

### **APPENDICES TO MAIN REPORT**

### VALUE CHAIN ANALYSIS OF SOLID WASTE MANAGEMENT FOR YOUTH ENGAGEMENT IN SERVICE DELIVERY (YES) PROGRAM IN ACCRA





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## Acronyms and Abbreviations

BOF	Biodegradable Organic Fraction
CBO	Community Based Organization
GAMA	Greater Accra Metropolitan Area
GOG	Government of Ghana
GPRS	Ghana Poverty Reduction Strategy
HIPC	Highly Indebted Poor Country
MEST	Ministry of Environment, Science and Technology
MINT	Material in Transition
MOU	Memorandum of Understanding
NYEP	National Youth Employment Programme
SWM	Solid Waste Management
VCA	Value Chain Analysis
WEEE	Waste Electrical and Electronic Equipment
YES	Youth Engagement in Service Delivery
TOR	Terms of Reference

### **Executive Summary**

The Youth Engagement in Service Delivery (YES) program is designed to support the creation of employment opportunities targeting the youth, especially in low income indigenous communities. The program therefore aims at enabling the youth through gainful employment in services that also improves the delivery of solid waste management (SWM) services in these areas.

The objective of this Value Chain Analysis (VCA) is to investigate job markets for youth engagement in management of solid waste streams. Additionally, the analysis led to the design of interventions for skills development that will enable the youth be competitive for job placement in selected segments of the waste management industry. The target communities for CHF interventions include Avenor, Agbogbloshie, Sabon Zongo, Ayidiki, Nima, James Town and Ussher Town, all in Accra.

The study involved selecting and analyzing SWM sub-sectors (functions) and carrying out further **value-chain analysis** of the components of solid waste (biodegradable organic fractions, metals, plastics, waste-electrical and electronic equipment, WEEE, etc.) to identify job opportunities within the processes for handling the various components from source to final treatment and/or disposal.

CHF provided sample Industry Selection Tools which were adapted for selecting and prioritizing four (4) solid waste component-value-chains. The selection tools were used to assess various scenarios i.e. Neutral, Poverty, Growth and Competitiveness and Sponsor (Gates). This was followed by field interviews with various actors to learn and gather information about the respective structures and dynamics within each prioritized component value-chain (*compostables, thin-film plastics, e-waste* and *metal*).

The table below shows the ranked value chains of the different components of the solid waste stream.

Scenarios	Solid	Solid waste management sub-sector value chains													
	Orga	nics	Plastics &		Metal		WEEE								
	Compostables	Thermal Feedstock	Thin-film plastics	High density plastics	Pneumatics tyres	Ferrous scrap	Non-ferrous scrap	Used batteries	E-waste	Bulky waste					
Neutral	37	26	38	29	11	30	25	21	34	19					
Poverty	55	38	59	45	15	43	36	28	32	28					
Growth	61	40	55	41	15	55	47	31	55	31					
Sponsor	67	49	75	57	21	49	39	33	59	33					

### Table ES1: Ranked Components' Value-Chains

The constraints and opportunities within these value chains were also identified. Market based solutions were subsequently developed, prioritized and tested with various solution providers to assess the success or risk factors that could be encountered when implementing the proposed interventions (solutions). A logframe for the proposed program of interventions was developed taking into account the deduced assumptions and risks (opportunities and constraints).

The *thin-film plastics* value chain was identified as the one having the largest potential for value addition if recycling is implemented. This option can offer sustainable means of employment for the youth in the selected communities. This is due to the fact that there is a large market demand for thin-film-plastic waste as well as abundant input supply (i.e. thin-film plastics currently litter all urban areas with adverse effects on aesthetic amenity of many communities). The ferrous scrap, e-waste and compostables value chains were observed to have comparatively limited potential as means of offering sustainable employment.

In order to provide a wide range of potential interventions to meet the different aspirations and choices of the youth encountered in these communities a number of activities to facilitate and provide avenues for engagement have been recommended for each value-chain examined.

