
Forging new partnerships: integrating scavengers in the waste management system in Lapu-Lapu City

A study for JPIC-IDC and JusticeF on the livelihood conditions of scavengers in Lapu-Lapu City. Conducted in co-operation with the Civil Engineering Dept., University of San Carlos, Cebu City, Philippines, October 2004

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By

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Preface

- Questions this report can and cannot answer
- For whom is it written?
- Shortcomings
- Acknowledgements

Part A: Executive Summary

Taking into account the results of the meeting with JPIC and Lapu-Lapu City on October 11.

Challenges for Lapu-Lapu City

Lapu-Lapu City works on the implementation of the Ecological Solid Waste Management Act (R.A. 9003). Doing that, the city faces a number of challenges:

- Environmental considerations, namely the protection of the fresh water supply of the island.
- Social considerations, namely the situation of the people living on the dumpsite (about 110 families or 600 scavengers).
- Technological considerations, namely the setting up of a material recovery facility and a sanitary landfill.

JPIC-IDC: focusing on the social impact

The Justice Peace and Integrity of Creation, Integrated Development Center is a Cebu-based organization headed by Fr. Max T. Abalos, SVD. The organization has a long working experience with scavengers in Inayawan (Cebu City) and Umapad (Mandaue City). JPIC-IDC pursues an integrated approach, not just tackling a single issue but focusing on the development of a functioning community. In Lapu-Lapu City, JPIC-IDC started to work early in 2004. First measures include the supply of free medical treatment by a doctor and a feeding program for the children. Acknowledging the important role of politics, JPIC-IDC seeks to co-operate with the local government.

Finding partners

JPIC-IDC has good contacts to a number of organizations in Germany. Through its partner-organization JusticeF, JPIC-IDC has had an initial contact with the German city of Oberhausen. During that initial meeting, the mayor of Oberhausen proposed to assist JPIC-IDC's partners in the field of solid waste management. Thus, JPIC-IDC and its partner JusticeF would be able to facilitate a partnership between the cities of Lapu-Lapu and Oberhausen.

Such a partnership could cover different aspects:

- Capacity building: internships in the administration of Oberhausen or in recycling/waste companies based in Oberhausen.
- Consultancy: either by the city administration or companies based in Oberhausen.

- Technical equipment: facilities needed for the setting up of a material recovery facility or a sanitary landfill.

Furthermore, the partners could explore possibilities to co-operate with the University of San Carlos and the GTZ, a German development agency, which just started a pilot project on integrating scavengers in the formal solid waste management process.

Taking social issues into account

Oberhausen City, JPIC-IDC and JusticeF are concerned about both environmental and social issues raised by solid waste management. In particular, they are concerned about the situation of the people living on the dumpsites, the scavengers. Therefore, they would be very interested to incorporate their situation into the overall considerations. Initial ideas include the following:

- For a transitional phase, scavenging shall be allowed in a certain portion of the new dumpsite (as proposed by the DENR / EMB).
- Once the MRF is operational, only scavengers shall be employed to run it.
- At least parts of the revenues created by the MRF shall be used for livelihood projects for the remaining scavengers.

Next steps

An initial meeting between JPIC-IDC and JusticeF took place on Monday, October 11. Lapu-Lapu City was represented by Engr. Perla T. Amar, Asst. City Planning and Development Coordinator. To enter into detailed negotiations with the mayor of Oberhausen, Lapu-Lapu City should signal its interest in the partnership and formulate its needs concerning solid waste management. Then, facilitated by JPIC-IDC and JusticeF, proper negotiations could be started.

Part B: Analyzing the current situation

B.1 The Political Framework

Introduction

The field of solid waste management is heavily affected by political institutions. In fact, politicians and governmental agencies are supposed to set rules for solid waste management, to monitor them and to enforce them when necessary. Therefore, we cannot look at the scavengers the supply chain alone. This chapter intends to give a brief overview of the most important political actors and the R.A. 9003. Since politics are in flux continuously, this is a somewhat difficult task, and the picture might change over the time.

Requirements by the R.A. 9003

The juridical framework is dominated by a single piece of legislation: the Republican Act (R.A.) 9003 – the “Ecological Solid Waste Management Act of 2000”. The importance of the R.A. 9003 is often underlined by the fact that it was the very first act signed by President Gloria Arroyo.

In short, the law prohibits the operation of open dumpsites and requires municipalities to transform them into sanitary landfills. A transitional phase, in which municipalities are allowed to operate so-called controlled dumpsites, is also governed by the law.

Theoretical input:	
Dumpsite	Sanitary Landfill
<ul style="list-style-type: none">• Lack of barriers to surface and groundwater• unfenced site• windblown waste distribution• uncontrolled drainage• uncontrolled gas-generation and migration• „waste picking“• lack of management and monitoring	<ul style="list-style-type: none">• Controlled drainage• management and operation plan• trained employees• waste compaction and soil coverage• SLF-construction• monitoring of surface-, groundwater and gas-generation• leachate and water treatment

Source: Paul, Johannes Ph.D., German Development Service

Local governmental units were due to comply with the law by the beginning of 2001. The deadline has been delayed several times. The latest deadline expired in January 2004.

The law is very detailed and sophisticated. We are not going to introduce it further at this point – but we will mention and explain its provisions whenever necessary in other chapters.

Main political actors and institutions

This is a list of the important actors we came across during our research. They are not ordered in any particular way.

The municipality of Lapu-Lapu City It is up to the municipalities (or local governmental units, LGUs) to implement the R.A. 9003. Likewise, Lapu-Lapu City has to transform the old open dumpsite into a controlled one. By this, the city is facing several serious challenges. The first challenge is a geographical one: Lapu-Lapu City is located on Mactan Island, which means that just very few space is available. This is highlighted by the requirement by the R.A. 9003 that the new dumpsite must not be located next to the seashore. Furthermore, the freshwater bubble beneath the island is rather close to the surface, which bears the inherent danger of water contamination through the dumpsite. The second challenge is concerning the high density of population and industries. Once again, this is posing constraints on finding a space for the new dumpsite. Most probably any relocation of the dumpsite would require expropriation of landowners elsewhere¹.

However, City Councillor Mario Y. Amores has come up with an ambitious ten year zero waste management plan. In brief, the plan features the following details:

- handing over of the old dumpsite to PEZA, who should operate the dumpsite thereafter;
- set up a new controlled dumpsite with a perimeter fence (to discourage scavenging) and a material recovery facility;
- sort out all recyclables (through the MRF²) and sell them;
- Buy a so-called “Pyrolysis machine” to burn the residual waste and use the remains as asphaltting material for streets.³

¹ Several interviewees mentioned ongoing expropriations in this matter. However, they also stated that such a process would probably take years.

² “MRF” (Materials Recovery Facility) – is a facility material, can be collected either via curbside collection or delivery by homeowners to local drop-off and buy back centers. These are processed segregation and recycle of solid waste.

The plan has already been approved by the solid waste management board of the city and has also been signed by Mayor Arpuro O. (“Boy”) Radaza. It is unclear how much money is earmarked in the city budget – an important question, since the plan definitely requires the purchase of land and expensive technical equipment. Nevertheless, Councillor Amores is highly optimistic in this regard. He has also started talks with different stakeholders like PEZA, single big companies, the airport authority, etc.⁴

Scavengers are not mentioned in the plan. There is a certain frustration about them in the city hall, because former attempts to deal with them have failed. The conclusion seems to be that they are to be ignored.

*Barangay*⁵ *Mactan* is the Barangay in which the dumpsite is located. This means that it is under the full jurisdiction of this Barangay. In particular, the Barangay monitors the number of trucks going there, guards the site and charges the dumping trucks.

Interestingly, Barangay Captain Paz Radaza is the wife of the mayor of Lapu-Lapu City. Mrs. Radaza claims a leading role in implementing solid waste management on Barangay level – she is about to start a pilot project on waste segregation in 500 households. By this, the volume of waste shall be reduced. If successful, this scheme shall be expanded to other Barangays in Lapu-Lapu City.

For us, it remains unclear how this is corresponding with Mr. Amores centralized zero waste management plan. We did not get a clear answer about this by Mrs. Radaza. It is neither clear if she supports or opposes the plan.

The *Department for Environment and Nature Resources (DENR)* and within it the Environmental Management Bureau (EMB) is the enforcing agency of the R.A. 9003. It is not run by the local or regional governments but by the federal government in Manila.

Their task is to monitor and enforce the R.A. 9003. In addition to that, the DENR is engaged in capacity building for LGUs to enable them to gain the necessary knowledge and skills to comply with the law.

The DENR also issues permits for recycling companies. Scrap buyers and junk-shops have to be registered with the DENR. But due to notorious under manning and shortage of money, the DENR is not able to effectively control the whole sector. If at all, there are random checks of single companies.

³ “Pyrolysis” is chemical decomposition brought about by using very high heat in the absence of air

⁴ Quite a number of interviewees stated that they had or would have an appointment with Mr. Amores in the next time.

⁵ Barangay = smallest administrative entity, like a village or city district

Nevertheless, the DENR is well aware that most LGUs are not complying with the R.A. 9003. But the DENR is also aware, that most officials simply do not know what to do. Therefore it still conducts workshops and conferences for civil servants.

Within the DENR, we have been in contact with Maria Victoria F. Recana. She seemed to be very committed and engaged. We were also in touch with Andreas Koenig, who is a CIM⁶ consultant within the EMB.

