

Waste Pickers in Durban, South Africa

by Sibongile Mkhize, Godwin Dube and Tasmi Quazi

November 2014

Durban



Informal Economy Monitoring Study: Waste Pickers in Durban, South Africa

Field research for this report was conducted in Durban between August - November 2012. The Durban Research Team consisted of: Sithabile Mngadi, Amanda Mthembu, Siphesihle Mubiru, and Phumzile Xulu.

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About the Informal Economy Monitoring Study

The Informal Economy Monitoring Study (IEMS) is a major, longitudinal study of the urban informal economy being undertaken initially at two points in time, 2012 and 2015, in 10 cities around the world: Accra, Ghana; Ahmedabad, India; Bangkok, Thailand; Belo Horizonte, Brazil; Bogota, Colombia; Durban, South Africa; Lahore, Pakistan; Lima, Peru; Nakuru, Kenya; and Pune, India. The study combines qualitative and quantitative research methods to provide an in-depth understanding of how three groups of urban informal workers – home-based workers, street vendors, and waste pickers – are affected by and respond to economic trends, urban policies and practices, value chain dynamics, and other economic and social forces. The IEMS will generate panel data on the urban informal economy.

In each city, a team of five researchers worked in collaboration with a local membership-based organization of informal workers from April 2012 to April 2013 to collect and analyze the first round of the data.

All city research reports, as well as sector reports (one each for home-based work, street vending and waste work), a global report, and other information on the study can be found at www.inclusivecities.org and www.wiego.org.

Table of Contents

Executive Summary	1
Findings	1
Policy Recommendations	2
Introduction	5
Study Objectives	5
Conceptual Framework	6
Methodology and Sampling	6
Research Partner Profile	8
Summary of City and Sector	8
Part 1: Characteristics of Workers and Households	14
1.1 Characteristics of Individual Workers and Households	14
1.2 Characteristics of Individual Enterprises	16
1.3 Characteristics of the Sector/Value Chains	18
Part 2: Changes in the Sector	22
2.1 Driving Forces in the Sector	22
2.1.1 Macroeconomic Forces	22
2.1.2 City / Government Policies & Practices	23
2.1.3 Value Chain Dynamics	30
2.2 Intermediary Factors	33
2.2.1 Responses to Negative Driving Forces	33
Part 3: Linkages & Contributions of the Sector to the City	39
3.1 Linkages to Formal Sector	39
Part 4: Key Findings & Policy Implications	43
4.1 Key findings and Policy Recommendations	43
References	48
Appendix 1: Summary of Focus Group Interviews	49

List of Tables

Table 1 - Basic household characteristics, by sex	15
Table 2 - Access to other types of household income, by sex (%)	16
Table 3 - Mean turnover and working hours, by sex and location (%)	18
Table 4 - Other types of work-related problems associated with waste picking (%)	22
Table 5 - Negative forces related to the city	24
Table 6 - Reported problems with infrastructure and institutional obstacles, by work location (%)	27
Table 7 - Positive forces relating to waste collecting	29
Table 8 - Negative forces related to the value chains	31
Table 9 - Positive forces related to value chain dynamics	32
Table 10 - Most important responses to key driving forces	33
Table 11 - Types of organizations that are identified as being “helpful”, by sex and location (%)	35
Table 12 - Types of organizations that are identified as being “unhelpful”, by sex and location (%)	36
Table 13 - Institutional matrix in terms of frequency	36
Table 14 - Quantification, listing and rankings from 15 ZOPPs	42

List of Figures, Diagrams and Charts

Figure 1 - Age range of waste pickers	14
Figure 2 - Education levels by sex	15
Figure 3 - Paid and unpaid employees over the last month (%)	17
Figure 4 - Type of waste collected (%)	19
Figure 5 - What type of work do you do?	20
Figure 6 - Negative forces related to the city (rankings)	21
Figure 7 - Negative forces related to the city	23
Figure 8 - Example of causal flow diagram associated with the lack of access to toilet facilities	25
Figure 9 - Causal flow diagram: negative driving force - rain	26
Figure 11 - Perceptions of local authority support	29
Figure 12 - Perceptions of local authority support	30
Figure 14 - The impact and response to the poor service from middleman	35
Figure 15 - Main customers, by location	39
Figure 16 - Diagram of economic linkages	40
Figure 17 - Spatial map of economic linkages	41

Executive Summary

The Informal Economy Monitoring Study (IEMS) seeks to provide credible, grounded evidence of the range of driving forces, both positive and negative, that affect conditions of work in the informal economy over time in 10 cities. Three sectors are being explored: home-based work, street vending and waste picking. This report examines waste picking in Durban, South Africa.

The IEMS used both qualitative (i.e. participatory focus group methodology) and quantitative methods (survey questionnaire) to gather data on the impact of three major driving forces on waste picking in Durban. These driving forces are the macroeconomic environment, institutions (e.g. government institutions and informal workers' organizations), and value chain dynamics.

The field work for the study was conducted between August and November 2012. A total of 152 waste pickers were interviewed, and 75 of these also participated in focus group discussions. The Durban sample comprised of women and men from two location variables: those that collected waste from one point (i.e. a fixed location such as a landfill site) or those that were itinerant (i.e. collecting waste from multiple collection points). More waste pickers operating from a single collection point were sampled (55 per cent) compared with itinerant waste pickers (45 per cent). The advantage of having surveyed more waste pickers from a single location is that the IEMS contributes to a gap in the existing research on this particular sector compared to more robust research on itinerant waste pickers.

Findings

The findings on household characteristics suggest that waste pickers' profits are a key source of household income. Sixty-one per cent of the respondents reported that waste picking was the main source of household income. However, there was a significant difference between male and female respondents. Seventy-two per cent of male respondents reported waste picking as the primary source of income in contrast to only 43 per cent of women. The average household size of the respondents was 3.6 for female respondents and 2.6 for male respondents. Waste pickers (especially men) tended to live in small households, and a number of them actually reported that they were living on the streets.

The research revealed that the vast majority of waste pickers are own-account workers (99 per cent) and generating employment, as one in 10 respondents reported that they had at least one paid employee working for them. Although, men were more likely to have paid employees compared with women who tended to depend on more unpaid family members.

The average waste picker in the sample reported a monthly turnover of R 1,566 (US \$119), which is a very low figure given the number of hours worked by the respondents (40 hours per week on average). Male waste pickers reported a turnover that was higher with longer working hours than that of their female counterparts. Waste pickers collect and sell a wide variety of waste recyclables, and men tend to dominate the collection and sale of metals, while women dominate in the collection and sale of cardboard, paper, plastic, and glass. The gendered difference in turnover and working hours is explained by factors such as the types of recyclables sold, where men tend to sell waste that command more labour-and-time intensive processes but that have higher profits (e.g. metals), whereas women sell recyclables of lower value (e.g. cardboard) and they have to contend with household responsibilities.

Almost a quarter of the respondents add value to the waste they collect by making such things as cupboards, beds, tables, and toys. Waste pickers largely sell or are linked into the formal economy, whereby most of the waste that is collected is actually sold to formal enterprises, such as middle-agents and recycling companies with evidence of strong forward linkages for both male and female respondents (85 per cent and 90 per cent, respectively). Waste pickers service formal entities as they source their recyclables from institutions like industries and hospitals, as well as landfill sites, bins, and along the streets of commercial and residential areas.

Waste pickers are operating in an increasingly difficult economic environment that is constraining their ability to keep their enterprises viable. The most often cited problem by the survey respondents was the lack of access to waste (83 per cent). Restrictions imposed by the city authorities on the collection of waste from households, streets, and landfills all have a negative impact on waste pickers' earnings. The vast majority of waste pickers do not have permits, and in the case of landfills, waste pickers are required to negotiate with the private operators of the landfill who only issue very few permits. Another problem cited was unscrupulous behavior by middle-agents, for instance, where

they pay very low prices for the waste collected. Whilst city-provided buy-back centers have helped deal with the latter, waste pickers cited the problem of having to travel long distances to sell their waste at buy-back centers (63 per cent) and the low number of buyers for the waste collected (62 per cent). In addition, 76 per cent of respondents cited competition from large companies as a major problem affecting their work. Competition from other waste pickers has also increased, with eight in 10 respondents who said that there was more competition for collecting waste.

Access to essential basic infrastructure was identified as a critical problem – 80 per cent of waste pickers surveyed mentioned access to toilets and running water as a major problem, particularly for those operating from a single collection point such as landfill sites. In terms of work-related infrastructure, inadequate business space (84 per cent) – providing shelter from the elements for sorting, storing, and processing waste pickers' recyclables – was identified as a major problem. The issue of storage was specifically cited because if recyclables and equipment are not secured, there is a chance that they will be stolen, and theft is a serious problem that affects many waste pickers. In addition, unreliable access to equipment was cited as a problem by 82 per cent of the waste pickers, and the absence or dysfunctionality of equipment or technologies compromises their ability to collect the desired volumes of recyclables and exposes them to occupational health and safety hazards. The equipment includes trolleys for conveying recyclables more efficiently as an alternative to head-loading, protective work wear, tools for collecting and bundling recyclables (e.g. ties, bags, bailing machines to compress recyclables, collection picks), scales for measuring recyclables, and large-scale technologies such as materials recovery facilities (MRFs)¹ at landfill sites.

National and local government were regarded by the vast majority of waste pickers (98 per cent) as being unhelpful to their activities because for many, the only interaction they have with local government is through harassment and fines at the hands of the police. In the focus groups and interviews, the police and the municipality were identified as institutions hindering their work. Police were mentioned by six focus groups for negatively impacting their businesses by chasing away and fining trucks that dump the waste, as well as confiscating their recyclables. Harassment from local authorities or the public was cited by 78 per cent of the respondents and mentioned as one of the top three negative driving forces in waste pickers' lives by seven focus groups. Major institutional obstacles cited by the survey respondents were those of treatment by the local authority (cited by 68 per cent of respondents) and the inability to obtain a business license (52 per cent). Sixty-six per cent of waste pickers surveyed identified poor access to support centers as a problem. Many survey respondents (45 per cent) reported that regulations and municipal rules on where and when they can sell their recyclables are not clear.

The study interrogated the role of intermediaries, especially waste picker organizations and non-governmental organizations (NGOs). The findings suggest that while there is solidarity among waste pickers, there are no prominent organizations that represent their interests. Over 3 in 10 respondents did however note that NGOs were helpful. The study concluded by exploring the waste pickers' views on their contribution to the city. Waste pickers noted that they hope to keep the city clean by collecting waste (cited by 14 FGRs), and in terms of economic contribution, creating employment (cited by eight FGRs).

In summary, the study found that waste pickers have been negatively affected by lack of access to basic and supportive sector-specific infrastructure, a harsh economic environment due to increased competition from formal and informal sectors, difficulty in accessing waste, and a largely hostile state, which is biased towards formal waste management systems. The lack of organization among the waste pickers has only exacerbated these negative forces.

In addition, the impact of these forces has adversely affected more female waste pickers than males. For instance, not only do male respondents earn more (on average) than women, they also tend to have more paid employees/ assistants and therefore have better support when unable to work compared with female respondents. There were also gender differences in the waste recyclables sold by women and men, where men dominate in the collection and sale of metals (which command higher prices), while women tend to dominate in the collection and sale of recyclables of less value (i.e. cardboard, soft plastics etc.).

¹ MRF is a specialized plant that receives, separates, and prepares recyclable materials for recycling through a combination of manual and/or mechanical sorting

Policy Recommendations

There are 10 recommendations that stem from this study's findings.

1. **Stop police harassment:** This could make waste pickers' earnings slightly more stable, thus reducing poverty risk at the household level. The municipality needs to investigate the conduct of the police and in parallel with suggestions outlined below, conduct a retraining program. Public awareness strategies that explain the valuable contributions of waste pickers in the recycling industry will assist in dealing with the social stigma faced generally.
2. **Review the permitting system:** The municipality, in consultation with waste pickers, clearly needs to conduct a comprehensive review of the permitting system, through a transparent and consultative process that involves waste pickers. Moving from open to sanitary landfilling is extremely important for environmental, sanitary, and human rights reasons; however, viable alternatives for waste pickers should be an integral part of any solid waste management plans and strategy. These alternatives include integration of waste pickers into systems of separation at source, door-to-door collection of recyclables, and other income-generating activities. Any restricted activity should be replaced with another of at least equal value. Equally, enabling authorized access to fixed collection points that is worker- and environmentally friendly around the city should be considered.
3. **Disseminate information about local regulations:** The municipality needs to disseminate information about regulations to waste pickers across the city.
4. **Provide basic infrastructure:** Many waste pickers do not have access to toilets and running water which is a source of concern for the health and well-being of waste pickers. In conducting the area-based assessment, priority areas where the city needs to provide these facilities should be identified.
5. **Provide supportive infrastructure, technology, and equipment:** Shelter from the elements, space for the processing of recyclables, and storage for recyclables and equipment are key to the productivity of waste pickers but also to better functioning and aesthetically pleasing urban environments. Provision of these services should be a priority. The opening of more strategically located buy-back centers and curbside collection points could go a long way in not only saving time but also improving the waste pickers' earnings, because they would not be held to selling to specific centers or middle-agents and it would increase their access to multiple and transparent sources of income.

In landfill sites, the provision of materials recovery facilities (MRFs) should be considered, which would enable waste picker groups to access and process the recyclable waste and reduce the health and safety risks. Therefore, strategies of leveraging funding for more buy-back centers, collection points, and infrastructure upgrades at the existing centers and MRFs need to be institutionalized within the relevant line departments, such as Durban Solid Waste, Business Support Unit, and area-based management units around the city, such as inner-Thekwini Renewal and Urban Management Programme (iTRUMP). Where resources are limited, the city can consider public private partnerships.

6. **Provide business support services:** There are existing support services, most notably the Small Enterprise Development Agencies supported by both the eThekweni Municipality and the national Department of Trade and Industry. These and other support centers (associated with relevant line departments, such as Business Support Unit and Durban Solid Waste) need to develop programs that specifically target the waste-picking population.
7. **Strengthen waste picker organizations:** The results indicate that waste pickers are not organized, and they should be encouraged to organize themselves as member-based organizations or within committee or cooperative arrangements, which will enhance their collective agency in accessing waste and spaces to operate. Waste pickers might also gain from capacity-building programmes (including negotiation and conflict resolution skills). Therefore, more support for the emerging workers' organizations, such as those established by support organizations like Asiye eTafuleni, Wildlands Trust, groundWork and South African Waste Pickers Association, and dialogue between waste picker groups, the city, and other stakeholders need to be encouraged to achieve this.

8. Consider sector support: Durban's Informal Economy Policy suggests a sector-based approach to the development and support of different segments within the informal economy (2002:14)². There is no evidence that the city has implemented this approach, and it should be revisited.
9. Consider national policy and legislative review: waste pickers in other South African cities often face similar challenges which adds impetus for a clear national vision and implementation strategy for fully realizing the economic development potential of the recycling industry. This can be done by the inclusion of waste picking within the growing global emphasis of recycling in waste management as a pillar in the green economy strategy.
10. Inclusion of informal waste collectors within co-existent or integrated waste management strategies are needed: Currently, waste management systems are skewed towards the formal sector; however, a critique and gap analysis of formal and informal collection systems would assist in determining which sector better responds to specific waste generation trends and maximizes employment opportunities.

² Accessible here: http://www.durban.gov.za/City_Services/BST_MU/Documents/Informal_Economy_Policy.pdf

Introduction

It is now widely recognized that the majority of workers in the developing world earn their livelihoods in the informal economy. Official statistics show that informal employment accounts for more than half of total non-agricultural employment in most regions, and as much as 82 per cent in South Asia and 80 per cent in most of sub-Saharan Africa (Vanek et al. 2012). Though many studies offer theories to explain the persistence, characteristics, and growth of informal employment, few have evaluated the grounded realities of work in the informal economy – and none have done so over time and across a sufficiently large number of sectors and cities. The Informal Economy Monitoring Study (IEMS) seeks to fill this gap.

The IEMS used both qualitative (i.e. participatory focus group methodology) and quantitative methods (survey questionnaire) to gather data on the impact of three major driving forces on waste picking in Durban. These driving forces are the macroeconomic environment, institutions (e.g. government institutions and informal workers' organizations), and value chain dynamics.

The field work for the study was conducted between August and November 2012. A total of 152 waste pickers were interviewed, and 75 of these also participated in focus group discussions. The interviews and focus groups were conducted at the IEMS research partner's - Asiye eTafuleni (AeT) - premises.

The results detail how waste pickers have been negatively affected by three main forces – the harsh macroeconomic environment, unsupportive institutions which favour privatization and outsourcing of waste management services, and a business climate characterized by increased competition in the sourcing and selling of recyclable material. The impact of these forces has not been the same for female and male waste pickers – the study shows that women seem to have borne the brunt of these forces. The results indicate that not only do male respondents earn more (on average) than women, they also tend to have more paid employees/ assistants and therefore have better support when unable to work compared with female respondents. There were also gender differences in the waste recyclables sold by women and men. The results show that men dominate in the collection and sale of metals (which command higher prices), while women tend to dominate in the collection and sale of cardboard, paper, plastic, and glass.

Study Objectives

The objective of the study is to provide credible, grounded evidence of the range of driving forces, both positive and negative, that affect conditions of work in the informal economy over time. The study places informal workers and their organizations at the center of the analysis, examining not only the impact of these forces but also informal workers' strategic responses to them. It is based on a collaborative approach between researchers and member-based organizations (MBOs) of informal workers to monitor, on an on-going basis, the state of the working poor in three sectors – home-based work, street vending, and waste picking – and also to build the capacity of MBOs to assess and mediate the driving forces that affect their work.

The study is based in 10 cities, as follows:

	Sector(s)	Local Partner
Africa		
Accra, Ghana	Street Vending	Institute of Statistical, Social and Economic Research (ISSER) and StreetNet Ghana Alliance
Durban, South Africa	Street Vending, Waste Picking	Asiye eTafuleni (AeT)
Nakuru, Kenya	Street Vending, Waste Picking	Kenya National Alliance of Street Vendors and Informal Traders (KENASVIT)
Asia		
Ahmedabad, India	Home-Based Work, Street Vending	Self-Employed Women's Association (SEWA)
Bangkok, Thailand	Home-Based Work	HomeNet Thailand
Lahore, Pakistan	Home-Based Work	HomeNet Pakistan
Pune, India	Waste Picking	Kagad Kach Patra Kashtakari Panchayat (KKPKP)
Latin America		
Belo Horizonte, Brazil	Waste Picking	Instituto Nenuca de Desenvolvimento Sustentável de Belo Horizonte
Bogota, Colombia	Waste Picking	Asociación de Recicladores de Bogotá (ARB)
Lima, Peru	Street Vending	Federación Departamental de Vendedores Ambulantes de Lima y Callao (FEDEVAL)

Conceptual Framework

Three categories of “driving forces” anchor the study. First, the IEMS explores the economy as a driving force: that is, the macroeconomic conditions such as inflation, recession, and patterns of growth that may influence working conditions in the informal economy. Second, the IEMS examines the city: specifically, the various government policies and practices that operate at the city level, including urban planning and policies, zoning regulations, sector-specific policies, regulatory norms, and urban infrastructure and service delivery. Third, the IEMS considers sector-specific value chain dynamics, including the power relations between informal workers and their suppliers and buyers, and the role of intermediaries in the value chain.

