a vast site comprising XX ha.

The third dumpsite is located in the municipality of Sambizanga. The former sand pit turned dumpsite is small in comparison with the others covering about 1 ha. The location is often referred to as either Soares de Costa or Farol das Lagostas. For this report, the site will be referenced as SC. It was reported by ELISAL that the site not been receiving waste for some time, however residents from around the site reported trucks do come on a occasion. Judging by the volume of waste present at the site, this was never a major dumpsite.

Each of the three dumpsites were visited on two occasions. On the first visit, the number of people scavenging, their age, sex and materials collected were noted. Where possible, the mobilisers engaged the people scavenging in conversation. Information and answers were record on the questionnaire. Each site was visited a second time to count the number of people collecting each of the various materials. The site visits occurred in July 1997.

Focus Groups

Upon a review of the initial results, additional information was required to learn more of the people who scavenge and of the life process of the materials collected. This information could not be collected through additional observation and thus focus group interviews were tried. The focus group could only be performed where sufficient numbers of scavengers (more than 10) would be available to participate.

Two focus groups took place at Mulenvos with twelve men participated in one group and eleven women in the other. Both groups were on the scavenging of broken glass.

Three focus groups were conducted at Gamek. One consisted of a mixed group of nine adults, both male and female. The group was on broken glass. Another focus group was held on aluminum, copper and bronze. This group was comprised of a mixture of adult men and women. The third focus group was a mixture of adolescents and adults, male and female and included people who collected bottles, tins, and cardboard.

The focus groups were conducted in August 1997.

3.0 Results

3.1 Hoje-Ya-Henda

The results from the observations and interviews are presented in Tables C-1 to C-5 in Appendix C. Observations indicated that 13 different items were scavenged. A list of each item, its use, the reported value and location sold is presented in Table 3.1.

In total, 363 people were observed collecting items during the 5 days. However, data from the first

day has been omitted as the number of children scavenging was not recorded. Therefore, of the 356 people there were:

- 88% were children
- 47% were women (13 years or older).

Of the 73 people interviewed there were:

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- 51% children.
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- 25% women (13 years or older).
- 74 % collected only one item.
- 47 % collected items for use in the house.
- 53% collect items to be sold.
- 19% of the items collected for use in the house were to make children's toys.
- of the children scavenging, 39% collected items to make toys
- 56% said they scavenged full time.
- a majority of the scavenging happens in the morning.
- children tend to scavenge at any hour.

3.2 Container Locations in the City

The results from the observations/interviews for locations in the city are summarized in Tables D-1 to D-6 in Appendix D. A list of the items scavenged are presented in Table 3.2.

Over the five day period 18 locations were observed. In total 174 people were observed and 128 were interviewed. The findings were as follows:

- 28% were children.
- 20% were women (13 years or older).

Of the 128 who were engaged in conversation, the results were:

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- 16% were children
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- 26% were women (13 years or older)
- 79% collect only one item.
- 12% collect items for use in the house.
- 1% of the items collected are to make children's toys.
- 88% collect items to be sold.
- 66% reported they scavenged full time.
- eight cases were scavenging for food.
- the majority of the activity occurred in the morning (79%)
- some people were encountered by both locations during the same monitoring period.

3.3 Landfill Locations

Gamek

By far, the busiest with the most diverse activities was the Gamek landfill. Of the trucks that empty here, not all dump at the active workface. This created pockets of activity in many areas of the site. In addition to the active dumping areas, it was also common to encounter people collecting from older parts of the landfill. Although, this site had the greatest diversity in items collected but not the greatest number of people active. The people here though, were much more aggressive in comparison to the other landfills areas.

The materials collected and the number of people collecting are presented in Table 3.3a.

Information collected during the two site visits is summarized below. The information is drawn from the 52 people interviewed on the first day and the 87 people from the second day. The results were:

- 0% to 3% of the people scavenging were children.
- 38% to 41% were female.

Of the 52 people interviewed there were:

- 83% collected only one item.

- all items collected were to be sold. There was not one case where reported where the item was to be used in the house.
- 59% of the people scavenging do it full time.
- no cases of scavenging for food was recorded.

Mulenvos

This site presented the greatest number of people actively scavenging. It was also the site with the greatest concentration of people active in the same sector i.e. broken glass. This site was almost exclusively people collecting glass. The reason being the type of solid waste trucked to this location generally comes from the factories and is mainly broken glass.

The results of the two site visits are presented in Table 3.3b and summarized below.

- 77 people were observed active on the first visit, 272 on the second visit.
- 39% were children.
- 32% were women (13 years and older).
- of those interviewed, each person only collected one item.
- everything is sold. There was not one case where the item was collected for use in the house.
- 97% collected broken glass.
- nearly all are involved full time.
- Mulenvos was observed to be a calm working environment.

Soares da Costa

During the two site visits, the number of people actively scavenging was 12 and 17. The results of the two site visits are presented in Table 3.3c and summarized below.

- 28% were children.
- 72% were women (13 years and older).

Of the 12 people interviewed:

- 85% collected only one item.
- all the people collected items to sell. There was not one case where the item was collected for use in the home.
- 81% were involved full time.
- it was observed to be a calm working environment.

3.4 Focus Groups

A summary of the focus group results are presented in Appendix F.