The recommended interventions designed to meet the objectives of the YES Program include:

• Carrying out a youth-inclusive market analysis of the solid waste management sector and facilitate participatory program design and process

- Building the capacity of value chain actors and public and private sector providers to improve the performance, service coverage, and service delivery of the SWM sector through a youth-focused lens
- Building the capacity of local providers to offer or link youth to services supporting their role within the SWM sector

### **Appendices**

Appendix 1 - Scope of Works

Appendix 2 - Adapted CHF Industry Selection Tools for Selecting Sub-sectors for prioritization and value chain analysis

Appendix 3A - Interview Guidelines-Initial Interviews

Appendix 3 B - Interview Guideline-Testing Solution of opportunities/constraints

Appendix 4 - List and Profile of Interviewees

Appendix 5 - Responses of Interviewees

#### Appendix 1 - Scope of Work

#### 1. Introduction

CHF International has been awarded a three-year grant to implement the Youth Engagement in Service Delivery (YES) program. The program will build the capacity of local youth development organisations and empower youth in urban settings by employing young people in Accra, Ghana and Monrovia, Liberia in the solid waste sector.

The YES Program has three principal objectives: (1) Conduct youth-inclusive market analysis of the solid waste management sector and facilitate participatory program design process; (2) Build the capacity of the value chain actors and public and private sector providers to improve the performance, and service delivery of the SWM sector through a youth focused lens; and 3) Build the capacity of local providers to offer or link youth to services supporting their role within the SWM sector.

Youth unemployment is a major component of the unemployment situation in Ghana. There have been several employment programs in Ghana, the most current of which is the National Youth Employment Program (NYEP) aimed at addressing the unemployment situation in Ghana. However, it is not very clear if these skill training programs are informed by the demands of the job market and the real interest of the trainees as several of these youth enter the most saturated markets and often cannot find work upon completing the program.

There is also gender self-selection into certain skills, which leads most male learners to select skills such as carpentry and joinery, brick-laying or motor vehicle mechanics, and female learners to select others such as tailoring or catering. This is often the result of gender stereotypes in the community and serves to further entrench differential access to social status and income across gender lines.

#### 2. Overall Purpose

The overall purpose of this assignment is to select and analyze 2-4 value chains within Ghana's solid waste management (SWM) sector that have an opportunity to employ young people. The task will include investigating the context of SWM service delivery in Ghana and in developing a sequential list of interventions that provide opportunities for youth engagement.

The specific objectives are:

The consultant will be a Solid Waste Management Consultant Firm with in-depth knowledge in the value chain of the solid waste sector, providing technical assistance to CHF/YES/Ghana team. The objectives of this assignment are to:

- Conduct research on the value chain of the solid waste sector
  - Identify clear value chains that have an opportunity for youth employment;
  - Facilitate the selection by the CHF team of a value chain(s) for assessment and program design, based on the research;
  - Debrief CHF at the end of the assignment to present the key points and recommendations;
  - Produce final written report, including work plan and suggestions for monitoring and evaluation of the VC program designed.

### 3. Methodology

In brief, the consultant will employ the CHF-endorsed value chain framework<sup>1</sup> to collecting and analyzing information and designing program approaches through a constraints/opportunities matrix. Specifically, the consultant will work with CHF team to undertake the following activities:

### **Preparatory Activities**

### **Review Existing Data on Potential Value Chains:**

- Conduct research and review of existing literature, studies and reports on the potential value chains, focusing on demand for SWM services (either existing or unmet demand).
- Research role and interest of private sector providers in SWM related service delivery. This should not be limited to the subject countries. The assessment could be global on the role played by private providers and its impact on municipal financing. This will enable CHF design interventions that promote entrepreneurship and employability specifically in linking youth.

### **Field Activities**

### Select Target Value Chain(s) within the Solid Waste Management Sector

• Define with CHF, the youth cohort (age, gender, socio-economic status) that we intend to target through the life of the program.