The IEMS assumes that the impact of these driving forces is mediated by institutions and actors related to the particular sector under study in each city. The study examines a range of institutions, including government institutions, civil society organizations, and, fundamentally, MBOs of informal workers. It explores the responses of informal workers to key driving forces in each city, and on the economic, political, and spatial linkages within each sector. Finally, through its sampling design, the study allows for comparisons at the individual level by sex (in cities in which both men and women belong to the partner MBO), employment status, and location of the workplace.

Methodology and Sampling

The IEMS is based on both qualitative and quantitative methods. The qualitative component consists of a participatory informal economy appraisal (PIEA), an innovative method designed to capture systematically the perceptions and understandings of informal workers in their own words, in a focus group setting.³ Each city team conducted 15 focus groups of five participants each (per sector), in which nine tools – organized around the themes of sector characteristics, driving forces

³ The methodology was developed collaboratively with Caroline Moser, Angélica Acosta, and Irene Vance, who also trained the city teams in the data collection methods and later in data analysis. PIEA is an adaptation of earlier participatory methodologies developed by Chambers (1994), Moser and Holland (1997), Moser and McIlwaine (1999, 2004), and Moser, Acosta and Vasquez (2006).

and responses, the institutional environment, and contributions of the sector to the city – were used to generate data related to the conceptual framework. Immediately after each focus group was conducted, the results—12-page reports, on average—were recorded and analyzed.

The quantitative component consists of a survey questionnaire administered to the 75 focus group participants per sector, plus another 75 workers, for a total of 150 in each city-sector. The questionnaire is designed to supplement the data collected through the focus groups by collecting information on the household profile and income sources of the workers; the assets profile of the workers' households; detailed information on the enterprise or occupation of the workers; and linkages between the informal economy and the formal economy. The questionnaires were administered using a data-capture tool. It took approximately 90 minutes for each respondent to complete the questionnaire.

Collectively, the focus groups and questionnaires provide data on the context within which informal workers earn their livelihoods and the forces that impact, both positively and negatively, workers' incomes and working conditions. We are also able to understand how workers adapt their work strategies in the face of these economic, social, and institutional forces.

The sampling approach was designed to maintain comparability in the results across the 13 city-sectors, on the one hand, and to allow some flexibility as demanded by local circumstances, on the other hand. To the maximum extent possible, the following principles were followed in every city-sector:

- Only MBO members were included in the sample.⁴
- Each sector sample was based on two variables, as follows, where possible:

Sector	Sampling Variable 1		Sampling Variable 2	
Home-Based Work	Employment Status		Product Category	
	Self-Employed	Sub-Contracted	Category 1	Category 2
Street Vending	Sex		Location of Workplace	
	Women	Men	Central city	Periphery
Waste Picking	Sex		Source of Materials	
	Women	Men	Fixed	Variable

- Each city team developed the “best sample possible,” based on the sampling variables outlined above. “Best” was defined as (a) the most representative sample possible of the study population of MBO members, and (b) the most sensible, feasible, and locally appropriate sample possible. In cities where the partner MBO maintains an updated registry of members with data on the sampling variables, for example, it was possible to develop a stratified random sample that was statistically representative of the MBO population on the sampling variables; in cities where there was no accurate registry, the city team used a quota sampling approach. In each city, the local researchers worked with the MBO to identify what the best possible sample would be, based on local circumstances.
- The second sampling variable – product category for home-based workers, location of workplace for street vendors, and source of materials for waste pickers – was designed to correlate with a degree of vulnerability that stems from sector-specific circumstances. In the street vending sector, for example, vendors who work in the central city are typically more vulnerable to evictions than those who work in the periphery. Each city team identified the best way to operationalize this variable according to local circumstances.

For waste pickers in Durban, the sample was not made up of MBO members, as waste pickers are not organized. Two sampling variables were used, gender and location. For the location variable, the categories used were based on whether workers collected waste from one point (i.e. a fixed location such as a landfill site) or whether they were itinerant (i.e. collecting waste from multiple collection points).

⁴ Substantively, being a “member” of an MBO means different things in different cities; in some cities it means being formally registered, for example, while in other cities, it implies a looser affiliation..

The participants were selected by the research partner, AeT. Of the 152 waste pickers who were interviewed as part of the quantitative survey, 75 of them also participated in focus groups. Appendix 2 contains a summary profile of the participants of the focus group discussions.

The implementation of the sampling design for Durban deviated from the plan for both the sex and location variables. The final sample had a total of 152 respondents (59 per cent male and 41 per cent female). Based on anecdotal evidence, there are more waste pickers operating from multiple collection points in Durban than ones operating from single locations; therefore, the original plan was to select more itinerant waste pickers. However, more waste pickers operating from a single collection point were sampled, i.e. 55 per cent instead of 30 per cent. Consequently, fewer itinerant waste pickers were sampled, with the final sample containing 45 per cent of itinerant respondents instead of 70 per cent. The advantage of having surveyed more waste pickers from a single location is that the IEMS contributes to a gap in the existing research on this particular sector compared to more robust research on itinerant waste pickers.

A source of potential bias stems from the fact that this sample was made up of those waste pickers who were willing to participate in the study (i.e. participants were not selected randomly). Another source of bias is that almost all of the respondents who were operating from a single collection point were from one particular landfill site – Bisasar Road, the biggest landfill site in the city.

Research Partner Profile

Asiye eTafuleni (AeT) (meaning “bring it to the table” in Zulu), is a non-profit organization which champions inclusive urban planning and design for the informal economy. AeT provides technical expertise to assist informal workers such as street vendors and waste pickers to acquire skills and understanding of urban development processes. The overall objective of AeT is to provide comprehensive design and facilitation services to membership-based organizations (MBOs) of the urban working poor (particularly women) to encourage unique partnerships that result in appropriate and enabling urban infrastructure. It is intended that this objective will dignify the informal economy and result in contextually responsive town/city place-making that secures urban livelihoods.

AeT was born out of the on-going involvement of local authority officials, academics, urbanists, and activists in the Warwick Junction Project⁵, an informal market complex at the heart of Durban, South Africa. The organization was co-founded by Richard Dobson and Patrick Ndlovu in 2008. Both Dobson and Ndlovu were involved in this innovative, award-winning initiative for over 10 years; Dobson eventually leading the inner city programme. Largely because of this engagement, as well as an improved level of organizing amongst the informal workers in Warwick Junction through the project, they were better able to participate in consultation processes with city officials on equal terms.

AeT’s office is located in Warwick Junction, the primary transport node of Durban’s inner city. AeT enables access to technical support for local government officials, vendor organization leaders, and their members, who are grappling with how to integrate the working poor into urban plans. Over time, the lessons learnt will be disseminated and the Warwick Junction demonstration sites replicated in other national and African centers.⁶

Unlike other partners in the IEMS, AeT is not an MBO but provides support to MBOs. AeT is an Inclusive Cities Project⁷ partner and has worked with other MBOs, NGOs, and informal worker committees in Durban to conduct the field research for the Durban component of the IEMS.

Summary of City and Sector⁸

The east coast city of Durban is South Africa’s third largest by population. The municipal authority of Durban was renamed the eThekweni Municipality in 2000. According to the 2011 Census (eThekweni Municipality, 2013: 20), eThekweni municipality had a population of just over 3.4 million people. It is a commercial and transport hub, which also has the busiest port in Africa.

⁵ For further information about the Warwick Junction project, see Dobson and Skinner (2009).

⁶ The organization has developed a website, www.aet.org.za, as an interactive platform where you can learn more about the projects AeT is doing, ask questions and share insights about the informal economy.

⁷ Inclusive Cities is an international network of MBOs and support organizations from various Asian, Latin American and African countries that advocate for inclusive development with informal workers which increases their voice, visibility and validity. For more information, see: www.inclusivecities.org

⁸ This section draws extensively from Rogan (2012)

There is evidence to suggest that there has been an increase in the number of informal workers in the post-apartheid era in the eThekweni municipality. A report commissioned by the eThekweni Municipality reported that 24% - or around 260,000 people – of the Metropolitan region's total number of employed people in 2011, were in informal employment⁹ (Urban-Econ, 2012: 101-102). This influx has been ascribed to such factors as the repeal of the influx control laws in the 1990s, the conditions in the rural and peripheral areas, the removal of legal barriers to live and work in the previously 'whites only' areas, and job losses in the formal sector (Rogan 2012).

One occupation that the unemployed across numerous South African cities, including eThekweni, have ventured into is that of informal waste picking. Recycling in South Africa is considered to be a relatively young industry which experienced a major expansion after 2000 and has been operated by both the formal and informal sectors (Ralfe, 2007). Globally, the recycling industry has been growing at a rapid pace due to diminishing environmental resources, and within developing country contexts, a lively informal sector has emerged around this industry (Maia, Giordano, Kelder, Bardien, *et al.*, 2011). A 2010 UN-HABITAT publication reports that waste pickers perform between 50-100% of all on-going waste collection in most cities in developing countries and at no cost to the city budget. In addition, this publication reveals that waste pickers have contributed to increasing recycling rates in some developing countries and making them more competitive than developed modern urban systems.

The industry is multi-layered in which materials pass through several hands before finally reaching the formal sector recycling companies (Ralfe, 2007). Unsurprisingly, at the bottom of the recycling hierarchy are waste pickers, also sometimes called primary collectors, salvagers, reclaimers, or informal recyclers. Waste picking serves as a prime example of a livelihood with low-levels of entry to the most marginalized individuals in society, particularly women, without needing particular education levels, skills, or start-up capital.

Waste pickers in Durban

In contrast to the numerous studies that have been carried out on street vending in Durban, very little research has actually been conducted on waste pickers (Rogan, 2012). There are a number of small studies that have been conducted, such as McClean (2000), Mueller (2005), Ralfe (2007), and Quazi and Dobson (2012), but the size and composition of this sector remains vague.

The great majority of waste pickers in Durban are itinerant or street waste pickers that collect waste from multiple points in residential and business areas after the waste is usually left aside for the municipality to collect (Rogan, 2012). Access to this recyclable waste is insecure and is often on the basis of "first come, first served." There is evidence that some waste pickers have arrangements with local people to facilitate their access to the recyclables (McLean, 2000; Dobson & Quazi, 2012). The other category of waste pickers is those operating from fixed locations, such as landfill sites (e.g. Bisasar Road landfill site), and those that service specific retail stores or shopping centers. There is a gendered division of labour, with women dominating the collection of plastics and cardboard while the men dominate in the collection of the more profitable metals (Rogan, 2012).

There is evidence to suggest that the informal waste collection sector in eThekweni does play an important role in the management of waste. Quazi and Dobson (2012) estimate that roughly 150 tonnes of recyclables – predominantly paper, cardboard, and plastics – are collected from commercial and industrial areas on a daily basis by over 500 waste pickers in the Durban central region. Nearly all businesses in the city center depend on waste pickers to remove their waste. There is very little reliable information on the total amount of waste that is recovered by waste pickers in South Africa; however, a study exploring the contributions of waste pickers to the overall recycling industry found that 31 per cent of plastics that are recycled are recovered by waste pickers, as opposed to private collection companies. Similarly, a fifth of all metal that is recycled in South Africa is recovered informally (Gresh, Govender, Valodia, Lymboussis *et al.*, 2012). These estimates suggest that these waste pickers make a substantial contribution to the recycling sector.

Legislative and regulatory frameworks

The responsibility for providing waste management services in South Africa lies with municipal governments (Rogan, 2012). However, the national policy and regulatory frameworks do not prescribe how waste management should be done and consequently it differs considerably across

⁹ It is likely that this estimate relates to informal employment more broadly defined.

different municipalities. In many cases, municipalities outsource this work to private companies, often under the guise of municipal service partnerships (MSPs).

The national legislative framework during apartheid and the immediate post-apartheid period (e.g. post-1994) was hostile towards waste pickers. As of the late 1990s, the Minimum Requirements for Disposal of Waste by Landfill of 1998 gives greater power to municipalities and landfill managers to determine the role of waste pickers (Rogan, 2012 cites Samson, 2010). In addition, the National Environmental Management Act (NEMA) of 1998 notes the importance of recycling but with no mention of the role of waste pickers.

Although the National Waste Management Strategy (1999) mentions the role of 'reclaimers', it is troublingly aimed at controlling the sector and eventually phased it out by 2003. The 2006 amendment to the Minimum Requirements for Disposal of Waste by Landfill makes concessions to 'salvagers' in terms of the minimum requirements for the 'control' of reclaiming. However, this legislation requires a layout plan showing where reclaiming will take place and how health and safety concerns will be addressed. It calls for the registration and issuing of identity cards to reclaimers. The reclaimers are expected to elect committees to represent them, and site permit holders are required to sign contracts with the private waste management service providers (Rogan, 2012). Some progress was made in securing access to landfills for waste pickers under the 2009 National Environmental Management Waste Bill, and this was reportedly driven by a community of waste pickers with support from the non-governmental organization groundWork¹⁰ (Rogan, 2012 cites Chamane, 2009).

At the provincial level, legislation is still hostile towards waste pickers. For example, the KwaZulu-Natal Prevention and Management of Waste Bill of 2007 prohibits the reclaiming of waste outright (Rogan, 2012). While some gains have been made for waste pickers operating from landfill sites, legislative frameworks at both national and provincial levels are silent on those operating from multiple collection points. Consequently, there is a large amount of discretion in the implementation of legislation at the municipal level and the situation differs across municipalities. Samson (2010: 18), in summarizing the situation, describes three different approaches to the role of waste pickers as that of 'complete exclusion of reclaimers from landfills, forced subordination to private companies, and benevolent patriarchy in which reclaimers are accommodated, but on terms defined by the municipality'.

Despite the underdeveloped and contradictory legislative and regulatory frameworks impacting waste pickers at the national and provincial level, there has been some progress at the municipal level in Durban. The Durban Solid Waste's (DSW) Integrated Waste Management Plan (2004), which is a requirement of NEMA, highlights job creation in previously disadvantaged communities and private sector partnerships for recycling, albeit with no mention of the role of waste pickers. More positively, however, both the Durban Climate Change Strategy (2013) and the Economic Development and Job Creation Strategy (2013) identify the importance of recycling and the "Green Economy" as a key potential growth sector and in the creation of multiple job opportunities encompassing the formal and informal sectors.

These municipal-level frameworks recognize the role of the informal waste picking sector, which is reflected in some progressive institutional approaches to the sector, to be discussed in the next section. Strategically, the recognition of waste pickers operating at landfill sites within national level policy and legislative frameworks, albeit limited and over-regulatory in its approach, is a positive one which secures some opportunities for waste pickers. Within all three tiers of government however, the policy, legislation and regulatory frameworks dealing with recycling and waste management are skewed towards the formal sector. There are therefore gaps which require recognition and strategies for the greater inclusion of the different types of waste pickers as contributors to a co-existent waste management strategy encompassing both the formal and informal sectors.

Durban municipality – institutional arrangements and approach

In Durban, waste is collected by the municipality through its waste department, Durban Solid Waste (DSW). The municipality (through DSW) employs permanent staff for the collection of domestic waste in the former 'white', 'Indian', and 'coloured'¹¹ areas (suburbs) of the city, but, since 1996, has contracted the service out to private companies in the (mainly black) township areas

¹⁰ <http://www.groundwork.org.za/>

¹¹ 'Coloured' is a term used to refer to mixed race people in South Africa

(Hallowes and Munnik, 2008). The collected waste is then disposed at landfill sites, most of which are privately managed.

In Durban, the municipality (through DSW) owns and assists in the operation of six buy-back centers where individuals and businesses can drop off recyclable materials in exchange for cash (Rogan, 2012). These buy-back centers, although owned by the municipality, are actually managed by private individuals (most of whom were previously waste pickers themselves) and act as “middle-agents” in the recycling value chain. A wide range of materials is purchased by these centers, but, on the whole, the available evidence suggests that the two most common materials are paper/cardboard¹² and scrap metal. The DSW estimates that 80-90 per cent of waste sold to these centers comes from waste pickers (Rogan, 2012). However, Rogan (2012) notes that there is a lack of governance and monitoring at some of the buy-back centers and, consequently, they sometimes do not operate efficiently (Interview: Senior Project Officer, AeT). Notwithstanding these challenges, the buy-back centers offer waste pickers a convenient option for selling recyclables and also offer some protection from police harassment, as they do not have to stockpile materials on curbsides.

These municipality supported recycling activities are, however, only one part of the recycling value chain, as there is a sizeable private sector presence in the recycling industry (Rogan, 2012; Ralfe, 2007). Prior to the introduction of the buy-back centers, waste pickers could only sell their materials to various types of private middle-agents, most of whom exploited them through unfairly low prices for materials, volatility in prices, as well as misuse of the scales used to weigh recyclable materials. However, many waste pickers (and particularly those collecting scrap metal) choose to sell their recyclables to private agents because these materials are often bulky and difficult to transport to locations that are far from the buy-back centers (Ralfe, 2007). The advantage that these middle-agents have over buy-back centers is that they collect recyclables from waste pickers on a regular basis with large trucks at informal collection points. Research conducted at two of DSW’s buy-back centers and one of the largest private recycling depots in Durban suggested that waste pickers generally sell their materials to the closest center to their collection point, irrespective of whether it is a municipal or private facility (Ralfe, 2007). In addition, research conducted at the Brook Street buy-back center in 2000 suggest that less than 10 per cent of cardboard waste pickers in the Warwick Junction area were using the center and the rest were likely to be selling directly to private agents on the street (Mueller, 2005).

On an ad hoc basis, some of the large recycling companies have offered training, work gear, trolleys for transporting recyclables, and above-market prices to secure a stable supply of recyclables from individuals or groups of waste pickers (Rogan, 2012). With regards to the issue of exploitation by private agents, DSW and NGOs like AeT have assisted some waste pickers in negotiating fairer prices. As a result, waste pickers are no longer held to ransom by curbside agents and gain access to more transparent sources of income for their materials (Rogan, 2012; Quazi & Dobson, 2012).

