



## **Final Report**

Survey of Livelihoods of Informal  
Waste Workers in Mostorod,  
Qualyoubia

Submitted to:  
**Egyptian Refining Company (ERC)**  
By:  
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July 25, 2009

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## ABBREVIATIONS

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CDA	Community Development Associations
CID	CID Consulting
EEAA	Egyptian Environmental Affairs Agency
ERC	The Egyptian Refining Company
FEI	Federation of Egyptian Industries
GCBA	Giza Cleaning and Beautification Agency
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
NGO	Non Governmental Organization
PET	Polyethylene Terephthalate
PVC	Polyvinyl Chloride
SEAM	Support for Environmental Assessment and Management
SME	Small & Medium Enterprise
SWM	Solid Waste Management
UNDP	United Nations Development Program
UNEP	United Nations Environment Program

## 1. Introduction and Background

CID was contracted by the **Egyptian Refining Company (ERC)** to conduct a **3-week study** to explore potential impacts caused by the new ERC project, which will require using the Laydown Area, located on the edge of the neighborhood of Mostorod District in Qalyoubia Governorate, as a temporary storage site for the construction of its works in the adjacent area. The study focused on any potential livelihoods loss to **the informal waste workers** in and around this target area.

The Laydown Area is located close to the communities of El Kattawi, which is part of Mostorod. The Laydown Area will be used for approximately three years, during the project construction phase. The land has been leased by ERC from a public sector company, ESCO. There is a strip of farm land owned by a farming family (Abd El Maqoud) separating the Laydown Area into two plots (the north and south plots – see Figure 1). A track bisecting the Laydown Area South Plot provides a direct route to the Ismailia Canal from which point many local residents access key transport routes.



**Figure 1: The Laydown Area, Farmland and Local Communities**  
© ERC

Social development aspects of waste management systems have been a main focus area of CID's work since it was founded. Its corporate areas of intervention have involved designing and

implementing grass roots projects in neighborhoods where informal waste workers live and work, institutionalizing recycling initiatives, conducting surveys, studies and research papers, assessing, evaluating and reporting on the sector and finally, advocating for informal waste worker's rights in the informal economy. The company was awarded the Schwab Social Entrepreneurship prize for the Arab region at the World Economic Forum in 2006 for having pioneered a unique program for children working in the garbage collectors' neighborhood around a public private partnership with the private sector and instituting innovating non formal learning recycling schools for children to mitigate the impact of privatization of waste management systems in Cairo to multinational waste companies.

## 2. Scope and Objectives of the Study

The main objective of this study is to determine how ERC's use of the Laydown Area would impact waste workers, be it scavengers, waste dealers or any other informal waste workers in that neighborhood. The study sought to extrapolate the livelihood issues which might be related to ERC setting up its enterprise in that neighborhood. Impacts of that activity have been identified, documented and quantified. Mitigating measures have also been proposed.

### Study scope and objectives are:

- Investigate whether or not the new ERC project would cause any livelihood resettlement to the informal waste workers in the area
- Propose measures that ERC can adopt to mitigate any livelihood loss or decline for the waste dealers in the catchment area.
- Identify the types of informal sector operators existing at present in the vicinity of the proposed project: their number, how they work, how much they handle in terms of materials (on a daily, monthly, annual basis) how much they earn from that activity, and how they deal with the materials they accumulate.
- Describe waste processing livelihoods activities, if any, with estimates given on revenue generated, cost of undertaking businesses and equipment/capital investment realities of each dealer/operator
- Trace and draw flow charts for trading partners of these waste collectors/depots
- Locate and profile sources of materials: the survey team traced the materials from source and identified the various streams through which primary materials travel to the depots operators who bring or sell materials to these businesses. The institutional and commercial set up of that chain was examined and described

- Profile the livelihood chain of actors involved from waste generation, to recovery, to accumulation, to storage to sale to depots through the processing and production of goods from the recycled materials,
- Describe the various forms of agreements and relationships which exist between these depots and the small traders/recoversers they deal with.

### 3. Approach & Methodology

CID Consulting mobilized a team of surveyors for this study that was uniquely conducive to the acquisition of accurate, sector specific information. Every attempt was made to select people who were familiar with the trade and who, in fact, were informal waste workers themselves. The surveyors are part of a CID team which has been trained on field research methods and that has been directed to use investigative methods which did not raise any suspicions about the cause of the study, nor use questioning methods which lead respondents to give false data. They acted as traders and waste dealers and used their knowledge of the market to validate information given by informants. The team of surveyors included youths and dealers from similar informal settlements like Mostorod, specifically surveyors from Shubra El Kheima, Ezbet El Nakhl in El Khosous area and Manchiyet Nasser (Mokattam garbage collectors' neighborhood).

At the same time, another team of trained surveyors which has been conducting this type of sector specific field research conducted focus groups with roamers (*Sarriha*) and waste dealers in other similar areas as comparative sites in order not to undertake direct questioning in the study site at the Laydown Area . This provided data validation and authentication.

CID allocated a team of 7 members for this 3-week study, five surveyors, a team leader, and senior researcher and reviewer.

**Table 1: Profile of Survey Team**

Team Members	Designated jobs & Tasks	Location
2 Surveyors	Conduct informal visits and interviews with informal waste workers, and introduce themselves as waste traders/dealers	Laydown Area

3 Surveyors	Conduct formal and informal interviews and focus groups with informal waste workers, out of Laydown Area to validate and cross-check data collected from the Laydown Area	Semi-urban areas similar to El Kattawi
Team leader	Conduct informal visits to the Laydown Area to check on the quality of data collected by the surveyors. Also, participate and monitor focus group discussion with waste dealers in the other areas. Finally, document all data	Laydown Area & other similar areas
Senior Researcher	Review data; participate in focus group discussion, and supervise entire research process	Other peri-urban areas & office

It is important to mention that one of these surveyors had trading ties with one of the depots around the Laydown Area as he had been dealing with one of the big waste dealers in El Kattawi in front of the vacant target area (Mo'alem Ashraf). Therefore, the data collected through this established business relation was reliable and accurate.

In addition, CID Consulting adopted the following methodology for this survey:

1. Reviewed reports and previous studies and surveys from ERC.
2. Referred to field surveys conducted by CID and others on informal waste workers in Egypt and elsewhere in the non industrialized world
3. Screened and selected surveyors so as to avoid drawing attention to presence and reconnaissance undertaken in the Laydown Area
4. Undertook a field survey using informants who were informal waste workers themselves

5. Compared findings with similar peri-urban areas in Cairo and elsewhere in Egypt to validate data

Finally, CID Consulting fell back on its more than fifteen years of experience in the sector and its broad and extensive research on social development aspects in the solid waste management field.

#### **4. Informal Waste Workers in the Laydown Area**

Informal sector actors in solid waste management in Egypt include traditional garbage collectors, depots, middlemen, traders, peddlers, roamers (*Sarriiha*), itinerant waste buyers, barter traders, scavengers, and dump and street pickers, street hawkers, depending on the waste they collect, how the waste was obtained, whether by buying, trading scavenging, or merely collecting. Middlemen / traders / intermediate waste buyers who own and manage the depots located around the Laydown Area, are the most important actors and drivers in the cycle of waste recovery in the Laydown Area.

##### **4.1 Profile of Informal Waste Workers in the Laydown Area**

###### **4.1.1 Depots/Middlemen in the Laydown Area**

The main actors in the Laydown Area are the middlemen and depots which handle recyclables. These form the nexus of the livelihood chain in that area. They form backward linkages to roamers (*Sarriiha*) and forward linkages to large wholesalers and recycling workshops. The volume of materials they handle is such that it cannot be influenced by the limited amounts which can originate from any uncontrolled dumpsite. They deal in tonnage which has to draw on sources of materials of which there is currently a plentiful supply on the streets of Cairo – a city suffering from an ineffective privatization scheme embarked on in 2003. They are a ready buyer of non organic waste from scavengers and roamers thus guarantee these two groups a source of income based on prevailing market prices. According to the information uncovered by this survey, the amount of materials the middlemen have been dealing in has not declined over the past few months. If anything, it has increased on account of the unsanitary condition of the streets of Cairo, due largely to the inefficient service offered to the residents of the city and the abundance of waste spilling out of containers in waste pooling sites on the streets. The depots in the Laydown Area trade with the traditional waste collectors particularly those in the nearby neighborhood of Ezbet El Nakhl, second largest garbage collectors' and recyclers' settlement in Cairo, but located in Qalyoubiya – i.e. the greater Cairo area.

The Laydown Area reflects the predominant institutional and livelihood situation of the waste trade in the rest of Egypt. It has eight depots around it. They are operated by the middlemen mentioned above. They engage a pool of roamers (*Sarriiha*) who go out on a daily basis and purchase recyclables to sell to the depots. They also purchase from scavengers who may not be part of that regular pool of roamers. The depots sell their materials to recyclers and larger dealers in the adjacent garbage neighborhood of Ezbet el Nakhl in El Khosous. They also trade with informal traders in other towns as well.

The middlemen/trader/intermediate waste dealers in the Laydown Area assign roamers (*Sarriiha*) to work for them. These *Sarriiha* are a second type of informal waste workers. Roamers are assigned to roam neighboring areas to recover the recyclables and bring them back to depots owned and managed by those middlemen. Inside each depot a few workers (male & female) are employed to only sort out and store the collected mixed recyclables collected by the *Sarriiha*, and this group represents the third actor in the target area. These workers prepare the sorted and packed material for selling. Though most depot owners have their own *Sarriiha*, they still welcome and buy from any scavengers willing to sell their recyclables. These middlemen /intermediate traders sell their material to another type of informal waste workers, none of whom are located in El Kattawi.

The following table shows the number of field visits, depots owners & operators, and workers interviewed in the Laydown Area. Most of these 13 visits were conducted in the form of prospective business deals to establish good business relations and ties. This provided reliable quantitative and qualitative information.