Concerning scavengers, the DENR encourages municipalities to transform the dumpsites smoothly. They suggest to designate a portion where scavenging is still allowed – and another portion which is solely used for dumping.

The *Integrated Bar of the Philippines (IBP)* is a semi-governmental organisation: set up by presidential decree but run by independent, private persons. The IBP is the umbrella organisation of all attorneys in the Philippines but also taking some public responsibilities.

The DENR has asked the IBP for back up with regards to the enforcement of the R.A. 9003. The DENR itself does not have the means to enforce the act – but the IBP supposedly has. Indeed, the IBP has stepped in and sent already a notice to sue to the cities of Lapu-Lapu, Mandaue und Cebu. The notice to sue entails a deadline of 30 days to comply with the act, which has expired on October 01. The notice to sue is a warning and precondition for the actual sue. The IBP seems to have chosen a rather aggressive approach towards the above mentioned cities. However, when the IBP is going to continue remains unknown.

The *Philippine Economic Zones Authority (PEZA)* is a governmental agency based in Manila, running the special economic zones. In Lapu-Lapu it is administrating MEZ I (MEZ II has been privately developed and is therefore run by its own administration) where about 100 companies are located.

According to Lapu-Lapu City's zero waste management plan, PEZA shall take over the old dumpsite. This makes PEZA one of the important political actors for us: they might be the ones running the dumpsite where the scavengers are located. Furthermore, the R.A. 9003 also applies to private entities such as PEZA. This means that PEZA would also be required to transform the dumpsite into at least a controlled one.

We know that there are ongoing negotiations between Lapu-Lapu City and PEZA. Unfortunately, we do not know any details. But Sheila M. Cascalla, the Environmental Management Officer of PEZA, at least considered that option.

⁶ CIM is a human resource provider with a development-policy mission. Government agencies and corporations in partner countries, as well as private sector employers can inform CIM of their requirements for experts (GTZ).

B.2 The Supply Chain

Introduction

Once the waste has been collected by the scavengers – where is it going? As an integral part of our research, we have tried to track its way down. Hence, we have interviewed producers of waste, junk-shops and scrap brokers as well as end-users and recyclers. Unfortunately, we were just able to interview a limited number of them. It has proven difficult to approach companies, in particular, if they are at the end of line and running a rather big business. However, we consider the number of interviews sufficient since we have managed to interview some of the key stakeholders.⁷

In this chapter we will first introduce our conceptualisation of the supply chain in Metro Cebu (see graph below). During the course of explanation, we will introduce examples we found remarkable (see boxes). Then, we will focus on prices and highlight the end of the line in Metro Cebu.

Explaining the different stages

In Metro Cebu a wide variety of companies deals with waste. According to the DENR, there are more than 150 of them. When interviewing them, we always asked for their suppliers and costumers. Putting all this data together creates a chaotic picture: this is due to the high number of business relationships and interactions within the sector. Such a picture would have been too complicated to provide us with an overview or a conceptualization of the waste sector. Thus, we decided to simplify it. For its illustration please have a look at the graph B2.1 below (“Supply Chain for Metro Cebu”).

Naturally, such a simplification forced us to skip some data. There might be single junk-shops or other companies who do not fit into this theoretical scheme. To compensate this, we will try to introduce small case studies and additional theoretical information, which you will find in grey boxes.

We have identified five main stages of the supply chain: *production*, *collection*, *segregation / sorting*, *consolidating / processing*, and *reusing / recycling*.

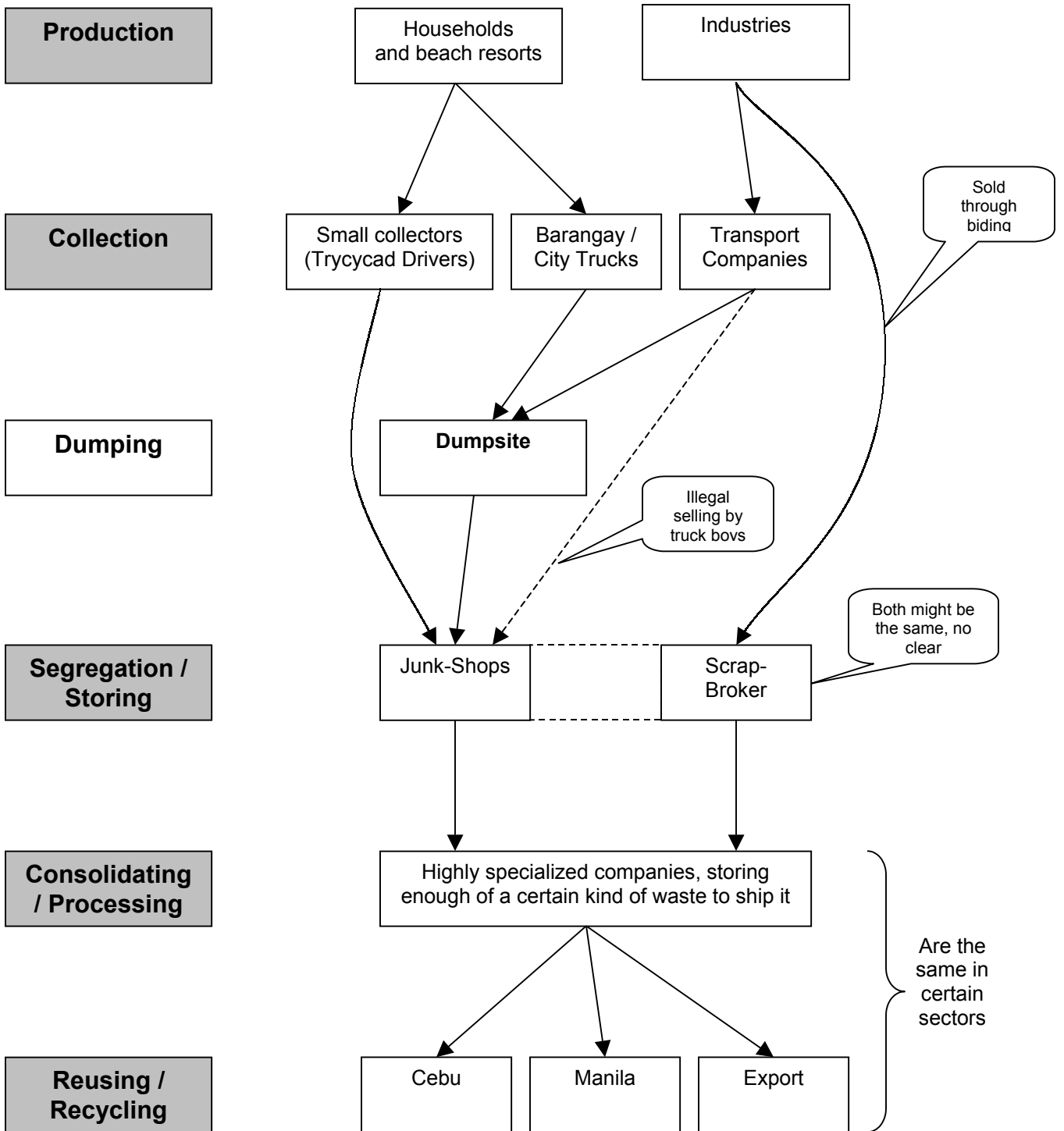
Production and collection. Three groups are responsible for the vast majority of the produced waste in Lapu-Lapu City: households, beach resorts and industries. For the households, it is common in the Philippines to estimate that one person produces 0.5 kilos of solid waste per day. The waste mainly consists of biodegradables, although there are significant portions of plastics and papers as

⁷ As key stakeholder we have identified either those with a special knowledge or those who have been mentioned or endorsed by other stakeholders.

well.⁸ In most Barangays in Lapu-Lapu City the waste is collected by Barangay- or City-trucks on a weekly basis. As part of an informal deal (one could also call it a gentlemen's agreement) the dump trucks will stop by a junk-shop before going to the dumpsite. There, the truck boys will sell valuable materials (metal scrap, certain plastics and carton) they have segregated while loading the truck.

⁸ This data is based on our observations and estimations. We have neither conducted a characterization of the household waste, nor have we checked its volume.

Graph B2.1: Supply Chain for Metro Cebu



The result, of course, is that there will be fewer materials left for the scavengers. In addition to the city dump trucks, there are also private collectors. Those are going from house to house, asking for paper, metal scrap, plastics (PET bottles), aluminium (soft drinks) cans or bottles. They will buy those materials for a few pesos. Usually, they either possess a pushcart or a tricycad⁹. There are many children and old people in this business. The collected waste will be sold to a junk-shop.

Beside being collected, household waste is often burned in the backyard.

For industrial waste, we have focused on the companies within the special economic zones (MEZ I and MEZ II¹⁰). The majority of industrial waste dumped in Lapu-Lapu City comes from those areas. Furthermore, we have interviewed single big producers, such as the Mactan Cebu International Airport Authority and Shangri-la's Mactan Island Resort. The latter serves as an example for the many resorts on Mactan Island.

Usually, companies auction off their waste. In order to be allowed to go into bidding within MEZ I and II, junk-shops have to be accredited with PEZA. The accreditation by PEZA will just be granted to those junk-shops which hold a proper DENR permit.

In most cases, companies tend to deal with a limited number of junk-shops.¹¹ In this respect personal relationships and affinity seem to be much more important than business prospects.

On the other hand there are also companies which are committed to dispose their waste properly and in a transparent manner. Tayo Yuden for example, which is producing semi-conductors and is certified according to ISO 14.001, an environmental management system. The company tracks down where its waste is finally being disposed and therefore requires their buyers to provide them with receipts of where it has been dumped or processed.