A pilot project, commissioned by the municipality in 2010 and implemented by AeT, aimed to enhance the livelihoods of waste pickers based in the inner-city and CBD (Dobson & Quazi, 2012). The strategies supported by the city have been to explore enabling equipment and urban infrastructure, which enhance the contributions of waste pickers. The project highlighted that cities that aim to have high recycling rates need to be inclusive of the spatial needs of waste pickers within urban plans, particularly in exploring alternatives to buy-back centers such as curbside collection points or drop-off centers for waste pickers. Subsequent to the pilot project, further research has been commissioned into the various recycling sectors within eThekweni Municipality with an emphasis on determining informal sector contributions within value chain analyses (Quazi & Dobson, 2012).

Landfill sites are a crucial link in the waste value chain, and Durban has four general waste sites as well as two low hazard sites (Rogan, 2012). The waste pickers’ access to landfill waste differs according to each site and is dependent on the waste pickers’ association with the private waste management company that operates on the site. At Bisasar Road, the recycling operations were privatized in 1999. Since then, companies have been awarded contracts through a tender system to operate for three years, and the company currently operating at Bisasar Road landfill site is Babs Waste Paper (Rogan, 2012 cites Interview: former DSW employee, 4 April 2013). Before the privatization and formalization of operations, there were about 600 waste pickers operating from the site without any restrictions and were earning incomes as high as R300 which is about US \$23 a day

¹² In the case of cardboard, the industry is dominated by four large companies to which all companies (including buy-back centers) sell.

(Interview: former DSW employee, 4 April 2013). The local authority felt that this was unsafe, as it exposed these waste pickers to hazardous waste and other dangers (i.e., the risk of being run over by vehicles). After reportedly consulting with waste pickers and contractors, a decision was then made by the local authority to restructure the landfill's operations. A key result of this restructuring was that waste pickers could only gain access to the landfill if they were employed by the contractor to pick waste (Interview: former DSW employee, 4 April 2013).

For the majority of waste pickers who could not be employed by the contractor, access to the landfill has been restricted. They are not allowed inside the landfill and they have to either negotiate with truck drivers or resort to dangerous practices, such as jumping onto moving trucks en route to the landfill (Rogan, 2012). A number of people from the adjacent Kennedy Road informal settlement depend on the landfill for their livelihood. The restrictions on access to waste imposed on waste pickers at the Bisasar site (and Durban's other landfill sites more generally) due to privatization is said to be representative of changes that are occurring at municipal landfills across the country, which is a process that has been well documented in South Africa (Rogan, 2012 cites Samson, 2003; Hallows and Munnik, 2008). Privatization and formalization negatively impact waste pickers in the form of less (or no) access to waste, restrictive permits which require collectors to sell materials to a single (private) buyer, and lower prices received for materials (Rogan, 2012).

Organizations like groundWork argue that investing in material recovery facilities (MRFs)¹³, although expensive, will assist in formally employing the majority of waste pickers already working in landfill sites with safer working conditions and at a safe distance away from the actual dumpsite (groundWork, 2012¹⁴). Notwithstanding the role of this type of infrastructure investment, which will enhance the health and safety aspects of waste picking, Urban-Econ (2014) noted that one of Durban's landfill sites in Marianhill had a sophisticated MRF plant implemented by Re-ethical Engineering (a large formal recycling solutions company). This plant was reportedly given the full support of DSW, employed 80 staff, and operated 24 hours a day. However, it was shut down after a short time, because it was no longer considered viable due to the low volume of materials recovery. This is in contrast to Bisasar Road landfill site, which managed to run a financially viable materials recovery operation without any on-site machinery due to the use of waste pickers.

Challenges faced by waste pickers – existing evidence

Waste pickers face many general challenges, in addition to their working environments. They are said to face low social status due to the nature of their work from difficult working and living conditions, which is prejudiced as undignified (Ralfe, 2007; McLean, 2000). Furthermore, relationships with the local municipality and generators of waste (businesses and citizens) are largely indifferent, with limited contact. For instance, waste pickers in Durban felt that they are not recognized, and that they consider themselves somehow "frowned upon by local authorities" (WIEGO¹⁵). Waste pickers also reported having very little shelter or access to basic amenities, such as water and toilets (Rogan, 2012). Since waste pickers work outside, there is very little that they can do when the weather is poor.

Another key challenge facing waste pickers is the difficulty they have faced in organizing as a collective (Samson, 2009). Various case studies of waste picker collectives in countries such as Brazil, Colombia, and India show that they have organized themselves in established cooperative structures and unions and that they have successfully lobbied for policy inclusion and the recognition of waste pickers as significant drivers of recycling. However, in South Africa, waste pickers predominantly operate in a highly individualistic manner, which has further marginalized them (Samson, 2009). Nevertheless, some limited examples of waste picker organizations include the South African Waste Pickers Association, which was formed around 2009 and which is currently in the process of forming provincial representatives, and local organizations such as Cape Town street waste pickers and those established by organizations like groundWork around KwaZulu-Natal. In Durban, specifically, waste picker groups have been organized by NGOs like AeT and Wildlands Trust in partnership with DSW.

In summary, based on the literature, some progress for the waste picking sector in Durban has been made due to the efforts of private agents in the recycling sector, DSW's buy-back centers, and a

¹³ MRF is a specialized plant that receives, separates and prepares recyclable materials for recycling through a combination of manual and/or mechanical sorting.

¹⁴ <http://www.groundwork.org.za/archives/2012/news%2020120803.php>

¹⁵ Women in Informal Employment: Globalizing and Organizing (WIEGO). "Waste Pickers", <http://wiego.org/informal-economy/occupational-groups/waste-pickers>

number of emerging groups of waste pickers supported by NGOs. The multiplicity of municipal and private sources willing to buy recyclables has meant that waste picking can commence at any time and can be taken to one of the buyback centers managed by DSW, the numerous scrap dealers, or collected from specific points by “middle-agents” in order to exchange the material for money. There have also been some negative changes in the recycling sector, such as the restriction of access to waste at Durban’s landfill sites as a result of the city’s health and safety concerns. These restrictions significantly erode the voice and leverage of waste pickers similar to the exploitation of curbside waste pickers by middle-agents. Durban is thus similar to that of many other municipalities in South Africa, and this is a negative outcome of the broader process of the privatization and formalization of waste management.

Notwithstanding the challenges, both the city and a number of NGOs have embarked on a number of initiatives which should improve the livelihoods of waste pickers in the future. Some of the main projects and programmes for the medium-term future include:

- the opening of buy-back centers in a number of other parts of the municipality;
- demarcated curbside pick-up or drop-off points where workers can process, store and sell their materials (e.g. the Palmer Street location has been identified as a potential site); and,
- continued work with waste pickers through the interdepartmental Informal Recyclers Reference Committee set up after the success of the Imagine Durban Cardboard Recycling Project, which initiated further research into Durban’s recycling sector.

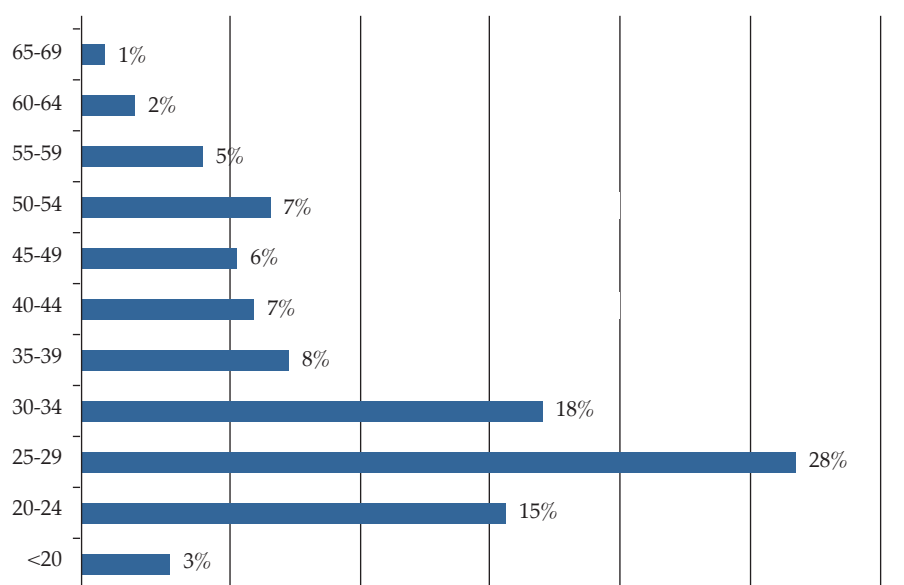
Part 1: Characteristics of Workers and Households

This section presents the results on the characteristics of individual waste pickers, their households, their enterprises and the value chain dynamics. These results integrate the findings from both the qualitative and quantitative aspects of the study.

1.1 Characteristics of Individual Workers and Households

The results of Figure 1 below suggest that the ages of the waste pickers interviewed in the survey ranged from 15 to 69 with a mean age of 34 and a median age of 30 – this seems to indicate that the survey respondents were quite young. Although not directly comparable, the study on Durban’s waste pickers by McClean (2000) found that the respondents’ ages ranged from 23 to 76 with an average age of 44. As shown in the figure below, 55% of all the waste pickers were below 35.

Figure 1 - Age range of waste pickers



n=152

Table 1 summarizes the findings from the survey of waste pickers’ household characteristics. The average household size of the respondents was 3.6 for female respondents and 2.6 for male respondents. Waste pickers (especially men) tend to live in small households and a number of them actually reported that they were living on the streets.

The ratio of working adults to total household size (i.e. the proportion of household members, including the respondent, with employment of any type) was 0.8 for males and 0.6 for females. Half of the male respondents had at least one other worker in the household while most (61 per cent) of the female respondents had at least one other worker in the household.

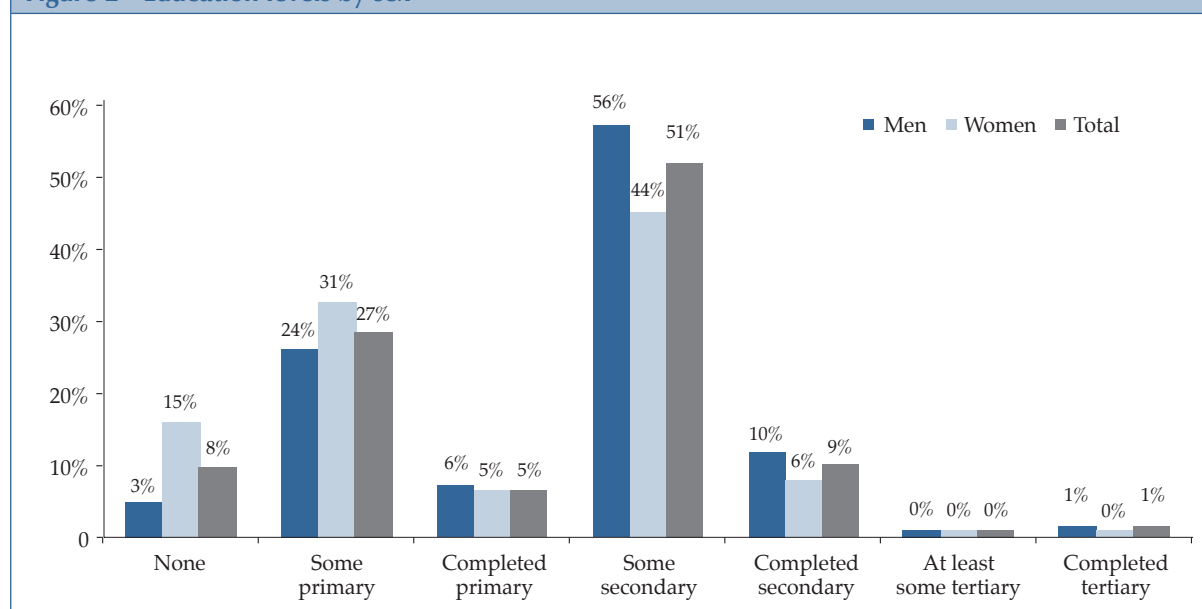
In terms of the sectors that these other workers were employed in, female respondents reported having more household members in the informal sector (47 per cent) compared to men (38 per cent) - see Table 1.

Table 1 - Basic household characteristics, by sex			
	Men	Women	Total
Household size	2.59	3.61	3.00
Household dependency ratio	0.80	0.62	0.73
Percentage with:			
Other workers in the household	50.00	61.29	54.61
Other informal workers in the household	37.78	46.77	41.45
Other formal workers in the household	21.11	19.35	20.39
N	90	62	152

Source: Durban IEMS survey data (2012)

According to Samson (2010 in ILO, 2012: 25), “one of the main socio-economic features of the waste pickers is their low level of schooling and literacy.” Almost all the male respondents (97 per cent) had received some level of education compared to 85 per cent of the female respondents. Only 1 per cent of the male waste pickers had obtained some form of post-secondary education (none of the women had).

Figure 2 - Education levels by sex



n=152

The results in Figure 2 above suggest that waste pickers from the IEMS tend to have lower levels of education, on average, than the adult population (and workforce) in South Africa. As shown in Figure 2, 8 per cent of all respondents had no schooling and only 5 per cent had completed primary school indicating high levels of drop-out rates at the primary and secondary levels of schooling. Using weighted estimates from the 2010 Quarterly Labour Force Survey (QLFS), Rogan (2012: 12), found that “6.7 per cent of adult South Africans (and 3.3 per cent of the employed) have had no schooling, about 17 per cent of the population has only a primary school education (14 per cent of the employed) and 11 per cent have attended a tertiary institution.”

Female respondents reported having more children in the household (0.97), on average, compared to males (0.4). More female respondents reported having working age adults, on average, in their households than males – the numbers reported were 2.6 and 2.2, respectively. However, in spite of having more working age adults in their households (on average), the number of dependents (i.e., members of the household that were unemployed) was higher for female respondents (i.e., those that were the sole breadwinners) – 2.8 for females and 2.1 for males. The number of pensioners (0.01 for males and 0.02 for females) and the number of household members who had completed high school (0.44 for males and 0.40 for females) was similar for both males and females.

Respondents were asked about the main source of household income. The majority of respondents (61 per cent) reported this to be through waste picking. There was, however, a significant difference between male and female respondents. Seventy-two per cent of male respondents reported waste picking as the primary source of income in contrast to only 43 per cent of women.

South Africa has a comprehensive cash transfer system. The child support grant, introduced in 1998, is awarded to caregivers of poor children. The old age pension (which was primarily intended for a section of the population during apartheid) was extended (in terms of coverage and benefits) after 1994. There is clearly a high dependency on these state grants, particularly in female waste pickers' households. A third of the female respondents (and only seven per cent of male waste pickers) cited social assistance from the state (pensions and grants) as their primary source of household income.

Respondents were asked what other types of household income they had access to as shown in Table 2 below. Unsurprisingly, cash transfers were by far the most common source of other household income received by both female and male respondents (82 per cent and 26 per cent, respectively). The table below shows the extent to which cash transfers support these households.

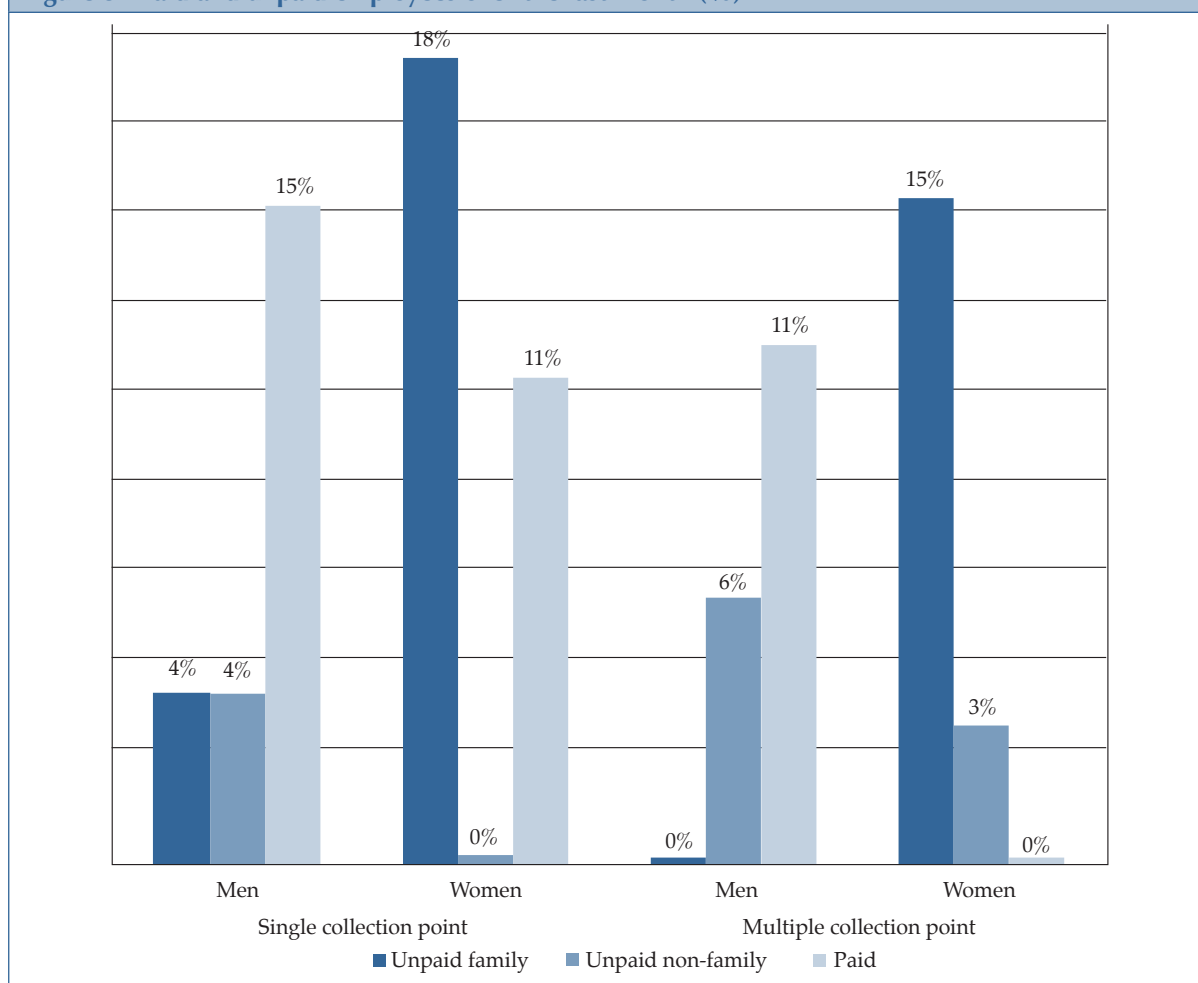
Table 2 - Access to other types of household income, by gender (%)			
	Men	Women	Total
Government grants	18.89	64.52	37.50
Remittances	12.22	4.84	9.21
Child maintenance	3.33	11.29	6.58
Rental income	4.44	9.68	6.58
Pension	3.33	6.45	4.61
Unemployment pay-out	0.00	3.23	1.32
Worker's compensation	0.00	1.61	0.66
Retrenchment package	0.00	0.00	0.00
N	90	62	152

1.2 Characteristics of Individual Enterprises

According to the International Labour Organization (ILO), there are two main forms of employment in the informal economy: self-employment (i.e. own-account worker, employer) or wage employment in an informal enterprise (2002). When asked about their employment status (i.e., whether they were employers, employees or own-account workers), almost all the respondents (99 per cent) said that they were own-account workers. Later in the questionnaire, respondents were asked whether they had employed at least one person in their enterprise over the previous month. Twenty-one per cent of the waste pickers interviewed said they had, thus being employers rather than own account workers. Eight per cent of all respondents had at least one unpaid family member working for them. Three per cent of all respondents had at least one unpaid non-family member working for them. Ten per cent of all respondents had at least one paid employee working for them.