**Number of field visits, depots owners & operators, and workers met in the Laydown Area:**

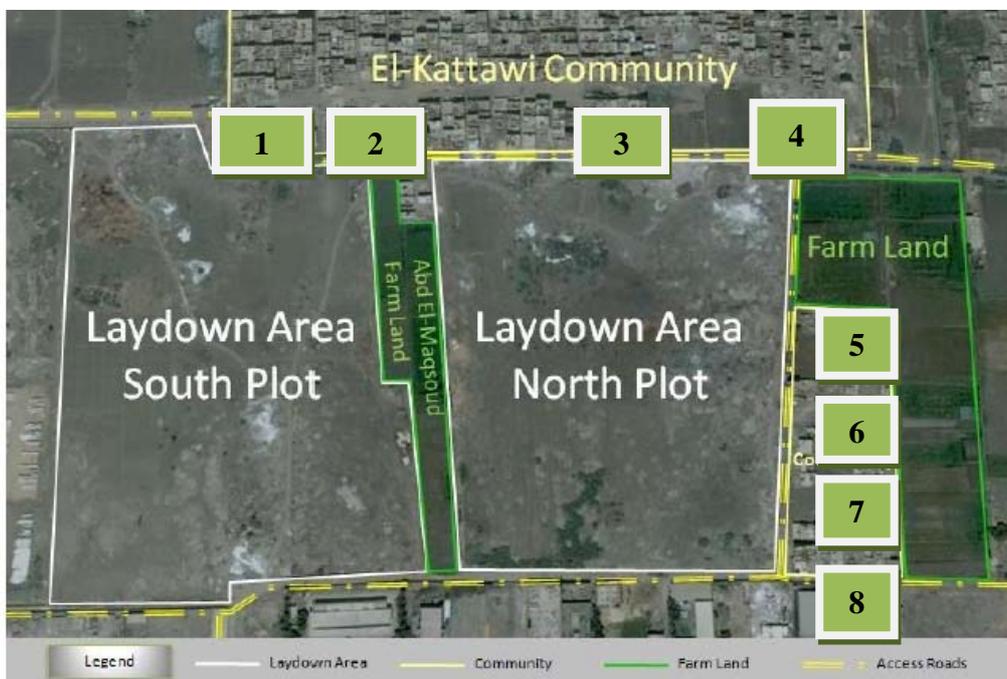
**Table 2: Profile of Depot Owners**

Number of field visits to Laydown Area by the team in three week period	Number of interviewed depot owners , who are the main actor and driver of waste business in the Laydown Area	Number of workers inside the Laydown depots
13	8 (7 male & 1 female who is a sister of the depot number 8 in table no. 4)  Their ages between 25 - 50	6 male (aged between 18 - 30)  9 women observed inside the depots,

	Detailed information for each depot is provided in table no. 4	ages between 25 - 35
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There are exactly eight (8) depots surrounding the Laydown Area (the north & south), four on each side of the two residential sides around the target area. There are two other small depots located in El Kattawi residential area, not in front of the Laydown Area like the other eight. These two depots are family owned businesses which combine being *Sarriha* with being traders of minimal amounts of cardboard. They alternate between going out onto the streets of Cairo and bringing the cardboard back to store, bind and sell.

The main 8 depots are shown and marked on the map below:



 Depots

Figure 2: Depots located in the Laydown Area

Figure No. 2 shows the location of each depot located in front of the Laydown Area, since they are the drivers of the waste recovery business in the Laydown Area.

**Table 3: Profile of each depot/ workshop surrounding the Laydown Area**

No.	Profile	Area of specialization	Number of Sarriiha	Number of workers	Equipment and tools	Estimated volume collected in tons per week (T/week)
1	This depot is run by Amr who has the capacity to buy and accumulate large volumes of recyclables. He and his brother manage this depot. Since he is financially capable, he also buys from the small depots in the Laydown Area to compensate for shortage in a specific item to meet urgent demands by wholesalers	This depot is not specialized in one item, but deals in: carton, iron, tin, aluminum, copper, plastics bags, soft plastics, PET. These were documented by the surveyors.	About 5-7  They recover recyclables from Bahteem, Mostorod, and Shubra El Kheima. These areas were reported to the surveyors repeatedly by the Sarriiha & middlemen	About 10 workers 4 (female & 5 male)	About five donkey-pulled carts  Large sacks (Gonya) A scale	Carton: 7 Iron: 1 Tin: 0.5 Plastic bags:0.5 Soft plastics (PVC) : 0.5  Remaining items are much fewer and sold in kilos not in tons.
2	This depot is owned and run by Mo'alem Ashraf. A big trader in terms of financial capability to buy big volumes of recyclables. Ashraf is one of the main suppliers of one of the surveyors. He runs a workshop of soft plastics (PVC) for processing & recycling activities in Shubra	Ashraf buys all types of recyclables , like Amr	About 8 roamers recover from EL Kattawi (public waste pooling sites and piles of waste in streets), in addition to nearby neighborhoods, such as Bahteem,	About 7-8 ( 4-5 female & 3 male)	Four donkey-pulled carts  Large sacks (Gonya)  A scale	PVC: 1 ton Carton: 6-7 Sacks: 2 -3 Iron: 0.8 – 1 Tin: 1 Plastic bags: 0 .8 – 1.00 Mixed plastics: 1

	El Kheima. He also buys from the small depots in the Laydown Area to compensate for shortages in specific items to meet urgent demands by wholesalers.		Mostorod, and El Khosous			
3	It is a small depot, run by Emaira. He was not willing to talk to our surveyors, though they were introduced as traders. This is because he sells most of his recyclables to Amr, so he forwards new traders to him. He apparently started as a Sarriih, as he himself still roams and recovers recyclables, with the assistance his son.	He deals in everything, but focuses on hard plastics.	About 3	2	2 donkey-pulled carts  A scale	Hard plastics: 2-3  PET: 0.5  Carton: 3 -4  About 100 kilos only of soft plastics, tin, yogurt plastics, and iron
4	This depot specializes in carton collection only. It is a family-owned business, as he and his sons work in this depot. He recovers from El Kattawi, Bahteem, and some residential parts of the ring road.	Carton only	1-2 including the owner of this depot who apparently started this business as a Sarriih too.	2-3	One donkey-pulled cart	Carton: 3

5	This is not a typical depot, but a small workshop/ factory for cloth and rug grinding. It is run by Abu Sayed. He recovers white and mixed colored rugs and cloth from clothing factories and other external traders.	It specializes in cloth only.	-	6-8 workers	Cloth grinder machine	Output is ground cloth , but no quantities disclosed
6	This is a small depot; specializes in carton only, is run by the dealer and his son, as a family-owned business. They recover from El Kattawi, specifically waste pooling sites, local workshops and small factories, and other commercial areas	Carton only	2	3 ( 2 male & 1 female)	One donkey-pulled cart A scale Big sacks (Gonya)	About 3 tons of carton per week
7	A small depot for carton collection located in a small vacant area. He collects carton mainly from factories out of El Kattawi	Carton only	2 Sariiha	2 workers	One donkey-pulled cart Big sacks (Gonya)	2 tons of carton per week
8	This depot is run from a house, but uses a vacant lot seemingly allocated for another house, which has not been constructed yet. He refused to sell his soft plastics	Collects all types of recyclables	4 Sariiha  They recover from Bahteem, Mostorod, Shubra El Kheima	4 workers (family members)	3 donkey-pulled carts  A scale  Big sacks	Carton: 2 Iron:0.2 Soft plastics: 0.1 Plastic bags: 0.3 Tin: 0.25

to new traders, as he is obliged to sell to a famous wholesaler called Galal Abu Hadida, located between El Kattawi and Bahteem, as the latter extends him credit.					
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## Common Features of the Laydown Area Depots:

- The large middlemen who own and run large depots have business connections with the small ones in the Laydown Area, which means that they do not compete with each other, but provide each other with material needed.
- The volume of recyclables brought in by the roamers (*Sarriiha*) differs from one day to the next, depending on many factors described further in the study
- They all have fruitful and dynamic business relationships with each other and with other actors in the sector
- They extend credit to the *Sarriiha* who are adjunct to them only, in the manner which occurs all over the country (described below)
- Wholesalers located around the El Kattawi area control the small depots and guarantee their commitment by advancing them credit and large sacks, so as to eliminate competition from new wholesalers.

### 4.1.2 Roamers (*Sarriiha*) in the Laydown Area

The roamers (*Sarriiha*) who deal with the depots in the Laydown Area recover waste by purchasing it from all over Cairo and supplement that with picking through vacant lots, street bins, and other residential and commercial spots. The nearby weekly and permanent markets of Bahteem and Mostorod are the main sources of recyclables for these roamers. Also, the adjacent waste pooling sites in the main street of El Kattawi are valuable sources of recyclables. This has not changed since ERC designated the Laydown Area for its activities and will not change when activities commence there as the markets will continue to provide a plentiful supply of materials and the waste pooling sites will not be removed. Their operations are based on age old characteristics of that group of informal waste workers as well as established methods of waste recovery, handling and trading verified and documented in numerous studies on this sector. The Laydown Area is no different from other areas scrutinized by other authoritative studies undertaken on this group of people

Roamers and scavengers can be boys or youths. In general, roamers will be male youths as their occupation involves bartering, negotiating and dealing with sources of materials which require a certain level of maturity. This type of business is unsuitable and inappropriate for

Egyptian females. Scavengers, on the other hand, do not need to deal with negotiators but simply have to be savvy about the city streets and know where waste accumulates near bins, in vacant lots, etc. That is why they can be young children.

The situation surrounding boys and scavengers involved in informal waste recovery is not so clear cut. It is common on the streets of Cairo to find two boys, or youths, playing different roles at different times and in different contexts: so that while one might operate as a roamer, the other will work as a scavenger but they will both be seen plying the same streets of Cairo and accessing different materials generators. As mentioned previously, roamers mostly work for a middleman, while scavengers work on their own most of the time. As mentioned above, some family-owned depots employ their children to assist them in waste recovery.

#### Types of materials recovered

Roamers in Egypt recover almost all types of recyclables: paper, carton, all types of metals (copper, aluminium, tin, etc.), and all types of plastics (PET, PVC, PP, PE, etc.)

#### Sources of recyclables

The study showed that most *Sarriiha* collect from the same neighborhoods located around and nearby the Laydown Area: Mostorod, Bahteem, Shubra El Kheima, and El Khosous. All these are close to the Laydown depots, about 1- 4 km from the nearest to the farthest. These neighborhoods are rich sources because they represent very active informal popular industry, so a high volume of recyclables is generated by these workshops. El Khosous and Shubra El Kheima accommodate numerous waste recycling and processing enterprises. This is strong evidence that the Laydown Area and the nearby vacant lots are not in any way a source of recyclables to these middlemen and their *Sarriiha*.

The closest public waste pooling sites to the Laydown Area are marked on the map below. However, many more are located in the neighborhoods the *Sarriiha* collect from, which have been specified above. All these sites are not private property, and are completely accessible to informal waste workers.

No territorial rights are ever established in any public waste pooling sites or vacant lots in Cairo or Egypt. The same applies to these locations near the Laydown Area. Waste pooling sites shown on the map below, and the other waste containers sites close to this Laydown Area (outside of the boundaries of the following map) are accessible to all informal waste workers. It is our assessment that the territorial rights

issues mentioned in the previous ERC on this matter are not reflective of the reality of the current situation and are not accurate.