<sup>&</sup>lt;sup>1</sup> This framework generally follows the value chain guidelines articulated on <u>www.microlinks.org</u>. CHF will provide specific templates and guidelines to be used by the consultant during the assignment.

- Define the criteria that will be used in choosing a value chain (e.g. unmet market demand or growth, potential numbers of young people that may benefit, local capacity or experience with the value chain, potential for value addition, and the role that existing and potential groups of micro and small enterprises may play in the sector)
- Investigate the existing solid waste generation profile for various segments (residential, commercial, institutional, industrial, medical, environment, construction waste, etc.) including a classification based on socio-economic classifications. This may require conducting sample waste audits. This will enable CHF design advocacy and community education/awareness initiatives and determine the scope for the role of youth.

Investigate current service delivery profile and map the geographical footprint. This will include understanding ongoing initiatives on 'at source' and 'at hub' segregation of waste including understanding the current collection and transportation systems and provide cost assessments. This will enable CHF design interventions based on underserved areas and develop enhancements in the current systems.

• Based on the selection criteria, identify one value chain for further analysis and program design.

#### Identify and Interview Key Players / Stakeholders in Select Value Chains

- Provide brief orientation for CHF/YES team members who will be participating in the assessment
- Identify and develop a list of key players and stakeholders in the targeted value chain; their functions, and inter-relationships.
- Develop an initial value chain map that graphically presents all the relevant private sector players and their relationships with one another.
- Using the initial findings of this map, conduct interviews with selected value chain players and key informants. Interviews will take a semi-structured approach to collecting this information: that is, you will use the questions as guides but will vary the order of questions according to the flow of the interview and comfort level of the interviewee. Key informants will include all actors across the value chain(s), including:
  - Existing municipal governance investments, resource allocation, and profile of responsibilities across departments/vertical. This will include analysis of the current budget allocations (internal and structured donor funds) and current tariff structures for service rendered. This will enable CHF determine and suggest capacity building interventions vis-à-vis potential policy reforms.

- Solid waste management plans vis-à-vis design of landfills and environmental considerations. This will include understanding the current investments on processing of usable and non-usable waste. Investigate current trends and practices on using recovered waste (organic and inorganic). Provide cost assessments and financial implication on the local government. This will enable CHF determine interventions on sustaining the reuse of waste.
- Special sub-sector opportunities at the city level including understanding the context and opportunities within urban agriculture, electronic waste, waste to energy, recycling of hard waste for infrastructure (use of bottles and automobile tires for surfacing roads), etc.
- Various stakeholders influencing solid waste management, including forecasting future WB investments and mandated/recommended reforms. This will help CHF design interventions that can benefit from other investments and co-themes including reforms and investments in labor laws/employment.
- Youth focus groups to assess youth skill training needs, interests and opportunities related to the value chains

#### Analyze Key Value Chain Constraints and Assess Possible Solutions

- Utilize Opportunities/ Constraints/Solutions Matrix to identify potential program interventions. This process will involve: (a) writing a visioning statement of where a youth-inclusive SWM value chain(s) could be in 5-10 years; (b) identifying opportunities for integrating youth into SWM value chains; (c) compiling key constraints to value chain competitiveness and increased benefit to target beneficiaries participating in the value chain; and (d) Identifying market-based solutions (including existing solution providers that could address constraints identified above.
- Assess the top 1-2 of the prioritized market-based solutions to determine: existing and/or
  potential providers; constraints to sustainable provision and use of the targeted solutions;
  satisfaction with and awareness of market-based solutions currently provided (if
  appropriate); and feasibility and commercial viability.

#### Test Solutions and Identify Potential Intervention Areas

- Conduct focus group discussion with providers/users of the targeted market solutions to validate findings and identify possible program interventions that support market-based solutions.
- Identify and select appropriate facilitation activities which will promote sustainable solutions to increase the benefits of target beneficiaries participating in the value chain and improve the overall competitiveness of the value chain.
- Finalize Opportunities/Constraints/Solutions Matrix based on the inputs from the stakeholders.