The waste collected / auctioned in this way is mainly consisting of ferrous and non-ferrous metal scrap, which is a by-product of many locators in MEZ.

The non-recyclable waste is collected by a single private contractor. Companies in MEZ are charged according to the volume of waste which has been picked up. The truck boys once again sort and sell the waste before it is finally dumped (correspondingly to the city-trucks).

⁹ A tricycad is a bicycle with a sidecar and a loading space instead of passenger seats.

¹⁰ MEZ = Mactan Economic Zone

¹¹ According to Maritrans and Tayo Yuden, XXX

Segregation and storing. At this stage you find what is usually referred to when you talk about junk-shops. Junk-shops buy all kinds of “junk”, which is any stuff that can be sold again. Some junk-shops are specializing in a certain kind of recyclables (such as electronic scrap, metal scrap or bottles), but most of them simply buy everything. Although junk-shops just buy segregated waste, they will segregate it again. Sometimes it is also washed or packaged in an orderly manner. In most cases, junk-shops will store the materials till they have collected a full truckload. Then they will either transport it themselves (if they possess their own truck) or ask their customer to pick it up.

For the segregating and cleaning junk-shops will employ up to 15 workers in their “bodega”. Those workers will earn around 1.000 Pesos per month and will be granted free accommodation and rice.

There are different business models. Some junk-shops concentrate primarily on big business. So they go into bidding and try to buy the materials directly from companies. In this case they will have to operate a truck in order to be able to pick up the waste. Furthermore, they tend to have few but big suppliers.

Other junk-shops prefer to buy from smaller suppliers like the above mentioned tricycad-drivers. These junk-shops deal with a wider variety of recyclables. Whereas those concentrating on big industries can choose what kind of waste they receive, those concentrating on smaller suppliers have to accept different kinds of waste.

Yet another model is given by the junk-shops directly located at the dumpsite. They are similar to those focusing on smaller suppliers, since they have to deal with a wide variety of waste.

Interviews with Junk-shops

We visited a junk-shop, located next to the dumpsite in Lapu-Lapu City. There even are two branches of this junk-shop directly on the site. There are some other junk-shops on the site, but they are tiny compared to this. Hence, this junk-shop is the place where most of the scavengers sell their waste.

These are some examples for buying and selling prices of the Junk-shop:

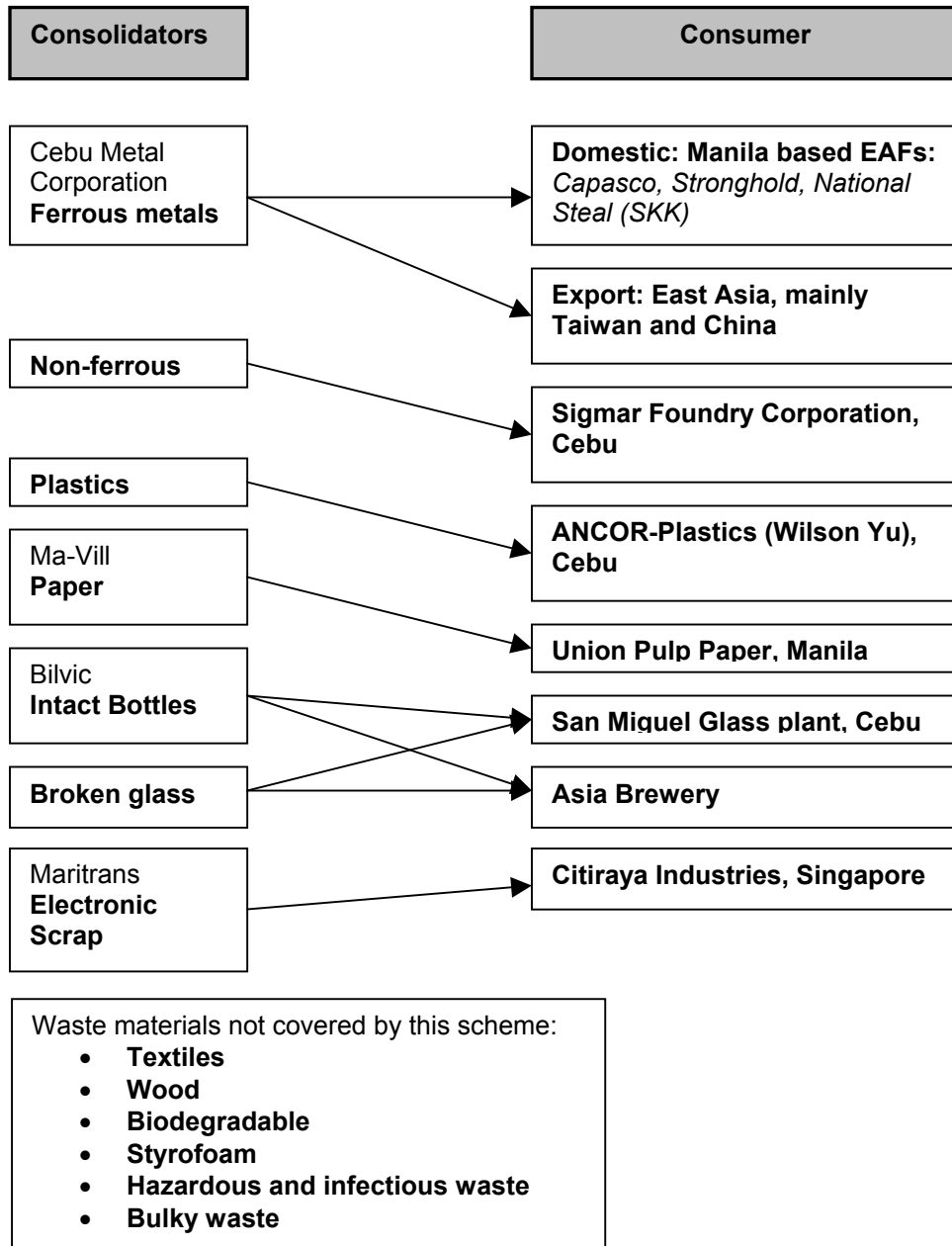
	Buying (per kilo)	Selling (per kilo)
Aluminium cans	40 Pesos	54 Pesos
Stainless steel	40 Pesos	56 Pesos
Thick plastic / PET	4 Pesos	25 Pesos
Gallons	8 Pesos	12 Pesos
Bronze wire	100 Pesos	145 Pesos
Bronze yellow	60 Pesos	133 Pesos

Consolidating, processing, reusing, and recycling: The companies on this level still buy and sell recyclables. In some instances they process the materials in a particular way, but they do not produce end-products. Processing can for example entail compactors or shredders. But the most important feature of the companies at this stage is that they are highly specialised and that they store huge amounts of a single material. Their suppliers are the junk-shops, who have already sorted the waste sufficiently. Their costumers are the end-users. In many cases, this level is the end of the supply-chain in Metro Cebu, although there are some exceptions.

Being the end of the line in Cebu, these companies consolidate the waste. This means that they collect enough for a shipment either to Manila or abroad. Shipment usually means a 20-foot container, or in the case of metal scrap, whole shiploads.

The end of the supply chain in Metro Cebu

Graph B2.2



Ferrous metals: There are just four companies dealing with ferrous metals in Metro Cebu. The two biggest are the Cebu Metal Corporation and Cebu Iron. Cebu Iron is quite huge: they own the big stockpile of metal scrap besides the old bridge to Lapu-Lapu City. They also have their own dockyard and ship.

Cebu Metals on the other hand has several facilities in Cebu. Although we managed to get an interview with Mr. Ben Chia Jr., the Vice-President, we didn't get any data about their annual turnover or their capacity.

Interesting for us: Cebu Metals operates a compactor, which they use for aluminium cans and other light metal scrap. There are no consumers of ferrous metal scrap in Cebu, therefore it is either shipped to Manila or abroad. In Manila, there are several EAFs (Electric Arch Furness). If it goes abroad, it is most likely to go to China or Taiwan.

Non-ferrous metals: According to the Sigmar Foundry Corporation, there is short supply of non-ferrous metals in Cebu. Therefore, most of their supplies are coming either from Manila or abroad. We did not come across a trader primary dealing with non-ferrous metals. This would back this assumption.

Theoretical input: Aluminium

Sources: Aluminium is made from bauxite, an ore that must be mined from the earth.

Recovery and recycling: Aluminium is melted down and reshaped into new cans and other items. Making new aluminium cans from old ones requires only five percent as much electricity as it does to make new cans from bauxite.

Plastics: In contrast to other sectors, there are several recyclers of scrap plastics in Metro Cebu. One of the bigger ones is Wilson Yu, who owns Ancor Plastics. He has been cited by almost all junk-shops we have interviewed as their main costumer regarding plastics. This leads to the conclusion that there are no consolidators for plastic as in the other sectors. The recyclers fulfil that function themselves and buy the plastics directly.

Ancor Plastics recycles a number of different plastics. In particular: PP, PE-HD, PE-LD, LLD, PS-GP, PS-HI, and ABS. In the process, the plastics firstly are sorted one more time (according to material and colour). Secondly, some of the materials are washed. Then they are entering the processing. Ancor-Plastic produces a variety of products, mainly household stuff like hangers, buckets, basins or garden chairs. The company is chiefly using recyclables – no virgin materials at all!