 Waste Pooling Sites

Figure 3: Waste Pooling Sites Located Around the Laydown Area

Average income for a Sarriih

A typical Sarriih earns an average of LE 30 – 60 per day out of his daily recovery efforts from all sources of recyclables, **not from the Laydown Area**. These earnings depend on his ability to recover a high volume of recyclables on any given day. He makes his profit from the difference between the cost of purchasing the recyclables and the price at which he sells to the middlemen. He also takes advantage of his client's inability to distinguish between the different types of materials, such as aluminum, or copper.

It is important to mention that these findings differ from the ones mentioned in previous ERC reports.

Table 4: Profile of Roamers (Sarriiha) in Laydown Area

Estimated Number of Roamers working for the 8 depots	Profile	Sources of recyclables	Estimated Average quantity of recyclables per day	Percentage & Value of recyclables they collect from the Laydown Area
25	Aged between 15- 35	- Mostorod, Bahteem, Shubra El	About 1-3 big sacks (Gonya),	Nothing or negligible from the Laydown in

	<p>However, two depots are run by roamers, aged between 40-50, and they still roam with their sons</p>	<p><i>Kheima, and El Khossos</i> - <i>closest public waste pooling sites &amp; Street containers in El Kattawi, Bahteem, Ezbet Shaker</i> - <b><i>Nothing or negligible amount from the Laydown Area</i></b></p>	<p>each weighing about 100 kg.  Each Roamer earns about LE 50 per day if he collects 200 kg of mixed recyclables, as the average price for one kilo is about LE 0.25</p>	<p>terms of quantity and value. All dealers and roamers do not currently consider this area as a source of good recyclables. They see it as residual waste (non recyclables) &amp; C&amp;D waste (construction and Demolition waste)</p>
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Ages of workers were provided by depot owners; however, the recorded ages are estimates only. The actual ages of workers could be less or more as dealers, who do not keep records of their workers, and may not have accurate information. Many people involved in the waste industry, along with a sizeable portion of the Egyptian population, do not possess birth certificates. Dealers contacted in the CID study provided a range from the earliest age of employment by Egyptian law (15) to a mid-adult range.

The informal waste scavenging, collection, sorting, recovery, ...etc. in Egypt is a ready sector for the engagement of children & youths from ALL ages. This is a fact in Egypt, and EL Kattawy area is a part of Egypt.



**Figure 4: Informal Recovery of Recyclables, Roamers in Laydown Area**  
 © CID Consulting, July 2009

It is important to mention that when Cairo privatized its waste management system to multinationals, it was thought that international companies would provide the city with a superior service to what had existed prior to that. But when collection systems were changed to introduce waste pooling sites and containers appeared on the streets, the cleanliness of the city declined drastically. Waste appearing in the public domain now meant that the 30% population living below the poverty level was now able to have a field day with creating livelihoods from materials lying around on the streets, ready for anyone with informal economy business acumen to take advantage of it!



**Figure 5: Waste on the Streets**  
 © CID Consulting, July 2009

Thus all of the informal and semi formal waste workers (the Zabbaleen), the roamers and the *Sarriiha*, the traders and recyclers – important

actors in solid waste management system – adapted their livelihood methods to exploit the situation and began plying the streets of Cairo to recover available materials and insert it into the existing chain of materials management. With the introduction of the new system by multinational waste companies in 2003, the roamers began seeing profit from scavenging open bins on the streets and added the activity of mining waste from these to their existing activities. Thus roamers who had prior to 2003 been operating in low income neighborhoods while the Zabbaleen had been servicing residents in high income neighborhoods on a door to door basis, began venturing into these higher income areas as compared with pre-2003 when their activities had been restricted to low income neighborhoods.

Thus the lines between who is a true blue scavenger, who is a roamer and who is a traditional garbage collector have become blurred and it is further down the chain that one can uncover the true status of the particular waste workers. In the Laydown study area the relationship between the depots and the roamers has been proof of a traditional roamer-trader relationship has been outlined in the study.

#### **4.1.3 Scavengers in the Laydown Area**

Scavengers work on their own and although they are few in number, can still sell their small volume of recyclables to these local middlemen. Typically, scavengers are children, youths/adults that are not necessarily attached to depots. They may also be the casual passer-by from the poverty sector who happens to find material which he/she thinks could be sold to a local waste dealer. Throughout this study, only two were witnessed wandering in El Kattawi neighborhood. They were carrying small bags and had recovered a minimal amount of materials from the streets of Cairo which are currently strewn with waste due to inefficient municipal cleaning services.

#### **4.1.4 Sorting, storing, and processing workers in the Laydown Area**

Sorting, storing, and processing workers work inside the depots only. They are employees who receive fixed weekly wages from the middleman who employ them. They have received the same and will continue to do so as their livelihoods are tied to the depots activities.

Sorters can be either female or male. However, no female workers are involved in waste collection in Egypt. This is not only because it is culturally unacceptable, but also is a matter of roles and responsibilities distribution. For example, among the traditional garbage collectors (Zabbaleen), men go out to collect, while women stay home to sort out the recyclables. Several dealers in the Laydown Area employ females but these work within the confines of the depots and do not venture into the public domain on the streets of Cairo.

#### **4.1.5 Wholesalers near the Laydown Area**

Wholesalers who buy in bulk and own large-scale warehouses and sell to informal workshops and recycling enterprises, are mainly located in Mostorod, Bahteem and El Khosous.

#### **4.1.6 Recycling workshops near the Laydown Area**

Recycling workshops are located out of El Kattawi & the Laydown Area (target area), mainly in Shubra El Kheima, El Khosous (Ezbet El Nakhl) where many Small and Medium Enterprises (SMEs) are located. These SMEs are partners and clients to many middlemen, including the ones around the Laydown Area.

**Below is a map of waste recycling enterprises in Ezbet El Nakhl, El Khosous:**

# Waste Recycle Facilities Ezbet El Nakhel-Al Anwar

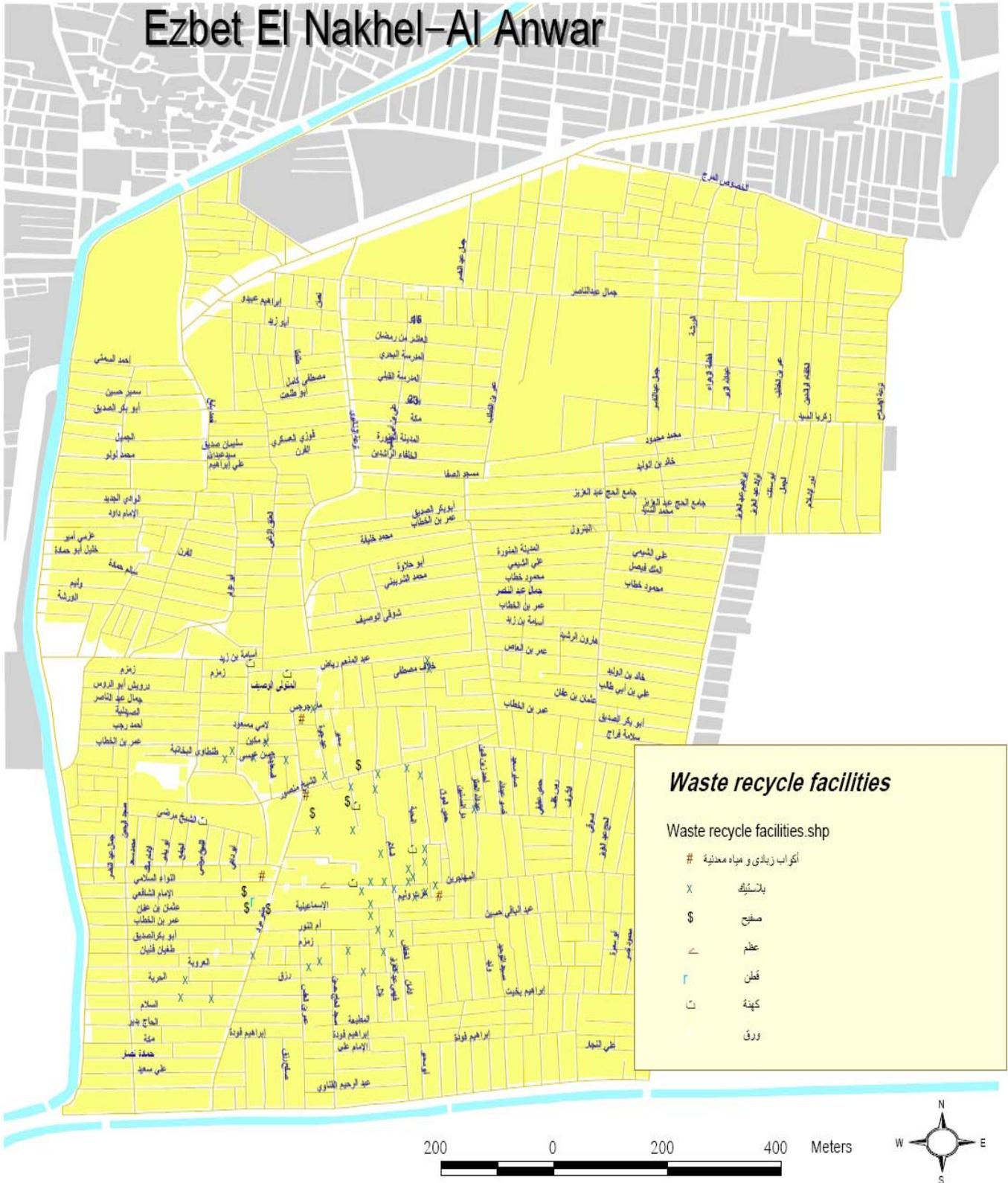


Figure 6: Waste Recycling Facilities in Ezbet El Nakhl, El Khosous  
© CID Consulting, 2006

## 4.2 Materials Flow

Based on information collected and presented above the following chart explains the flow of the inputs and outputs of recyclables

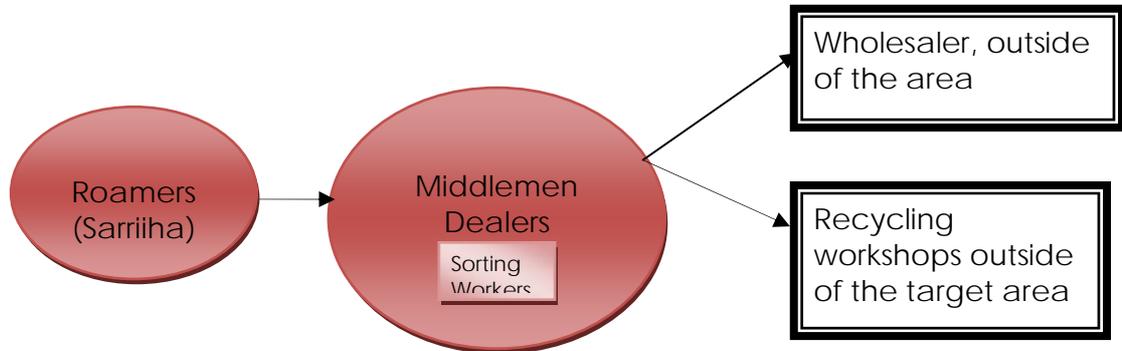


Figure 7: Materials Flow Chart in Laydown Area

## 5. Informal Waste Workers in Similar Areas

### 5.1 Roamers (Sarriiha)

This group is significant for our study on the Laydown Area because they constitute an important stakeholder as one of the main sources of materials which reach the depots around the study area. By monitoring the activities of the depots and the volume of recyclables in which they trade, we have been able to ascertain that the materials flow and volumes have not been affected. Prices though have been affected by the global crisis but that assuredly cannot be attributed in any way to ERC's activities in the Laydown Area.

