

Scavenger Study

An Overview of Scavenging in Luanda



Luanda - July 1997

Scavenger Study - An Overview of Scavenging in Luanda

1.0 Introduction

In July 1997 Development Workshop carried out a study on scavenging activities in the city of Luanda. The study was performed to gather concrete and accurate information on scavenging activities and to dispel misconceptions. No previous studies of this nature are known.

The objective of the study was to identify which items are being scavenged, who is scavenging and under what circumstances, where scavenging is occurring, and what is the life-cycle of the scavenged items. With this information one could a) assess possibilities of reducing the volume of household waste through enhanced removal of the scavenged items; b) create jobs in the informal market; and c) provide information to assess the potential for future project interventions.

The study covered three areas, including:

- i. peri-urban - informal dumpsites in the peri-urban area of Luanda;
- ii. city - container locations in Luanda; and
- iii. landfill locations - the major landfills of Luanda.

This study formed one of the components of Development Workshop's pilot project in solid waste (referred to as ANG-466, April 1997-April 1998). The project was active in Luanda's peri-urban area, specifically in the area of Hoje-Ya-Henda in the municipality of Cazenga. A map of the project areas is presented as Figure 1, Appendix A.

2.0 Methodology

2.1 Peri-Urban Setting

Hoje-Ya-Henda represents a typical peri-urban area of 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 is typically disposed of at various informal dumpsites located along the roadways or unoccupied spaces. The dumpsites also serve as public latrine and a playground for the children. Clearing of these dumpsites has been infrequent, some not having been removed during the last five years.

On the assumption that the bigger the dumpsite the more activity it would have, the project selected the larger dumpsites in the project area, about 1 km² centred around a dumpsite of more than 1000 m³ of waste. In total, 9 dumpsites were observed during a five day period in July 1997. 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). The field researchers recorded the number of persons rummaging through the dumpsite, estimated the age, sex, and identified which items were collected. The age and sex was chosen to differentiate who was scavenging. Age was subdivided into four groups: child (12<), adolescent (12-20), adult (20-40) and senior (above forty).

When possible, the researcher engaged in conversation with the person scavenging to gather additional information such as how much time is spent collecting the items, what do they do with the items once collected. Observations and the results of the interview were recorded on a questionnaire. A sample questionnaire is attached in Appendix B. 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 for each group. When there was more than one group active in the dumpsite, the researcher recorded the number of people, their sex and age.

It quickly became evident that children formed the majority of the people scavenging and that they scavenged mostly for items to make toys. On the first day, the researchers did not regard the

activity of the children important and their movements where not recorded.

2.2 City Container Locations

The study also included observation of several container locations in the concrete section of Luanda. The container locations consisted of 1.1 m³ containers and 7m³ dumpsters. Potential sites were scouted before hand to verify scavenging activity and to pre-select a variety of areas to provide some geographic coverage of the city and to cover a range of economic divisions (residential or commercial, low and high income).

In cases where during the observation period, ELISAL emptied the containers being monitored, the field researcher moved to a different container location nearby.

The project observed 12 sites over a period of five days in July. Sites with several containers (1.1m³) were preferred. At the time of the study there were an estimated 350 container locations in the city.

Each site was observed during a morning period of three hours and an afternoon period of two to three hours. The researchers recorder the scavenging activities on a questionnaire. When possible, researchers engaged the person scavenging in conversation to collect additional information. When the researcher was occupied with one individual or group and another appeared, the researcher made a note of this recorded the number of people and their sex and age. An example of the questionnaire is presented in Appendix B.

2.3 Landfills

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 nine years has been and continues to be transported here. The Gamek site is sprawling dumpsite covering tens of hectares. Urbana 2000 reports that Gamek is near capacity and will be closing within the next few years.

Mulenvos is planned to become the future landfill site for Luanda and has been used on occasion by ELISAL and Urbana 2000 over the past ten years. Mulenvos is also a large site covering tens of hectares.

Both the Gamek and Mulenvos sites are simply dumping areas. There has been no engineering design or leachate control measures.

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

Landfill locations are shown on Figure 1.

Each of the three landfills mentioned above was visited on two occasions in July. On the first visit, the number of people scavenging, their age, sex and materials collected were noted. Where possible, the researchers engaged the people scavenging in conversation. Information and answers were record on the questionnaire. A sample questionnaire is presented in Appendix B. Each site was visited a second time to count the number of people collecting each of the various materials.

In the case of Mulenvos, one the first visit, nearly all the people were observed to collect broken

glass. Researchers conversed with only a small sample of the total number under the pretext that since most everyone is collecting the same item, the information they would provide would be similar.

Focus Groups

Upon a review of the initial results, the information collected was insufficient to completely define the lifecycle of the item scavenged and to complete the makeup of people scavenge. It was felt that this information might be obtained through focus group discussions. Focus group discussions are limited in their need for sufficient numbers (more than 10) to provide representative information. Therefore, focus groups were limited to the landfill locations and to only a few items; namely broken glass and metal.

Two focus groups took place at Mulenvos with twelve men participated in one group and eleven women in the other. The men and women were separated to see if there was a differing opinion between the genders. 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 Peri-urban Setting

The results from the observations and interviews are presented in Tables C-1 to C-5 in Appendix C.

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. The actual number of people scavenging is greater as the researchers did not record the number of children on the first day. Because of this the detailed breakdown presented below has omitted data from the first day. Of the 356 people observed there were:

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

Of the 356 observed, 73 were interviewed. The results were:

- 51% children.
- 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 was to make children's toys.
- of the children scavenging, 39% collected items to make toys.
- 56% of those interviewed said they scavenged full time being more than 20 hours per week.
- a majority of the scavenging happens in the morning.
- children tend to scavenge at any hour.

3.2 City Container Locations

The results from the observations/interviews for locations in the city are summarised 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 a total 174 people were observed and 128 were interviewed. The findings were:

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

Of the 128 interviewed, the results were:

- 16% children.
- 26% 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 (more than 20 hours per week).
- eight cases were scavenging for food.
- the majority of the activity occurred in the morning (79%).
- some people scavenging were observed at different areas (by both researchers) during the same monitoring period.

3.3 Landfill Locations

Gamek

By far, the busiest location with the most diversity of items collected was the Gamek landfill. There was a main working face but as trucks often dumped in other locations there were pockets of activity throughout the landfill. In addition to the active dumping areas, people were encountered scavenging from the older parts of the landfill. The Gamek location was much more aggressive in comparison to the other landfills areas.

The materials collected and the number of people scavenging are presented in Table 3.3a. Information collected during the two site visits is summarised below. The information is drawn from the 87 people observed. The results were:

- 0% to 3% of the people scavenging were children.
- 38% to 41% were female.
- 11 different items were collected.
-

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. Trucks hauling to this location generally bring a loads with a high concentration of glass as many trucks haul from waste from the bottling facilities.

The results of the two site visits are presented in Table 3.3b and summarised 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).
- six different items were collected.

Of the 11 people 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 summarised below.

- 28% were children.
- 72% were women (13 years and older).
- five different items were collected.

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

The focus group information has been summarised in Appendix F. The group discussions yielded the following information:

- the people scavenging were often skilled workers who couldn't find employment in their field.
- most people viewed scavenging as their job and worked at it full time (greater than 20 hours/week)
- the Gamek location was structured with an appointed leader.
- it was difficult to start up scavenging at Gamek because of aggression from other people scavenging.
- starting up at Mulenvos was easier with little to now hostility from the other people scavenging.
- few used tools and those used were simple.
- no protective clothing or protective measures were taken although injuries were often mentioned as a hazard of the job.
- the life-cycle of several materials were defined

Life-cycles of Materials

Through information obtained through the focus groups and observations, the life-cycles of glass and metals has been determined.