Ancor Plastic does not recycle PET. According to Mr. Yu, he sometimes enters into contracts for collecting a certain volume of PET. The PET is then shipped to China, where it is processed in textile manufacturing. Those contracts are also given to other companies dealing with plastics. Then, everyone else will sell to that company to enable them to fulfil their contract.

Paper. There is no paper mill in Metro Cebu. This means that there have to be consolidators which take care of the shipments either to Manila or abroad. Unfortunately, we were not able to conduct an interview with one of the consolidators. However, we were able to gain some information by the DENR and supplying junk-shops.

According to them, Ma-Vill is one of the biggest paper dealers in Metro Cebu. Almost all the junk-shops we have talked to listed them as a customer. Furthermore, most of the scavengers are directly selling collected carton to Ma-Vill. Their truck goes there everyday to pick up the carton.

If it is shipped to Manila, it will most probably go to Union Pulp Paper. There it is recycled. There is also a new development in this sector: Union Pulp Paper plans to restart their paper-production in Cebu. There is an old but still intact facility in direction to Toledo, which is currently checked and repaired. Union already began to pile up vast amounts of scrap paper in its yard. The plant shall be operational again till the end of this year.

Theoretical input: Cardboard, newspaper and paper

Sources: Paper and paperboard makes up nearly 40 % of the waste stream
Cardboard, newspaper, and high-quality papers (like paper for notebooks, copiers, computers, letterheads, and envelopes) can all be recycled.

Recovery and recycling: Different kinds of paper-like newsprint and high-quality white paper are sorted into separate piles because they are processed differently.

Paper is recycled by shredding it into small pieces and mixing it with water. The mixture is beaten into mush, called pulp, which flows onto a moving screen where most of the water is taken out. Wood or paper fibres remain and the fibre is pressed through rollers that squeeze out more water. It is then dried in a steam-heated dryer. The result is recycled paper.

Bottles. For bottles, there is at least one big end-user, the San Miguel Brewery. The brewery buys broken and intact San Miguel bottles. If the bottles are intact, they are simply reused (up to seven or eight times). If they are broken, they will be processed and used as a raw material for the production.

Unfortunately, we do not know what happens to the broken glass in particular. But San Miguel is very choosy on the quality of the glass: therefore they just deal with a limited number of bigger suppliers. That makes it easier for them to ensure the quality.

Another big buyer of glass is Asia-Brewery (“Tanduay”).

Broken glass

Sources: Light bulbs, ceramic glass, dishes, and window glass can't be recycled
Recovery and recycling: Glass is sorted by colour, crushed into small pieces, and melted down into a liquid. Then, it is melded into new glass containers. Sometimes recycled glass is used to make insulation and road-construction materials.

Biodegradable

Sources: Majority of the biodegradable is kitchen waste.
Recovery: The composted wastes are transferred to the processing plant and fed to sifter to separate large from small particles. Plastics and stones are picked manually. The small particles are aged from two to three days and put in sacks. These are now the organic fertilizers labelled. One ton of decompostable waste can produce 20 sacks of fertilizer.

Dependency on world market prices

Prices in the waste sector are dependent on world market prices. They are changing accordingly but with a short delay.

For scrap (ferrous) metals, prices are currently varying between 10 and 15 pesos per kilo. The price has almost doubled since last spring: then, the price was at 7 pesos per kilo. Just five years ago, the price was 3 Pesos per kilo. Although there are fluctuations, the price is still increasing. Mainly, this is due to China's huge demand for raw-materials. According to the Cebu Metal Corporation, it is still possible to predict the price for the coming week. Therefore, they constantly check prices with a trading partner in Manila.

For non-ferrous metals, the situation looks somewhat similar. Prices have been rising continuously, due to growing demand in China. Since March the price has been stable, due to changes in interest rates in China. To monitor prices, the Sigmar Foundry Corporation constantly checks prices with another dealer in Manila. Since last year, the price for stainless steal went up by 150%, the price for copper by 60-70%.

For plastics, the scrap price is usually about 40% of the price for virgin materials, says Ancor Plastics. The price changes constantly according to world market prices – and according to the oil price. Therefore, the price for plastics has been rising since the last couple of months.

We did not get information on price dependency in other sectors, but we assume that the picture is a similar one. Dependency on the world market price is evident

because a good deal of trade with scrap materials is handled with companies in other countries.

B.3 The Scavengers

Introduction

The dumpsite area of Lapu Lapu was a limestone quarry before, and its size is about 2-5 ha. Altogether there live about 110 families at the Lapu Lapu dumpsite. According to our survey and some local people in the area, they transferred to the site because they had no job and no living area before. Surveying the Scavengers in Lapu Lapu City we conducted 58 interviews, w/e is about half of the families there.

Personal Data of the interviewed people

Gender		
Male	17	29%
Female	41	71%
Respondents total	58	100%

Table 1

Age		
15 - 20 years	4	7 %
21 - 30 years	19	33 %
31 - 40 years	15	26 %
41 - 50 years	14	24 %
>50 years	6	10 %
Respondents total	58	100 %

Table 2

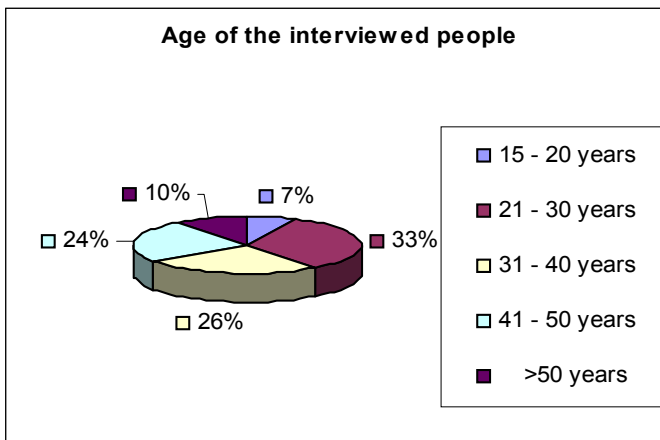


Chart 1

The majority of the people are between 21 and 40 years old and married. As an average the number of persons in a household is between six and seven, which means that most of the families tend to have 4 or more children.

Number of persons in the household		
1	4	7%
2	7	12%
3	7	12%
4	7	12%
5	8	14%
6	9	16%
7	5	9%
8	6	10%
9	5	9%
Respondents total	58	100%

Table 3

Education		
No school	4	7 %
ES Grade 1-4	38	66 %
ES Graduate	7	12 %
High school Grade 1-2	7	12 %
High school Graduate	2	3 %
Respondents total	58	100%

Table 4

More than 70% of the respondents do not have any school education or dropped out of school at an early stage (ES Grade 1-4). As a result most of the people cannot speak or understand English. The lack of educational skills is one of the reasons why it is difficult to find an alternative job outside of the dumpsite.

Regrettably, not all children have the opportunity to go to school. Problems are on the one hand the transport fare, school uniform but also other forms of expenses. On the other hand, they have to work as scavengers in some cases in order to help their parents improving the income. There were also examples, where the father died and the oldest son had to replace him and had to care for the livelihood of the family.

Place of origin		
Cebu / Mactan	31	53 %
somewhere else	27	47 %
Respondents total	58	100 %

Table 5

More than the half of the people came originally from Cebu or Mactan. The others have different origins (Bohol, Negros, Mindanao, Leyte etc.). It seems that there is a general tendency to move to the dumpsite, because 14% of the respondents are staying less then one year on the dumpsite. It is not possible to make any conclusions about if the place of origin is associated with the years they live on the dumpsite. Only few of the respondents lived on other dumpsites like Umapad (Mandaue) or Inayawan before.

The scavengers formerly have been fishermen, farmers, carpenters, laundry women, vendors etc. The common responded reason to move to the dumpsite was because of increasing the income and looking for a better livelihood.

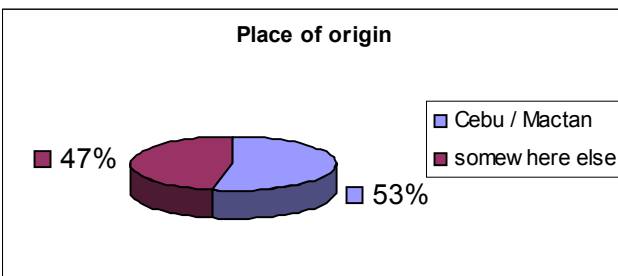


Chart 2

How many years on the dumpsite		
Less then 1 year	8	14 %
1 - 5 years	16	28 %
6 - 10 years	13	22 %
>10 years	21	36 %
Respondents total	58	100 %

Table 6

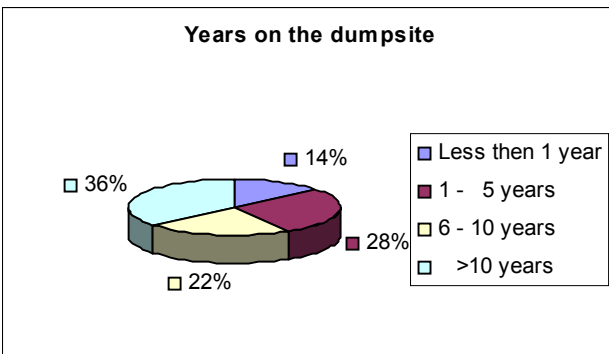


Chart 3

Work and Income

Main occupation		
Picking waste	41	71 %
Others	17	30 %
Respondents total	58	100 %

Table 7

Not only scavengers but also other squatters who have another job such as a tricycle driver or balot vendor are living in the Lapu Lapu dumpsite. Overall the main occupation of the people living there is scavenging. Most of them work full time, 7 to 10 hours, six days per week.