Roamers represent a trade that covers all of Egypt. Their name derives from the nature of their activity: *Sarriiha* (singular *Sarriih*), are those who roam the streets buying, trading, and exchanging recyclable waste items. Other terms exist such as "*Sarriih Khorda*," which means roamer specializing in scrap metal (literally, *Sarriih* means roamer; and *Khorda* means scrap). They roam around the country in both rural and urban areas either with pushcarts or on donkey-pulled carts. They have no fixed neighbourhood where they all agglomerate the way the garbage collectors of Cairo do. They have no community-based organization to represent them. They barter with residents in low income neighbourhoods in Cairo and in towns and villages in the Delta and Upper Egypt. They exchange plastics and metal which housewives have set aside for them in return for household items of utility. These range from clothes pegs to glasses, pitchers, plastic tubs, and the like. They purchase recovered items from commercial waste generators as well. They also purchase source segregated waste from commercial

and institutional waste generators such as supermarkets, butchers, metal workshops and the like. The roamers possess limited capital especially if they work for themselves. They may be attached to a trader who owns a depot (a *Mo' allem*) who supplies their donkey cart and the day's cash for cash transactions. The *Mo' allem's* advantage is that he possesses capital and storage space and thus is able to buy whatever these roamers recover from their day's bartering activities with residents. He also has better market information than the roamers. Roamers who are able to save and amass some capital set up their own depots, graduating from being roamers or itinerant waste buyers to middlemen or intermediary buyers/dealers owning their own depots;

The dealers who own depots around the Laydown Area have a direct relationship with roamers who operate on their behalf. They extend credit to some of them while purchase from others who are not tied to them by credit ties. These roamers may specialize in one type of recyclables, or not. They either collect or buy all types of recyclable material. They buy (when capital is available by means of borrowing from a middleman, or savings), or collect (when capital is unavailable or they have no connections with middlemen) recyclables from households, commercial, and institutional establishments, streets and dumps. Their roaming is planned and follows familiar routes where their reconnaissance on the streets of Cairo leads them to the 'good' spots, i.e. where non organic waste is available and abundant either in vacant lots, or in containers which have not been picked up and/or emptied on account of poor municipal services, or just plain on the ground on the streets of the megalopolis.

In general in Egypt, roamers may either work independently of any depot/middleman or be attached to one. Below is a description of both categories so that the particular group which operates with the depots in the Laydown Area is clearly understood.

### **5.1.1 Working for a Middleman/Depot**

At present most of the roamers in the Laydown Area work for a middleman or depot. This means that they are tied to the middleman via a credit line which the depot extends them. They buy and collect recyclables from various waste generators. The fact that they have been supplying the middlemen/depots in the Laydown Area with the same volume of waste, and maybe a slightly higher volume, is an indication that their livelihoods have not been affected by anything that has happened in the Laydown Area. In fact, as will be shown further, their main source of recyclables is from nearby neighborhoods and vacant lots which are accessible to ALL roamers and scavengers in the megalopolis of 17 million inhabitants. These "*Sariiha*" roam around buying or recovering recyclables, and at the end of the day return to the depot to sell their recyclables there. They may agree with

the middleman on a price for the recyclables, or if they are unhappy with the price offered for their day's work, they may ask to have their items weighed and priced accordingly.

### **5.1.2 Working Independently**

Roamers who are self-employed and work independently sell recyclables bought or recovered to any middleman or depot they wish to deal with. The critical factor in that freedom is whether they have had credit extended to them by the depot/middleman before emerging on the streets of the city or whether they are not bound by credit so that they can roam around the streets and workshops of the city then approach the depot that is closer to their place of residence, or the one that they have good trading ties with, or the one who is most likely to extend loans when and if they need them.

They may choose to recover from streets and even dumpsites, acting temporarily as scavengers or if they have established a good working relationship with some middlemen, may choose to have the middlemen loan them some money, and in return, sell the recyclables to them at the end of the day. They usually have a donkey-pulled cart on which they have several sacks which they fill them up with recyclables throughout their roaming. They return to their homes, which also house the storage space for the items that they collect. The storage space is the corner or the courtyard of their house where several larger sacks "Gonya" lie side by side, each containing a single type of recyclable. They empty the contents of their sacks in the larger "Gonya." When they have accumulated enough of a specific recyclable and can be sold for enough profit, they transport the "Gonya" to a middleman.

### **5.2 Scavengers**

Are those who scavenge and collect the waste by picking through dumps, vacant lots, landfills, and street bins. These are accessible to many of Cairo's urban poor as no territorial rights can be claimed over any of these sites and lax enforcement of cleanliness laws means that mountains of materials are available for the urban poor to use as a livelihood base.

In many Governorates in Egypt where waste is disposed of in uncontrolled, unmanaged dumps, scavengers will frequent a particular dumpsite and recover large items of materials which they sell to depots in small towns and villages. Additionally, roamers and itinerant waste buyers may sometimes scavenge the banks of the Nile and/or other waterways, canals, vacant lots in urban centers and recover an additional fraction of non organic waste to supplement what they acquire from streets and neighborhoods. They scavenge valuable

items such as aluminum, plastic and cardboard which they trade locally with the middlemen and wholesalers in their Governorates, who in turn trade with the garbage collectors (Zabbaleen) in the Greater Cairo area.

In order to place these traders/middlemen/depots into perspective in Egypt, CID referred to studies undertaken by CID for the "Support for Environmental Assessment and Management<sup>1</sup> (SEAM) Program" in governorates outside of Cairo. These studies confirm the existence of a sizeable recycling informal sector with strong economic activity covering the entire country. It has largely gone undocumented and un-quantified. Its characteristics are:

- Thriving activity which recovers, trades in, processes and re-manufactures plastic, scrap metal, paper, cardboard and bones.
- A culturally intrinsic practice of separation at the source, among households, institutional and commercial waste generators, which makes the sought-for items available when the roamers access towns, villages and neighborhoods.
- Highly developed markets and strategies in the informal source segregated waste sector, and a chain management of the resource from generators all the way to recyclers.
- Substantial employment opportunities in that informal sector of source segregated waste.
- Specialized towns and centers for the recovery and trade of specific items appearing in the municipal, industrial and commercial waste streams. These are source segregated and traded through a chain of roamers, traders, middlemen, graduated traditional collectors and informal sector operators in all of Egypt's towns and villages.
- Small and medium enterprises appearing everywhere in small towns and larger villages around the processing, re-manufacturing and trading of particularly recovered recyclables.
- Manufacturing of recycled end products which may sometimes not qualify to consumer protection standards. Informal arrangements embedded within the formal sector of collection, transport and disposal of municipal waste.
- A very slow, gradual departure from re-use, recovery and recycling as urban lifestyles replace rural ones, but a persistence of that behavior well into certain suburbs of the capital.
- Where people leave off habits of re-use and recovery, scavengers - the poorest of the poor- step in to perform that function and create a network which demonstrates highly developed survival strategies devised and adopted by the poor.

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<sup>1</sup>SEAM, "Support for Environmental Assessment and Management (SEAM) , environmental program implemented by the Egyptian Environmental Affairs Agency (EEAA), Entec UK Ltd and ERM with support from the UK Department for International Development (1996).

Some features which distinguish the roamers and middlemen around the Laydown Area from the traditional garbage collectors (Zabbaleen) are:

The Zabbaleen are semi-informal, collect mixed household waste directly from residents as part of the semi formal municipal system, and have fixed routes on which they operate. Roamers do not have direct client relationships with residents, often informally obtain the waste from residents (in both rural and urban Egypt) and extract valuable materials from waste pooling sites, banks of the Nile, dumpsites and vacant lots which residents have resorted to using as disposal sites given the poor collection service offered by municipal and private waste collection operators to low income residents in large urban agglomerations. These lots are accessible to all types of urban poor groups seeking to eke out a living off of materials discarded by others.

Roamers and itinerant waste dealers are:

- Informal, unregistered, and unregulated.
- Have not been surveyed or documented (unlike the semi formal Zabbaleen).
- Have not organized thus are not represented by an organization, e.g. by an NGO, association or cooperative.
- Have not had been part of the community development activity which has been part of the Zabbaleen communities since the eighties.
- Have been forced into the trade as a result of rural to urban migration, poverty, illiteracy and lack of skills, and limited employment opportunities
- Have increased in numbers as a result of escalating urban poverty
- Are constantly being harassed by law enforcement officials; and face confiscation of their donkeys and their carts, alongside their recyclables, and escape fines through bribing. (Note: The roamers and scavengers in the Laydown Area are not subject to constant harassment suffered by their counterparts in other areas simply because both municipal collectors and local law enforcement patrols do not go into these areas)
- Exist in all of Egypt, not just in large urban centers

### **5.3 Middlemen /Traders/ Depot Owner / Intermediary Buyers/Dealers**

This category of informal waste workers is found all over Egypt. In Cairo, some started out as garbage collectors, others as roamers, while others were never in that trade. The one feature which led to their graduating to that role was the ability to acquire and accumulate

capital and to acquire space to store large quantities of recoverables. They are known as "*Mo'allemeen*" or "*Toggaar*" (singular "*Mo'ellem*" and "*Taager*") who own small to medium size depots. The depot owners around the Laydown Area can be classified as small to medium traders. They sell to wholesalers and large buyers of recyclable materials mainly in Ezbet El Nakhl which is the garbage collectors' neighborhood closest to them in El Khosous and other traders all over the Delta where specialized towns have cropped up with dealers in one specific type of material concentrated in one area, e.g. Miit Ghamr for tin, Alexandria for cloth, etc.