The glass cycle is as follows:

- glass is collected from areas of high concentration (the various landfills and from the Ilha).
- glass is sorted from the rubbish into separate colours.

- glass is bagged in rafia sacks (50 kg food sacks).
- periodically Vidrul (glass factory in Cacuaco) sends trucks to collect the glass from predetermined locations where scavenging of the glass occurs (ie. Ilha, Soares da Costa, Gamek, Mulenvos) to collect the glass.
- the sacks are loaded onto the truck and someone accompanies the truck to the factory.
- at the factory the sacks are weighed and money paid.
- white glass earns 0.05 USD/kg and brown earns 0.04 USD/kg respectively (at the parallel exchange rate).
- the volume of glass collected or possible to collect per day was highly variable. No consensus could be found in the information collected. Obviously, the volume collected would depend on the total volume available and the amount of waste mixed with it.
- the people collecting the glass have no say in pick-up or price of their selling glass.
- the factory indicated the glass collected did not meet the demand of the factory.

The cycle for metals is as follows:

The metals covered are copper, aluminum and to a lesser extent bronze.

- material is collected at the dumping locations
- copper comes from wires and the plastic coating is burned off and the copper retrieved.
- The metals are collected until they collected 50 kg or more.
- there are buyers (middlemen) located near the landfill
- it is also possible to sell directly to foundries or to warehouses
- prices at the landfill were aluminum – 0.07 USD/kg; copper – 0.07 USD/kg; and bronze at 0.36 USD/kg (at parallel exchange rate).
- earnings would be less than 5 USD/day.

The life-cycle for the other materials is generally: collection, cleaning, followed by selling at a nearby market. Other cases involved scavenging for items, cleaning and then selling from the house. Income from scavenging activities could not be well defined but estimates indicate that the range could be as high as 10 USD on a good day. The average daily earning is probably less than five USD/day.

Who is Involved

The majority of the people active in scavenging activities in the peri-urban area are children. There was rather equal ratio of male to female. Some people would be considered classified as poorest of the poor as they had to collect wood and branches as they had no money for gas or charcoal. The study did not encounter any cases of people scavenging for food in the peri-urban area.

The city saw some cases of desperation where people were scavenging for food. However this was a small percentage in comparisons to those scavenging for items to be resold. The people scavenging were a mixture of adolescents and adults with a majority male.

The people involved at the landfills saw their scavenging activity as their job. They had professions but were not able to locate employment, In some cases employment that would pay more than they were earning at the landfill or pay that would compensate them for the annoyance of having a boss and less than ideal working conditions. The people at the landfills come from many parts of the city and include both males and females.

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 to evaluate the scale of the potential recycling market for each item. Waste from the city differs in composition from the peri-urban areas. Waste from the city sector is summarised in Table 3.5a with waste from the peri-urban sector summarised in Table 3.5b.

In the peri-urban area, the most common item collected was glass bottles which 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 which are scavenged. In the peri-urban area, the amount of glass in bottle form or broken is so little (compared to more favourable areas where it is highly concentrated) that no scavenging for broken glass occurs. Plastic bags and bottles are rather common but comprise only 6.7% of the waste. The most common use of plastic was to cook with and there isn't much opportunity to expand the market in this regard. Also given the health implications of cooking over burning plastic it wouldn't be an option to pursue. Based on the composition of peri-urban waste the percentage of waste that has recoverable materials is less than 16.2% (paper/cardboard, plastic, glass, metal). Add to this an undetermined percentage of the 25.8% organic material (which could be recovered for cooking fuel) and one could expect that about 20% of the waste stream could be reused given favourable conditions. Unfortunately, at Luanda's present state of industrial capacity (very low) there are few possibilities to expand or create formal markets for the scavenged material.

In the city the most common item collected was plastic bottles. The third most common item was plastic bags. Together these items comprise part of the 11.1% plastic component. The second most common item was glass bottles; glass (total) 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 (aluminum, copper and bronze) 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 have an income people have resorted to scavenging. Scavenging activities are occurring 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 over 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 and metal items could be considered part of the formal market.

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

To determine if there is a potential for reducing the volume of waste in the waste stream several factors need to be clarified. It is needed to understand the informal market better to assess the need/demand and mechanisms of its operation. It is also needed to analyse the existing industrial capacity in Luanda to determine if there are potential markets to open up. For example, there is a

plastic factory that may have a need for certain types of plastic.

With the present information it is not felt the scavenging market is suitable for consideration for waste reduction. To a certain extent waste reduction through scavenging is occurring to its probable potential. Also, job creation for the following reasons:

- the demand for items by the informal market is not known
- activities occur over a large geographic area and co-ordination will be difficult and costly
- costs associated with each step of the life-cycle are not known and the costs available for sustaining an intervention are not known
- the number of beneficiaries is relatively small and dispersed over a wide geographic area

However, further studies into the recycling activities to identify key indicators of the feasibility of waste reduction through enhanced scavenging or expansion of scavenging activities and periodic review will

Further, to avoid a negative unanticipated impact, a sub-sector analysis should be conducted before any intervention is attempted. It is recommended that a study of the industrial capacity in Luanda be conducted to identify users of recyclable materials.

In terms of the broken glass, improvements in pick-up of the glass are needed and there is the demand at the factory for glass. Transport and operating costs in Luanda are so high that it is felt the cost could not be covered by a contribution from the persons scavenging.

Appendix A

Maps

Appendix B
Sample Questionnaires

LEVANTAMENTO MAIS PRECISO SOBRE RECICLAGEM

Local:

Data:

Hora:

Mobilisadora:

Quem /Crianca <12/ /adolescente 12-20/ /adulto20-40/ /mais velho >40/
sexo

Que tipo de material recolheu?

Quanto tempo fez?

Quantos recolheu?

Obs:

Onde vai com o materiaal?

Quanto tempo gasta nesta actividade?

Faz sempre isto?

Outros:

LEVANTAMENTO MAIS PRECISO SOBRE RECICLAGEM

Contagem das pessoas nas lixeiras. (preenche quando ocupado com um outro grupo)

Data: De Manha A Tarde

Grupo	No. Pessoas (indica M/F)	Idade (<12, <20,<40,>40)	Materiais recolhido	Tempo (do dia)

Levantamento das Actividades da Reciclagem

Mobilisadora:

Data:

Periodo do dia:

Local:

Numeros dos contentores:

Descricao da area perto dos contentores:

1. Quem? crianca <12 adolescente 12-20 adulto 20-40 mais velho >40

1a. Sexo?

2. Que tipo de material recolheu?

3. Quantos recolheu?

4. Recolheu comida?

5. De onde vem? (Qual e a distancia?)

6. Quanto tempo gasta nesta actividade? Por dia?

Por semana?