#### 4. Deliverables

- i. A profile and maps of solid waste services in the city of Accra
- ii. A value chain map that graphically presents all the relevant private sector players and their relationships with one another
- iii. Selection of value chain with potential to increase benefits for micro and small enterprises
- iv. A summary of municipal governance investments, resource allocation, and profile of responsibilities across departments/vertical.
- v. Summary assessment of the select value chain(s), using the "USAID Guidelines for Value Chain Case Studies" as a general template for summarizing value chain dynamics
- Vi. A written Opportunities/ Constraints/ Solutions Matrix, completed by the consultant.
   Written summary assessment of market based solutions that are needed to increase competitiveness and bring benefit to youth in targeted value chain
- vii. Draft report that includes information from point's i-vi above.
- viii. Proposed baseline data and monitoring indicators.
- ix. Final report and debrief that incorporates any feedback from CHF/Ghana and CHF/HQ.

#### 5. Bidding

All the bidding organizations or consultants should submit proposals which will include the following:

- Overview of Organization's Capabilities/Experience.
- Personnel to be assigned (CV of each person).
- Contact Details. Submissions are to include contact details, including telephone number and email address(es).

- Description of Services / Work to be performed.
- Methodology.
- Deliverables
- Delivery Schedule.
- A detailed budget
- Certificate of incorporation from the Registrar General's Department
- Tax clearance certificate
- SSNIT clearance certificate
- The proposal should not exceed 25 Pages.

### 6. Coordination and Reporting

The day to day activities will be coordinated by the Consultant. All correspondence should be addressed to Daniel Baako, CHF International / Ghana. The draft and final reports should be sent to the above mentioned name.

### 7. Payment Schedule

The contract sum will be divided into categories relating to the deliverables to be agreed by the two parties after the evaluation and the consultant will be paid accordingly.

#### 8. Duration

This study is expected to last for a maximum of one month, effectively 15 working days. **NB:** CHF partner communities to be included in the survey refer to:

• Avenor, Agbogbloshie, Sabon Zongo, Ayidiki, Nima, James Town, and Ussher Town, all in Accra

Solid waste collection and management includes dumpsites and all activities within the value chain of solid waste management. Most importantly, it includes e-waste: domestic and freshly imported.

### Appendix 2- Adapted Selection Tools

This section presents the adapted subsector/value chain selection tools and the results obtained for the various scenario analysis. These include the following:

- List of General Terms and Terminologies
- Industry Statistics
- Scenario Analysis Tables
- Scenario Analysis Graphs