Depots are sometimes small shops that house the recyclables, or may simply be a piece of land, fenced or unfenced, where sorting and storing of the recyclables takes place. Working under them, are the "*Sarriiha*". Some middlemen hire several "*Sarriiha*" to work exclusively for them, others may not hire "*Sarriiha*" at all, and deal with the self-employed "*Sarriiha*" who approach them to sell their accumulated recyclables on a daily basis. Some middlemen and intermediary buyers sell directly to recycling workshops and enterprises, however small scale, and informal. Some middlemen and most wholesalers have the legal and financial capacity to enter into auctions to bid on large quantities of waste materials, since such auctions require a large amount of capital.

The middleman/depot for which the roamers work typically specializes in one or two types of recyclables. This applies to the middlemen in the Laydown Area. Their means of transportation are usually donkey-pulled carts, or even small pick-up trucks. The middleman or "*Mo'ellem*" has one or several depots where storage of the recyclables takes place until dealers of large-scale warehouses "*Toggaar*" buy the recyclables, measuring the recyclables by ton. A large scale middleman may have as many as 5 to 40 "*Sarriih*," and a few donkey pulled carts.. Each cart may accommodate two or three "*Sarriiha*" who set off together buying specific recyclables. Early in the morning, the middleman organizes his crew, and loans each pair or individual a sum of money (between L.E. 200-300 per day), depending on their buying needs, which goes towards purchase of recyclables from the waste generators, be they residents in low income neighborhoods or commercial and industrial establishments. They set off to roam the neighborhoods, or at least, known locations from which they buy, and at the end of the day, they return to the depot, and sell their day's purchases to the middleman. Cardboard *Sarriiha* go to grocery stores and shoe stores, bones *Sarriiha* go to butchers and scrap metal *Sarriiha* target small informal industrial workshops, while paper *Sarriiha* target office buildings and printing shops. Their profit at the end of the day is what they make after selling to the depot. They therefore try to negotiate lower prices when buying such recyclables

from their customers so as to make a higher profit when selling to the middleman/depot who advanced them their small operating capital.

The middlemen run these depots as any business buying the recyclable materials, tracking the finances at the depot, and selling to other intermediary buyers and wholesalers. They watch the market and when prices plunge, as they did in 2008 when the financial crisis hit, those who had enough cash were able to stock pile while others were forced to sell short. Dealers of large-scale warehouses may continue to be unregistered but over time find that the hidden costs of managing unregistered businesses is too high and are driven to formalize.

#### **5.4 Wholesalers**

Wholesalers, are sometimes informal but mostly are formal businesses. They deal directly with manufacturing industries and large-scale recycling enterprises. Additionally, there are those who own large-scale warehouses and sell recyclables to informal workshops and recycling enterprises. They employ labor informally and operate large trucks to haul the recyclables from the middlemen and intermediary buyers/dealers to the recyclers and manufacturers who purchase materials as inputs to their industrial processes. The Laydown area does not include any large wholesalers as these are located in Ezbet El Nakhl neighborhood in El Khosous. They trade with the middlemen/depots in the Laydown Area.

#### **5.5 Recycling Workshops and Enterprises**

Recycling workshops and enterprises in the informal sector receive their input material either from middlemen and intermediary buyers/dealers or from wholesalers. Recyclers of scrap metal are the smelters, who process the metals, and then sell them to manufacturers as ingots. Good re-usable cardboard boxes are recovered for reuse in small-scale workshops and resold again as cardboard boxes. These also are located in Ezbet El Nakhl in El Khosous and are not located in the Laydown Area.

#### **5.6 The Traditional Waste Collectors (Zabbaleen)**

Up until 1990, garbage collectors used to set out on donkey-pulled carts to individual residences in Cairo. From 1990 they began converting to mechanized trucks in response to an order by the Cairo Cleansing and Beautification Authority (CBA) – an agency which was established in 1986 to provide overview to the various actors in the waste management system of the city, to provide services to hitherto unserved low income neighborhoods, and to license new Egyptian private collection companies. This group is described here because although the dealers and other informal waste actors in the Laydown Area do not belong to it, they trade with them in a significant way.



**Figure 8: Waste Recovery in Garbage Collectors' Neighbourhoods**  
 © Norbert Schiller, Mokattam, 2003

**6. Urbanization, Poverty, Informal Settlements and the Rise of New Actors in the Informal Sector**

Because this entire activity occurs in informal settlements or informally owned land and businesses, a description of that sector is linked to a description of informality of shelter. According to a 2003 United Nations Environment Program Report, Cairo has four of the largest mega slums in the world.

**Table 5: Mega Slums in the World – UNEP Report 2003**

	Million		Million
1. Neza/ Chalco/ Izia (Mexico City)	4.0	16. Dharavi (Mumbai)	0.8
2. Libertador (Caracas)	2.2	17. Kibera (Nairobi)	0.8
3. El Sur/ Ciudad Bolivar (Bogota)	2.0	18. El Alto (La Paz)	0.8
4. San Juan de Lurigancho (Lima)	1.5	19. City of the Dead (Cairo)	0.8
5. Cono Sur (Lima)	1.5	20. Sucre (Caracas)	0.6
6. Ajegunle (Lagos)	1.5	21. Islamshahr (Tehran)	0.6
7. Sadr City (Baghdad)	1.5	22. Tlalpan (Mexico City)	0.6
8. Soweto (Gauteng)	1.5	23. Inanda INK (Durban)	0.5
9. Gaza (Palestine)	1.3	24. Manshiet Nasser (Cairo)	0.5
10. Orangi Township (Karachi)	1.2	25. Altindag (Ankara)	0.5
11. Cape Flats (Cape Town)	1.2	26. Mathare (Nairobi)	0.5
12. Pikine (Dakar)	1.2	27. Aguas Blancas (Cali)	0.5
13. Imbaba (Cairo)	1.0	28. Agege (Lagos)	0.5
14. Ezbet El Haggana (Cairo)	1.0	29. Cite-Soleil (Port-au-Prince)	0.5
15. Cazenga (Luanda)	0.8	30. Masina (Kinshasa)	0.5

Informal livelihoods from waste and other activities are strongly linked to informal shelter issues. The categories of informal waste workers outlined above live and work in informal neighborhoods where no land tenure exists but where the sheer size of these informal settlements have long made evictions and relocations unthinkable. Newer informal settlements may be subject to demolition but the established neighborhoods where thousands of informal waste workers currently live, have been put on the development map drawn up by the

government of Egypt. From the public administration’s point of view Egypt’s informal urban areas are often considered a problem. Yet, from a macro-economic point of view they have been the solution to housing for poor and low-income families for the past forty years.

Rural to urban migrants, early squatters and population density in low income neighborhoods all led to the established mega slums in Cairo today. Before the 1970s informal areas were more like homogenous camps formed by rural migration to the periphery of large Egyptian cities. Since 1975, increasing urbanization and real-estate speculation forced many previously urban population groups into informal areas.

A “National Upgrading Policy of Informal Urban Settlements’ went into effect in 1993 and according to United Nations Development Program’s (UNDP) 2005 Egyptian Human Development Report more than half a billion Euros were spent on these massive projects.<sup>2</sup> In 2006 President Hosni Mubarak announced an ambitious programme for improving people’s standards of living in his election platform for his new six-year term. It included 12 projects related to housing, education, health care, transportation and infrastructure, access to clean water and sewage system networks in squatter settlements.

**7. Comparative Sample of Informal Waste Workers in Peri-Urban Area**

In order to draw an accurate profile of the people working in and around the Laydown Area, the CID team surveyed an area demonstrating similar features of informal waste activity. Below is a table which shows the number of informal waste workers who participated in focus group discussions conducted in other similar areas.

**Table 6: Number of Focus Groups and Attendees**

Number of focus groups conducted with informal waste workers in other similar areas	Number of informal waste workers participating in focus group discussion
2 (one conducted in Cairo, and the other in El Minia , upper Egypt)	Total 15 (male, ages between 18 – 35)

The following information was gathered through interviews & focus groups with traders & roamers in these other semi-urban areas

- A typical dealer has about 30 roamers attached to his business, while other small dealers employ about 4 -5 roamers

<sup>2</sup> UNDP and Ministry of Planning, Egypt Human Development Report: A New Social Contract. Cairo, 2005

- The roamers are extended credit by the dealer on any given day, and are released to roam around in the area where depots are located & nearby residential clusters
- Roamers receive a credit line of about LE 200
- Roamers recover, barter recyclables with low quality plastics products; and buy anything, all types of recyclables.
- The purchase prices of recyclables is set between the roamers and residents/ clients (sellers) based on bargaining and this happens in low income areas , where the poor try to sell the materials at higher prices, while in high income areas, people just give their materials away free of charge
- Out of experience, roamers know where to find recyclables, so they target these areas, or neighborhoods.
- The tools that roamers use are: donkey-pulled carts, microphones, a scale, and low-quality plastics products to use in bartering, in addition to some cash to buy if they have to pay people in low income areas.
- Each roamer earns about LE 30 -70 per day, depending on his skills and luck in recovering valuable materials on any given day.
- Roamers know, out of experience too, the good seasons when their trade flourishes, such as harvest times in rural areas, or feasts & special occasions in semi urban areas.
- Most roamers met & interviewed stated that they were involved in this work because they had learned it from their parents, or older brothers, who had already been involved. The intergenerational aspect of learning the trade is a key feature of people in that sector graduating from this being an incidental activity to it becoming a full fledged occupation and trade.
- Dealers undertake minimal further sorting to all recyclables collected by roamers, then sell the recyclables to various bigger dealers and recyclers to process (crush, or granulate) & produce low quality recycled products

**Table 7: Prices of Recyclables that roamers offer to their clients – June 2009**

No	Item	Price per kilo LE
1	Paper	0.25
2	Carton	0.25
3	Mixed plastics	1.00 – 1.50
4	Iron	0.75
5	Aluminum	9.00
6	Copper (yellow)	12.00
7	Copper (red)	15.00

*NB: prices differ from one area to another*

The CID team of surveyors engaged in this study of the Laydown Area was able to ascertain that the situation described above correlates with the situation in the Laydown Area.