7. Porque? (O que vai fazer com o material ?)

8. Se a pessoa vai vender o material, onde vai vender? (qual e a distancia?)

9. Qual e o preco? Por kilo? Por sacco?

10. Quantos kilos/sacos/garrafas vende por dia/por semana?

Questoes 5 e 8 para melhor entender e a distancia viajado por dia/semana

Observacoes:

Appendix C

**Summary Results
Hoje-Ya-Henda**

Table C-1
Summary of Results
Scavenger Study in Hoje Ya Henda
Near Mini-Estaleiro/Near the Kwanzas market (lixeria principal)
July 2, 1997

Person	M/F	AM	PM	Type of Material																	
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys	Batteries/bottle caps	Foam	Cardboard	Alumin ¹ /copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other ³	
Child (<12)	M	2		1						1											
Adolescent (12<>20)	F	3					1		1									1			
Adult (20<>40)	M	1		1																	
Older (40<)	F																				
Total Movement			7	0	2	0	0	2	0	1	1	0	0	0	0	0	0	0	1	0	0
Collected only one item					2			2		1	1								1		
Collected two or more items																					
Sold					1			1											1		
Used in house					1			1		1	1										
Scav full time					1			2											1		
Scav part time					1					1	1										
Persons not interviewed ⁴																					
Child (<12)	M																				
Adolescent (12<>20)	F																				
Adult (20<>40)	M																				
Older (40<)	F																				
Total			0	0																	

Note: the sites were observed for only two hours in the morning

1 - aluminum/copper and bronze

2 - metal pieces other than aluminum copper and bronze

3 - other:

4 - a count of persons who visited the site during the period of observation. The researcher was occupied an

u - unknown, no response given

Table C-2
Summary of Results
Scavenger Study in Hoje Ya Henda
Beside ADPP and Dos Kwanzas Market
July 3, 1997

Person	M/F	AM	PM	Type of Material																
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys/Batteries/bottlecaps	Foam	Cardboard	Alumin ¹ /copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other ³	
Child (<12)	M	2			1	1														
	F	2	1			3			1									1		
Adolescent (12<->20)	M																			
	F		1					1												
Adult (20<->40)	M	1												1						
	F		1			1												1		
Older (40<)	M	1					1											1		
	F	3			1		1	1												
Total Movement		9	3	0	2	5	2	2	1	0	0	0	0	1	0	0	0	3	0	0
Collect only one item					2	2	1	2						1						
Collect two or more items						3	1		1									3		
Sold					2	5		1						1				2		
Used in house							2	1	1									1		
Scav full time					2	5	2	1+U	1					1				3		
Scav part time								U												
Persons not interviewed ⁴																				
Child (<12)	M	11	6																	
	F	6	6																	
Adolescent (12<->20)	M																			
	F																			
Adult (20<->40)	M																			
	F																			
Older (40<)	M																			
	F																			
Total		17	12																	

Note: the number of children not interviewed is an estimate only

1- aluminum/copper and bronze

2- metal pieces other than aluminum copper and bronze

3 - other:

4 - a count of persons who visited the site during the period of observation. The researcher was occupied an

u - unknown, no response given

Table C-3
Summary of Results
Scavenger Study in Hoje Ya Henda
Armazem Tony &Filhos/Junto Unidade Policia
July 4 1997

Person	M/F	AM	PM	Type of Material																
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys	Batteries/ bottlecaps	Foam	Cardboard	Alumin1/copper/ bronze	Metal2 pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other3
Child	M	7		1		2	1		3	1										
(<12)	F	2	4			1			3	3		1							1	
Adolescent	M	2	1		1	1		1				1								
(12<->20)	F																			
Adult	M	1		1			1												1	
(20<->40)	F	1	1		1	1														
Older	M	1										1								
(40<)	F	1				1														
Total Movement		15	6	2	2	6	2	1	6	4	2	1	0	0	0	0	0	0	0	2
Collect only one item				1	1	5	1		2	2	2	1								1
Collected two or more items				1	1	1	1	1	4	2										1
Sold				U	2	6	1	1			2									1+U
Used in house				1+U			1		6	4		1								1+U
Scav full time					2	6	1	1			2									
Scav part time				2			1		6	4		1								2
Persons not interviewed ⁴																				
Child	M	12																		
(<12)	F	8																		
Adolescent	M																			
(12<->20)	F																			
Adult	M																			
(20<->40)	F																			
Older	M																			
(40<)	F																			
Total		20	0																	

Note: only one site was observed in the afternoon.

1- aluminum/copper and bronze

2- metal pieces other than aluminum copper and bronze

3 - other: fig seeds, pieces of cloth

4 - a count of persons who visited the site during the period of observation. The researcher was occupied an

u - unknown, no response given

Table C-4
Summary of Results
Scavenger Study in Hoje Ya Henda
Near Antonia's house/Coral street beside the church/the old Kala Coca
July 7 1997

Person	M/F	AM	PM	Type of Material																
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys/ Batteries/ bottlecaps	Foam	Cardboard	Alumin ¹ /copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other ³	
Child (<12)	M	4	4	1	1	2			1									3		
Adolescent (12<=>20)	F	1						1	1		1									
Adult (20<=>40)	M	3		2			1	1			1									
Older (40<)	F	1																		
Older (40<)	M	3				1	1							1		1				
Older (40<)	F	1		3	3						3									
Total Movement		15	5	6	4	4	4	1	2	0	1	3	0	1	0	1	0	3	0	0
Collected only one item				3	1	4	2		2		1					1		1		
Collected two or more items				3	3		2	1				3		1				2		
Sold				4	4	4	U	U			1	3				U		3		
Used in house				2		3+U	U	2						1		U				
Scav full time				4	4	2	U	U			1	3				U		1		
Scav part time				2		2	3+U	U	2					1		U		2		
Persons not interviewed ⁴																				
Child (<12)	M	43	43																	
Adolescent (12<=>20)	F	12																		
Adult (20<=>40)	M	2																		
Older (40<)	M	1																		
Older (40<)	F																			
Total		58	43																	

Note: the sites were observed for only two hours in the morning

1- aluminum/copper and bronze

2- metal pieces other than aluminum copper and bronze

3 - other:

4 - a count of persons who visited the site during the period of observation. The researcher was occupied an

u - unknown, no response given

Table C-5
Summary of Results
Scavenger Study in Hoje Ya Henda
Coral street beside the church/the old Cala Boca market
July 8 1997

Person	M/F	AM	PM	Type of Material																
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys/ Batteries/ bottlecaps	Foam	Cardboard	Alumin ¹ /copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other ³	
Child (<12)	M	7	2	1		2	1	1	1			1	1			1		1		
Adolescent (12<=>20)	F	1																		
Adult (20<=>40)	M	3			1	1							1							
Older (40<)	M	2									2									
	F	3			2	1						1								
	M						1					1							2	
	F	2																		
Total Movement		18	2	1	3	4	2	2	1	0	2	3	2	0	0	1	0	3	0	0
Collected only one item				1	2	2	1	2	1		2	1	2			1				
Collected two or more items					1	2	1					2							3	
Sold					3	4	1	U			2	3	2			1			3	
Used in house				1			1	1+U	1											
Scav full time					2	2	2	U			2		2							
Scav part time				1	1	2		1+U	1			3				1			3	
Persons not interviewed ⁴																				
Child (<12)	M	52	36																	
Adolescent (12<=>20)	F	28	15																	
Adult (20<=>40)	M																			
Older (40<)	F	2																		
	M																			
	F																			
Total		82	51																	

Note: one respondent did not care to clarify where the item would be used.