### List of General Terms and Terminologies for Sub-sector Selection Tool

	This refers to individual components of the solid waste stream. For the purposes of this manual, these have been identified as organic, paper and
ub-Sectors	cardboard, plastics and rubber, glass, textile, metals, wood, Waste-Electrical-and-Electronic-Equipment (WEEE) and inerts/residues.
Aain Funding Source	This refers to the key sponsor (source of funds) for intervention/programme/project
/agnitude	The extent to which {MAIN FUNDING SOURCE} investments impacts a specific sub-sector
Attribution	The extent to which {MAIN FUNDING SOURCE} can take credit for demonstrated improvements in the waste management sub-sector. So, for example the metal sub-sector will likely see growth no matter whether {MAIN FUNDING SOURCE} invests in that sector or not. But if {MAIN FUNDING SOURCE} invests in the WEEE sub-sector, that sub-sector may see distinctly attributable growth that is a direct result of {MAIN FUNDING SOURCE} assistance
	The criteria by which we evaluate a sub-sector: Availability of Data, Generation Quantity, Immediate Value Potential, Growth Potential, Export Potential, Job Creation, DFI Potential, Consistency with Revised NESP, Interest/Commitment of MMDAs, Ability to Leverage with other Youth Programmes, Leverage with other CHF Activities, Environmental Consideration, Gender Consideration, Inclusion of MSMEs (local private sector), Impact in CHF Partner (and low-income) Communities, Inclusion of CBOs/NGOs, Improving Urban Waste Management System, Initial Capital Requirement, Ability to
Evaluation Metric	Process Sub-Sector Material
Definition of Evaluation Metrics	
Vaste Quantity	This is a metric for measuring the quantity of waste generated per period (in tonnage or volume, m <sup>3</sup> ) or per capita ( in kg or m <sup>3</sup> )
mmediate Value Potential	This is a metric for measuring the saleable value for a component of the waste stream. It is measured by current market price-usually GH per tonne.
Growth Potential	This is a metric for measuring the potential for growth of the different components (sub-sectors) of the waste stream. It is measured by the rate of growth of the components of the waste stream.
Job Creation	This is a metric for measuring the potential number of jobs that can be created in the sub-sectors. It is measured by the number of jobs and job-growth in the past 3-5 years, focussing on the youth.
	This is a metric for measuring how the targets or activities relating to the sub-sector conform to the measures of the revised National Environmental
Consistency with Revised NESP	Sanitation Policy (NESP) of Ghana. The NESP promotes the adoption of 4Rs; Reduction, Re-use, Recycle, Recovery. This is measured by ranking based on the 4Rs on a scale of low to high progressing from reduction to recovery.
Environmental Consideration	This is a metric for measuring the negative impact of each waste component on the environment. It is measured by a pollution factor relating to a combination quantity, visual, olfactory and toxic level.
Gender Consideration	This is a metric for measuring gender equity in the sub-sector. This is measured by the perceived potential to provide equal opportuunity to males and females.
mproving Urban Waste Management System	This metric measures the extent to which urban waste management in the Greater Accra Metropolis will be improved by effective management of the sub-sector. This is measured by the reduced quantity of waste stream sent for final disposal.
nitial Capital Requirement	This is a metric for measuring the initial investment needed for start-up of job for the informal actors, MSME, etc. This is measured by start-up equipment cost and transportation cost.
Ability to Process Sub-Sector Material	This is a metric that measures the ease of processing the specific component of the waste stream. This is measured by the number of separate stage of processing required (e.g. unit processes of physical, biological and thermal).
Definition of Modelling Scenarios	
Neutral Scenario	The measurement of sub-sector impact when all criteria have equal weight.
Poverty Scenario	The measurement of sub-sector impact when certain metrics related to poverty alleviation have been given a heavier weighted importance (such as impact in low-income areas, MSMEs, number of jobs/youth employment)
Growth Scenario	The measurement of sub-sector impact when certain metrics related to growth have been given a heavier weighted importance (such as export potential, FDI)
Donor Scenario {MAIN SPONSOR}	The measurement of sub-sector impact when the Donor/Funding Agency e. g. Gates Foundation has personally weighted each metric according to the own Mission objectives.
Sonor Scenario (MAIN SPONSOR)	own wission objectives.

### **Sub-Sector Statistics**

SOLID WASTE MANAGEN	MENT S	SUB-SECT	OR STAT	ISTICS (200	)5 -2009)					
		Organics	Paper & Cardboard	Plastics & Rubber	Metals	Glass	Textiles	Wood	WEEE	Inerts or Residues
Waste Quantity (% by weight)		60	8	8	3	2	4	>2	<2	11
	Ranking	1	3	3	6	7	5	8	9	2
Growth (10-year)		-13.1%	1.4%	4.7%	0.9%	0.5%	1.8%	decreasing	growing	0.5%
	Ranking	9	3	1	5	6	2	8	3	6
Immediate Value Potential (local i price)	narket	low	medium	high	very high	medium	low	low	very high	no value
	Ranking	8	4	3	2	5	6	7	1	9
Job Growth Potential		very high	medium	high	high	medium	n/a	n/a	high	n/a
	Ranking	1	5	3	3	6	8	7	2	n/a