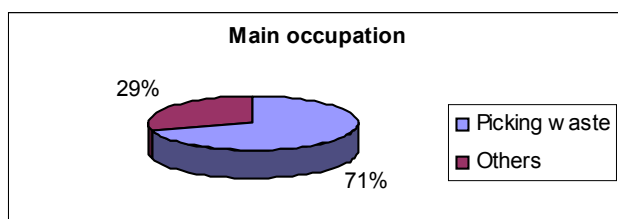


Chart 4

Income from other jobs		
no income from other jobs than picking waste		
	34	59 %
Less than 200 Pesos	3	5 %
201 - 500 Pesos	2	3 %
501 - 800 Pesos	8	14 %
801 - 1000 Pesos	6	10 %
>1000 Pesos	5	9 %
Respondents total	58	100 %

Table 8

Maximum family income per week through scavenging		
< 200	0	0 %
201 - 500	20	34 %
501 - 800	21	36 %
801 - 1000	7	12 %
1001 - 1300	4	7 %
1301 - 1500	2	3 %
>1501	1	2 %
no income trough scavenging	3	5 %
Respondents total	58	100 %

Table 9

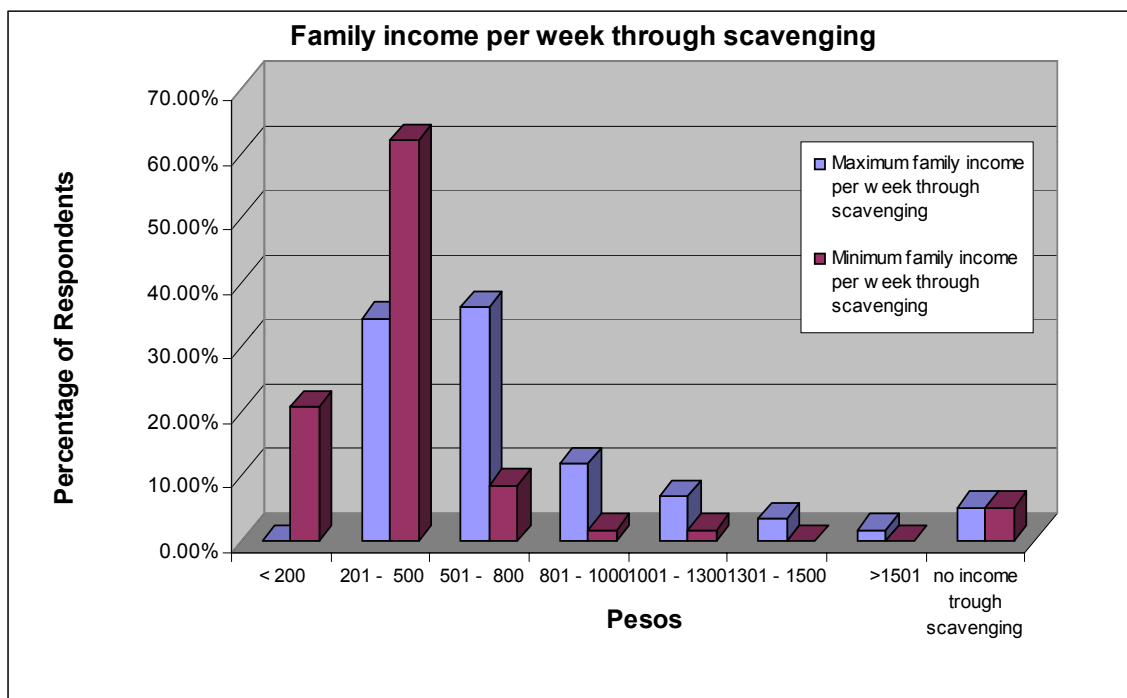


Chart 5

Usually the scavengers sell their goods once a week. The average income per family is only between 200 to 500 pesos per week. Even if it's a good week, the income could be approximately 500 pesos. In addition, this money seems to be spent for daily food, water for drinking and transport fare.

The family per-capita income per week is calculated from the family income per week divided by the member of the household. It is between 50 and 400 Pesos. It is keenly dependent by the number of the children living in the household.

Family per-capita income weekly		
< 100	11	19 %
101 - 150	11	19 %
151 - 200	11	19 %
201 - 300	9	16 %
300 - 400	11	19 %
400 - 500	3	5 %
>500	2	3 %
Respondents total	58	100 %

Table 10

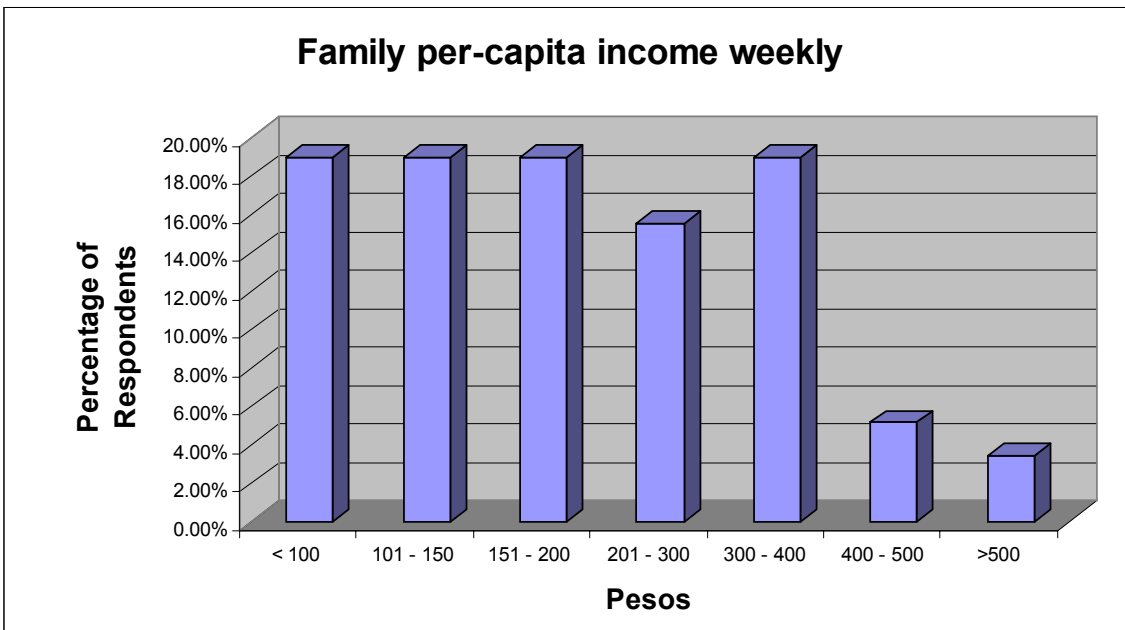


Chart 6

To whom do they sell?		
1= Victor Lim	26	46 %
3= Rhoda	5	9 %
4= Different Junk-shops	7	12 %
5= Others	19	33 %
respondents total	57	100 %

Table 11

The majority of the scavengers sell their waste to Victor Lim (Maviche Enterprises), who has a Junk shop across from the dumpsite. Aside from that he owns two small branches each with one employee located direct on the dumpsite. The scavengers sell to him on the one hand, because of the short route of transport. Understandably it is too far to carry heavy rubbish. On the other hand to go there, they need to take transport and it is sometimes higher than the income out of it. As a result, most of them never changed their junk-shop. Furthermore he is giving money in advance, so the scavengers have to sell to him to pay the money back.

Kind and prices of the collected waste

Averaged prices of the collected recyclables ¹²		
Plastics	Nature springs (=mineral water bottles, PET)	14 P/kg
	Cellophane	4 P/kg
	Galun (=Hard plastic)	7 P/kg
	Jolly bee cups	6 P/kg
	Alu-cans (soft drinks)	41 P/kg
Metals	Yellow bronze wire	65 P/kg
	Red bronze wire	104 P/kg
	Copper wire	107 P/kg
	Metal scrap	7 P/kg
Paper	Carton	1 P/kg
	Office paper	1 P/kg
	Newspaper	1 P/kg
Glass	San Miguel bottles	1 P/kg
	Soft drink-bottles	1 P/kg
	Other bottles	0.50 P/kg
	Broken glass	0.50 P/kg
Others	Clothes/Textiles	11 P/kg
	Wood	50 P/sack(ca.15kg)
	Cement sacks	0.5 P/piece
	Rice sacks	0.75 P/piece
	Medicine bottles	0.5 P/piece
	Shells	3 P/kg

Table 12

Working group – The CORPO¹³

Most of the respondent people answered, that they prefer to work individually. Nevertheless there is an existing working-cooperation called CORPO. It has been founded four years ago. Rose is the head since 2 years. The former head of the CORPO, is actually in jail.

The heads are Rose Blanco and Albit (we don't know the family name), both are scavengers. According to Rose, the CORPO has actually about 90 members, 3 groups with 30 members each. But according to Evelia Revera, she was the auditor of the CORPO before the CORPO has only 30 members all in all.

¹² Averaged prices out of the evaluation from 30 respondents.

¹³ Interviews with Rose Blanco and other scavengers during our research on the dumpsite

Several people told us about trouble among themselves. Maybe that's why most of the respondents don't want to become a member. Aside from that the majority of them don't think that there are advantages when working in groups.