Respondents were asked whether they had any employees (paid and/or unpaid) in their enterprises over the last month. The percentage of male waste pickers that had a paid employee/assistant was higher than that of women waste pickers operating from multiple collection points (11% and 0%, respectively). For those waste pickers operating from a single collection point, the proportions were similar with 15% of the men and 11% of the women reporting that they had paid employees/assistants. These employees assist in moving collected materials from the landfill site to the waste pickers' households, the buyers and the points where they sell them.

Figure 3 - Paid and unpaid employees over the last month (%)



n=152

As shown in Figure 3 above, men were more likely to have paid employees than women (whether they were operating from a single collection point or multiple collection points). Women tended to depend more on unpaid family members with 15 per cent of those operating from multiple collection points and 18 per cent of those operating from a single collection point reporting that they had unpaid family workers.

When asked about the number of paid and unpaid employees during the busiest time of the year, the responses are very similar to those in Figure 3 above. Fifteen per cent of the male waste pickers collecting from a single collection point said that they had a paid employee (similar to the responses from female respondents, 14 per cent of whom had a paid employee). Four per cent of the male respondents in the landfill site had at least one unpaid family member working for them compared to 12 per cent for the female respondents. Ten per cent of the male waste pickers collecting from a single collection point had at least one unpaid non-family member working for them, compared with 14 per cent of the female respondents.

For those waste pickers collecting from multiple points, six per cent of the male respondents had at least one paid employee compared with three per cent of the female respondents. None of the male respondents reported having unpaid family members working for them compared to 15 per cent of the female respondents.

Interviewees were asked what their total turnover was before deducting taxes or any other expenses related to their work¹⁶. Based on this question, the average waste picker in this sample reported a

¹⁶ The data presented here were generated through a question designed to capture **turnover**—that is, the total value of sales. They **do not** take into consideration expenses incurred, such as storage of equipment, transport of recyclable goods, and fees. The literature on income is clear that it is very difficult to capture distinctions between turnover, gross earnings, and net earnings reliably, and as with similar studies, these data should not be taken out of context and should be interpreted with caution. Data on turnover from all cities included in the IEMS study showed very high standard deviations and means that far exceeded medians.

turnover of R1565.50 a month (about US \$119). Women's turnover figures, however, are much lower than those of men. On average, male waste pickers' monthly turnover in this sample was R1871 a month (about US \$141). This was higher than that of female waste pickers whose average monthly turnover was R1169 a month (about US \$88). The average earnings of waste pickers are low as can be seen in Table 3, which groups the results on location and sex. Although female waste pickers collecting from a single point earn slightly more than their male counterparts, on average, men generally earn more than women. Male waste pickers collecting from multiple places actually earn more than three times what their female counterparts earn on average.

Respondents were asked on average how many hours a week and how many months a year they work. Men tend to work more hours on average than women, because women usually have to contend with domestic chores and other household responsibilities. On average, waste pickers interviewed worked 40 hours a week. Men tended to work more hours per week (44 hours compared to 34 hours for women). Table 3 below contains the results by sex and location.

Table 3 - Mean turnover and working hours, by sex and location (%)					
	Single collection point		Multiple collection point		TOTAL
	Men	Women	Men	Women	
Mean monthly turnover (Rands)	1344.25	1466.81	2843.85	918.71	1565.50
N	48	26	26	31	131
Mean hours per week (last week)	35.16	37.71	57.66	30.59	39.79
N	55	28	35	34	152
Mean months per year	9.14	10.00	11.60	11.32	10.36
N	55	28	35	34	152

When asked whether their revenue had increased, decreased or stayed the same, almost two thirds of all respondents (64 per cent) reported that their revenue had fallen over the past 12 months. Seventy-four per cent of women operating from multiple collection points said that their revenue had fallen over the past year compared to 51 per cent of the men.

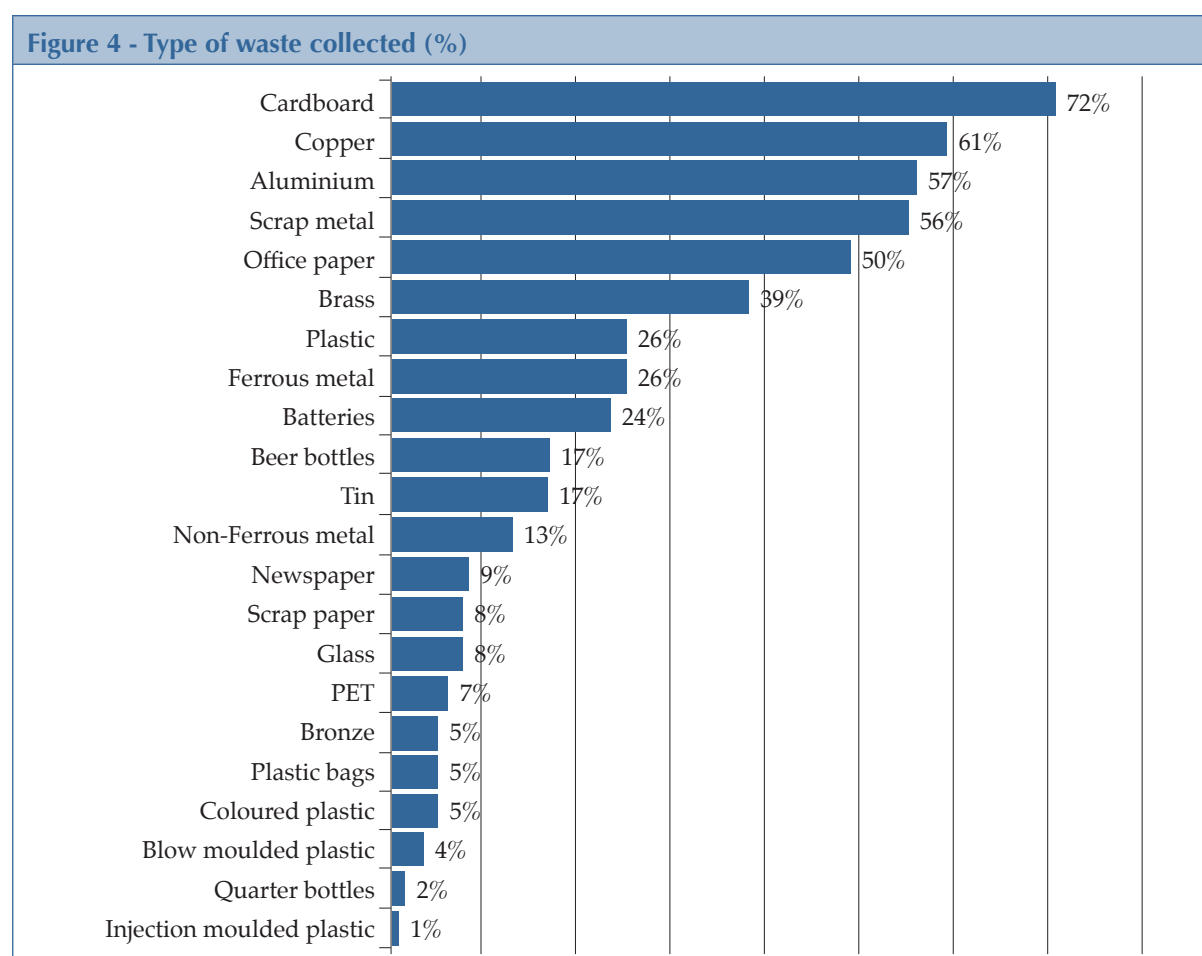
Despite these long hours, 65 per cent of the waste pickers responded positively to the question, "During the past seven days, would you have liked to work more hours than you actually worked?" Waste pickers were also asked if they had a second job. Unsurprisingly, given the work hours reported above, only 11 per cent of all respondents had a second job. Waste pickers were also asked if they received any support when they were unable to work. The vast majority of waste pickers (93 per cent) did not receive any type of support when they were unable to work.

In summary, the survey found that waste pickers' turnover was on average R1566 in a month. This is a very low figure given the number of hours worked by the respondents (40 hours per week on average). It also found male waste pickers' turnover was a lot more (on average) than their female counterparts. The survey found that waste pickers were generating employment – with one in every 10 reporting having a paid assistant. Men also have more employees/assistants and tend to work more hours on average than women. As has been pointed out in other studies, there are a number of factors that cause these differences, such as the types of recyclables sold (men tend to sell waste such as scrap metal that commands more labour intensive processes and have higher profits) and hence the longer working hours reported by men – with women having to contend with domestic chores and other household responsibilities. Men also have better support when unable to work with an employee running their enterprise; this finding is consistent with the higher number of employees/assistants reported by male respondents.

1.3 Characteristics of the Sector/Value Chains

Survey respondents were asked to identify the type of waste that they collected and many of them actually reported that they collected different types of waste (multiple responses were allowed).

Figure 4 below shows the percentage of respondents who sold the various types of waste. Waste pickers collect and sell a wide variety of items. Cardboard was the most popular type of waste collected, with 72 per cent of all respondents citing it as one of the materials collected.



n=152

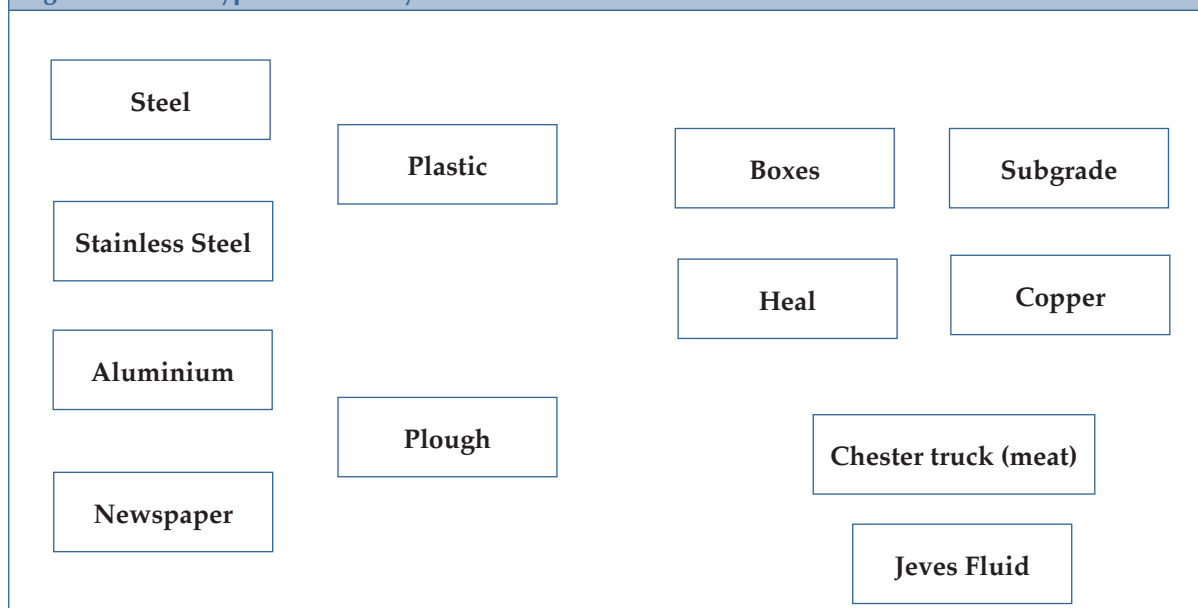
The focus group interviews commenced with an exercise where interviewees were asked to write or draw in cards what work they do within the sector. The participants were then asked to group the cards as they saw fit. Findings from a focus group are reflected in Figure 5 below. In the focus group (FGR 8) represented in Figure 5, the waste pickers (three female and two male) reported that they collected and sold additional categories of recyclable materials, such as subgrade and food, in addition to the categories reported in the survey as captured in Figure 4 above. One participant in the group reported that she supplements her income from waste picking by providing traditional healing services and selling Jeyes fluid¹⁷ as she says:

“I sell Jeyes fluid with the money that I get from selling waste materials like steel, plastics, boxes¹⁸, papers. I cultivate medicinal plants for healing people. My garden is at Inanda. I go there during the weekends, then during the week I am at Mayville. Sometimes I have to go door to door selling [Jeyes fluid].”

¹⁷ “Jeyes fluid” is an antibacterial fluid used in households but which is also used as a product in traditional healing.

¹⁸ This is the colloquial expression for cardboard recyclables.

Figure 5 - What type of work do you do?¹⁹



Source: FGR 8, 3 females and 2 male waste pickers– Single and Multipoint collection

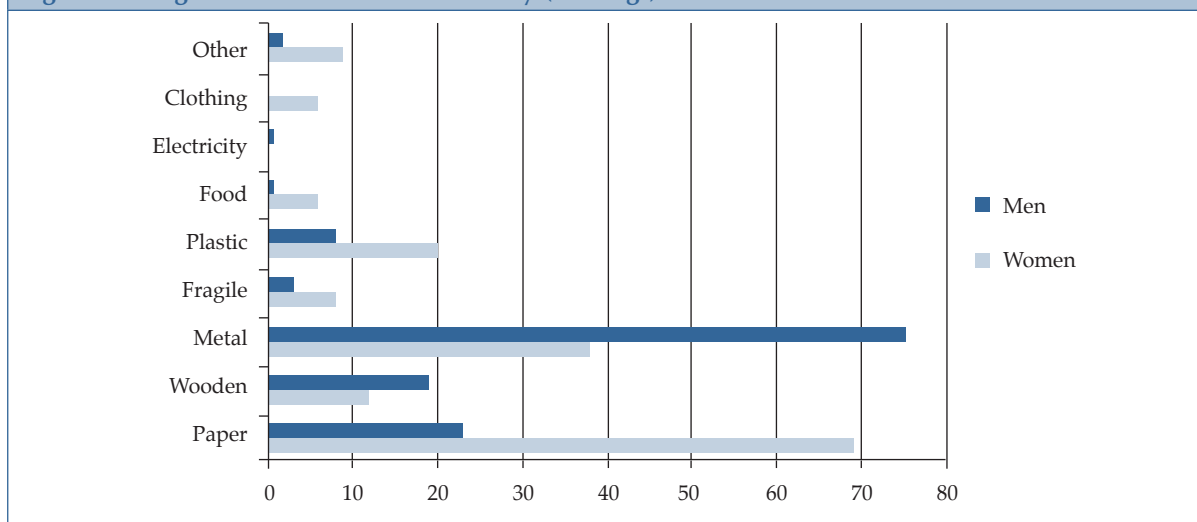
The focus group findings also showed that there are participants who were collecting and selling more than one item. An example is of a male participant (FGR 14) who said, “I collect and sell papers, plastics, tins, cardboard boxes and plastic containers.” This was the case with the majority of participants, especially those operating close to a landfill site - they collected and sold whatever they could find when waste material arrives there. A female participant (FGR 8) said, “The problem is that I pick the heavy stuff there. Sometimes when I put my hand in a waste packet, I do not even know what I am going to find inside. Sometimes there are shocking plugs. That is why my hand became crippled.”

There were a number of participants however who were specialising in the collection of certain items. An example is that of participants who collect cardboard, white paper, and plastic materials from the central business district, industrial, and residential areas. A female participant, FGR 29, said, “I collect and sell boxes, paper and plastic.... I am the only one selling three items ... that shows I am working hard.” An interesting comment from a male participant who collects plastics and cardboard recyclables, FGR 9, was, “... I have been in this industry for so many years. ... I was celebrating 26 years in recycling. ... I have been recycling plastics and we used them to make plates...”

In the survey, men tended to dominate in the collection and sale of metals while women tend to dominate in the collection and sale of cardboard, paper, plastic, and glass. Fifty-two per cent of the respondents who sold cardboard were females (n=110). Of the 87 respondents who collected aluminium, 63 (or 72 per cent) were males. Figure 6 below shows the products according to gender, which shows that women were dominant in collection and selling of paper (69) and plastic materials (20) while men dominated in the collection and selling of scrap metal (75) and wooden materials (19). Similarly, the findings from the focus groups showed gender differences in the materials that were collected and sold: men dominated in the collection of metal and wooden materials while women were predominant in the collection of plastics, cardboard, and paper. Therefore, the gender differentiation affirmed the results obtained in other studies (McLean, 2000; Dobson & Quazi, 2012; Ralfe, 2007) that found that women predominantly collected cardboard and paper while males collected the latter and various types of metal.

¹⁹ Categories in the ZOPP: The category “Subgrade” is a type of corrugated iron sheet which is weak when compared to other metal materials and is sold cheaply by waste pickers as building material. “Boxes” refers to cardboard waste. “Chester truck (meat)” refers to a local business called Chester’s Butchery, which disposes expired meat products at the landfill site. The categories in grey text, i.e. “Heal”, “Plough” and “Jeyes fluid”, are all categories listed by one participant – “plough” refers to the cultivation of medicinal plants that are used for traditional healing; hence, the category “Heal”, and “Jeyes fluid” is an antibacterial fluid used in households sold by the same participant and it is also used as a product in traditional healing.

Figure 6 - Negative forces related to the city (rankings)



The survey results also indicate that itinerant waste pickers collecting from multiple points tend to dominate in the collection of cardboard, paper, and plastics while those operating from a single collection point tend to dominate in the collection of metals. Ninety-three per cent of waste pickers operating from multiple collection points reported that they collected cardboard compared to 56 per cent of those operating from a single collection point. Sixty-three per cent of respondents collecting waste from a single collection point said they collected scrap metal compared with 49 per cent of those operating from multiple collection points.