**Figure 9: Informal Recovery and Recycling Activities**  
 © CID Consulting, Low Income Neighborhoods in Cairo, 2007

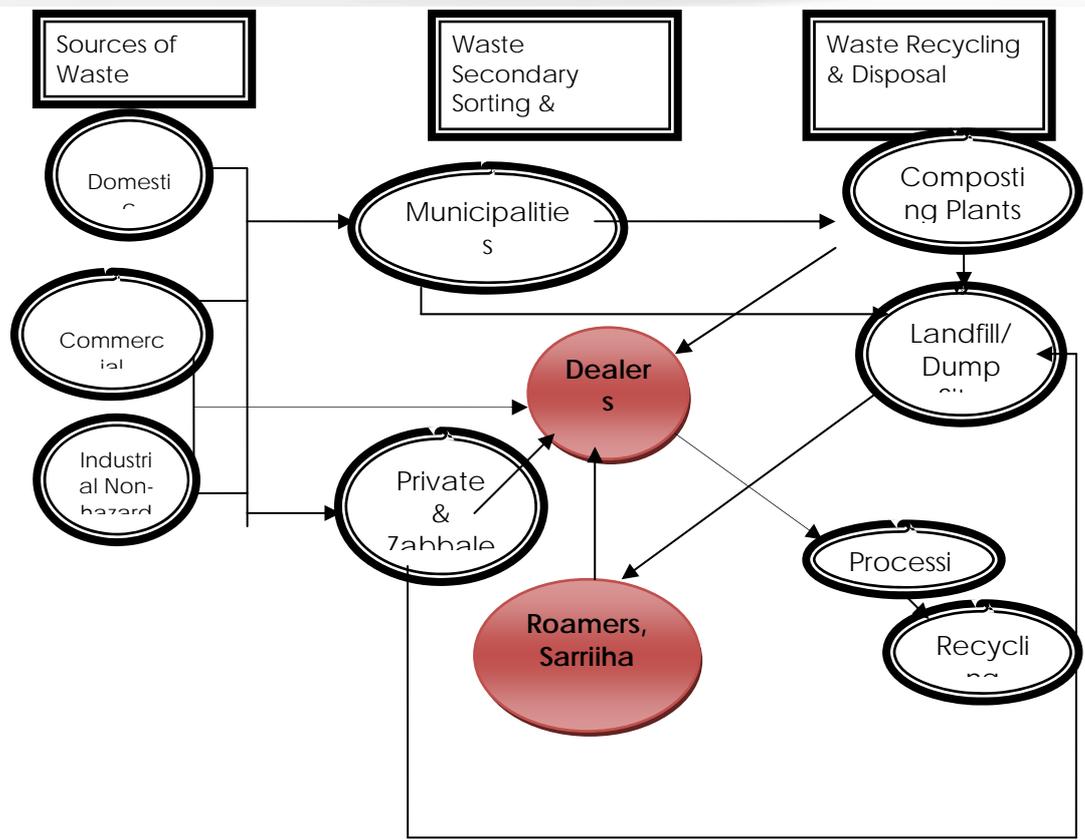
Over the last two decades, an increasing number of usages have evolved for more and more of the primary materials. As new market demand arises, the appropriate technology is adopted, and new channels for market distribution and production are instated.



**Figure 10: Roamers from Urban and Rural Egypt (Cairo and the Delta)**  
 © CID Consulting, 2008

## 8. Chain Management of Recyclables

Below is a flowchart to outline the chain management of recyclables in the greater Cairo area. The recyclables identified are: scrap metal, plastic, paper, glass, cardboard, bones, bread, rags and fabrics, old appliances and machines, wood, old clothes and apparel, and rubber.



**Figure 11: Recyclables Process Flow**

The flow chart above illustrates the global picture of waste flow for all materials and actors in the city of Cairo. The circles highlighted in red point to the waste chain actors and flow specific to the Laydown Area and shows their connection to the larger context of waste flows and actors in the entire system in Cairo. It shows the backward and forward linkages between the Laydown Area dealers, roamers and other formal and informal structures. It is evident that that chain is much larger and more dynamic than any one area of the city and that it is connected to waste generators in residential areas, commercial and industrial areas and that it allows waste recoverers to connect to it at several different points. The particular point of access which informal waste workers will choose for entry will rely on credit lines, markets, business relations with dealers, and most of all the existence of waste in the public domain, i.e. on the streets of Cairo.

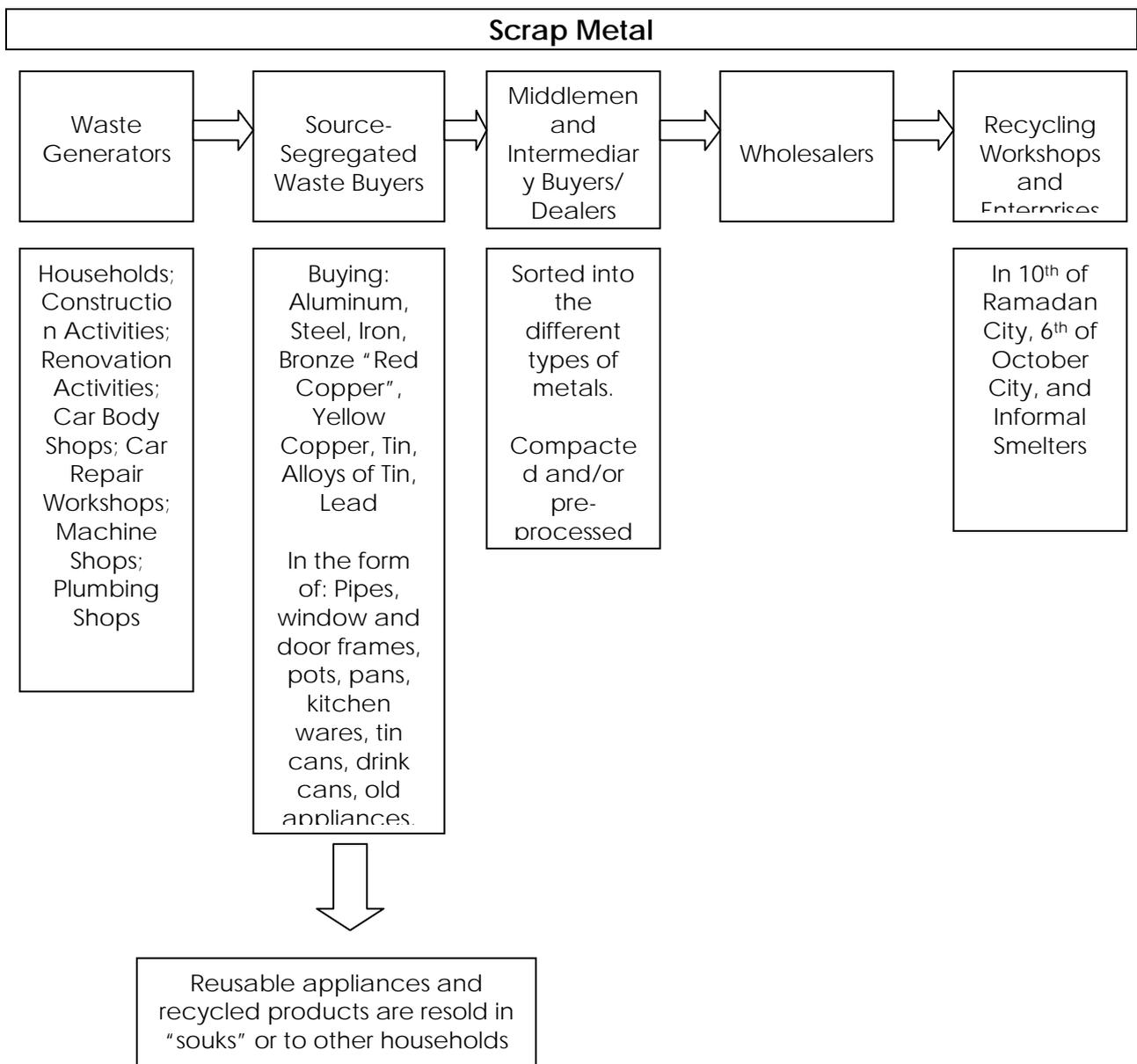
### 8.1 Scrap Metal

The scrap metal trade is among the oldest trades with respect to material recycling. The roamers buy the scrap metal from households,

construction activities, renovation activities, car body shops, car repair workshops, machine shops, plumbing shops, and waste from manufacturers of tin containers. Scrap can be categorized as heavy scrap, medium scrap, and light scrap. Where;

- (i) heavy scrap includes cars
- (ii) medium scrap includes home appliances and simple machines such as ovens, washing machines, fans, fridges, heaters, and irons
- (iii) Light scrap includes various metal products and house wares.

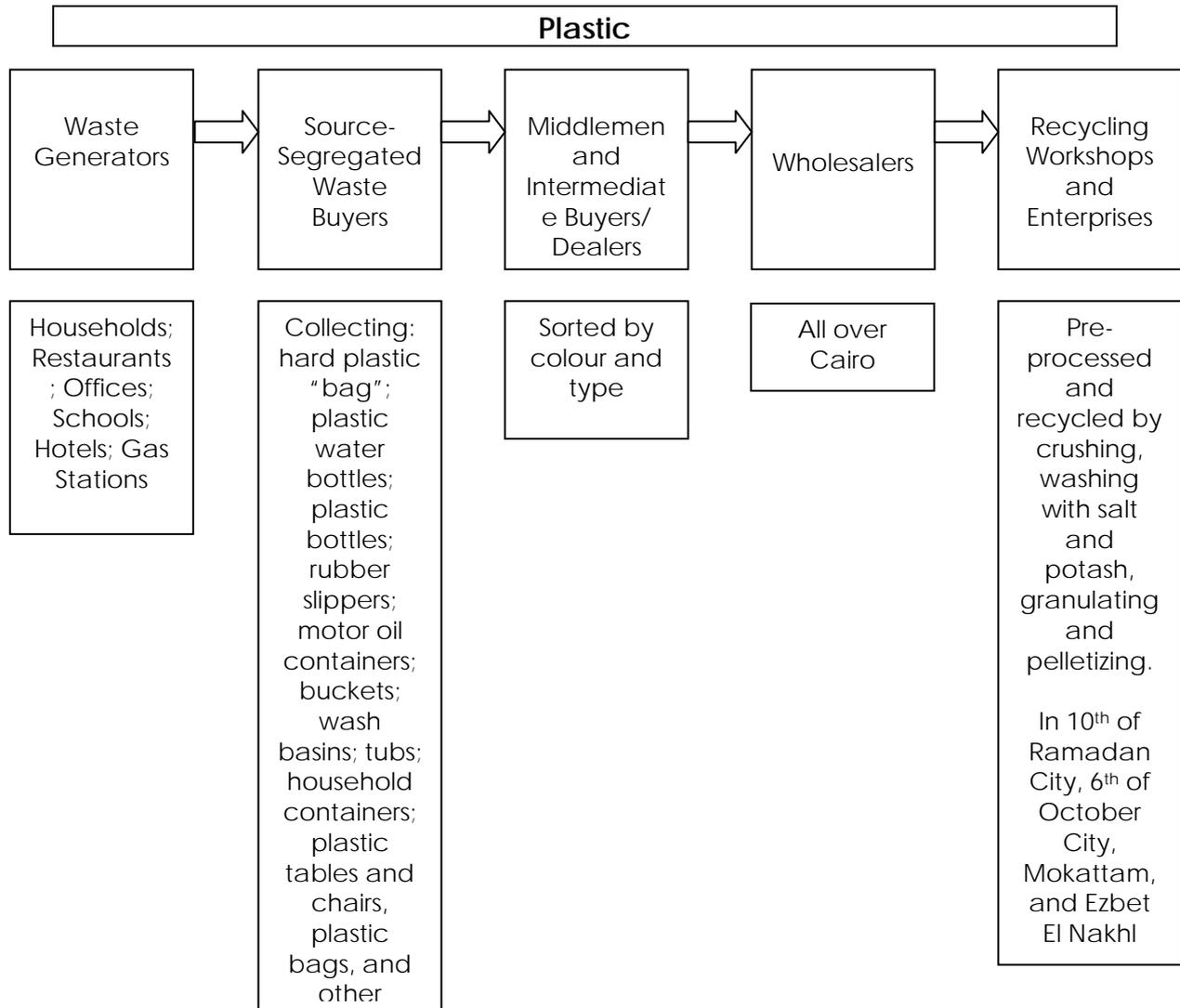
The following flow charts are for specific types of recyclables<sup>3</sup>:



<sup>3</sup> Adapted from the: "ENABLING THE INFORMAL SECTOR IN SOLID WASTE MANAGEMENT" FINAL REPORT, 2003, CONSORTIUM OF CID CONSULTING, ECO-CONSERVE, AND EQI

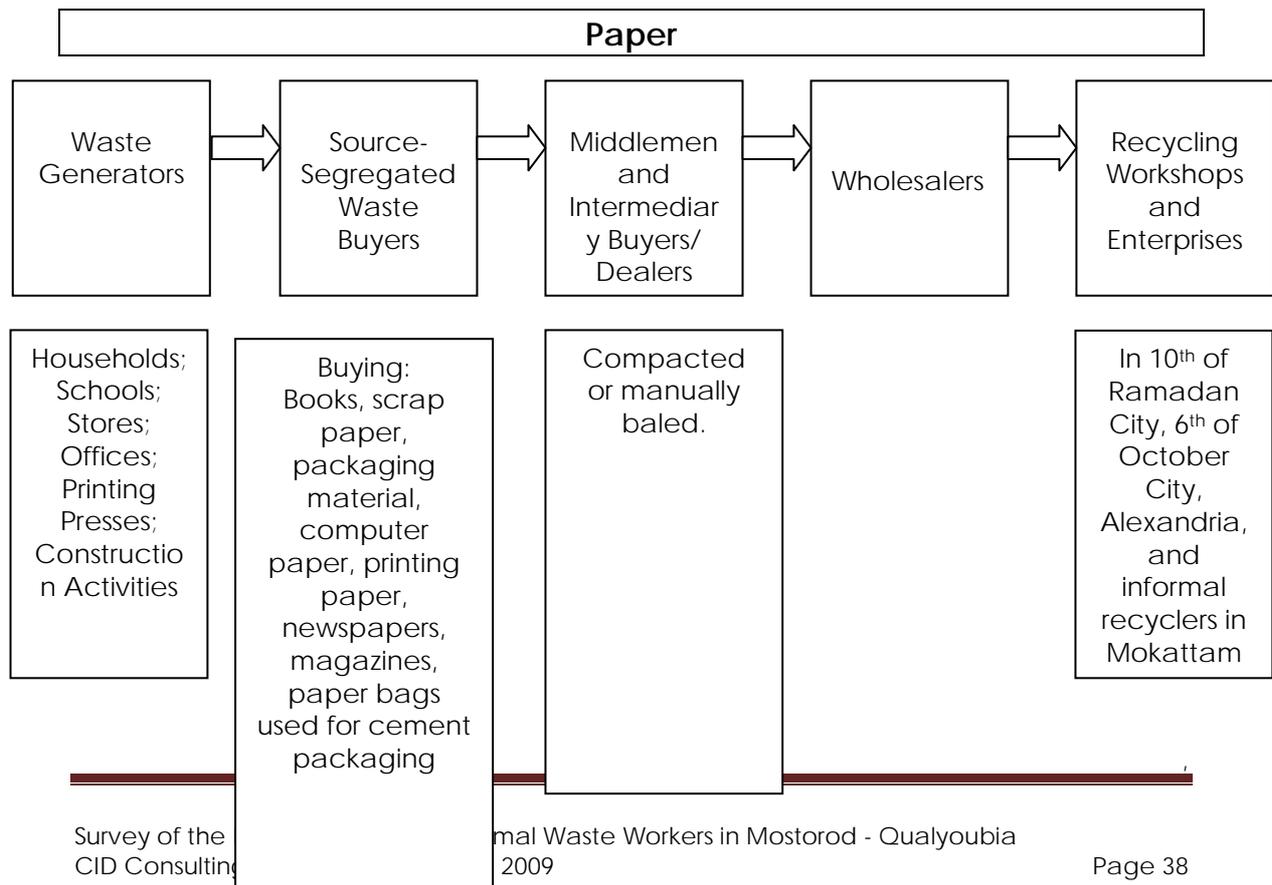
## 8.2 Plastic

Various types of plastics are bought from households and gas stations. Plastics are categorized into hard plastic (also referred to as "Bagh") and soft plastic "Tari"; which include plastic water bottles, plastic bottles, rubber slippers, motor oil containers, buckets, wash basins, tubs, household containers, plastic bags, lids of bottles and containers, and other plastic house wares.



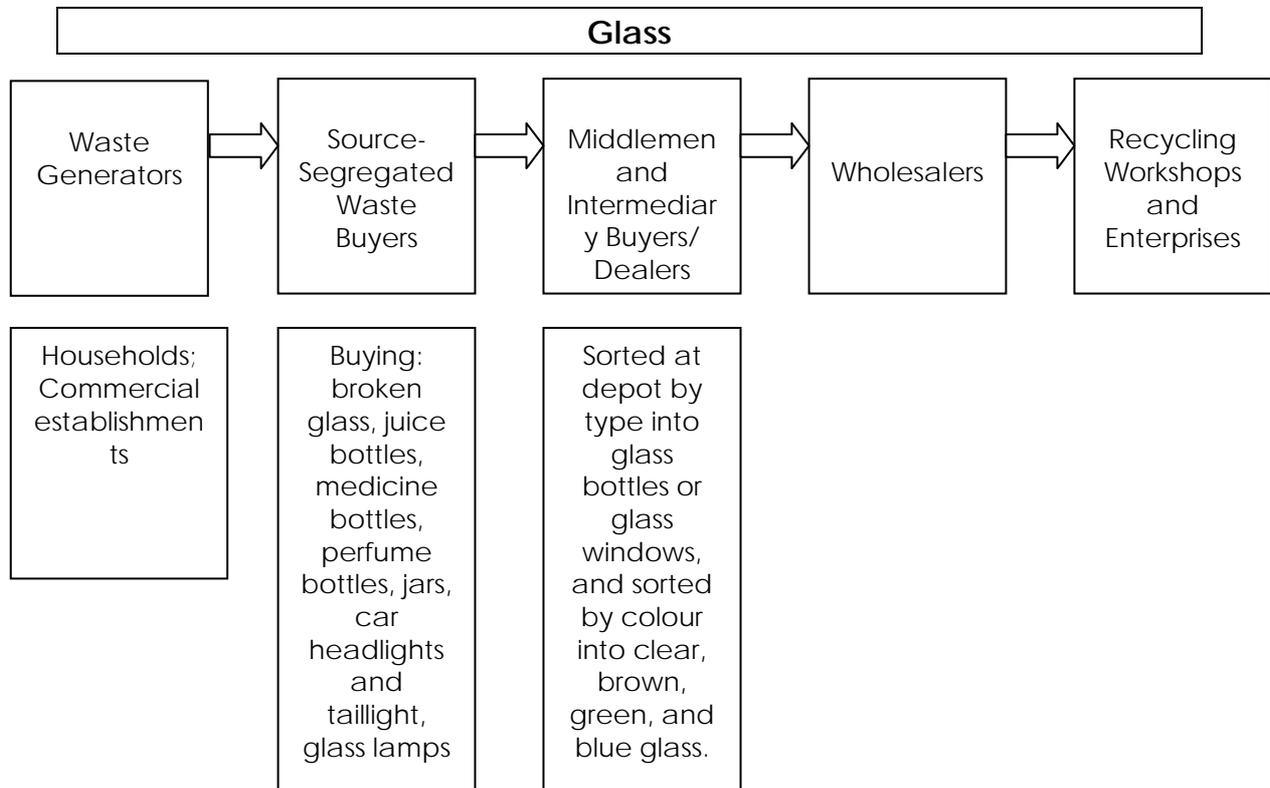
### 8.3 Paper

Paper is generated from households, offices, schools, stores, and printing presses, and construction activities which generate paper in the form of books, scrap paper, packaging material, computer paper, printing paper, newspapers, and magazines, and paper bags in which cement is packaged. Paper is bought by the roamers and itinerant waste buyers on donkey-pulled carts or motor or regular tricycles. Schools and offices that generate large quantities of paper offer their waste for sale in an auction. The quantities are typically large, and the source-segregated waste buyers more often than not do not have the capital or legal capacity to enter the auction. The middlemen and intermediary buyers/dealers are informed by the source-segregated waste buyers that work for their depot of an upcoming auction, and they are the ones to bid and purchase the waste paper. Wholesalers that store large amounts of paper to formal paper recycling industries. Paper can be subdivided into clean paper "Sana'a" that is sold to manufacturers of toilet paper, and other forms of tissue paper. Damaged and unclean paper "Dasht" is recycled by shredding, pulping, and pressing, and drying.