The fundamental ideas of the CORPO sound good. It was to support the older and the women, who cannot carry so heavy. There is one truck per day coming from MEZ reserved exclusive for CORPO-members. Young and old people segregate together, the younger carry the segregated material for the older one, who cannot carry so heavy. They weight the gathered material as complete first, than they divide them among themselves. All the recyclables usually have been sold to Victor Lim (Maviche Enterprises). But they don't get a better price even though it's a bigger volume.

There are no requirements in joining the group; all you have to do is to be listed. According to Rose the problems of the CORPO are caused by the truck company. She argued that since one year the income of the scavengers is worse, because the garbage left and dumped on the dumpsite has a bad quality. The good ones are already been taken before reaching the dumpsite.

Basically there are a lot of inconsistencies about the statements of CORPO members, formal members and scavengers who never become a member about the CORPO. It is also obvious, that the group dynamic and the sense of connectedness of the CORPO are not distinctive.

Debts and savings

It is difficult for the people living on the dumpsite to save money. The main reason is most of the people earn not enough money that they can save it. On the other hand, a few people are likely to save little by little. According to them, the main purpose of saving is for emergency such as disease and health care.

Savings		
Yes	8	14 %
No	50	86 %
respondents total	58	100 %

Table 13

Debts		
no debts	20	34 %
1 - 100 Pesos	10	17 %
101 - 500 Pesos	12	21 %
501- 1000 Pesos	7	12 %
>1000 Pesos	9	16 %
respondents total	58	100 %

Table 14

Interest for the debts	
5/6 System	3
other interest	1
no interest	34
respondents total	38

Table 15

One third of the respondents don't have debts at the moment. The majority of the others have debts amounting to 100 till 500 Pesos.

The borrowed money is mainly spent for food, hygienic products and health care. The sari sari stores give the money in advance, because usually the scavengers only sell once a week, so they get money only once a week. Also junk-shops give money in advance. As a result from that, the scavengers become dependent on the Junk-Shops. Usually they don't have to pay interest to sari sari stores and junk-shops.

There are few scavengers who borrowed money from professional money lenders. The interest they have to pay is the 5/6 System. That means if u borrow 500 Pesos, you have to pay back 600 Pesos one month later. The amount of the interest is definitely daylight robbery and illegal but it's a common method of loan extension.

Application of the debts		
no debts	20	35%
hospital/medicine	2	4%
housing	1	2%
education children	0	0%
food	25	44%
others	9	16%
respondents total	57	100%

Table 16

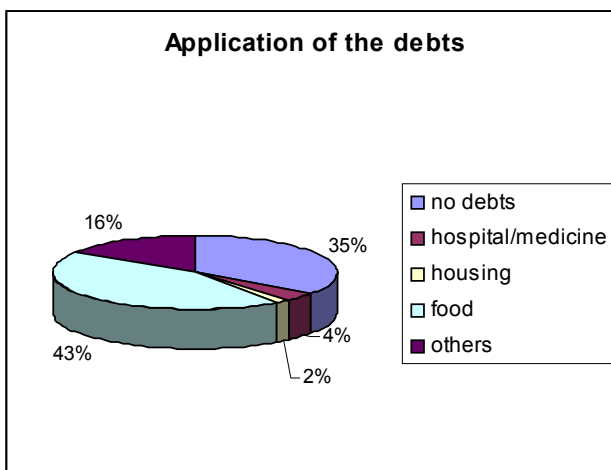


Chart 7

Lender	
1= junk-shop	11
2= sari sari	20
3= others	7

Table 17

Additional

Expected support from the government		
Healthcare	1	2%
Land	2	4%
electricity and water supply	0	0%
alternative job	8	15%
education/training	1	2%
Food	10	19%
Others	15	28%
Housing	16	30%
respondents total	53	100%

Table 18

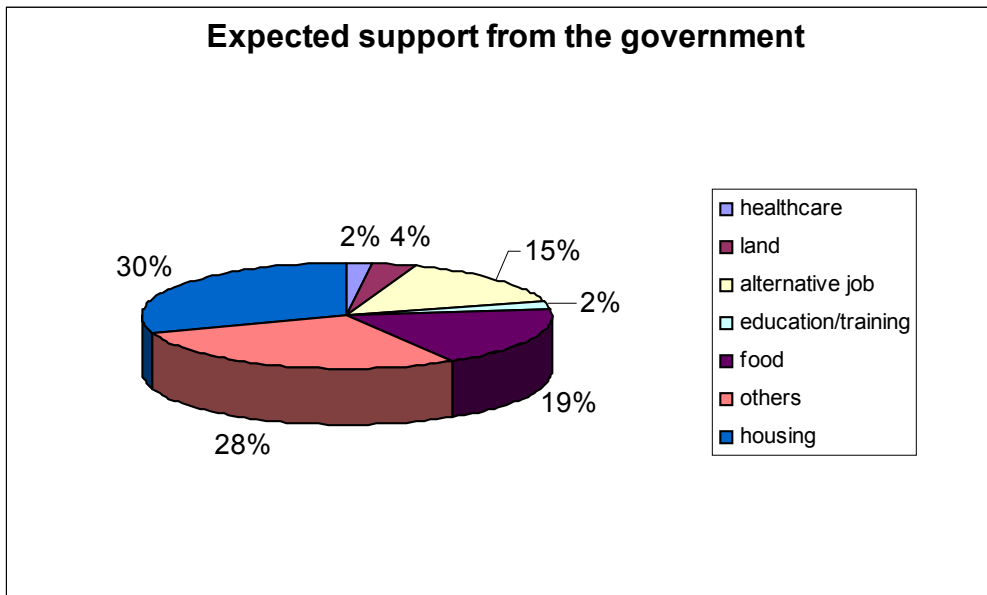


Chart 8

Part C: Future Developments and Strategies

Introduction

In this chapter, we would like to have a closer look at possible future developments. Thus, we will first introduce two possible political developments. We will have a closer look at possible strategies and finally, we will also tackle our initial idea about setting up our own junk-shop.

Scenarios for political change

Naturally, the strategy how to tackle the situation of the scavengers is dependent on the political framework. As we have shown, this framework is about to change significantly. If we want to make a decision how to proceed, it is vital to consider future changes. On the other hand it is very difficult if not impossible to predict politics. Therefore we do not want to concentrate on a single scenario. Instead we would like to introduce two basic options: compliance and non-compliance of Lapu-Lapu City with the R.A. 9003. However the future development is going to look like; it is most likely to be within these two extremes, even if it is not matching one of them. The consideration of both developments will hopefully enable us to react accordingly to future developments and changes.

Firstly, we will list the arguments and steps leading to the scenario. Secondly, we will summarise its consequences for the scavengers.

Compliance: Lapu-Lapu City finally complies with the R.A. 9003. The old dumpsite is handed over to PEZA and by them transformed to a controlled one. A new controlled dumpsite is set up by Lapu-Lapu City. This site is completely fenced and a material recovery facility has been set up. The paralysis machine has not been bought yet, therefore the residual waste is dumped.

Main arguments leading to this conclusion are the following:

- The City of Lapu-Lapu is really willing to comply with the R.A. 9003. There is a high acceptance for changing the current system.
- The city is also under high pressure. First, by the DENR / IBP. The notice of sue was an effective warning, making clear that the city will face a lawsuit if it does not comply. Second, by the growing importance of the problem itself. The open dumping causes a number of serious problems: air pollution, freshwater contamination, and complaints by resorts and neighbours.
- The city government has already started to implement the zero waste management plan. Negotiations with PEZA about the old dumpsite are

under way, the expropriation of an appropriate lot has been started, and a budget has been earmarked.

- There is money in the waste: if a MRF is employed, there will be new revenues for the city government.

What does this mean for the scavengers? If implemented as such, the consequences for the scavengers will be severe: there will be no place for them to go. If the MRF is in place, the waste will be completely segregated. This is exactly the work the scavengers are doing right now. Only the residues will be dumped. Even if there are some valuable materials left it will not be enough for the vast majority of families currently living on the dumpsite. But this also depends on the fencing of the area: if there is a fence (as required), there will be no opportunity at all for the scavengers to get on the dumpsite.

In short: if the implementation of the R.A. 9003 and the zero waste management plan is successful, the scavengers are going to lose their livelihood.

Non-compliance: Lapu-Lapu City fails to implement the R.A. 9003 and the zero waste management plan. The old dumpsite is still in use. Although there have been some immediate measures (it has been levelled and the fire has been extinguished) the overall situation has not been changed. The waste is still dumped and not compacted.

Main arguments leading to this conclusion are the following:

- Lapu-Lapu City is lacking the means to implement the zero waste management plan. The plan has been too ambitious: it requires a huge effort by the administration, which is understaffed and has not obtained the proper training.
- The money for implementation is lacking. The zero waste management plan requires quite a lot of money – and there is just a small budget earmarked.
- The political setting might change. Although Mr. Amores is very committed, he might be replaced during the next elections (every three years).
- There is no real pressure by the DENR / IBP.
- The dumpsite in Lapu-Lapu City is not yet completely filled. So there is no need to close it from that point of view.¹⁴
- Finally, public opinion opposes the idea to spend too much money for a proper landfill.

¹⁴ Compare the dumpsite in Mandaue City. It is completely filled and therefore due to be closed soon.

What does this mean for the scavengers? If nothing changes, the scavengers will be able to stay on the dumpsite. This does not mean a worsening of their situation – but it does certainly neither mean an improvement. Most probably the number of scavengers will continue to grow, as we have observed a population growth during the last three months.