1 - aluminum/copper and bronze

2 - metal pieces other than aluminum copper and bronze

3 - other:

4 - a count of persons who visited the site during the period of observation. The researcher was occupied an

u - unknown, no response given

Appendix D
Summary of Results
Luanda

Table D-1
Summary of Results
Scavenger Study in Luanda
Zone: commercial/residential (near DW's office and near Nilo's bakery)
Date: July 14, 1997

Person	M/F	AM	PM	Type of Material																
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys	Batteries/bottle caps	Foam	Cardboard	Aluminum/copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other ³
Child (<12)	M	1	1	1	1															
Adolescent (12<->20)	F																			
Adult (20<->40)	M	3			1	1		1												
Older (40<)	F																			
Adult (20<->40)	M	6	4	1	7	4	1				1								1	
Older (40<)	F		2			2														
Older (40<)	M	1	1		1														1	
Older (40<)	F																			
Total Movement		11	8		2	10	7	1	1	0	0	1	0	0	1	0	0	0	0	2
Collected only one item					1	8	2+U		1						1					2
Collected two or more items					1	2	4+U				1									
Sold					2	10	6+U				1				1					1
Used in house							U		1											1
Scav full time					1	5	1+U				1									
Scav part time					1	5	5+U		1	1					1					2
Persons not interviewed ⁴																				
Child (<12)	M	3																		
Adolescent (12<->20)	F	5																		
Adult (20<->40)	M		2																	
Older (40<)	F																			
Older (40<)	M	2																		
Older (40<)	F																			
Total		12	2																	

Note: ELISAL made a pick up at both sites and thus the mobilisers moved to a site nearby that contained co

1 - aluminum/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other:plastic sandals, food for animals

4 - a count of persons who visited the site during the period of observation. The researcher was occupied an

u - unknown, response not given

Table D-2
Summary of Results
Scavenger Study in Luanda
Zone: Residential (near the Concern office and near the Comboio restaurante)
Date: July 15, 1997

Person	Type of Material																				
	M/F	AM	PM	Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys	Batteries/bottle caps	Foam	Cardboard	Alumin ¹ /copper/brnze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other ³	
Child (<12)	M																				
Adolescent (12<->20)	F					2															
Adult (20<->40)	M	1	1		2	1															
	F	2			1	2															
Older (40<)	M		1																		1
	F	2	1		2		1														
Total Movement		7	3	0	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Collected only one item					3	3	1														1
Collected two or more items					2	2															
Sold					4	5															
Used in house					1		1														1
Scav full time					3	3															
Scav part time					2	2	1														1
Persons not interviewed ⁴																					
Child (<12)	M	2																			
	F	5																			
Adolescent (12<->20)	M																				
	F																				
Adult (20<->40)	M																				
	F																				
Older (40<)	M																				
	F																				
Total		7	0																		

Note:

- 1 - aluminum/copper/bronze
- 2 - metal other than aluminum/copper/bronze
- 3 - other: clothes; in addition there were 2 cases of people looking for food but none was collected.
- 4 - a count of persons who visited the site during the period of observation. The researcher was occupied and u - unknown, no response given

Table D-3
Summary of Results
Scavenger Study in Luanda
Zone: Residential (near the Sao Paolo market, near the UCAH building)
Date: July 16, 1997

Person	M/F	AM	PM	Type of Material															
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys	Batteries/bottle caps	Foam	Cardboard	Alumin ¹ /copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones
Child (<12)	M	9	1	1	4	2						2							2
Adolescent (12<->20)	F	2	1	1	2			1				1							
Adolescent (12<->20)	M	6	7	1	6	1						2		4					1
Adolescent (12<->20)	F																		
Adult (20<->40)	M	3	3		2	1						1	1						1
Adult (20<->40)	F	3				1		2											
Older (40<)	M	1	1	1															1
Older (40<)	F																		
Total Movement		24	13	4	14	5	0	3	0	0	3	3	5	0	0	0	0	0	5
Collected only one item				1	12	5		2			2	3	4						4
Collected two or more items				3	2			1			1		1						1
Sold				3+U	14	5		3			3	2	5						4
Used in house				U							1								1
Scav full time				3+U	13	5		3			1	1	4						1
Scav part time				U	1						2	2	1						4
Persons not interviewed ⁴																			
Child (<12)	M	3	2																
Child (<12)	F		3																
Adolescent (12<->20)	M	2																	
Adolescent (12<->20)	F																		
Adult (20<->40)	M	1																	
Adult (20<->40)	F																		
Older (40<)	M	2																	
Older (40<)	F																		
Total		8	5																

Note:

1 - aluminum/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other: old kwanza notes, plastic ribbon (2 cases), plastic sandals, and shoes

4 - a count of persons who visited the site during the period of observation. The researcher was occupied and

u - unknown. response not given

Table D-4
Summary of Results
Scavenger Study in Luanda
Zone: Residential (Avalade, near the pool and off of Antonio Barousa just below Palanca)
Date: July 17, 1997

Person	M/F	AM	PM	Type of Material																	
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys	Batteries/bottlecaps	Foam	Cardboard	Alumin ¹ /copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other ³	
Child (<12)	M																				
Adolescent (12<=>20)	F	1			1																
Adult (20<=>40)	M	8	6	1	3	3	1											1	6		
Older (40<)	F	1			1																
Adult (20<=>40)	M	8	2		3	4	1	1			1								2		
Older (40<)	F	9	3		8	3	1														
Older (40<)	M																				
Older (40<)	F		1				1														
Total Movement		27	12		1	16	10	4	1	0	0	1	0	0	1	0	0	0	1	0	8
Collected only one item					1	14	9	2	1						1				1		7
Collected two or more items					2	1	2				1										1
Sold					1	16	10	2	1			1			1						2
Used in house								2											1		6
Scav full time					1	15	6	1+U			1										6+U
Scav part time					1	4	2+U	1							1				1		1+U
Persons not interviewed ⁴																					
Child (<12)	M	5																			
Adolescent (12<=>20)	F																				
Adult (20<=>40)	M																				
Older (40<)	F																				
Total		5	0																		

Note:

1 - aluminum/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other: plants, food (6 cases), and shoes

4 - a count of persons who visited the site during the period of observation. The researcher was occupied and u - unknown, response not given

Table D-5
Summary of Results
Scavenger Study in Luanda
Zone: Commercial/Residential (near Angoship and near Hotel Central)
Date: July 18, 1997

Person	M/F	AM	PM	Type of Material																
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys	Batteries/bottle caps	Foam	Cardboard	Aluminum/copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones	Other ³
Child (<12)	M	4			4															
Adolescent (12<->20)	F							1				1								
Adult (20<->40)	M	2										1								
Adult (20<->40)	F	4				2						1								
Adult (20<->40)	M	5			4														1	
Adult (20<->40)	F	5		1	3	3														
Older (40<)	M	2				1													1	
Older (40<)	F																			
Total Movement		22	0		1	11	6	0	1	0	0	0	0	0	0	0	0	0	0	2
Collected only one item					10	6		1				2								2
Collected two or more items					1	1														
Sold					1	11	6		1			2								2
Used in house																				
Scav full time					9+U	5		1				2								1
Scav part time					1+U	1														1
Persons not interviewed ⁴																				
Child (<12)	M																			
Child (<12)	F																			
Adolescent (12<->20)	M																			
Adolescent (12<->20)	F																			
Adult (20<->40)	M																			
Adult (20<->40)	F																			
Older (40<)	M																			
Older (40<)	F																			
Total		0	0																	

Note: sites only observed during the morning

1 - aluminum/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other: plastic ribbon, paper

4 - a count of persons who visited the site during the period of observation. The researcher was occupied the

u - unknown, response not given

Table D-6
Summary of Results
Scavenger Study in Luanda
Zone: Residential (initially by the SHA office but afterwards by Kinixix)
Date: July 18, 1997