According to the survey, almost a quarter of the respondents (24 per cent) add value to the waste they collect by making such things as cupboards, beds, tables, and toys. Similarly, this was reported by participants in FGRs 3, 10, and 14, who collect boards and timber to make cupboards, tables, and beds. A male participant, FGR 10, who collects waste from the landfill site, reported, *"I collect boards and timber to make tables and cupboards."* Another male participant (FGR 20) said, *"I make cupboards and room dividers and sell. I also panel beat cars using the material I collect from the dumping site."*

Both the survey and focus group findings indicate that men tend to be more dominant in these value addition activities than women (i.e., by making different products to sell). The survey findings show that 31 per cent of male respondents reported that they make things from the waste they collect compared with only 13 per cent of the women. Eleven per cent of the respondents reported that they go to the extent of purchasing raw materials when they fail to obtain them from their waste collection activities.

Part 2: Changes in the Sector

2.1 Driving Forces in the Sector

This section summarizes the findings from the survey and focus group discussions on factors that respondents identified as being helpful and unhelpful in their work. These factors (or driving forces) were grouped into three categories: the macroeconomic environment, city / government policies, and value chain dynamics.

The factors impacting waste pickers in Durban were analyzed in terms of three main driving forces: the economy, national/local government policies and practices (i.e. access to infrastructure, police harassment and heavy-handedness in dealing with waste pickers—82 per cent of all waste pickers cited abuse and violence at the hands of authorities as a major problem hindering their work—inadequate business support services, lack of clarity on rules and regulations), and value chain dynamics. The different forces will next be discussed in turn.

2.1.1 Macroeconomic Forces

In order to determine the impact of economic forces (i.e. demand, supply, and competition) on the respondents, waste pickers were asked if they were able to earn more, less, or the same for the amount of recyclable waste collected compared with same period last year. Only 20 per cent of the respondents said that they were able to get more money for the waste collected over the past year. Almost half of the respondents (49 per cent) said that they were getting less, and 28 per cent reported that they were getting the same amount. There were gender differences in the responses as only 13 per cent of female respondents said that they were able to get more money for their waste compared with 24 per cent of the male respondents.

Respondents were also asked whether their access to waste had increased, decreased, or stayed the same over the past year. Only 26 per cent of the respondents reported that their access to waste had increased over the past year compared with 39 per cent that said it had decreased and 28 per cent said that it had stayed the same. Thirty per cent of the male respondents said that their access to waste had increased over the past year compared to 21 per cent of the female respondents.

Furthermore, Table 4 below shows that 80 per cent of survey respondents identified lack of security in access to waste as a challenge to their work. Another work-related challenge identified was where 73 per cent of waste pickers do not have formal permission from the city to collect waste from single and multiple collection points. The survey results suggest that for many waste pickers, difficulties in accessing waste have been accompanied by reduced demand for the waste that they sell as a result of increased competition.

Table 4 - Other types of work-related problems associated with waste picking (%)	
Do you encounter any of the following problems in your work?	%
Lack of security in access to waste	79.61
Poor ability to negotiate higher prices for recyclables	78.95
No formal permission (from city) to collect waste from households, streets, dumpsters, or landfills	73.03
N	152

With regards to the difficulty of accessing waste from landfill sites, in FGR 21, a male participant explained, *“The problem of not being permitted for entry in the dump [which] is not good for us because this is the place where we are making a living.”* Similarly, in another group, difficulty in accessing waste from residential areas was identified as one of top three negative driving forces. As a female waste picker (FGR 24) said, *“The whites and Indians are also giving us problem[s]. They chase us away from their residential areas saying we should leave the garbage. I do not understand why they chase us when we are picking up this waste. As they have thrown it, they have no use for it.”*

The waste collection sector is very competitive. When asked whether the level of competition (from new entrants into the waste picking sector) had increased, decreased or stayed the same, the vast majority of respondents (78 per cent) said that there was more competition for collecting waste. Only five per cent of the respondents said that the level of competition had decreased, and 14 per cent said

that it had stayed the same. In the focus group sessions, a female waste picker (FGR 24) said, “There are people who come first to collect before we even reach the collection points. As a person who cannot walk properly, it is very difficult for me to go collect very early in the morning. So by the time you go, they have collected almost everything.” This affirms that there is increased competition even from other waste pickers.

Clearly, macro-economic factors have had a negative impact on waste picking in Durban, particularly the combination of competition due to new entrants in this sector who are not being absorbed by the formal labour market and the difficulty in accessing waste. These factors have meant that earnings have dropped with about half the respondents actually saying that they are getting less for the waste that they sell.

2.1.2 City/Government Policies & Practices

This section reflects the focus group and survey findings on the issues related to the city that were reported as problems. A key exercise in the focus group discussions was for waste pickers to identify what was helping or hindering their work. They were asked to first list these and then rank them. Figure 7 and Table 5 summarises the most cited negative driving forces relating to the city as cited in the 15 focus group discussions. The most serious driving forces were basic infrastructure and crime as each was cited by 8 of the 15 focus groups. These are followed by police who were cited by 7 focus groups. Finally, local state and regulations were cited by 2 focus groups each, as part of difficulties they experience.



Source: 15 FGRs of waste pickers – Single and Multipoint collection

Table 5 - Negative forces related to the city					
Difficulty/ obstacle	FGR #	Priority 1	Priority 2	Priority 3	Total
Basic Infrastructure					
Toilets	1,3,4,9	III		I	4
Water	3,9		I	I	2
Shelter	4		I		1
Storage	3			I	1
Police					
Police	1,2, 10,12,13,14,15	III	I	III	7
Crime					
Thieves	5,6,8,9, 10		III	I	5
Unsafe place	7,12	I	I		2
Feranjis (street kids)	11		I		1
Local State/General					
Security	15		I		1
Municipality	13			I	1
Regulations					
No permits	4	I			1
Denied permission	8			I	1

Source: 15 FGRs of waste pickers – Single and Multipoint collection

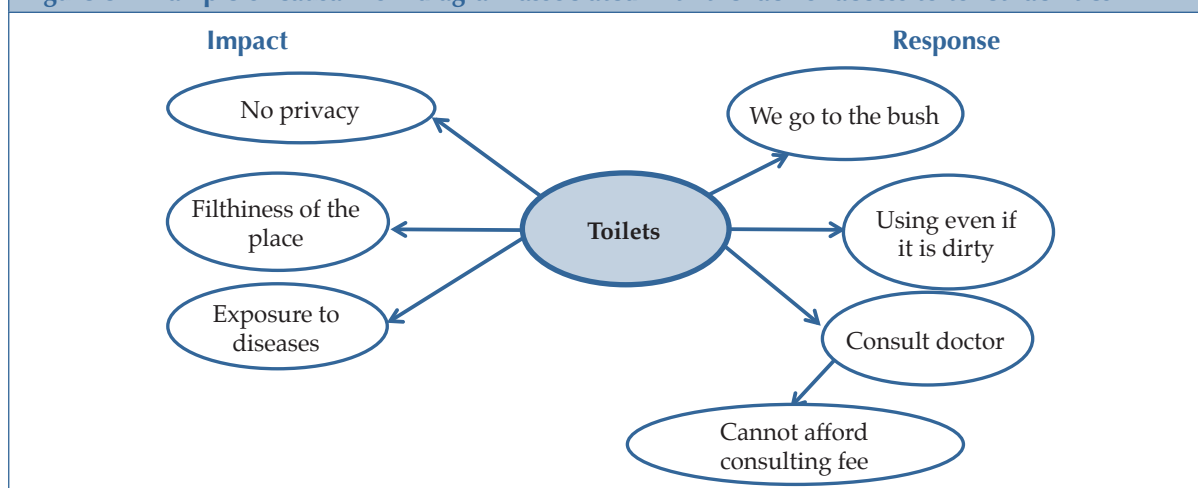
1. Basic Infrastructure – toilets, water, shelter and storage

As is clear from the Figure 7 and Table 5, access to basic infrastructure – toilets, water, shelter, and storage – was cited as a major issue hindering waste pickers' businesses. This category was cited by 8 of the 15 focus groups with three focus groups ranking it as the most serious negative driving force (i.e. assigning it the highest priority).

Toilets

Four groups reported the absence of toilet facilities as the most serious negative driving force (i.e., assigning it the highest priority under the basic infrastructure challenge). The negative impact that this poses to the lives of waste pickers and how it hinders their work activities was well demonstrated in one of the focus group interviews. The details they gave on how this affects their businesses are presented in the causal flow diagram below as an example:

Figure 8 - Example of causal flow diagram associated with the lack of access to toilet facilities



Source: FGR 3, 3 females and 3 male waste pickers from one collection point

Overall, there are three major issues that emerged from all the focus groups that identified challenges related to toilets as a negative factor in their work: lack of privacy (due to absence of toilets), filthiness of the place (including being undermined by people for using the bush), and exposure to diseases.

Participants operating in the city's multi-collection points reported that they walk long distances for toilet facilities and usually use public toilets, which are at the public transport ranks. Participants operating near landfill sites in particular, reported that the absence of toilets compromises their privacy and safety. A female participant, FGR 1, said, "We do not have toilets, we go to the bushes to relieve ourselves and you cannot go on your own. You need to get someone to accompany you as it is not safe." There were reports of humiliating incidents happening before reaching the toilet facilities due to the distance. A female participant, FGR 9, said, "There was a time when I was not feeling well with a stomach bug. I accidentally mess(ed) myself up. I took off my clothes. That was not good for me; it was humiliating. It cannot be wiped from my memory."

The absence of toilet facilities also impacts their income generating activities. A male participant, FGR 3, said, "...women have to go to the bush to relieve themselves. When they are away, the (collection) car or truck comes and they miss out just because of the distance they have to travel for toilet." As a result of the participants being forced to use the bush as a toilet, these places are considered filthy and smelly. A male participant, FGR 3, said, "We have to walk carefully when going to the bush to relieve ourselves. This is because most parts of the bush have been used as a toilet. One might find oneself stepping on stools if you are not careful." Participants reported that they feel humiliated in these areas, as a female participant, FGR 9, said, "When we are in the bushes relieving ourselves, we are treated with contempt by passers-by."

The filthiness of these areas exposes them to unpleasant smells and diseases, which is particularly problematic when eating in the vicinity. Male participants, FGR 3, said "When food items are dropped on the ground, they get contaminated but we have to clean and eat them because we have no choice." A third male participant, from FGR 3, added, "We end up eating unhygienic food stuffs. The food we get there (landfill site) is already expired. When it drops on the ground, it gets more germs. This then exposes us to diseases. We get infections or exposure to diseases. Our health is really bad and it deteriorates..."

Water

Two focus groups identified the lack of access to water as negatively impacting their activities, as explained by a male waste picker (FGR 3) operating from a single point collection: "We have to carry water by containers from our homes when going to KwaPotsho so that we will have (it) when we need. If we don't have water to rinse food items like fruits, we end up eating it as it is. This spreads germs and results in diseases. Unfortunately, we do not have a choice but to live like this."

Shelter

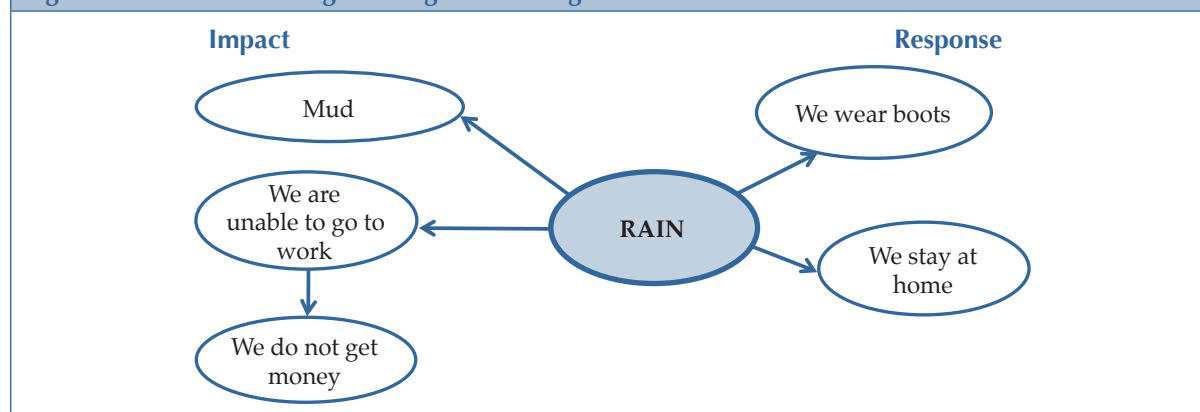
A major infrastructure-related problem cited by the survey respondents (78 per cent) was inadequate business space. Furthermore, the lack of shelters exposes waste pickers to harsh weather conditions

and makes it difficult for them to operate. This is clearly explained by a male waste picker (FGR 21) operating from a single collection point as he said:

“Sometimes you may find that you have received something like the mattress for yourself. Due to weather conditions and not having the shelters on-site, you have to take it to your house immediately. While you are gone to your house, (collection) trucks arrive to the area and you miss out. We also lose customers²⁰ because we are not able to stand there and sell, even customers cannot come when it is raining.”

Four focus groups cited exposure to the elements, particularly the rain, as a negative force to their activities in waste picking. A female participant, FGR 13, had this to say; “It makes it hard for us to go out there after it has been raining as ... we do not have shelters where we are working. We are unable to work on rainy days.” Figure 9 below was drawn by participants to show the impact of rain to their activity.

Figure 9 - Causal flow diagram: negative driving force - rain



Source: FGR 13, 5 female waste pickers from single point collection

As can be seen from Figure 9 above, there are a number of other ways in which the rain impacts on waste pickers, especially those operating by the landfill sites. When it rains, the area gets muddy and slippery, as mentioned by a female participant (FGR 13), who said, “It gets muddy when it rains, it is difficult to work in such conditions.” In this case, they end up making no income because they cannot go to work.

Storage

Another major infrastructure-related problem cited by survey respondents (66 per cent) was inadequate storage space. Waste pickers’ access to storage for their goods has an impact on their enterprise. If the goods are not properly stored, there is a chance that the goods will be stolen (theft is a serious problem that affects many waste pickers). Similarly, the lack of storage facilities was mentioned by FGR 3 as one of the highest negative forces because their recyclables are left exposed, which increases the vulnerability of theft. As will be discussed later, theft of recyclable material was identified as a negative driving force by five of the 15 FGRs.

Waste pickers, therefore, need appropriate space, not only for storing their recyclables and equipment, but also for sorting and processing the collected recyclables. In the survey, 84 per cent of respondents identified the lack of space for sorting, storing, and processing their recyclables as a problem as shown in Table 6. Unreliable access to equipment, such as trolleys for conveying recyclables more efficiently instead of head-loading,



Figure 10 - One of AeT’s pilot project participants provided with a custom-designed trolley to ameliorate the challenges of head-loading. Photo: Dennis-Lee Stols, with kind permission from Asiye eTafuleni

²⁰ Referring to buyers of recyclable materials.

protective work wear, tools for collecting and bundling recyclables (e.g. ties, bags, bailing machines to compress recyclables, collection picks, and technologies such as MRFs), and scales for measuring recyclables, was cited as a problem by 82 per cent of the waste pickers. Access to equipment has an impact on a waste picker's earnings – the absence or dysfunctionality of this equipment compromises their ability to collect the desired volumes of recyclables on a particular day and exposes them to occupational health and safety hazards. Figure 10 above shows an image of one of a number of custom-designed trolleys co-developed with waste pickers through AeT's pilot project.

The table below reflects the issues related to infrastructure and state services, which survey participants recorded as problems.

Table 6 - Reported problems with infrastructure and institutional obstacles, by work location (%)			
	Single collection point	Other	Total
Inadequate access to toilets	87.95	69.57	79.61
Occupational hazards affecting safety of workers or self	85.54	69.57	78.29
Inadequate business space	78.31	76.81	77.63
Treatment by the local authority	71.08	63.77	67.76
Inadequate or lack of storage space	71.08	60.87	66.45
Poor access to small business support centers	71.08	60.29	66.23
Can't obtain a business license	59.04	43.48	51.97
Cost of infrastructure (electricity, water, telephone)	51.81	29.41	41.72
Expensive rent	26.51	14.49	21.05
N	83	69	152

In summary, there were similarities in the results from both the focus groups and the survey concerning the issue of basic infrastructure. In the focus groups, inadequate access to toilets was the most serious problem identified, and similarly in the survey, 88 per cent of those operating from a single collection and 70 per cent of those collecting waste from multiple places cited this as a problem, as shown in Table 6 above. Toilets and running water are an essential component of a decent work environment. The lack of toilets poses not only a health risk to waste pickers themselves but also to their customers. In the case of toilet access, women are particularly at risk of being raped or assaulted when they have to relieve themselves in public. The proliferation of human waste at their place of operation (due to a lack of toilets) not only makes the place filthy and smelly but also exposes them to diseases especially when it rains.

Table 6 above also shows that occupational hazards affecting waste pickers were cited by 78 per cent of the survey respondents. Two focus groups mentioned that unsafe place results in health hazards. A male waste picker, FGR 12, said: *"When you are hit by the car, you are on your own, except if you have family who cares for you..."* The respondents also identified the lack of security in access to waste (80 per cent), which has an impact not only on the waste pickers' earnings but also their safety.

With regards to occupational hazards, vulnerability to illnesses was mentioned by participants as one of the negative forces in their activity. A male participant, FGR 2, said, *"We suffer chest problems due to the dust that we are exposed to everyday when we do our work at the dumping site."* The vulnerability to illness puts waste pickers in debt, as they have to borrow money to make ends meet as a male participant in FGR 2, explains, *"There are times when one is so ill that they cannot go to work and make money. For us to survive during that time of illness, we have to go to money lenders to get money and go to either the clinic or doctor for medical attention."*

2. Experiences of the Police

Focus group findings cited police as one of the top three most serious negative driving forces (the others being crime and poor infrastructure) – as mentioned by seven focus groups (with three of these groups actually ranking the police as the most serious negative driving force). Female participant, FGR 1, said, *"Police bring their dogs when we are getting the goods from the trucks and they chase us away using these dogs."*

A male participant, FGR 2, said, *“Police are chasing the (collection) cars and trucks away. They fine them when they are caught, letting us take what we need from them.”* Participants also accused police of bribery as a male participant, FGR 10, said, *“They take bribes from us and instruct us not to tell our colleagues that they let us go without jailing us. We lose a lot from these bribes that we are forced to pay.”*

The survey asked the waste pickers questions about the problems they encounter in running their enterprises. The most common form of interaction that waste pickers had with the city council (according to both the survey respondents and focus group participants) was with the police. Harassment from local authorities or the public (cited by 78 per cent of the respondents) and the restrictions imposed by the city authorities on the collection of waste from households, streets, and landfills all have a negative impact on waste pickers’ earnings.

With reference to local state, two focus groups mentioned municipality and security as negative forces. The main challenge they mentioned about these forces is that they prevent them from doing their work of collecting waste and demand bribes.