## 8.4 Glass

Glass is generated from households and renovation activities, which sell glass in the form of broken glass doors, windows, household and kitchen glasswares, jars, juice and medicine bottles, and gas lamps. The roamers and itinerant waste buyers buy the glass, where they are sold to the middlemen and intermediary buyers/dealers



## 8.5 Cardboard

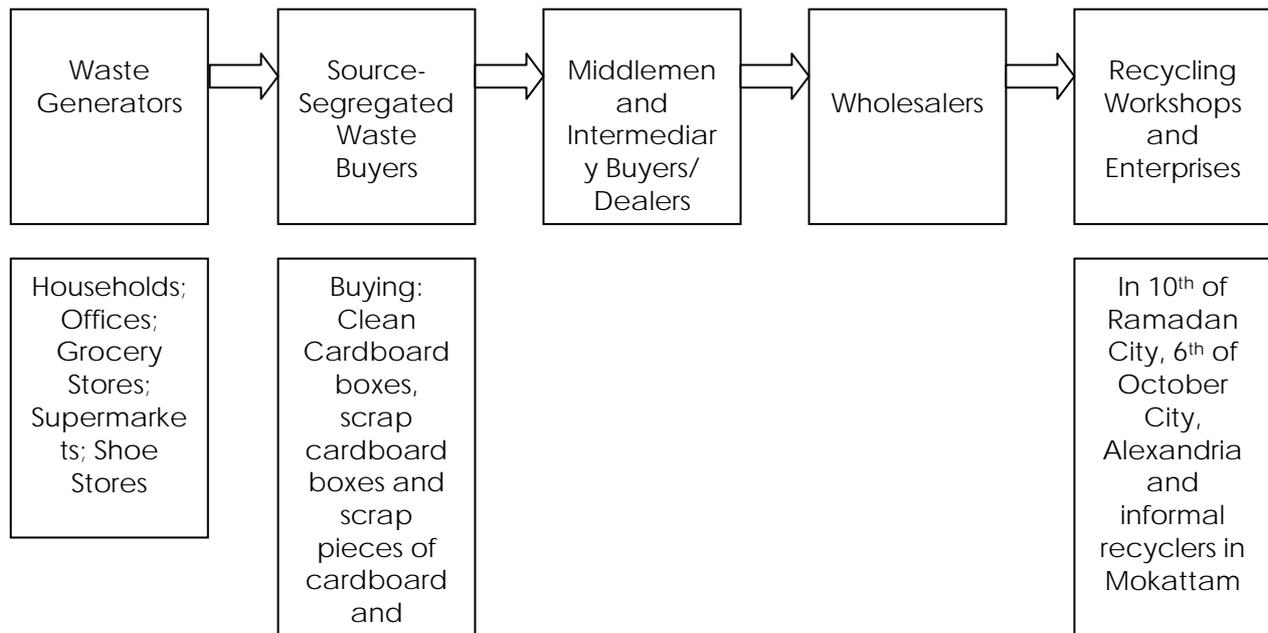
Cardboard is generated from households, offices, grocery stores, supermarkets and shoe stores, in the form cardboard boxes, scrap pieces of cardboard and packaging material. Cardboard is bought by itinerant waste buyers on tricycles who buy their flattened out cardboard boxes from grocery stores and supermarkets. The middlemen and intermediary buyers may also be the ones who recycle the cardboard boxes back into useable boxes, and then sell the cardboard boxes. Such clean and flattened cardboard boxes are turned inside out and re-sized by cutting, and re-stapled or glued back into boxes that are sold to manufacturers requiring boxes for packaging for soaps and vinegar bottles



**Figure 12: Cardboard Depot in Bahtem Trading with Laydown Area Depots**

© CID Consulting, July 2009

Cardboard



## 9. Results and Findings: Informal Waste Workers in Laydown Area, Mostorod, Qalyoubiya

The survey showed that most of the informal waste workers located in the Laydown Area are limited to the type and scale of **middlemen / trader / intermediate waste buyers**. They employ & depend on the work the roamers/ *Sarriiha*. Each one of them hires roamers, and as explained above, the depot extends credit to them on a daily basis which allows them to set out and roam around in the neighboring neighborhoods to buy recyclables from commercial waste generators, residents, industrial workshops, print shops, etc.

The surveyors who interviewed the middlemen and roamers operating around the Laydown Area reported that their respondents reported that the nature and extent of activity around the Laydown Area between depots and roamers has not changed or been affected by the prospective use of the Laydown Area. This was communicated by indicating the amount of materials they traded in, the number of *Sarriiha* they had maintained ties with and the number of recycling workshops and large wholesalers they had continued to deal with.

These depots around the Laydown Area are the driver of all waste business and livelihoods generated in this area. Their livelihoods are linked to a much broader context of formal city wide waste management systems, and until the government of Egypt and the governorate of Cairo decide to do something about the current

negative state of lack of cleanliness, the informal waste workers and dealers will continue to adapt, survive and thrive.

As waste has now become abundant on the streets of Cairo and in the public domain, livelihoods of roamers and scavengers are not affected by any one particular spot or site. A more significant determinant of livelihoods is the ability of roamers to connect to a middleman or depot and find someone to sell their recoverables to. It also depends on the ability of scavengers to escape the arrests, extortion and potential fining if they are caught mining waste containers on the streets.

The study therefore has shown that ERC's use of the Laydown Area has no impact on the livelihoods of the informal waste workers in the neighborhood. Existing structures, markets, chain of waste flows make all of the activity around the Laydown Area outside of the physical site of the Laydown Area. Another significant finding is that the Laydown Area is considered by the informal waste workers to be one of the worst and least profitable spots to venture in as other public waste pooling sites in the main street of Kattawi, or the waste containers in Bahteem and Mosotorod are richer in terms of recyclables than the Laydown Area. Thus it is our assessment that ERC's use of the Laydown Area will not impact the livelihoods of those middlemen.

As mentioned earlier, there are waste pooling sites around the target area; three are shown in Figure 3. However, many more are located in the neighborhoods where the Sarriha collect. All these sites are not private property, and are completely accessible to informal waste workers.

**The findings point to the Laydown Area not being a source of recyclables based on the following evidence:**

- 1- This Laydown Area cannot be compared to other surrounding neighborhoods in terms of the quantity and value of recyclables
- 2- Now, almost all of the waste in the Laydown Area is construction and demolition waste which cannot be recovered by informal waste workers and needs heavy equipment to haul, crush and recycle. This is an industrial process for large manufacturing businesses, not for informal sector operators.
- 3- The Laydown roamers and their middlemen focus on municipal waste, which is found in minimal quantities in the Laydown Area. In addition, waste collection services provided by the local municipality to the residents of el Kattawi reduce the waste brought to the periphery of the Laydown Area.

When service is irregular or interrupted, residents dispose their waste in waste containers or public waste pooling sites, but very few dispose of their waste in this target area, and the nature of their waste is not valuable as it is what informal workers classify as residual waste – soiled paper and plastic bags, etc.

- 4- Dealers report that they still retain the same number of roamers and roamers report that they earn the same income as they did within the past few months and as other roamers compared to them by the CID surveyors.
- 5- Many waste pooling sites are located around the Laydown Area, and these have more valuable waste than this poor Laydown Area
- 6- All the middlemen and roamers reported clearly that they recover from: Mostorod, Bahteem, Shubra El Kheima, and El Khosous, and these are the main and most important sources of recyclables.

## 10. Recommendations - Mitigating Measures

Numerous mitigating measures are available for ERC to implement in the Laydown Area. These will probably need the partnership of local community organizations in the neighborhood. ERC may have to support the nearby community in registering a new nonprofit group to partner with in proposed community based schemes. Community Development Associations (CDAs) all over Egypt have implemented community based waste management schemes. These have not had a visible impact on the national level yet provide models which can be mobilized for interventions around recycling, source segregation into wet and dry, and for the establishment of small processing and trading centers for recycling. They represent the mosaic of community groups in Egypt today. NGOs and CBOs have played numerous roles in the waste management system of Egypt. These are summarized here below:

- Providing assistance and welfare relief to the informal sector
- Implementing development initiatives in waste management at the grass roots
- Testing pilot schemes designed to upgrade the working methods of the informal waste sector
- Demonstrating replicable small scale waste systems based on informal sector aspects of recovery and recycling
- Undertaking action research at the grass roots around waste issues
- Participating in research projects around the integration of the informal sector

- Advocating for the rights of the informal sector
- Communicating with government agencies, the media and other NGO's to place the informal sector on the policy agenda for waste management in the city and in the country
- Conducting public awareness campaigns around innovative methods of waste segregation at source
- Approaching donors to fund development projects
- Raising in kind contributions from individuals and the private sector as well as community groups to improve living and working conditions of the informal sector.

ERC has already established the existence of community groups in the neighborhoods surrounding the Laydown Area. Numerous activities can be proposed as initiatives for community outreach in those neighborhoods:

- Channel all materials for recycling to existing depots
- Upgrade existing recycling technologies of waste depots e.g, by introducing compactors, granulators, forklifts, etc.
- Organize clean up campaigns with youth groups on a quarterly basis
- Undertake beautification activities by painting murals on school grounds, youth centers, etc.
- Contribute space for a football court in corner of Laydown Area and invite local youth to organize sports activities on a regular basis
- Schedule special sports days for roamers and scavengers
- Organize field trips and hygiene interventions for roamers and scavengers
- Institute source segregation campaign in neighborhoods in line with national campaign just approved by Ministry of Environment and Ministry of Local Development for greater Cairo area.
- Set up recycling school for scavengers along the lines of the Mokattam Recycling School set up by CID in Cairo

These provide opportunities for children who are currently out of school, who live on less than US\$1 a day, are illiterate and caught, for the most part, in a cycle of educational failure, poor health, social exclusion and exploitation.

CID designs these non formal learning schools for youths and children who missed out on an opportunity to a formal education in Mokattam Garbage Neighborhood, and in the brick factories of Giza.. The approach seeks to empower youths through an alternative, non-formal model of education revolving around designing working conditions that lead to lifelong learning and earning skills and creating a network

of learning communities. The project combines earning income, work skills, environmental protection, arts and recreation, literacy, industrial safety, and personal hygiene. The concept and design of the school are based on the fact that working youth need to be empowered with income generating skills and opportunities that do not threaten their lives or health but provide them with lifelong learning skills.

**The objectives of this approach are to provide the children with:**

- An educational setting that is flexible, fluid and involves **earning while learning**.
- An education leading to lifelong learning and earning skills.
- Teaching and learning methods adapted to their life situation.
- An educational delivery system that accommodates their working schedules
- An experience that values them as individuals, and builds on their skills
- An experience filled with dignity and respect.
- Learning content that shows them how to improve their working methods
- An educational experience marked by excellence.
- A balanced experience combining working, learning, recreating, celebrating, rejoicing, cultural expression.

Recycling schools are an optimal solution for informal waste workers in the Laydown area because of the variety of programs and activities that would support the boys, youth, and ALSO their families as well i.e. fathers and mothers. It would introduce "learning while earning" & "safe recovery & recycling methods and practices" for all. Community led vaccination campaigns would reach this group, recreation programs would likewise offer recreation. Adult literacy classes would be an option for the entire family.

For boys who are from outside the city, and have to go back to their families on weekends, we could conceivably find a local mosque, youth NGO or shelter to house them on weekdays. CID Consulting is currently working with a similar group of child migrant workers in the brick factories. They live in deplorable conditions on site in the factories on weekdays. Rotary International and a local Rotary Club provide them with rattan beds, mattresses, hygiene supplies, etc. We could propose the same for this group.