Person	M/F	AM	PM	Type of Material															
				Plastic Bags	Plastic Bottles	Glass Bottles	Wood and Charcoal	Tins	Tins to make toys	Batteries/bottle caps	Foam	Cardboard	Alumin ¹ /copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Stones
Child (<12)	M																		
Adolescent (12<->20)	F																		
Adult (20<->40)	M	1		1															
Older (40<)	F	1			1														
Older (40<)	M																		
Older (40<)	F																		
Total Movement		2	0		1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Collected only one item					1	1													
Collected two or more items																			
Sold					U	1													
Used in house					U														
Scav full time					U	1													
Scav part time					U														
Persons not interviewed ⁴																			
Child (<12)	M	1																	
Adolescent (12<->20)	F																		
Adolescent (12<->20)	M	3																	
Adult (20<->40)	F																		
Adult (20<->40)	M	2																	
Older (40<)	F																		
Older (40<)	M																		
Older (40<)	F																		
Total		6	0																

Note: ELISAL has a pick up at both sites during the morning

1 - aluminum/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other:

4 - a count of persons who visited the site during the period of observation. The researcher was occupied an

u - unknown, response not given

Appendix E

Landfills, Gamek, Mulenvos and Soares de Costa

Table E-1
ANG-466; Peri-Urban Emergency Sanitation Project
Scavenger Study at Gamek Landfill
Date: July 23, 1997

Person	M / F	Type of Material														
		Plastic bags	Plastic bottles	Glass bottles	Wood/ charcoal	Tins	Batteries/ bottlecaps	Foam	Cardboard	Alumin/ ¹ copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Other ³
Child (<12)	M															
Adolescent (12<=>20)	F															
Adolescent (12<=>20)	M					4				7						
Adolescent (12<=>20)	F		1	2		1										
Adult (20<=>40)	M					6				13						
Adult (20<=>40)	F		1	6		4										
Older (40<)	M				1				1			5	1			
Older (40<)	F			1	1				2				1			
Totals	52	0	2	9	2	15	0	0	3	20	0	5	2	0	0	0
Collected only one item				7		15			1	20		5				
Collected more than one item			2	2	2				2				2			
Material sold			2	9	2	15			3	20		5	2			
Mat. used in house																
Scav full time				9		3				17		5				
Scav part time			2		2	12			3	3			2			

Notes:

The total number of persons scavenging is presented under the 'persons' heading.

The number of cases of each item being scavenged is indicated under the 'type of material' heading.

These numbers will differ if a person collects more than one item.

In addition to the 52 people interviewed were 25 other persons scavenging broken glass.

1 - aluminum/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other:

Table E-1
ANG-466; Peri-Urban Emergency Sanitation Project
Scavenger Study at Gamek Landfill
Date: July 23, 1997

Person	M / F	Type of Material														
		Plastic bags	Plastic bottles	Glass bottles	Wood/ charcoal	Tins	Batteries/ bottlecaps	Foam	Cardboard	Alumin/ ¹ copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Other ³
Child (<12)	M															
Adolescent (12<=>20)	F															
Adult (20<=>40)	M					4				7						
Older (40<)	F		1	2		1										
	M					6				13						
	F		1	6		4										
	M				1				1			5	1			
	F			1	1				2				1			
Totals	52	0	2	9	2	15	0	0	3	20	0	5	2	0	0	0
Collected only one item				7		15			1	20		5				
Collected more than one item			2	2	2				2				2			
Material sold			2	9	2	15			3	20		5	2			
Mat. used in house																
Scav full time				9		3				17		5				
Scav part time			2		2	12			3	3			2			

Notes:

The total number of persons scavenging is presented under the 'persons' heading.

The number of cases of each item being scavenged is indicated under the 'type of material' heading.

These numbers will differ if a person collects more than one item.

In addition to the 52 people interviewed were 25 other persons scavenging broken glass.

1 - aluminim/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other:

Table E-1
ANG-466; Peri-Urban Emergency Sanitation Project
Scavenger Study at Gamek Landfill
Date: July 23, 1997

Person	M / F	Type of Material														
		Plastic bags	Plastic bottles	Glass bottles	Wood/ charcoal	Tins	Batteries/ bottlecaps	Foam	Cardboard	Alumin/ ¹ copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Other ³
Child (<12)	M															
Adolescent (12<=>20)	F															
Adult (20<=>40)	M					4				7						
Older (40<)	F		1	2		1										
	M					6				13						
	F		1	6		4										
	M				1				1			5	1			
	F			1	1				2				1			
Totals	52	0	2	9	2	15	0	0	3	20	0	5	2	0	0	0
Collected only one item				7		15			1	20		5				
Collected more than one item			2	2	2				2				2			
Material sold			2	9	2	15			3	20		5	2			
Mat. used in house																
Scav full time				9		3				17		5				
Scav part time			2		2	12			3	3			2			

Notes:

The total number of persons scavenging is presented under the 'persons' heading.

The number of cases of each item being scavenged is indicated under the 'type of material' heading.

These numbers will differ if a person collects more than one item.

In addition to the 52 people interviewed were 25 other persons scavenging broken glass.

1 - aluminum/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other:

Table E-1
ANG-466; Peri-Urban Emergency Sanitation Project
Scavenger Study at Gamek Landfill
Date: July 23, 1997

Person	M / F	Type of Material														
		Plastic bags	Plastic bottles	Glass bottles	Wood/ charcoal	Tins	Batteries/ bottlecaps	Foam	Cardboard	Alumin/ ¹ copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Other ³
Child (<12)	M															
Adolescent (12<=>20)	F															
Adult (20<=>40)	M					4				7						
Older (40<)	F		1	2		1										
	M					6				13						
	F		1	6		4										
	M				1				1			5	1			
	F			1	1				2				1			
Totals	52	0	2	9	2	15	0	0	3	20	0	5	2	0	0	0
Collected only one item				7		15			1	20		5				
Collected more than one item			2	2	2				2				2			
Material sold			2	9	2	15			3	20		5	2			
Mat. used in house																
Scav full time				9		3				17		5				
Scav part time			2		2	12			3	3			2			

Notes:

The total number of persons scavenging is presented under the 'persons' heading.

The number of cases of each item being scavenged is indicated under the 'type of material' heading.

These numbers will differ if a person collects more than one item.

In addition to the 52 people interviewed were 25 other persons scavenging broken glass.

1 - aluminim/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other:

Table E-1
ANG-466; Peri-Urban Emergency Sanitation Project
Scavenger Study at Gamek Landfill
Date: July 23, 1997

Person	M / F	Type of Material														
		Plastic bags	Plastic bottles	Glass bottles	Wood/ charcoal	Tins	Batteries/ bottlecaps	Foam	Cardboard	Alumin/ ¹ copper/bronze	Metal ² pieces	Broken glass	50 kg bags	Car tire	Plastic to burn	Other ³
Child (<12)	M															
Adolescent (12<=>20)	M					4				7						
Adult (20<=>40)	F		1	2		1										
Adult (20<=>40)	M					6				13						
Older (40<)	F		1	6		4										
Older (40<)	M				1				1			5	1			
Older (40<)	F			1	1				2				1			
Totals	52	0	2	9	2	15	0	0	3	20	0	5	2	0	0	0
Collected only one item				7		15			1	20		5				
Collected more than one item			2	2	2				2				2			
Material sold			2	9	2	15			3	20		5	2			
Mat. used in house																
Scav full time				9		3				17		5				
Scav part time			2		2	12			3	3			2			

Notes:

The total number of persons scavenging is presented under the 'persons' heading.

The number of cases of each item being scavenged is indicated under the 'type of material' heading.

These numbers will differ if a person collects more than one item.

In addition to the 52 people interviewed were 25 other persons scavenging broken glass.