3. Crime

Crime was cited by eight focus groups as one of the top three negative forces faced by waste pickers in the focus groups. Five focus groups cited thieves as a negative force, as illustrated by a female waste picker, FGR 6, *“Thieves are a problem in my life. They recently stole nine bags of my collection. [Middle man 1] uses a car but others use trolleys to steal and transport our collection. I was so devastated. I felt sick and was admitted in hospital for stress.”* Similarly, theft was cited as a major problem by 74 per cent of all survey respondents.

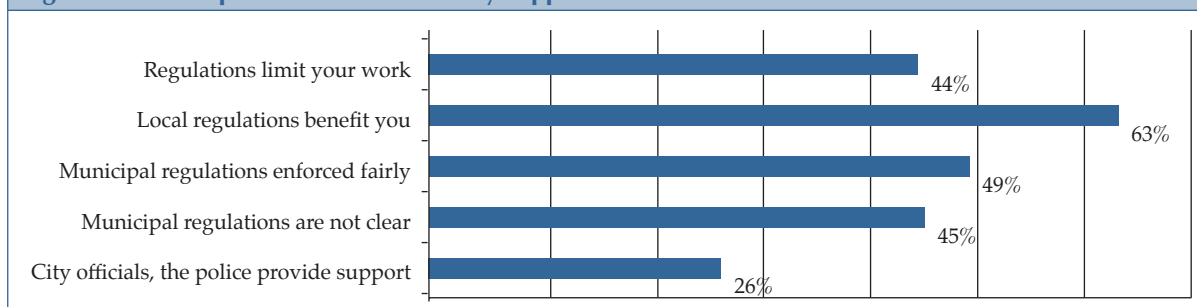
Theft is believed to be carried out by thieves from outside as well as amongst the waste pickers, as explained by a female waste picker, FGR 5, who said: *“We are also experiencing problems from thieves. We are also having thieves amongst us. Same people we are operating with steal our items. When your items have been stolen you have nothing to sell, you need to start again looking for what you can sell. It makes us suffer a lot.”*

Theft impacts negatively on waste pickers’ businesses and causes animosity amongst themselves, as a female participant (FGR 5) describes: *“When somebody has stolen amongst us, there is that friction where we swear at each other. Although we have not yet laid hands on each other, it becomes so bad when we are screaming at one another.”*

Theft by street children (usually boys), called *feranjis*, was mentioned by one focus group as a problem, as a female participant (FGR 11) said, *“The feranjis are troubling us. When you keep your load of boxes they come and steal them. We need this money so much to be able to survive but they only need the money to buy themselves drugs.”*

4. Regulations

More than a third of the survey respondents (44 per cent) felt that these municipal rules and regulations limit their work, as depicted in Figure 11 below. Forty-five per cent reported that regulations and municipal rules on where and when they can sell their recyclables are not clear. Waste pickers’ perceptions of support from local authorities were generally low, and the most common form of interaction between waste pickers and the city council (according to both the survey respondents and focus group participants) was through the police. Nevertheless, most waste pickers (63 per cent) felt that regulations benefit them, and almost half (49 per cent) felt that these regulations were enforced fairly.

Figure 11 - Perceptions of local authority support

n = 152

Participants in FGR 8 complained of being denied permission to operate their activity of collecting waste by regulators of the landfill site, and, similarly, those collecting from the multiple points are denied permission to collect from certain shops. This was linked by some participants (FGR 4) with the lack of permits to operate, as a male participant explains, *“The municipality is harassing us because we do not have permits to go inside. They do not want us to get in the dump. They are also chasing these cars away that are helping us.”*

The other major institutional obstacles cited by the survey respondents were those of treatment by the local authority (cited by 68 per cent of respondents), poor access to small business support centers (66 per cent), and the inability to obtain a business license (52 per cent).

Positive forces

Some positive forces were identified by 13 out of 15 focus groups, as depicted in Table 7 below. The earning capacity category was identified as the most positive driving force, (9 responses), followed by a sense of independence (6 responses), and having stock or materials (3 responses); municipal support (1 response) was mentioned last. Regarding the earning capacity category (made up of such things as money and getting something²¹), a male participant, FGR 3, said, *“For me, it is good that I get items which I can sell and get money to survive.”*

Table 7 - Positive forces²² relating to waste collecting

Benefit	FGR #	Total
Earning capacity		
Money	2,3,7,14, 15	5
If we get something	3,6,11,14	4
Sense of Independence		
We are not like jobless people	13	1
We do not irritate anyone	13	1
We do not beg	13	1
We do not sleep hungry	4	1
Being able to provide for myself	8	1
We save money	9	1
Stock/materials		
Goods	1,2	2
We get materials we need	13	1
Local State general		
Municipality	5	1

²¹ Getting something in this context means getting waste material to sell

²² Participants mentioned few positive driving forces. They did not prioritise the ones they mentioned so the common report format in this regard has not been applied.

2.1.3 Value Chain Dynamics

Waste pickers were asked questions about the problems they face in the collection and selling of waste. As shown in Figure 12 below, the most cited problem by the survey respondents (83 per cent) was the lack of access to waste. Since waste pickers are not allowed to collect waste from landfill sites (as a result of privatization in the case of the Bisasar landfill site), a number of them reported resorting to dangerous strategies to access this waste — see Figure 13 below.

Figure 12 - Perceptions of local authority support



n = 152

A male participant in the FGR 20 explained that because waste pickers are denied access to the landfill sites, they have to resort to dangerous tactics, such as jumping into moving waste disposal trucks, “[The] municipality is not good to us because they are chasing these cars away...When they are chasing the cars,²³ we get hurt while we are trying to get the items that we need, because these cars are in motion.” These dangerous tactics resulting from the lack of access to landfill sites confirms Rogan’s (2012) reports of the same occurrences. In FGR 20, a male participant added, “Some drivers harass us. They point guns at us when we jump up their cars to pull out what may be useful for us to make a living.” These problems experienced by waste pickers indicate that some of the restrictions on the waste pickers’ access to waste (especially at landfills and dumpsites) have to be reconsidered.

The second most serious problem cited by waste pickers (82 per cent of respondents) in terms of accessing and selling their waste had to do with corruption or unethical behaviour by the buy-back centers or middle-agents. Unscrupulous middle-agents were accused of offering very low prices for the waste collected, which the waste pickers often had to accept. They viewed this as a form of exploitation.

The other major problems cited were the competition from large companies (76 per cent), the closure of buy-back centers (73 per cent), competition from other waste pickers, and large variations in income (71 per cent). Waste pickers also cited the problem of having to travel long



Figure 13 - Waste pickers jumping onto a moving disposal truck outside the Bisasar landfill site. Photo: Angela Buckland with kind permission from Asiye eTafuleni.

²³ “Cars” here refers to waste disposal vehicles, which can be small or large vans and pickup trucks.

distances to sell their waste at buy-back centers (63 per cent) and the low number of buyers (referred to as 'customers' in Table 11) for the waste collected (62 per cent). Some waste pickers explained that they often had to sell their waste to unscrupulous middle-agents due to the fact that they could not transport their waste to centers offering better prices. The opening of more strategically located buy-back centers and curbside collection points could go a long way in not only saving time but also improving the waste pickers' earnings by providing multiple and more transparent sources of income.

As shown in Table 8 below, the relationships with buyers and generators of waste were cited by five focus groups, respectively, as the main negative force. Negative forces relating to the value chains included relationships with buyers, generators of waste / people, low profits, and other issues. Each of these forces has elements which will be discussed below.

Table 8 - Negative forces related to the value chains					
Difficulty/ obstacle	FGR #	Priority 1	Priority 2	Priority 3	Total
Relationships with buyers ²⁴					
Middleman1 ²⁵	5,6,11	II		I	3
Delays by our buyers	7	I			1
Relationships with generators of waste / people					
Being undermined	8,12,14	I	I	I	2
Discrimination from community	12		I		1
Whites and Indians	7			I	1
Low profits					
Low price	11	I			1
Other					
Lack of business	5		I		1

Source: 15 FGR waste pickers – Single and Multipoint collection

Relationships with buyers

Relationships with buyers was mentioned by four focus groups as a challenge to their work. There were reports that middle-agents who buy their recyclables do not arrive in time, thus delaying them: *"If he does not come, making excuses that there are so many places that they have to go to, it frustrates us. Our goods have to be kept until it is damaged or it is not in a good condition to make us get reasonable money."* (Female, FGR 7).

The situation is worsened by the allegations of theft against the buyers, as mentioned by female participant from FGR 6: *"He steals our collection, and when he learns that securities have reported him to us, he simply bribes us by paying R10 (about US \$0.76), which is nothing compared to the weight of the materials he stole."*

In addition, three focus groups mentioned that one of the middle-agents is monopolizing the activity by chasing other middle-agents away from buying from the waste pickers. Waste pickers also mentioned that they are not making enough income from waste picking because some middle-agents pay them very low rates per kilogram of recyclable, as explained by female participant: *"[Middleman1] pays us very less money. We have spoken about this during our meetings with him. After that, he increased it. While we were happy about it, he dropped it again saying that the kilogram (rate per kilogram) has gone down everywhere, in all the cars (i.e. other buyers)."* (FGR 11)

²⁴ Middle-agents have been separated due to their market, and one of them was highly unpopular with participants. For the purpose of this report, there is Middleman1 (unpopular) and Middleman2 (popular)

²⁵ There has been a shift from the name "middleman" to middle agent (Asiye eTafuleni).

Relationships with generators of waste / people

Relationships with the generators of waste or people was mentioned by five focus groups as a challenge to their work. A male participant (FGR 12) had this to say about his relationship with the general public: *"They swear at us, calling us rats and other derogatory names, saying we pick the dumped things."* Similarly, a female participant (FGR 8) describes the discrimination she faces: *"It disturbs us to be undermined by other people when we are doing our job. It makes it difficult for us to carry on with our job. Sometimes you will stay at home for maybe two weeks without going out if somebody has said something that is undermining to you."*

Some waste pickers who collect waste from multiple points, such as residential areas, also suffer from a sense of prejudice and discouragement. A female participant (FGR 7) explains: *"The whites and Indians are also giving us problem. They chase us away from their residential areas, saying we should leave the garbage. I do not understand why they chase us when we are picking up this waste. As they have thrown it away, they have no use for it."*

Positive forces relating to value chain dynamics

In terms of the value chain dynamics, good working relationships with buyers / middle-agents and generators of waste came out strongly from some groups as helping their work. As shown in Table 9 below, these were cited six times by participants in different focus groups who mentioned that drivers operating as middle-agents or from recycling companies donate goods and hire them.

Table 9 - Positive forces related to value chain dynamics		
Benefit	FGR #	Total
Sources of support		
Food that the disposal trucks throw away	1	2
Lots of charity	7	1
Disposal truck drivers give us their waste materials	7	1
Good work relationships		
We are working very well together	9	1
We help each other	9	1
Drivers allow us to take waste from their disposal trucks in the mornings	4	1
They hire us to offload their disposal trucks	4	1
Good relationship with generators of waste	15	1
Good working relationships	15	1

Source: 15 FGRs of waste pickers – Single and multipoint collection

Overall, Table 9 above shows that there are two categories of positive forces that emerged from all focus groups, which are good working relationships and the sources of support. Good work relationships were mentioned six times by three focus groups. These relationships include relationships among each other, with the truck drivers as well as with generators of waste. Female participant from FGR 9 mentioned the benefit of good relationships among waste pickers: *"We bring what we have and share with each other. For example, if I had collected more boxes and one of my colleagues does not have enough, I do give them some."* FGR 9 mentioned that they do not fight but help each other. They contribute to rotating savings and credit associations, locally known as *stokvels*, as a form of saving.

Truck drivers at the landfill site were cited three times by two focus groups as benefiting the participants by allowing them to take recyclable waste and also hire and pay them to offload trucks. The male participant (FGR 4) explains: *"Those whites help us because they hire us to offload these goods inside the dump, then they will pay us R10."* Furthermore, the truck drivers support participants with the goods that they donate, as two female participants (FGR 1) report: *"These cars are giving us food and clothes."* She also said, *"Even the scrap metals that they throw away, we are able to sell it and earn some money."*

2.2 Intermediary Factors

2.2.1 Responses to Negative Driving Forces

Survey participants were asked the question, “If your revenues/turnover from your primary activity has fallen over the past 12 months, how did you manage?” Thirty-six per cent of all respondents said that they did nothing. Others (five per cent) said they borrowed money, and four per cent said they cut down on their personal expenses.

Table 10 below outlines the responses to the negative driving forces from the institutional maps of 15 focus groups. The responses were mostly at the individual level, with 29 responses at this level. There was only one response at the collective level, where one female participant, FGR9, said: “We do help each other by giving a needy person what we have, so we help each other by supporting one another.”

Table 10 - Most important responses to key driving forces				
Category	Driving Force	Response	FG#	Individual
City	Police	We pay bribes, run away, cry, keep quiet	10,13,14,15	1111
	Security	We beg for waste, we pay bribes	15	1
	Permits	We run away	4	1
		We look for other places to work, we take work home	8	1
Basic infrastructure	Toilets	We accompany each other to the bush for toilet needs, we use toilets at the rank, we put water,	1,3,9	111
	Water	We fetch from home and bring along to the site,	3	1
	Unsafe place	We hit children who steal goods, we repack messed piles, we take precautions	7,12	11
	Shelters	We build shelters	4	1
Local state general	Thieves	We go to hospital for medical care, we hit them, we loan each other in time of need, we start afresh collecting items we need	6, 9,10	11
	Feranjis ²⁶	We suffer from stress and consult at the clinic for medical attention	11	1
Value chains	Middlemen	We wait until late, we cry and even swear at middleman	5,6	11
	Delays by middlemen to arrive to the trading spot to buy the stock	We try new middlemen, or keep phoning middleman to come to buy our collection.	7	1
	Low prices paid for recyclables	We discussed the problem for his attention. We even opt to walk distances to other middlemen.	11	1
Economic	Lack of business	We wait for middleman to come as we are dependent on no one for assistance.	5	1

²⁶ This term is used to refer to street children.

Table 10 - Most important responses to key driving forces (cont'd)				
Category	Driving Force	Response	FG#	Individual
Other	Smell	We clean the area of operation by burning the dirt	1	1
	Weather, rain	We take long walks to avoid muddy areas or wear boots to be able to walk in muddy places. We go and stay at home without when weather is bad	2,13, 14	111
	Illness	We go to hospital when we are sick. We get loans to sustain the household.	2	1
	Being undermined	We stay home, beg for food, or return to work if things get tougher.	8	1
	Community	We apologise when blamed; we persevere the ill treatment from the community	12	1

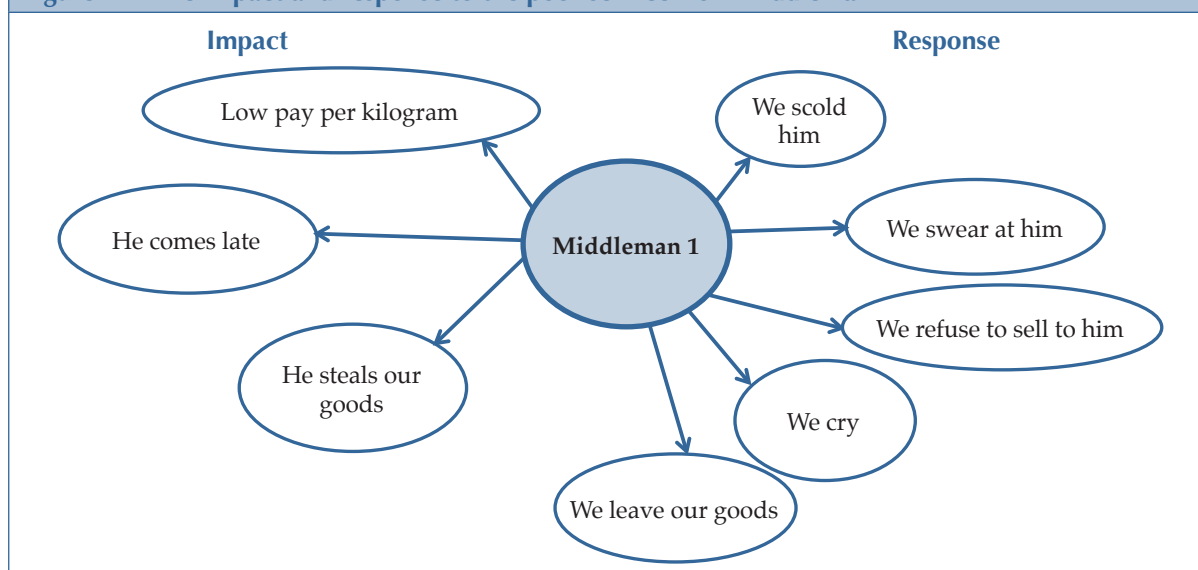
Source: as identified by waste pickers from 15 focus groups

From this summary it is clear that borrowing money is a common response to many of the problems waste pickers face. Sometimes it is specified that money is borrowed from loan sharks who are known to charge extremely high interest rates. The response to the lack of basic infrastructure is largely to use alternative means for their needs – to bring water from home and building shelters where water and shelters are not provided. These are all additional costs when incomes are already low, and there is a physical burden in terms of carrying water from home.

The response to the value chain dynamics relating to the disservice from middle-agents is mainly emotional at the individual response level. Respondents reported that they wait until late while making several calls to the respective middle-agent. They also try other middle-agents who are accessible, however this means walking long distances to other locations or waiting for longer periods until they arrive.

These challenges were well captured in Figure 14 below in FGR 6 that identified the disservice from a specific middle-agent as a key difficulty. They constructed the diagram below. The impacts are shown on the left, and the responses on the right. Most responses are emotive in showing the frustration and sense of powerlessness of waste pickers as they sometimes go home without money and end up leaving their goods, often in insecure places, which makes them vulnerable to being stolen. Waste pickers counteract the middle-agent's inconsistent services with negative responses, where, for example, they refuse to sell their recyclables and verbally reprimand the middle-agent. Clearly, the poor service received from middle-agents limits waste pickers' ability to fulfil their potential and increase their earnings.

Figure 14 - The impact and response to the poor service from middleman



Source: FGR 6, six female waste pickers from mixed collection points

Sub-section B: Intermediary institutions

Survey respondents were asked how helpful certain institutions were in their waste picking activities. Table 11 below reflects the institutions waste pickers identified as unhelpful and helpful, respectively. There is an indication that waste pickers generally rely more on other workers for help. Supermarkets and large retailers were seen as helpful especially by waste pickers operating from multiple collection points. In fact, some waste pickers reported that they had informal arrangements with some supermarkets and retailers that allow them to collect waste from their premises. NGOs were generally more favourably perceived by many of the waste pickers, especially multiple collection point women, 44 per cent of whom cited these organizations as “helpful.”