Mulenvos

The focus groups held supported the information obtained from the observation/interview phase as well as providing additional information. The groups indicated:

- i. Mulenvos was a good site because some of the solid waste that arrived comes from the bottling plants and thus has a concentration of broken glass that wouldn't be found elsewhere;
- ii. there is a open atmosphere unlike the other sites where it is difficult for newcomers to start up;
- iii. the men had professions but had no work in Luanda and so resorted to collecting the broken glass;
- iv. the women indicated they collected the broken glass because they had no capital for investment in a different business. The scavenging required no start up costs;
- v. people had been scavenging for as long as five years, but most were less than two years;
- vi. people used simple tools, nothing specialised;
- vii. the quantity of glass collected was highly variable;
- viii. information on earnings per person per day was unclear. However, it is estimated the earnings on a good day would be about 10 USD although the average daily income is expected to be less than 5 USD; and
- ix. the life cycle of the glass is as follows. It arrives in a truck, sometimes concentrated if the waste is brought from a bottler; when the trucks dump, the glass is collected and then carried to another area for sorting and removing of non-glass items; the glass is placed in 50 kg bags and awaits the factory (Vidrul) to send a truck to collect it; when the trucks come, someone accompanies the bags to the factory; at the factory the bags are weighed and money is paid.

Gamek

This was a much more aggressive environment and focus groups at times were difficult to control. There was harassment from other scavengers and loss of interest when new trucks arrived. However, in the sector of broken glass the groups indicated much the same information as noted for Mulenvos. In addition to the previously mentioned information they indicated:

- i. people indicated scavenging could provide a more sure income than selling in the market place
- ii. glass is separated by colour, white glass being worth more
- iii. white glass is worth 15,000 KWR while brown glass is worth 12,000 KWR

Aluminum, Copper and Bronze

Scavengers in this sector presented the following information:

- i. they came from all over the city
- ii. they had professions but couldn't get a decent paying job. It was better to scavenge and be your own boss than be paid little and have a boss
- iii. they are able to earn enough money to keep themselves fed
- iv. preferred this site as it had the highest concentration of material (i.e. more truck dumping here than any other site)
- v. had to keep the gathered material in their houses so no one would steal it
- vi. initially sold to someone who came on site and then the scavengers located that person's buyer and bypassed him
- vii. they indicated there are many possible buyers
- viii. the scavenging is organised and regulated by a 'soba', a traditional leader
- ix. it was not clear the money earned but one stated they would need a monthly wage of at least 150 USD to accept employment and headaches that go with it. Based on this it is expected the average earning would be less.

Mixture (bottles, tins and cardboard)

This was the most difficult group to conduct as many were anxious to carry on with their work and other scavengers were harassing the group. Information obtained was as follows:

- i. the women collected cardboard and bottles
- ii. the men collected tins
- iii. people worked to earn a living

3.5 Percentage of Various Materials in the Waste Stream

The previous sections described the materials that are actively sought. Relative to these materials it is important to know the quantities available in the waste stream. The results of waste characterisation studies performed on samples of Luanda's solid waste are summarized in the following tables. Waste from the city sector is summarized in Table 3.5a. Waste from the peri-urban sector is summarized in Table 3.5b.

In the peri-urban area, the most common item collected was glass bottles; glass forms 2.7% of the waste stream. Actually, the percentage would be less, as the 2.7% represents all the glass not just the whole bottles that are scavenged. Plastic bags and bottles, also common but comprising 6.7% of the waste. In total, the percentage of the waste that has recoverable materials would be less than 16.2% (paper/cardboard, plastic, glass, metal). In addition to the 16.2%, one would expect a percentage of the organic material (25.8%) to be recovered for cooking fuel.

In the city the most common item collected was plastic bottles. The third most common item was plastic bags. Together these items would comprise part of the 11.1% plastic component. The second most common item was glass bottles; glass comprising 10.2% of the waste stream.

At the landfills the most common item collected was broken glass. The waste stream contains 10.2%, some of this would be whole bottles. At Gamek another common item was metal which comprises 7.5% of the waste stream.

4.0 Conclusions

The study provided an indication of the overall poor economic conditions in Luanda. Jobs are few even for those with skills or training. To maintain food on the table, some people have resorted to scavenging. Scavenging activities happen in both the urban and peri-urban areas as well as the city's landfill areas. Generally people have been involved with scavenging for less than two years but there were some cases of up to 5 years.

The range of materials and the uses are varied and diverse. In the peri-urban zone, the most common item collected was glass bottles. In the city, it was plastic bottles. At the landfills, it was broken glass.

The materials scavenged were mainly sold through the informal market. Only the broken glass had a formal process.

Scavenging in the peri-urban is different from the city and at the landfills. In the bairro it is mostly children gathering materials to make toys. In the bairro there were cases of people scavenging for material to be used at the house. At the other locations, the scavenging was strictly an income generation. In the city there were a few cases of scavenging for food.

Accurate information regarding income from the scavenging activities was difficult to obtain. The information acquired was variable. However, the information gathered indicates the average daily income is probably less than 5 USD per day per person.

In the peri-urban area the percentages of materials recoverable comprises

Appendix A

Maps

Appendix B

Sample Questionnaires

Appendix C

Summary Results Hoje-Ya-Henda

Appendix D

Summary of Results Luanda

Appendix F

Focus Group Summary Sheets

Appendix E

Landfills, Gamek, Mulenvos and Soares de Costa