1 - aluminum/copper/bronze

2 - metal other than aluminum/copper/bronze

3 - other:

Appendix F
Focus Group Summary Sheets

Focus Groups in Mulenvos

Two groups were held on the same day; twelve men participated in one and eleven women in the other. The men's ages ranged between 29 years and fifty five years, the women between twenty and fifty years. There were three women who were forty and above and five men over forty years of age. Both groups discussed scavenging for glass only. Group atmosphere was good and members participated freely.

Why this site?

Both groups indicated that the major sites for glass collection were Mulenvos, Nocal and Golfe. The women said that they collected in Mulenvos, because it was nearer their homes; the men said that both Golfe 11 and Nocal were "closed" sites. They described a monopoly in these sites by the people who lived near the sites (they referred to them as proprietarios) and they said that to work there, one needed to have a friend or family member who vouched for one. The men maintained that Mulenvos site was an open site – with people working there from all over the city. They named bairros, Cazenga, Vidrul, Mabor, Cacuaco, Cimangol, Kicolo, Ilha and Viana. The men also maintained that the scavengers in the Mulenvos site "cooperated" with each other. "Existe cooperacao entre nos".

Mulenvos was also a good site because Cuca dumped their glass there which was good quality glass and clean. Refrinor dumps in Soares da Costa and Nocal in the Nocal dump only. Elisal lorries bring glass but it is mixed with other rubbish, dirty and poor quality. Imported beer bottles such as Cristal, SuperBock and Sagres were considered poor quality glass.

Why scavenge glass?

The women said that scavenging required no capital investment. They maintained that to become involved in other businesses, one required a lot of money and one could lose a borrowed investment very easily – "e preciso muito dinheiro para a fazer os outros negocios e mesmo assim, o dinheiro vai para abaixo". The men spoke more about "jobs". They maintained that they all had previous jobs but when they became displaced, they lost their jobs or they lost their jobs in privatisation. The men also said that the advantage of scavenging glass was that one had a fixed outlet, Vidrul, which buys glass. Both groups said that they learned about the business from friends. There also seems to have been active encouragement from the Vidrul company.

Hours worked

Both groups regarded the activity as a job and referred to it thus – "o nosso/meu trabalho". Both groups said that the women come later because they have housework to do first. The men said they left home at 06.30 and the women said they left at 07.30 or 08.00. Both groups said they finished work at 17.00 – the women's group said that when people left early it was because they had other problems at home. Most men said that they had "lavras". The women did not mention "lavras". People brought food from home or cooked food on the spot.

Quantity of glass collected

The quantity collected depends on the number of people working. Some people work on their own; in other cases they work as a husband and wife team and in some cases it functions as a family business. One man described how all his children work with him; one

group comes in the morning and the other in the afternoon. All his school age children go to school and they come to the dump site the period they do not go to school. The women estimated that one woman could collect 15-20kg per day and that a man with help could collect 50kg in a day. The men said that one man on his own would need to work more than one month to collect sufficient glass to make it worth selling.

The collected glass is kept on site. The women said that their glass did get stolen sometimes, particularly if the glass was not in sacks. The men stated categorically that "there was no problem with stealing in their site".

Tools used

Both groups said that they did not use any particular tools; people used enchadas, the wire coverings of fans, broken zinc.

Both groups maintained that injuries were common such as cut hands or feet, getting glass or other objects into their eyes.

Scavenging Cycle

Both groups described the same cycle with some different comments on the difficulties encountered. When lorries come to offload rubbish, scavengers crowd around the lorries. The women described how the strongest people push to the front and collect more glass, more easily. The older women said that they were not physically able to push their way in a crowd and they had to dig for the glass that other people leave behind.

The collected glass is removed to another spot where it is cleaned, removing the sand and the rubbish. Then the glass is put in bags. If the glass is crushed one can put 60-70kg in one sack. Information varied on how often the Vidrul lorry came to collect the glass – some said monthly, others said every fifteen days. Not everybody loads their sacks when the lorry comes – only those who consider that they have enough to sell. On the other hand, if scavengers have accumulated much glass and the Vidrul does not turn up, they then hire a candongeiro to go to Vidrul. Vidrul has apparently two lorries, one with a capacity to haul 850 sacks in one trip and the other with a capacity for 350 sacks. Vidrul does not charge for the haulage. The owners of the sacks must go with the sacks because

- a) if the sacks burst, the owner must be there to buy more sacks and re-sack the glass.
- b) The owner must be present at the weighing

Putting the sacks on the lorry at the dump site is not a problem because people help each other. But the women said that at Vidrul, they must hire help to carry the bags. There the glass is emptied out and weighed – money is discounted if stones or objects are found among the glass. Vidrul company prefers broken glass to bottles which may have contaminants like petrol. Whole bottles are sold to market sellers of paraffin or other liquids.

Prices and Profit.

There was too much variation in the prices quoted to allow the researchers form any valid opinions on the income people earned. Some of the quoted costs included

- A 50kg sack quoted at 300,000 to 350,000Kw.

White glass sells for more in relation to brown glass. Quoted selling prices were Six bags for 6 million; 40 bags for 18 millions; forty eight bags for 56 millions (crushed glass) and fifteen bags for 8 millions. The mens group said that the current selling price was 10,000 Kw per kilo and they thought that a just price would be 30,000Kw per kilo (about 10cents USD).

Other concerns:

The mens group raised the issue of the difficulty they had getting school places for children. Most of the participants were displaced and did not have school transfer documents or often basic identity documents for their children. During the Beneficiary Assessment for the Water and Sanitation Sector, when data was collected during May 1995, this concern was also raised by a number of groups.

Focus Group - GAMEK – Aluminium, copper and bronze

Twelve people participated and the group composition was mixed. The ages ranged from twenty nine years to sixty three years. This group was very lively and volunteered unsolicited information

Why this site?

Gamek dump site was considered the “mother of all rubbish sites”. The participants said that no other dump site had so much aluminium and no other site had as many rubbish lorries dumping there. A number of participants said that they had already been scavenging other items in the site when a man appeared one day and said that he would buy aluminium from them. Since then they have specialised in aluminium. Initially, they sold only to the man who had appeared but then soon they decided to find out where he sold the material. They localised his buyers and found out the price these buyers paid; they were then able to re-negotiate a better price at Gamek.

Why scavenge aluminium or bronze?

The participants considered that a minimum acceptable wage in the formal sector would be 150USD. They felt that it was not worth the “chatiço” to work for less. Given that they could not get a decent job with an acceptable wage they preferred to scavenge on their own time and not be bothered by a boss. Scavenging provided them with sufficient money “to keep hunger from their house”. (Aguentar a fome em casa). They stated strongly that they most of them had professions but could not find jobs in their profession that provided a minimum wage.

Profile of the Scavengers

The participants said people came from all over Luanda to the site; they cited examples from Golfe 1 and 11 (near), Cazenga, Petroangol, Estalagem, Sambizanga. They were originally from Luanda, K.Sul, K.Norte, Catete, Malange, Kissama and Benguela. All the participants said they scavenged because they could not find other jobs. The group included a shoemaker, demobilised soldiers, ex-fisherman, a car-sprayer, a radio technician, a young women with a professional dress-making course, a driver, a machine operator and a mechanic. One young man said he was a student but that his name “did not appear on the list” so he scavenged rather than sit at home doing nothing. The comments made by the group on the job market included

“we are not here because we are mad; we are here to earn a living”

“I am a professional driver with my documents, but here in Angola, you need a lot of good luck to manage to get a job”

“One day they came and took us to work on the building sites at Luanda Sul. We worked all day, they gave us a meal of rice and fried fish and they only payed us 5 million at the end of the day. We are better off here on the dump site”.