Table 11 - Types of organizations that are identified as being “helpful”, by sex and location (%)

	Single collection point		Multiple collection points		TOTAL
	Men	Women	Men	Women	
Other workers	69.09	57.14	57.14	67.65	63.82
Supermarkets or large retailers	10.91	21.43	71.43	52.94	36.18
NGOs	30.91	28.57	34.29	44.12	34.21
Local government	5.45	7.14	14.29	26.47	12.50
Police	0.00	10.71	25.71	14.71	11.18
National government	0.00	7.14	14.29	5.88	5.92
MBO	0.00	3.57	2.86	0.00	1.32
Workers’ co-op	0.00	0.00	2.86	0.00	0.66
Trade union	0.00	0.00	0.00	0.00	0.00
N	55	28	35	34	152

Waste pickers mentioned national/local government and police as the most “unhelpful” institutions with a vast majority of respondents saying that these institutions were unhelpful, as can be seen from Table 12.

The vast majority (98 per cent) of men operating from a single collection point said national government was unhelpful. Unlike their counterparts from multiple collection points, waste pickers from single collection points tended to view supermarkets and large retailers as unhelpful. When

asked whether they had ever received any form of support or assistance in running their businesses, only three per cent of waste pickers reported having received some form of support or assistance. This support only came from NGOs.

Table 12 - Types of organizations that are identified as being “unhelpful”, by sex and location (%)					
	Single collection point		Multiple collection points		Total
	Men	Women	Men	Women	
National government	98.18	85.71	85.71	94.12	92.11
Local government	94.55	89.29	85.71	73.53	86.84
Police	96.36	85.71	74.29	73.53	84.21
Supermarkets or large retailers	81.82	75.00	25.71	38.34	57.89
NGOs	61.82	60.71	51.43	44.12	55.26
Worker’s co-op	45.45	0.00	37.14	29.41	40.79
Trade union	43.64	53.57	37.14	26.47	40.13
Other workers	27.27	42.86	40.00	20.59	31.58
MBO	7.27	7.14	17.14	11.76	10.53
N	55	28	35	34	152

With reference to the matrix below in Table 13, the municipality plays an overwhelmingly negative role (they have 12 responses on negative impact). In addition, police, security officials, middle-agents, and thieves were identified as negatively impacting the sector. Two female waste pickers from FGR 8 said, “The municipality takes away our loads and throws it away. They go and burn our boxes.” The other added, “After taking our loads of waste material, they swear and hit us.”

Table 13 - Institutional matrix in terms of frequency			
		Positive or negative	
Institution	Frequency	+	-
General			
Police	1111111 (7)	1 (1)	111111 (6)
Councillor	11111 (5)		11111 (5)
Municipality	111111111111111 (15)	111(3)	111111111111 (12)
Durban Solid Waste (DSW)	1 (1)		1 (1)
Security	11111111 (8)	11111(5)	111 (3)
Clinic	1(1)		1(1)
Organizations			
Committee	1 (1)		1 (1)
NGO	11 (2)	11 (2)	
AeT	11111 (5)	1111 (4)	1 (1)
Private Sector			
Shopkeepers	1 (1)	1 (1)	
Shops	1 (1)	1 (1)	
Muslims	1 (1)	1 (1)	
Jabula Hardware	1 (1)		1 (1)

Table 13 - Institutional matrix in terms of frequency (cont'd)

		Positive or negative	
Institution	Frequency	+	-
Middleman 1	11111 (5)	1 (1)	1111(4)
Middleman 2	1 (1)	1 (1)	
Mondi papers truck	1 (1)		1 (1)
Priority Zone	1 (1)	1 (1)	
Waste Paper	1 (1)	1 (1)	
Other			
Drivers	1111111 (7)	1111 (4)	111 (3)
Trucks	111 (3)	11 (2)	1(1)
Thieves	111 (3)		111 (3)
Community	1111 (4)	1 (1)	111 (3)

Source: As identified by waste pickers from 15 focus groups

Police were mentioned by six focus groups for negatively impacting their businesses by chasing away and fining disposal trucks that dump the waste and for confiscating their recyclables. A female waste picker from FGR 1 said, *“Police are giving us problems. When the trucks are coming to dump the goods that we pick up, they give them fines.”*

Five focus groups mentioned that their local councillor is not helping them in any way with services. They provide services through favouritism and nepotism, which excludes waste pickers and leaves them in a disadvantaged position. In terms of security officials, there were reports that they demand bribes, hit participants, and even charge them for looking after their goods, as mentioned by three FGRs. Two male participants, FGR 15, said, *“They demand bribes. Sometimes they threaten to beat us.”*

There were no organizations mentioned, except committees, which came out as mixed. In terms of NGOs, AeT was largely viewed as having a positive impact, but it is important to note that this particular study was organized and held at AeT's premises. In terms of the private sector, one particular middle-agent was reported for largely impacting the sector negatively. The rest were reported as having positive impact in the sector. Finally, drivers, such as middle-agents or from recycling companies and disposal trucks, were identified as impacting the sector positively, while thieves largely impact the sector negatively.

Sub-Section C: Analysis of the Role of MBOs

The roles of Membership Based Organizations (MBOs) were discussed in the institutional maps and matrices of institutional intervention. Waste pickers reported that they do not affiliate under any member-based organization. However, one focus group mentioned a committee, but nothing much was said about it.

According to AeT, they have tried (through the Municipality's Imagine Durban Project) to organize waste pickers in Durban, but this has not been easy. Some of the problems cited in trying to organize waste pickers are things such as substance abuse issues (a serious problem in this sector among male waste pickers), the survivalist nature of most waste picking operations, and the individualistic tendencies among workers in this sector, which make it difficult to get them to cooperate and work as a group. Even in these pilot projects, there have been numerous discipline-related problems with some members being expelled for misconduct (Interview: Patrick Ndlovu, Senior Project Officer at AeT, 28 February 2013).

²⁷ Middleman who is not popular to waste pickers

²⁸ Middleman who is popular to waste pickers

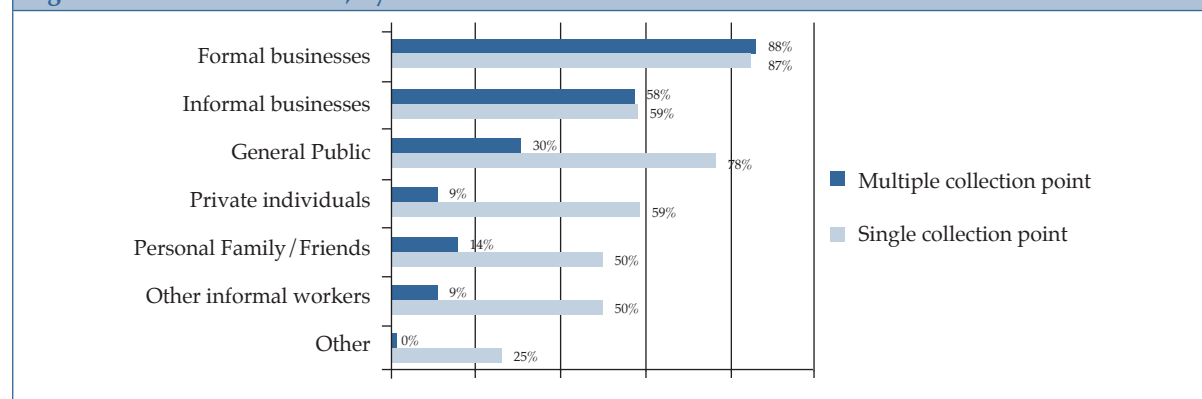
In summary, waste pickers view local/national government as being unhelpful in their work. For many waste pickers, the only interaction they have with local government is through harassment and fines at the hands of the police. NGOs were generally viewed more favorably. Waste pickers reported that they do not affiliate under any MBO. It is important to take note of the helplessness of waste pickers in the absence of MBOs in their activities.

Part 3: Linkages & Contributions of the Sector to the City

3.1 Linkages to Formal Sector

Many of the waste pickers did interact with enterprises in the formal economy, as there were formal/informal business linkages that were reported by respondents. Most of the waste they collect is sold to formal enterprises. The survey findings show evidence of strong forward linkages for both male and female respondents (85 per cent and 90 per cent, respectively). The vast majority of respondents reported that they sold their recyclables to formal sector enterprises as shown in Figure 15 below.

Figure 15 - Main customers, by location

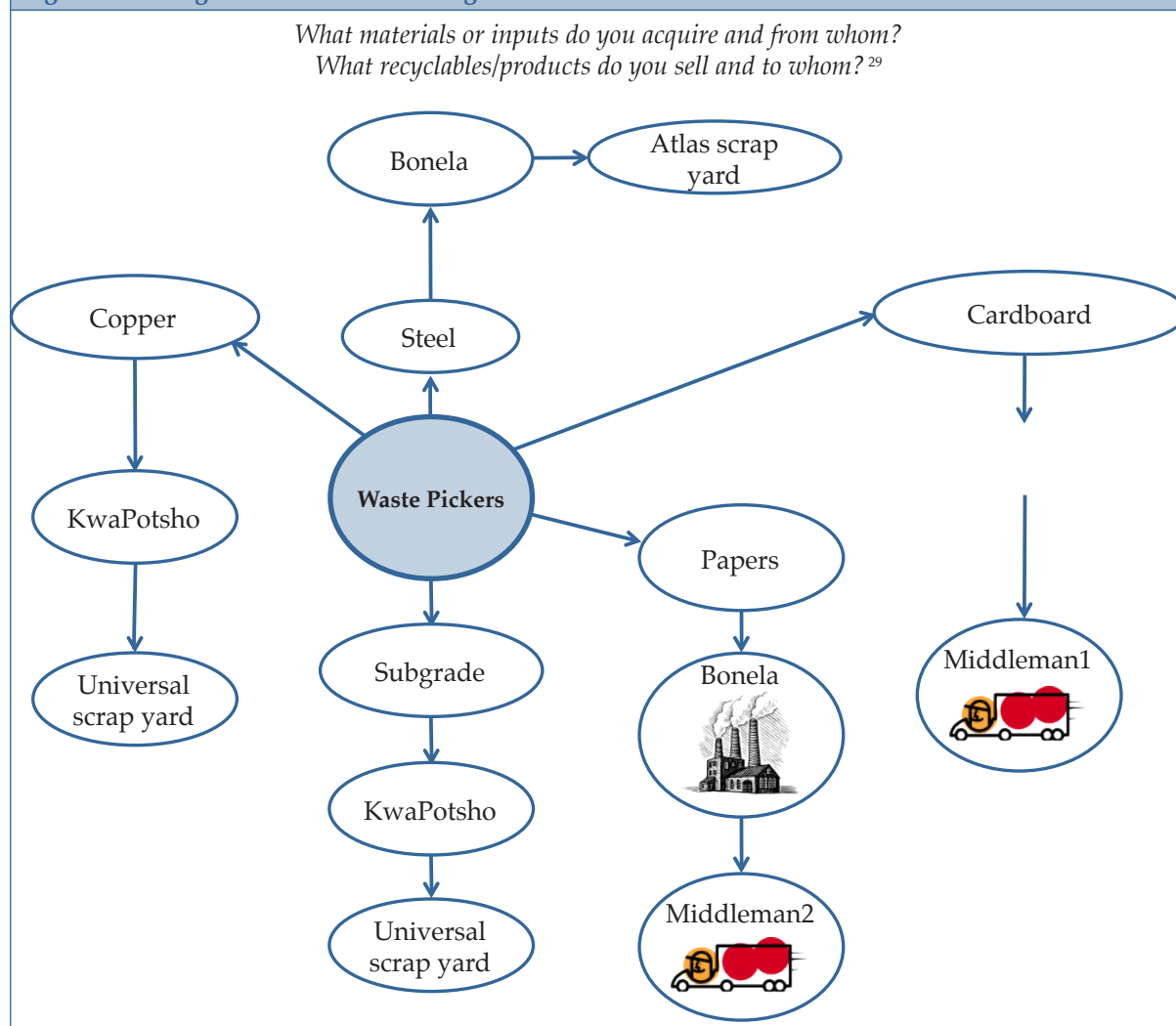


n = 152

Figure 16 below shows the activities undertaken by waste pickers in order to generate income. Waste pickers from the focus groups reported that they interact with those recycling at a small scale, such as middle-agents, as well as bigger recycling companies, such as Universal and Atlas Scrap Metals. In describing these linkages with formal sector institutions, one male waste picker, FGR 9, said; *"I collect cardboard boxes from Blue Waters Hotel and sell them to South African Waste Paper."*

In the focus groups, participants were asked what materials or inputs they acquire and from whom and what recyclables/products they sell and to whom. In the process, they constructed diagrams of economic linkages among the group. An example of such a diagram is given in Figure 16 below. This shows the linkages with the formal economy. In this case, the formal buyers are Universal Scrap yard and Atlas Scrap yard, as well as a middle-agent, who in turn sells to bigger companies for recycling. Therefore, waste pickers source their goods from the landfill sites, bins and along the streets, as well as from formal institutions like industries and hospitals.

Figure 16 - Diagram of economic linkages



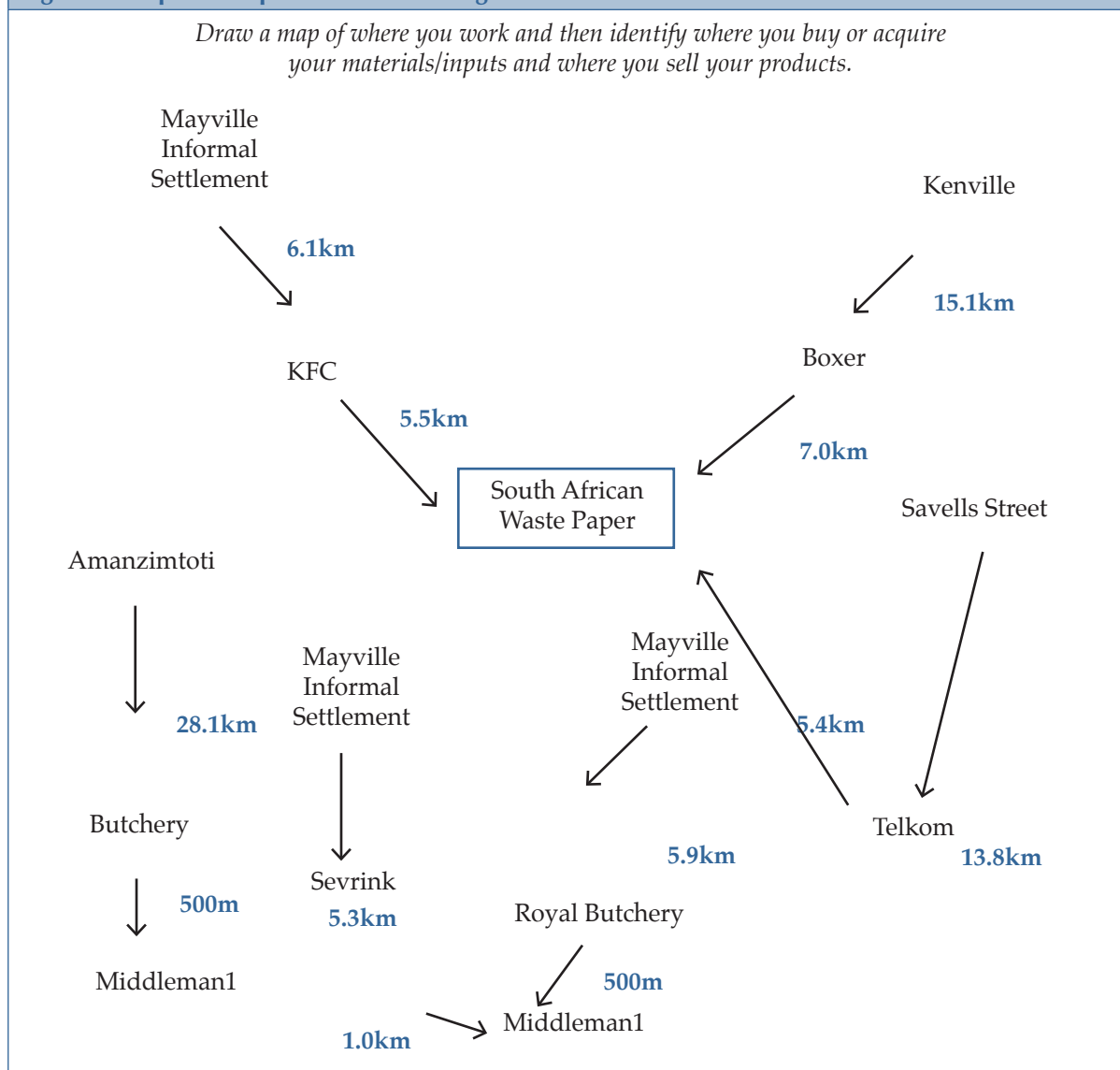
Source: FG8, three male and two female waste pickers collecting from single and multiple points

Focus group participants were asked to draw a map of where they work and then identify where they acquire their materials/inputs and where they sell their recyclables. An example from one focus group is shown in Figure 17 below. This suggests that waste pickers are frequently traveling extremely long distances, as illustrated in the diagram, to both go to source their inputs and to sell them. The distances traveled by waste pickers from their households by public transport are costly. This is worsened by the calculated distances from their households to the places where they source their recyclables to the points where they sell them (see figure below). A waste picker in FGR11 travels approximately 29 kilometres, as he lives in Amanzimtoti, south of the city. He said: *"I come from Amanzimtoti. I go to butcheries around Durban city to collect boxes and then go to Pine Street where I meet with [middleman 1] and he will pay me my money."*

Considered together, the spatial maps from all 15 FGRs powerfully demonstrate how apartheid-era urban planning forcing the poor to live on the periphery of the city, which is poorly serviced with basic infrastructure and economic opportunities, remains today. Waste pickers travel long distances from their homes to where they collect their materials – usually different points which are sparsely distributed – to their selling point, incurring high travel costs and taking lots of time.

²⁹ KwaPotsho refers to the outside areas of the Springfield landfill site.