Strategies according to the first scenario: compliance

According to the first scenario, we would face two major problems: the scavengers would need to find a new place to live – and a new livelihood. Fortunately, this scenario is unlikely to occur from one day to another. It will take months if not years to implement the R.A. 9003 and the zero waste management plan completely. This gives us the chance to tackle the situation during the process – and not at the end. So, the question is: how can we get involved during the process of change and smoothen the process? While answering this question it is important to bear in mind that in the end scavenging will not be allowed anymore. Accordingly we will have to find new livelihoods for the scavengers.

First, it would be important to create chances for the scavengers during the process. With regards to the zero waste management plan, those could include the following:

- If a new dumpsite is opened and scavenging effectively prohibited, scavenging could still be allowed in a certain portion of the dumpsite (as encouraged by the DENR). Even if a new dumpsite is opened, there will still be the need to segregate the waste to reduce the volume. This could be applicable until the new MRF is operational.
- Once the MRF is operational, only scavengers shall be employed to run it.
- The old dumpsite will be operated (and transformed to a controlled one) by PEZA. During the process of transformation, one portion could be designated for scavengers, instead of prohibiting scavengers on the whole site.
- If there is a MRF, only scavengers should be employed to run it.

Even if these measures are put into practise successfully, they will just affect a very limited number of scavengers. The majority will still have to find new livelihoods.

In order to be able to enter into negotiations with the city, we need to have something to offer. That could be:

- A partnership with Oberhausen City, including:
 - Internships for officials in recycling companies in Oberhausen.

- Consultancy by the city administration or companies based in Oberhausen.
- Technical equipment such as compactors or shredders (through JusticeF).
- The design of a MRF by the University of San Carlos.
- Consultancy by the University of San Carlos.
- Lots of experiences in dealing with scavengers and the perspective of solving this social problem.

In our opinion, this means that we could also ask for some conditions, if we enter into negotiations with Lapu-Lapu City. The most important condition should be that at least parts of the revenues of the MRF are reinvested in livelihood-projects for the remaining scavengers. This would of course leave us with a transitional phase – in which the scavengers have to find another livelihood.

From our point of view, there is no perfect solution. At least not as long as we chiefly look at segregating waste as their only livelihood. At this point, we might have to think about changing their livelihood altogether, as has been done with the fisher folks relocated by JPIC and KKS.

However, one of the major conclusions is not to wait for Lapu-Lapu City to take action but to take the initiative.

Strategies according to the second scenario: non-compliance

According to the second scenario, we would essentially face the same situation as we do now. The problems of the scavengers are evident, and they touch issues such as health, housing, income, children's education and food security. Nevertheless we will continue to focus on their income.

The inaction of the city government would force us one more time to take the initiative. The inaction would also be compatible with the idea sketched above: starting negotiations with Lapu-Lapu City on integrating the scavengers in the formal system of waste management.

In that case, we might be able to set up our own MRF on the old dumpsite – run by the community of the scavengers and in co-operation with the city. The details would be similar to those mentioned above. But there are a number of critical questions which would have to be answered first.

- How would the MRF look like? Who could design the MRF? In particular: what kind of technical equipment is required?
- Who would manage the MRF? Who would do the accounting and the general management?

- How would the junk-shops close to the dumpsite react? They would lose their main source of income.
- Currently, the scavengers do not form a community. How long does it take to form one? This seems to be a crucial precondition to start any project.

Those questions arise due to two reasons: on the one hand, we cannot rely on the input of the city government; on the other we have to rely on the community of scavengers.

Those objections are not that strong in the first scenario, since we assume that the government is willing to tackle some of them. Secondly, in the first scenario we do not rely on the community of the scavengers at all.

Summing both scenarios up

The first and most important thing to note is: in both scenarios it is us who have to take the initiative. If it is not us, no one is going to take the needs of the scavengers into account. This does not only concern the implementation of the project – it does also concern its preparation. Our need to act is highlighted by the assumption that any changes are most likely to mean a worsening of the scavengers' situation.

In general, the conclusions drawn from both projects are compatible. In our opinion, the partnership outlined in the first scenario is close to an optimal project – or at least the best we can get. We would integrate the scavengers into the formal system of waste management; we could use the knowledge and equipment provided by JusticeF and Oberhausen as well as the knowledge and experience of JPIC.

We think that it is most likely that the political situation will change in direction to the first scenario. There is a lot of pressure by the DENR and IBP. Out of that the problem is becoming evident, so there will have to be at least slight changes. It is our conclusion that there will be changes and that at least a part of the zero waste management will be implemented.

This is already an ample basis to step in with a project – and therefore also an ample basis to start a partnership with Oberhausen as sketched above.

Setting up a community based junk-shop

It has been our initial idea to set up a community based junk-shop. So we would also like to refer to that as well. To make it short: we do not think that this idea is feasible, due to a number of reasons. By this we are referring to both models we have discussed (the centralised and decentralised one).

- Tracking down the supply-chain has shown that the waste sector in Metro Cebu is very sophisticated. It will be very difficult for a newcomer to find a niche.
- The sector is based on strong relationships between waste generators and buyers. During our interviews, we have regularly come across cases of corruption and criminal practices. Therefore, it seems to be very hard to enter the market as a newcomer. (This goes for the decentralized model in particular.)
- Setting up a Junk-Shop at the dumpsite (centralized model) would require a large provision of capital and a well trained manager with excellent expertise.
- The future of the dumpsite is quite uncertain. The city government plans to shut the dumpsite and it is unclear what is going to happen to the scavengers then. The city government might enforce the prohibition of scavenging on the new landfill.
- Finally, there seem to be better opportunities at hand.

Examples “best practice”: Waste management center in Bais City, Negros Oriental

The Bais City's Solid Waste Management Program (SWMP), which involves 35 barangays, took off in 2000. It responds to the increasing pollution in the coastal areas and to the mandate of the Ecological Solid Waste Management Act of 2000 which prohibits the still predominant open dumpsites for solid waste disposal. Pollution was traced to have caused fish kills along the Bais Bay a few years ago, threatening the main source of income of the fishing communities. Only three years after start of the planning activities, Bais opened a modern Waste Management Center as one of the first LGUs in the Visayas. It consists of a Sanitary Landfill, a Water Treatment Plant and a Recycling Center.

A survey conducted by a Dutch researcher established that the main cause of pollution in the bay areas are not the two sugar mills but household and agricultural wastes that are dumped indiscriminately. So, the local government allotted about six million pesos for the construction of a sanitary landfill for proper waste disposal. But it faced another major concern — there was no local expert on solid waste management.

The City had to look outside for this technical expertise. Fortunately, the German Development Service (DED), a partner of the Philippine National Volunteer Service Coordinating Agency (PNVSCA), responded to the need through the deployment of Dr. Johannes Paul in April 2000.

Local government units (LGUs), by the highly technical nature of building a sanitary landfill, usually contract the services of a consulting firm in preparing the requirements for securing the Environmental Compliance Certificate and a license to operate a landfill. The Department of Environment and Natural Resources (DENR) accepted Johannes as a volunteer consultant for the local government of Bais which saved Bais about a million pesos from hiring the services of a consulting firm.

With Johannes assistance, the Project Team was able to craft a solid waste management program, conduct an environmental impact assessment, comply with all the requirements of DENR and obtain the necessary clearance and permit for the construction of the landfill.

The construction of the landfill called for more hard work. After that, came the building of the Recycling Center with facilities for composting biodegradable wastes, building fences and drainage system, water tanks and water pumping system. Of equal importance was the training of the barangay LGUs, the Program staff and the community folks. Finally, on April 2, 2003, President Gloria Macapagal Arroyo graced the inauguration of the first unit of sanitary landfill of Bais City's 12-hectare site in barangay Cambanjao.

Rainwater collection is just one aspect of the material recovery facility. Wasted cartons, plastics, aluminium and more will find their true value here.

The problem of pollution, however, does not end with the construction of a landfill. How to prevent overfilling the landfill in a short span of time? Which type of trash goes to the landfill and which could be recycled? No doubt, there is a need for more community education on the importance of proper waste disposal and how to do segregation, waste minimization and recycling. There is also a need for training the Project Team further on running the landfill and the Recycling Center. Much still needs to be done to ensure sustainability of the Project.

Mayor Villanueva, however, credited Johannes with much more than the construction of the landfill and the Bais Recycling Center. Johannes discovered the rich deposit of "white clay" in Tambo, Ayungon, Bais City which provided a good alternate to plastic liner in sealing off seepage of leachate from the landfill, which could contaminate ground water.

The discovery of white clay saved the City Government thousands of dollars in buying plastic liner, and made it the first in the country to build a sanitary landfill with a clay liner.

The DED volunteer also introduced recycling. The newly constructed Recycling Center has produced and is now selling its own organic fertilizer called Bais Friendly Soil at low prices to help farmers improve their harvest. Also, the Center's need for water to process the biodegradable wastes, led to the idea of rain water utilization and the construction of a solar pumping station to pump up ground water. Moreover, Johannes has also initiated the creation of RIBA, the Recycling Initiative in Bais City, which now provides income to six households.