One young boy was an orphan and had been an apprentice with a “serralheiro”. He left the serralheiro because he was payed so little and went hungry. The participants said that he was only a child when he appeared on the site but that he had stayed with them since his arrival and was quite happy here.

The participants wer asked what they did when they were not scavenging. Two types of responses were elicited, one which referred to their leisure time and the other to other gainful employment. One young man said that when he finished work, he bought water near-by, washed and dressed himself smartly and went off looking for girlfriends or sometimes he went to the cinema. Others said that they went home to spend time with

their families and many said that they read and washed television.

It was clear that a significant number followed other opportunities for making money when available – some washed dishes in restaurants in Ilha and Miramar, another man worked at his profession as a shoemaker and yet another went looking for occasional labour at the warehouses. One man said that

“as head of the family, he could not be irresponsible enough to depend on one source of income only, that he obviously had to go chasing up other opportunities”.

Hours worked

As in the groups which collected glass, this group regarded the activity as a job, like any other job. Those who lived near or on site began working at 05.00; others who lived further away came at 07.00, 08.00 or 09.00. The participants said that those people who stayed later than 18.00 did not stay to work but rather to find out where other people had “hidden their material, to steal it”. People came to work mostly on foot; those who lived far away came by taxi (candongeiro) if they had money.

Quantity collected

Two to three Elisal lorries dump daily in Gamek; if the lorry “sleeps in the driver’s house”, the driver can manage three dump loads in a day. Other companies also dump in Gamek but not on a regular basis.

There are relatively large quantities of aluminium which appear regularly; copper and bronze only appear in small amounts. The participants estimated that one person could fill a 50kg sack in one to two days depending on how quickly they worked. The group of them working the dump site could fill a container with aluminium in one month. Bronze and copper are found only in small amounts and it takes three to four weeks to fill a 50kg bag. All of the participants said that they accumulated the aluminium on site but most of them took the bronze and copper home with them – the amount they collected in one day was quite light and it was more valuable. Many people sold their aluminium on Friday to have money for the weekend.

Tools used

The participants used iron rods to dig and separate the soil and rubbish. When they needed to remove a “junta de cupla” they used a hammer, escopro, chaves de boca to take it apart.

They come to work well dressed and change into “working clothes” on site.

Scavenging Cycle

“When the lorries come to dump, we all crowd around the lorry and begin separating and digging through rubbish with our iron rods”. The pieces which are retrieved are put in a container. “Often you think you have lots of aluminium but when you weigh it, it amounts to nothing”. Much of the collected copper comes from light cables, which are burned until the collectors retrieve approximately 60 or 70kg which they then sell.

Many people buy aluminium, bronze and copper. There are buyers in Golfe 1 and 11 and there are two houses near the dump site which also buy. Many of the warehouses belonging to business people from Mali and Senegal also buy it. There is a Malian named Fofano who is one of the big buyers.

“he does not weigh directly himself but he opened containers in Golfe 1 and 11 and he has

other places in Sambizanga”.

People who have a “fundicao” also come to Gamek to buy. The participants said that if there were direct transport from Gamek, they themselves would take their material to the warehouses for sale; but they mostly sell to the buyers who have outlets nearby. As in other scavenging, the major risks are injuries. The participants described where one person digging with their bare hands can be injured by another using a tool. Another common injury was burns while burning the electricity cables. When the Elisal lorries dumped (the participants referred to the Elisal lorries as Calabrese) they sometimes got injured by falling batteries, gas bottles or lumps of metal. One participant described how a car engine had fallen on her foot and she was in hospital for six months. Thieving was an external problem; sometimes late in the evening at 18.00 or 18.30, groups of thieves arrived and stole their money or any valuables they had on them.

Organisation of their work

Some people work alone and others in groups. People are assigned sections; one participant said he worked a section with three other older people.

“There are codes for the sections, such as B,4,C and 7 but since you have only come here to-day you would not understand our codes”.

The group elected a Soba Angeli.

“Soba Angeli is very big with a deep voice and he has already passed through many dump sites; we elected him because he is old and he likes things organised properly and gives good advice.”

The Soba resolves any “confusions” and arbitrates any disputes. For example if one person has their material stolen and identifies the thief and beats them, the soba will punish both the thief and the person whose material was stolen. Originally, the Soba lived at the dump site but the participants said that the workers on the site felt that it was inappropriate for their Soba to live on the dump site;

“we saw that it was not good for him to be living here with his wife, so we all contributed money, gave it to him and he built his own house in Golfe 11, where he lives with his wife”.

They added that,

“sometimes we sit here with our Soba and he tells us stories, gives us advice and he even gives us good ideas”.

The participants distinguished between those who came to scavenge on a daily basis but slept in their own homes away from the dump-site, *Lipixeiro* and those who worked and slept on site, *Incanqueiro*.

The mermaid of Chionga

One participant had worked the dumpsite since 1983; others began in the late nineteen eighties but the majority had begun working as and from 1992. The longest standing worker said that he/she knew the history and traditions of the site. According to this participant, originally there had been many people working the site but people began to die and disappear. They began to investigate the tradition of the site and discovered that a “fairy/magic person” (Sereia Chionga) lived in the embondieros and the holes. The group decided to organise an annual festival (festa), buying kimbombo and dancing around the embondeiros. Now people do not die or disappear any more. The annual festival is held on May 25; when they dance around the imbondeiro they chant “we fled our bairros and we did no harm to anybody, so open up and let us in, we do not wish to die”

Prices

The participants indicated that the price they got depended where they sold. Nearby, the

prices were lower than if they took their material directly to the warehouses because when they sold locally, the buyers discounted the cost of transport. They quoted the following local prices;

- Aluminium, 1 kg @ 20,000 Kw
- Bronze, 1 kg @ 100,000 Kw
- Cutlery, 50,000 Kw clothes iron @ 500 - 600,000Kw
- Clothes Iron Handle @ 300,000Kw Control for Iron @ 50,000Kw

The price for bronze in CHEL was 150,000Kw. Hence if they could get a lift with the Elisal lorry, they took their material to CHEL. Essentially, the best opportunities for making money was to collect bronze and copper.

Focus Group - GAMEK Glass Collectors, 08-08-1997

This group was a mixed group of men and women, ranging between thirteen years of age and thirty one. Nine people participated in the discussion.

Why this site?

The participants said they collected glass on the site because there was lots of glass there. On site, they asked their colleagues who collected other items to inform them if they came across collections of glass shards. Some of them used to scavenge (recolher is the term used by the participants which more closely translates as “collect”) in Soares da Costa and in Vidrul. They heard that there was much more glass shards in Gamek so they moved here. Since they moved to Gamek, they also learned about other good glass sites such as behind the Nocal factory, in the yard of Vininorte in Boa Vista, in Mulenvos and beside the Cuca factory. Some of the participants mentioned that Vidrul and the dump-site behind Filda no longer had any shards worth collecting.

Why collect glass?

The participants all said that collecting glass shards provides for a basic income. Again, many of the women remarked that collecting does not require an initial investment and the only costs they have is the cost of their food during the week they stay on site. Most said that they stayed on site during the week and brought enough food with them to last the week. They mentioned that initially, collecting glass was a young persons occupation but since people realise that it guarentees a basic income, many adults have become involved. One man said that if he were offered a job for 10 millions Kwanzas a month he would refuse it.

Profile of participants

Many of the women said that they had been selling in the market place but that collecting glass was a more secure income. One man told the group “my wife sold in the market but it only brought us a loss, so I brought her here (puxei para ela) and now we work here to-gether” One women had previously been a cook, another man had been a driver but he lost his documents and could no longer work.