Figure 17 - Spatial map of economic linkages



Source: FGR11, five female and one male waste picker collecting from multiple points

Sub-Section B: Contribution to the City

In concluding the focus group discussions, waste pickers were asked to list the contribution their sector has to the city. Table 14 summarises the findings. Keeping the city clean was the most common response (cited by 14 FGRs). A female participant from FGR 11 said: *"We are keeping the city clean by collecting these boxes from the streets."* Another female participant from FGR 6 similarly commented: *"Our municipality is kept clean by our activity of picking waste that we sell to recyclers."*

In terms of economic contribution, creating employment was cited by eight FGRs. One male participant (FGR14) said, *"We contribute in creating employment opportunities."* Another male from the same group added, *"We give ourselves work to do so that we can generate income, because South Africa has a high rate of unemployment."* Others pointed out that they create employment for others, as two males from FGR 8 said:

"We are decreasing the number of unemployed fellow mates. For example, if I am busy with something else, I will ask my friend or any other person available to take my load and drop it where I work; after that, I will pay the person." The second male participant said, *"Others are not working because their hands are not functioning properly. So, you will give that person a job, like the task of measuring your boxes, then you pay them. I do not want to see my fellow mates stealing, so it helps if I give them a temporary job."*

Coupled with this, participants mentioned that they contribute to the economy (cited by four FGRs) and recycling (cited by six FGRs). A male participant, FGR 14, said; *“We help in the recycling and contribute to the economy.”* Another male participant, FGR 15, said, *“We contribute in the recycling.”*

Table 14 - Quantification, listing and rankings from 15 ZOPPs		
Economic Contribution	Listing and Ranking	Priority
We increase employment	1, 2,3,5,7,8,12,14 (8)	2
We export	4(1)	8
Contribute to the economy	10,13,14,15(4)	5
We collect and bring goods close to people	10,11 (2)	7
Selling at low prices	3,10,13(3)	6
Provide affordable items that people need	2,13,14 (3)	6
Provide business to companies	6,8,9,13,14,(5)	4
City Contribution		
Prevent crime	3,8,14,15 (4)	5
Keep the city clean	1,2,3,4,5,6,7,8,9,11,12,13,14,15, (14)	1
Help municipality	9,11,15 (3)	6
Help people who bringing waste by trucks	5(1)	8
We improve the city	13(1)	8
Household contribution		
We make a living from our sales	3(1)	8
We make money	7(1)	8
Social Contribution		
We give to poor who cannot work	2(1)	8
Environmental Contribution		
We recycle	1,4,9,13,14,15 (6)	3

Part 4: Key Findings & Policy Implications

4.1 Key findings and Policy Recommendations

This section outlines the key findings and policy implications from the study. The main objective is to provide research-based evidence that waste pickers can use in their engagement with government on issues that affect their sector.

Key findings

Household characteristics

Waste pickers have low levels of schooling and literacy: On average, the waste pickers from the IEMS have lower levels of education than the adult population (and workforce) in South Africa. Eight per cent of all respondents had no schooling and only 5 per cent had completed primary school. Almost all the male respondents (97 per cent) had received some level of education compared to 85 per cent of the female respondents.

Waste pickers' profits are a key source of household income: Sixty-one per cent of the respondents reported that waste picking was the main source of household income. However, there was a significant difference between male and female respondents. Seventy-two per cent of male respondents reported waste picking as the primary source of income in contrast to only 43 per cent of women. The average household size of the respondents was 3.6 for female respondents and 2.6 for male respondents. Waste pickers (especially men) tend to live in small households and a number of them actually reported that they were living on the streets.

Government cash transfers are an important source of income: Forty-nine per cent of survey respondents reported they received government grants. A third of the female respondents and 7 per cent of male traders interviewed cited social assistance from the state (pensions and grants) as their primary source of household income.

Enterprise characteristics

Waste pickers are own-account workers and generating employment: Almost all the respondents (99 per cent) said that they were own-account workers, and one in 10 respondents reported that they had at least one paid employee working for them. Men were more likely to have paid employees than women, whether they were operating from a single collection point or multiple collection points. Women tended to depend more on unpaid family members with 15% of those operating from multiple collection points, and 18 per cent of those operating from a single collection point reporting that they had unpaid family workers.

Male waste pickers reported a turnover that was higher than that of their female counterpart: The average waste picker in this sample reported a monthly turnover of R 1,566 (US \$119), which is a very low figure given the number of hours worked by the respondents (40 hours per week on average). On average, male waste pickers in this sample earned R 1,871 a month (US \$142), while women reported a much lower turnover of R 1,169 a month (US \$89). Men also tend to work more hours, on average, than women. Like other studies, there are a number of factors that cause these differences, such as the types of recyclables sold where men tend to sell waste, such as scrap metal that commands more labour-intensive processes and have higher profits and the longer working hours reported by men, whereas women have to contend with domestic chores and other household responsibilities.

Waste pickers collect and sell a wide variety of waste recyclables and some add value: Men tended to dominate the collection and sale of metals, while women tended to dominate in the collection and sale of cardboard, paper, plastic and glass. Fifty-two per cent of the respondents who sold cardboard were females (n=110). Of the 87 respondents who collected aluminium, 63 (or 72 per cent) were males. Almost a quarter of the respondents (24 per cent) add value to the waste they collect by making such things as cupboards, beds, tables and toys. Thirty-one per cent of male respondents reported that they make things from the waste they collect compared with only 13 per cent of the women. In addition, 93 per cent of waste pickers collecting waste from multiple points tend to dominate in the collection of cardboard, paper, and plastics, compared with 56 per cent from a single point. Sixty-three per cent of respondents collecting waste from a single collection point said that they collected scrap metal, compared with 49 per cent of those operating from multiple collection points.

Waste pickers largely sell or are linked into the formal economy: The study shows that most of the waste that is collected is actually sold to formal enterprises with evidence of strong forward linkages for both male and female respondents (85 per cent and 90 per cent, respectively). Waste pickers from the focus groups reported that they interact with those recycling at a small scale, such as middle-agents, as well as bigger recycling companies. Waste pickers source their recyclables from landfill sites, bins and along commercial streets and residential and industrial areas, as well as from formal institutions like industries and hospitals. Therefore, they service formal entities.

Access to essential basic and work-related infrastructure

Access to toilets and running water: Eighty per cent of waste pickers surveyed mentioned inadequate access to toilets and running water as a major problem. This problem was more serious for those operating from a single collection point (with 88 per cent citing it as a major problem) compared to those operating from multiple collection points (70 per cent). Toilets and running water are an essential component of a decent work environment. The lack of toilets poses not only a health risk to waste pickers themselves but also to their customers. In the case of toilet access, women are particularly at risk of rape and indecent assaults when they have to relieve themselves in public. The proliferation of human waste at their place of operation (due to a lack of toilets) not only makes the place filthy and smelly but also exposes them to diseases, especially when it rains.

Shelter, access to business space, and storage: Another major problem related to infrastructure that was cited by the survey respondents was that of inadequate business space (78 per cent) and the lack of storage space (66 per cent). If recyclables and equipment are not properly stored, there is a chance that they will be stolen, and theft is a serious problem that affects many waste pickers.

In another part of the survey, 84 per cent of respondents specifically identified the lack of space for sorting, storing, and processing their recyclables as a problem. Unreliable access to equipment, such as trolleys for conveying recyclables more efficiently as an alternative to head-loading, protective work wear, technologies/ tools for collecting and bundling recyclables (e.g., ties, bags, bailing machines to compress recyclables, collection picks, and materials recovery facilities), and scales for measuring recyclables, was cited as a problem by 82 per cent of the waste pickers. The absence, or dysfunctionality, of these equipment or technologies compromises the waste pickers' abilities to collect the desired volumes of recyclables, and exposes them to occupational health and safety hazards.

Permitting system

Poor regulatory environment: Many survey respondents (45 per cent) reported that regulations and municipal rules on where and when they can sell their recyclables are not clear. More than a third of the waste pickers (40 per cent) felt that municipal rules and regulations were not enforced fairly and equally.

Restricted access to permits and recyclables: The vast majority of waste pickers do not have permits, and respondents complained about being denied access to landfill sites. The issuing of permits is highly restrictive and in the case of landfills such as Bisasar, waste pickers are required to negotiate with the private operators of the landfill who only issue very few permits. This system therefore favors formal businesses that utilize employees for reclaiming waste and leaves minimal prospect for own-account workers to get a permit to operate under their own terms at landfill sites. Restrictions imposed by the city authorities on the collection of waste from households, streets and landfills, all have a negative impact on waste pickers' earnings. Major institutional obstacles cited by the survey respondents were those of treatment by the local authority (68 per cent of respondents) and the inability to obtain a business license (52 per cent).

Police harassment

The most common form of interaction that waste pickers had with the city council (according to both the survey respondents and focus group participants) was with the police. Harassment from local authorities or the public was cited by 78 per cent of the respondents and mentioned as one of the top three negative driving forces in waste pickers' lives by seven focus groups. Police were mentioned by six focus groups for negatively impacting their businesses by chasing away and fining trucks that dump the waste, as well as confiscating their recyclables.

Economic and value chain dynamics

Access to waste: The most often cited problem by the survey respondents was the lack of access to waste (83 per cent of respondents). Since access to landfills is so restrictive as a result of privatization in the case of the Bisasar landfill site, a number of them reported that they usually resort to dangerous strategies to access this waste, e.g. jumping onto moving trucks as these trucks make their way to the dump sites.

Unethical behavior by middle-agents: The second most serious problem cited by waste pickers in terms of accessing and selling their waste had to do with corruption or unethical behavior by middle-agents (cited by 82 per cent of respondents). Unscrupulous middle-agents were accused of offering very low prices for the waste collected, which the waste pickers often had to accept. This had a negative impact on their earnings.

Competition from large companies and too many competitors generally: Seventy-six per cent of respondents cited competition from large companies as a major problem affecting their work. Competition from other waste pickers has also increased, with eight in 10 respondents who said that there was more competition for collecting waste.

Buy-back centers: Seventy-three per cent of the respondents cited the closure of buy-back centers as a problem that adversely impacted their operations. Waste pickers also cited the problem of having to travel long distances to sell their waste at buy-back centers (63 per cent) and the low number of buyers for the waste collected (62 per cent). While buy-back centers are important for waste pickers, demarcated curbside pick-up or drop-off points, where workers can process, store, and sell their materials to private-agents, would increase their access to multiple and transparent sources of income.

Large variations in sales/income: Seventy-one per cent of the respondents said that large variations in income were a major problem that they faced in their enterprises.

All these factors combined has meant that waste pickers perceive that it is increasingly difficult to keep their enterprises viable.

Experience of the state and access to state support

Unhelpful: National and local government are regarded by the vast majority of waste pickers (98 per cent) as being unhelpful to their activities. The findings suggest that for many waste pickers, the only interaction they have with local government is through harassment and fines at the hands of the police. In the focus groups and interviews, the police and the municipality were identified as institutions hindering their work.

Intermediaries – Waste pickers' organizations and NGOs

Some solidarity among waste pickers but no prominent organizations that represent their interests: Six in every 10 (64 per cent) of waste pickers surveyed identified "other workers" as helpful. Thirty-six per cent of the respondents said that supermarkets were helpful, and 34 per cent cited NGOs as being helpful. There appears to be very little, if any, interaction with MBOs with only 1.3 per cent of the respondents identifying MBOs as helping them. While NGOs were identified as positive intermediaries, the sample was biased toward waste pickers who had exposure to AeT. Respondents, however, did report that their experience of AeT was positive.

Contribution to the city

Waste pickers' important contribution to the city: Waste pickers noted that they help to keep the city clean by collecting waste (cited by 14 FGRs). In terms of economic contribution, creating employment was a contribution that was cited by eight FGRs

In summary, the study found that waste pickers have been negatively affected by lack of access to basic and supportive sector-specific infrastructure, a harsh economic environment due to increased competition from formal and informal sectors, difficulty in accessing waste, and a largely hostile state, which is biased towards formal waste management systems. The lack of organization among the waste pickers has only exacerbated these negative forces.

Policy recommendations

Before moving on to the specific recommendations, two general points are worth making. Firstly, waste pickers are an integral part of Durban's economy and should be viewed as such. Secondly, it is important to recognize the work that is done by waste pickers and their contribution to the city. Waste pickers are employees and employers whose income sustains the livelihoods of their families while also contributing to the economy (through the provision of recyclables to recycling companies and the businesses/industries whose waste they collect; the study showed strong forward linkages with the formal sector). They are also helping in keeping the city clean and meeting its targets of increasing recycling rates, thus increasing the life spans of its landfills while expending a limited carbon footprint compared with formal waste management systems.

Some policy recommendations include:

Stop police harassment: The focus groups revealed on-going struggles to maintain profit margins viable enough to sustain waste pickers' households, and reducing police harassment could make their earnings slightly more stable, thus reducing poverty risk at the household level. The municipality needs to investigate the conduct of the police and, in parallel with suggestions outlined below, conduct a retraining program.

Create greater public awareness: Public awareness strategies that explain the valuable contributions of waste pickers and the role that they play in the recycling industry will assist in dealing with the social stigma and public harassment faced generally.

Review the permitting system: The municipality, in consultation with waste pickers, clearly needs to conduct a comprehensive review of the permitting system. As previously noted, Durban seems to have instituted a restrictive permitting system, especially at landfills such as Bisasar. The result is that very few people have these permits. An urgent reconsideration of the city's landfill policy is needed, as well as research into the current situation and its effect on waste pickers that have some access to the sites (as employees of small private recycling companies). Through a transparent and consultative process that involves waste pickers, a way has to be found to allow access to these landfills in a manner that addresses any health and safety concerns that have been raised by the municipality. Moving from open to sanitary landfilling is extremely important for environmental, sanitary, and human rights reasons; however, viable alternatives for waste pickers should be an integral part of any solid waste management plan and strategy. These alternatives include integration of waste pickers into systems of separation at source, door-to-door collection of recyclables, and other income-generating activities. Any restricted activity should be replaced with another of at least equal value.

Equally, enabling authorized access to fixed collection points that is worker and environmentally friendly around the city should be considered. We would suggest working with waste pickers, area by area, assessing the available public space and together conclude waste pickers' "carrying capacity", with the appropriate number of permits being issued (there is precedent in the Warwick Junction Renewal project, in general, and the re-design of the Brook Street Market, in particular; see Dobson and Skinner, 2009 chapter 4 for more details). Strategies for permitting itinerant waste pickers also need to be developed.

Disseminate information about local regulations: the city council needs to disseminate information about regulations to waste pickers across the city.

Provide basic infrastructure: As previously noted, many waste pickers do not have access to toilets and running water. This is a source of concern for the health and well-being of waste pickers. In conducting the area-based assessment, priority areas where the city needs to provide these facilities should be identified.

Provide supportive infrastructure, technology, and equipment: Shelter from the elements, space for the processing of recyclables, and storage for recyclables and equipment are key to the productivity of waste pickers but also to better functioning and aesthetically pleasing urban environments. Provision of these services should be a priority. The opening of more strategically located buy-back centers and curbside collection points could go a long way in not only saving time but also improving the waste pickers' earnings. In addition, they would not be held to selling to specific centers or middle-agents. In landfill sites, the provision of materials recovery facilities (MRFs) should be considered, which would enable waste picker groups to access and process the recyclable waste and reduce the health

and safety risks. Therefore, strategies of leveraging funding for more buy-back centers, collection points, and infrastructure upgrades at the existing centers and MRFs need to be institutionalized within the relevant line departments, such as Durban Solid Waste, Business Support Unit, and area-based management units around the city, such as inner-Thekwini Renewal and Urban Management Programme (iTRUMP). Where resources are limited, the city can consider public private partnerships (see the case of Bhubaneswar in India documented by Kumar, 2012 for an example).

Provide business support services. As previously noted, none of the waste pickers in the survey had accessed any support from government. There are existing support services, most notably the Small Enterprise Development Agencies supported by both the eThekwini Municipality and the national Department of Trade and Industry. These and other support centers (associated with relevant line departments, such as Business Support Unit and Durban Solid Waste) need to develop programs that specifically target the waste picking population.

Strengthen waste picker organizations. The results indicate that waste pickers are not organized, and they should be encouraged to organize themselves as MBOs, or within committee or cooperative arrangements, which will enhance their collective agency in accessing waste and spaces to operate. Waste pickers might also gain from capacity-building programmes (including negotiation and conflict resolution skills). Therefore, more support for the emerging workers' organizations, such as those established by support organizations like AeT, Wildlands Trust, groundWork, and South African Waste Pickers Association, and dialogue between waste picker groups, the city, and other stakeholders need to be encouraged to achieve this.

Consider sector support. This study shows the diversity of recyclables sold by Durban's waste pickers. Waste pickers are one point in a continuum of economic activities, with waste pickers selling different recyclables operating in different value chains. Durban's Informal Economy Policy suggests a sector-based approach to the development and support of different segments within the informal economy (2002: 14)³⁰. There is no evidence that the city has implemented this approach, and it should be revisited.

Consider national policy and legislative review. Waste pickers in other South African cities often face similar challenges. The Durban IEMS case study gives detail to the challenges waste pickers face and adds impetus to a call for a national policy and legislative review (see Karumbidza, 2011 on informal traders, among others). A clear national vision and implementation strategy is needed for fully realizing the economic development potential of the recycling industry. This can be done by the inclusion of waste picking within the growing global emphasis of recycling in waste management as a pillar in the green economy strategy.

Inclusion of informal waste collectors within co-existent or integrated waste management strategies are needed. Currently, waste management systems are skewed towards the formal sector; however, a critique and gap analysis of formal and informal collection systems would assist in determining which sector better responds to specific waste generation trends and maximizes employment opportunities. For instance, commercial business and light-industrial areas are more efficiently serviced by waste pickers that are able to remove recyclable waste on a daily basis. In addition, the unique characteristics of the certain recyclables generated lend themselves to labor-intensive processes, e.g. sourcing, cleaning, separation at source, baling, and some recyclables cannot be accommodated in municipal provided bins. This issue can be solved through multi-faceted partnerships between relevant line-departments within the city council and other stakeholders within the growing recycling industry comprising formal and informal sector representatives.

³⁰ Accessible here: http://www.durban.gov.za/City_Services/BST_MU/Documents/Informal_Economy_Policy.pdf

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Appendix 1: Summary of Focus Group Interviews

Focus Groups with Waste Pickers: Summary of Application of Sampling Approach					
FG no.	Date	No. of participants	Sex of participants	Location	Single (S)/Multiple (M) Collection Points (CP)
1	26-09-2012	6	Females	Springfield	Periphery
2	27-09-2012	6	Males	Springfield	Periphery
3	28-09-2012	6	Males & Females	Springfield	Periphery
4	01-10-2012	6	Males	Springfield	Periphery
5	02-10-2012	6	Females	Mayville	MCP
6	03-10-2012	6	Females	Mayville	MCP
7	04-10-2012	6	Females	Mayville	MCP
8	08-10-2012	5	Males & Females	Mayville	MCP
9	09-10-2012	6	Males & Females	Mayville & Springfield	SCP & MCP
10	10-10-2012	6	Males	Springfield	SCP
11	12-10-2012	6	Male & Females	Durban	MCP
12	15-10-2012	6	Males & Females	Mayville & Springfield	SCP & MCP
13	16-10-2012	5	Females	Springfield	SCP
14	17-10-2012	6	Males	Durban & Springfield	SCP & MCP
15	18-10-2012	6	Males	Durban	MCP