(Source: DED Philippines, <http://philippinen.ded.de>)

Additional¹⁵

- 15 part time scavengers working on the landfill. They earn between 500 and 1000 Pesos per month.
- The sanitary landfill is watched and it's only for the 15 scavengers allowed to pick up waste there.
- No squatting and putting up of houses on the sanitary landfill.
- The volume of the dumped waste is about 40 m³ per day, coming from 7 different barangays in Bais. Approximately 70% of the incoming waste is recyclable. It is only domestic waste, no industrial waste.
- Plastic bottles (PP,PET,HI,HD), carton, paper, glass bottles (only intact), scrap iron, aluminium cans and wood will be collected
- Biodegradable: out of 1m³ biodegradable there can be produced about 250 kg of compost. Selling price is 100 Pesos per 50 kg of compost
- Biodegradable in Bais contains saw dust, cow dung, shredded leaves and waste from the public market; there are dust bins on the market to collect the materials.
- LGU has 3 employees for sorting and shredding which have been provided with trainings to run the composting area

The primary object of the sanitary landfill was not to employ as many people as possible, also not, to improve the livelihood of all the scavengers living at the old dumpsite before. After the construction of the new landfill and the Recycling Center it was not possible, to employ all the scavengers who lived at the old dumpsite before. In place of that a limited amount of 15 scavengers working part-

¹⁵ Visit in Bais, conversation with Paul, Johannes Ph.D., on October 21

time on the dumpsite now. There is not enough capacity to employ more people there.

Estimated costs sanitary landfill in Bais:

- 1000 Pesos per m³ development costs (including all costs for infrastructure, land price in Bais 100 Pesos/m²) to build up the sanitary landfill.
- 150 Pesos per m³ delivered waste for running project costs
- 1 truckload (6-7m³ = 1 m³) landfill.

One more advantage for the LGU is the economized volume of the landfill through out of recycling. Seeing that the land prices in Mactan are very expensive, it's even important for the LGU in Lapu-lapu to keep the area of the landfill as small as possible.

Further examples for “best practice” on the Philippines: www.swapp.org

SWAPP (= Solid Waste Management Association of the Philippines¹⁶) is offering trainings for MRF especially for government representatives. 3 day training for government representatives including an excursion to the sanitary landfill in Bais costs about 7.500 Pesos all inclusive.

Topics among other things are:

- Design manuals in solid waste in urban settings and establishing an MRF.
- Health safety and safety measures, incl. operational safety

Advice from Johannes Paul, DED: to arrange training with SWAPP, JPIC in cooperation with the DED or the GTZ.

Part D: Recommendations and to dos

Concerning the further proceedings, we recommend the following to implement the project and the partnership with Oberhausen.

Immediate to dos are:

- Arrange a meeting with Lapu-Lapu City, in particular with Councillor Mario Y. Amores, who is the driving force behind the zero waste management plan. Objectives:

¹⁶ Conversation with Lizette C. Cardenas, Executive Director SWAPP Visit in Bais, on October 21

- Get updated on the implementation of the plan
- Check his willingness to co-operate with JPIC
- Check his openness for a partnership with Oberhausen
- Arrange a meeting with Mayor Boy Radaza to get his political support and commitment as well
- Arrange a meeting with Mrs. Paz Radaza. Find out how her plans are corresponding with Mr. Amores plans.

Actual preparation of the project

If we come to an agreement with Lapu-Lapu City, the actual preparation of the project has to start.

- JPIC would need to hire a person whose only responsibility is the preparation and implementation of this project.
- We have to clarify details about the co-operation. Such as:
 - The schedule and course of events
 - The technical requirements of the MRF
 - The required training for the scavengers and city employees
- In Germany, we have to check with Oberhausen and JusticeF what they can offer regarding the technical equipment, capacity building (internships) and financial means.
- Concerning the University of San Carlos we would have to find out what they can offer regarding capacity building, the design of a MRF and consultancy.

Co-operating with the GTZ?

A new pilot-programme of the GTZ (“Partnership for recycling management”) might pose an opportunity to raise funds for a project. Next steps should include:

- Write a brief project proposal (taking the above into account)
- Discuss the proposal with the GTZ in Manila and Eschborn

Further research

In addition to that, further research has to be conducted on the following issues:

- Is it possible to leapfrog stages in the supply chain by employing a certain kind of technique (compactors)?
- Who is going to buy our waste?
- What other livelihoods for the scavengers are at hand? For example, can the waste be processed to any kind of product (e.g. juicy bags or fertilizer)?

Annexes

Annex I – Questionnaire scavengers

Annex II – Questionnaire junk-shops

Survey Form

Scavengers on the dump site in Lapu-Lapu City

Interviewer: _____

Date: _____

Translator: _____

Number: _____

1. Personal Data

Name: ^{1.1} _____

Gender: ^{1.2} male female

Age: ^{1.3} _____

Are you married? ^{1.4} Yes No

Number of persons in the household: ^{1.5} _____

If yes, to whom? ^{1.6} _____

Education / Training : ^{1.7} _____

Place of Origin: ^{1.8} _____

Since when do you live on the dump site? ^{1.9} _____

Why did you come the dump site? What did you do before? ^{1.10}

Why do you work on this dumpsite and not on others? ^{1.11}

Do you speak English? ^{1.12} Yes No

2. Work / Income

What is your main occupation? ^{2.1} Picking Waste other: _____

Occupation / age of family members: ^{Table 2.2}

	Age	Occupation / In or out of school	Income (day / week?)
Spouse:	_____	_____	_____
Child A:	_____	_____	_____
Child B:	_____	_____	_____
Child C:	_____	_____	_____
Child D:	_____	_____	_____

2. Work / Income - continuation

What is your average family (household) income (per week / day)? ^{2.3}

this week / today: _____ good week: _____
 last week / yesterday: _____ bad week: _____
 before that: _____ average: _____

What is your personal income (per week / day)? ^{2.4}

this week / today: _____ good week: _____
 last week / yesterday: _____ bad week: _____
 before that: _____ average: _____

Kind, volume and price of the collected waste: Table 2.5

	kind of waste	price	volume	time	with whom
Plastics:	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
Metals:	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
Paper:	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
Glass:	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
Others:	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____

How many hours per day do you work? ^{2.6}

from: _____ till: _____

2. Work / Income - continuation

To whom do you sell the waste? ^{2.7}

Name and Address	what?	how often?

Why are you selling to this Junk-Shop? Have you ever changed your Junk-Shop? ^{2.8}

Is everybody allowed to pick waste on this dump site? ^{2.9}

Are you a member of the CORPO? ^{2.10} Yes No

If your are not a member, would you like to be one? ^{2.11} Yes No

Do you think there are advantages when working in groups? ^{2.12}

How much money do you earn through other jobs per week? ^{2.13} _____

3. Debts

Do you have any debts? ^{3.1} yes no

Do you have any savings? ^{3.2} yes, as much as: _____ no

How much debts do you have? ^{3.3} _____

For what did you need the money? ^{3.4}

hospital / medicine housing education leisure

others, please specify: _____

What interest-rate do you pay? ^{3.5} 5/6 system other, specify: _____

Who gave you the credit? ^{3.6} _____

(name, address, how have you met him)

When did you get the credit? ^{3.7} _____

When do you plan to pay the money back? ^{3.8} _____

4. Additional

For how long are you going to stay on the dump site? ^{4.1} _____

What kind of support would you like to have from the city government? ^{4.2}

healthcare land electricity water supply alternative job education / training

others: _____

Do you have access to ... ^{4.3} water electricity sanitation

Do you see any possibilities to treat the waste in order to make more money out of it? ^{4.4}

Survey Form

Junk-Shops in Lapu-Lapu City

Interviewer: _____

Date: _____

Translator: _____

Number: _____

1. Basic Data

Shop's name: ^{1.1} _____

Owner's name: ^{1.2} _____

Gender: male female Age: _____ civil status: married

Number of Children: _____ Education: _____

Interviewee: ^{1.3} _____
(If it is not the owner)

Address: ^{1.4} _____

Phone: ^{1.5} _____

Number of employees: ^{1.7} _____

Salary of the employees: ^{1.8} _____

What kind of technical
equipment is available? ^{1.9} _____

Is your shop independent or belongs it to a bigger company? ^{1.10}

independent part of: _____

Do you have a price list? ^{1.11}

2. Buying Waste

What kinds of waste do you buy? Table 2.1

	kind of waste	volume (unit?)	price per unit
Plastics:			
Metals:			
Paper:			
Glass:			
Others:			

2. Buying Waste

Do you have any preferences, and if so, why? Table 2.2

kind of waste	reason

From whom do you buy waste? 2.3

- Scavengers street children persons specialised in collecting
 private households truck drivers companies Others: _____

Where are they from, if not from LL? 2.4 _____

How many kilos do you buy from them per week? 2.5

- Scavengers street children person specialised in collecting
 private households truck drivers companies Others: _____

How many suppliers do you have per day (selling their waste)? 2.6 _____

Are you satisfied with the quality of the waste you receive? 2.7 yes no

If not, why? 2.8 _____

4. Processing

Do you treat the waste in any way? ^{4.1} yes no

If so, what kind of waste in which way? ^{Table 4..2}

kind of waste	treatment

Do you produce any kind of end product? ^{4.3} _____

If so, what kind of waste/ressource material do you use for that? ^{4.4}

If so, where are you selling these products? ^{4.5} _____

If so, what price do you get? ^{4.6} _____

5. Business perspectives

In terms of income: Are you satisfied with your business? ^{5.1} yes no

Annual turnover: ^{5.2} _____

Do you observe the activities of your competitors? ^{5.3} yes no

Do you intend to stay in this business? ^{5.4} yes no

Do you intend to expand your shop? ^{5.5} yes no

If so, when and how? ^{5.6} _____

Are you aware of the LGU's plan to introduce a zero-waste management plan? ^{5.7}
 yes no