Hours worked

Quantity collected

The amount collected depends on how much glass is available. If there is a lot of glass, one can collect three or four bags per day; if one has already seperated a mound of glass, one could bag one 50kg bag in thirty minutes. One participant said that “if we already have the shards seperated we can bag as much as twenty bags a day” The participants maintained that there was no problem accumulating mounds of glass on site, that the glass was not stolen. But they did feel that more people were collecting glass recently and they also competed with the women who came to collect bottles. These group also referred to their digging tool as a “kisandelo”. Some used spades, boxes or buckets. They sometimes used tins with holes to sieve the glass. The women maintained that only the men had boots and gloves – that they the women only had closed shoes. Most participants had collected their tools on site but others maintained that they had taken them from their homes.

Scavenging Cycle

When the Elisal tractor brings old, dry rubbish the scavengers collect the glass and then break it. They then have to check it for foreign objects because if corks, stones or other items are found in it when they go to sell it, the weight of these objects are deducted from the price. One kilo is deducted for each non-glass object found. In Vidrul, a cargo of 50 bags can contain one whole bag of sand and maybe about 50kg worth of other non-glass objects. The glass is separated by color because white glass is more expensive. Then the glass is bagged.

When the Vidrul lorry comes people help each other to load the lorry. The participants said that normally approximately 25 people loaded together. Some of the bags could weigh 100kg and required 5-6 men or 6-7 women to lift them. The owners mark their bags. This group of participants maintained that Vidrul lorry charged for the transport – they quoted 200,000Kw as the price paid for a complete load. Vidrul has only two lorries. Normally one lorry turns up every fifteen days. They said that

“we are waiting for the lorry since Monday. So our colleagues, who live in Vidrul, went to the factory to-day to tell them that we are waiting for them”

No other lorries apart from the Vidrul lorry come to collect glass.

The owners follow the truck in a taxi. Sometime ago they sat on top of the cargo but the police do not allow that any more. When a lorry comes, not everybody loads their bags – people only load if they feel they have sufficient glass to take some money. If there are many people waiting to sell in Vidrul, they have to join the queue, sticking with their own bags. Sometimes they have to sleep over a number of nights in Vidrul and they sleep in colleagues houses in the neighbourhood. When arrive at the weighing post, (they referred to it as the field “campo”) they untied their bags. The contents are weighed and the money is payed.. The participants said they never had any problems with the workers in Vidrul. They never refused to buy and they never had to go away with a cargo without being able to sell it. But one problem that did arise was that when the “basculante” tipped their load, some bags would burst. Then the owner has to buy new bags and re-bag the material. Raffia bags were less resistant to sisal bags which could often be used 4-5 times. Again the most frequent problems are injuries. Many people have to fill their bags with their bare hands and they injure themselves. When they are beating the glass to break it, shards can enter their eyes. One women described an injury where she had to get 5 sutures and payed 17 million Kw. She spent four days without moving her hand. The participants said that

“if something like that happens in a factory, there will be a health post in the factory and you will not pay anything”.

When they began working in Gamek, they found the young people there who collected aluminium. These people, because they were there first, annoyed them and would not let them work at ease. But now they all work as colleagues. The participants said the police were not a problem; the police only checked the rubbish lorries, to make sure that they were only carrying rubbish.

Price and Costs

One man said that he had recently been paid 30 millions for forty bags. The previous buying price at Vidrul was 8000Kw; many people stopped collecting then because the price was so low. Now they buy white glass for 15,000Kw per kilo and brown glass for 12000Kw per kilo.

Raffia bags cost 100,000 to 200,000Kw and sisal bags cost 500,000Kw per bag.

If somebody is sick when it comes to selling the glass, they either ask a friend to sell for them; one does not normally have to pay a friend. But if the service is done by a “stranger” (estranho) they will pay them half the load for the service.

Focus Group - GAMEK – Mixto 11/08/1997

The group was composed of eleven participants, five adolescents, four males and one female and six adults, four women and two men. It included people who collected bottles, tins, cardboard and bags. The researchers reported that it was a difficult group to hold because the women said that they were in a hurry to work and the youths who collected aluminium were threatening the group. The women collected bottles, bags and cardboard and the men collected tins.

Why the site?

Participants said that other dumpsites such as Soares da Costa and Ramiro were too far away. Those who collected tins said that there were much more tins at a large dumpsite and they could come and collect what they needed quickly. Those who collected tins did so to make trunks. (malas) Some participants had worked the site for some months only; those who collected cardboard and tins were working for over one year. The participants said they knew of people working there for three years and more.

Why scavenge?

Again participants scavenged to earn a living and none of this group had other occupations but most scavenged to re-sell the material themselves. One young man said that when he was not scavenging he looked for occasional labour in the bairro. Their observations included,

A young man, "we do this not to have to steal and be killed eventually"

Young people, "there are no other jobs and we cannot depend on our parents for ever.

They brought us up and now it is our turn to help them. We come here to "make do" (desenrascar-se na vida).

An older woman, "I can get bottles and paper and bags and sell them. It makes enough to buy food and pay for my children to go to school. I am illiterate but I do not want that my children have to come here to-morrow to work on top of rubbish"

A younger woman, "I am here to earn about 20 million kwanzas, then I will begin another negocio (business) in the market"

A second woman, "my husband cannot get work because they are asking for 300USD to give him the job".

Hours worked

The hours worked depend on the individuals. Those who live near come at 07.00. Others come much later. Again, as in other groups, the women say they come later because they have housework to do. The group which collected tins said they came early at 07.00 and normally finished their work by 15.00. The working hours also depended on when the rubbish lorries came; on Mondays one must wait until late afternoon to collect anything worthwhile but on Fridays and Saturdays, the lorries dump early and sometimes the participants finished work at 14.00 on those days. Many people took taxis to work if they lived far away but only if they could afford it.

Scavenging Cycle

Those who collected tins worked with their families making trunks. They thus came to collect the amount of tins they required and then returned home to make the trunks which they sold in the market places. They collect the tins, cut them, straighten them and align the sheets. They said that they could collect two or three sacks of tins in thirty minutes. Often all they have to do is scavenge after the people who make lamps, because they only

remove the tops from the tins and they can collect lots of tins in their wake. They can plan their activities according to the amount of tins they collect. They know how much tins they need to make a trunk and how long they will be making the trunks. Those who make trunks often work three or four people in one yard but each individual is responsible for his own output and for selling in the market place. When selling in the market place they pay 1 millionKw to the inspectors (fiscais).

The group who collected bottles said it took two to three hours to collect a 50kg sack of bottles. They then had to wash the bottles in the river "Catim-tom". Some sold the bottles and some sold other products in the bottles. All the participants said they took whatever they collected home with them, that otherwise it would be stolen. He who had money took a taxi, if not they walked home.

All of this group referred to the iron they used to dig as a "kissandelo"

Most of the group said that they sold what they collected or what they made in the markets – each one selling in the market nearest their house; the cardboard was sold directly to people who make bread for sale in their homes.

The problems mentioned were again injuries. Apparently, the bottles can explode and on one occasion some other object exploded and injured a number of children who are still in hospital.

Prices

- The participants who made trunks sold small trunks for 3million Kwanzas and large ones for 5-6millions Kwanzas.
- A sagres bottle of parafin is sold for 50,000Kw
- A rafia bag sells for 30,000Kw
- A bundle (um atado) of cardboard sells for 500,000Kw

All of the participants said that they scavenged in groups of three to four but each individual collected and was responsible for his own material.