### Sub-Sector Neutral Scenario Analysis Tables

	Ommention	•			Class	Tautilaa	10/	WEEE	Inerts or
10/-:	Organics	Cardboard	Rubber	Wetals	Glass	Textiles	vvood	WEEE	Residues
vveignts		2	2	2	2	1	4	2	2
	_								2
				-			-		1
		-		-		-			
1			-	-			· ·	-	1
1			-	-	-		-	-	1
1		-	-	-				-	3
1		-				-	-		4
1				-			2		1
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	33	21	38	36	21	12	15	36	16
		Dapor 8	Diactice 8						Inerts or
	Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Weights				_					
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1	1		4	-	1	[ 1	0	4	1
1		3				0	1	4	1
1	5	1				1	1	3	1
1	4	2	5	-	3	1	3	4	1
1	2	1	5	3	1	2	1	4	3
1	2	4	4	1	3	3	4	2	4
1	4	1	5	4	2	1	2	3	1
1	5	2	2	5	2	1	1	5	1
1	4	3	2	5	3	1	1	4	1
	33	21	38	36	21	12	15	36	16
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	Organics 33	Paper & Cardboard 21	Plastics & Rubber 38	Metals 36	Glass 21	Textiles 12	Wood 15	WEEE 36	Inerts or Residues 16
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    3         5         3         2         0           1         2         3         5         3         1         1           1         2         3         5         3         1         2           1         4         2         5         3         1         2           1         4         1         5         2         1         1           1         4         3         2         5         3         1           1         4         3         2         5         3         1           1         4         3         3         6         21         12           Veights         Ima</td><td>Organics         Cardboard         Rubber         Metals         Glass         Textiles         Wood           1         4         2         3         3         2         1         1           1         1         2         3         3         2         1         1           1         2         3         5         3         2         0         1           1         2         3         5         3         2         0         1           1         2         3         5         3         2         0         1           1         4         2         5         3         3         1         3           1         2         1         5         3         1         2         1           1         2         4         4         1         3         3         4           1         4         1         5         4         2         1         2           1         4         3         2         5         3         1         1           1         4         2         3         36         21         12</td></td<> <td>Organics         Cardboard         Rubber         Metals         Glass         Textiles         Wood         WEEE           1         4         2         3         3         2         1         1         3           1         1         2         3         5         3         2         1         1         3           1         2         3         5         3         2         0         1         4           1         2         3         5         3         2         0         1         4           1         2         3         5         3         3         1         3         4           1         2         1         5         3         3         1         3         4           1         2         4         4         1         3         3         4         2           1         4         1         5         3         1         1         4         2         3           1         4         3         2         5         3         1         1         4           33         21         38         36</td>	Organics         Cardboard         Rubber         Metals         Glass         Textiles           1         4         2         3         3         2         1           1         4         2         3         3         2         1           1         1         2         4         5         1         1           1         2         3         5         3         2         0           1         2         3         5         3         2         0           1         2         3         5         3         1         1           1         2         3         5         3         1         2           1         4         2         5         3         1         2           1         4         1         5         2         1         1           1         4         3         2         5         3         1           1         4         3         2         5         3         1           1         4         3         3         6         21         12           Veights         Ima	Organics         Cardboard         Rubber         Metals         Glass         Textiles         Wood           1         4         2         3         3         2         1         1           1         1         2         3         3         2         1         1           1         2         3         5         3         2         0         1           1         2         3         5         3         2         0         1           1         2         3         5         3         2         0         1           1         4         2         5         3         3         1         3           1         2         1         5         3         1         2         1           1         2         4         4         1         3         3         4           1         4         1         5         4         2         1         2           1         4         3         2         5         3         1         1           1         4         2         3         36         21         12	Organics         Cardboard         Rubber         Metals         Glass         Textiles         Wood         WEEE           1         4         2         3         3         2         1         1         3           1         1         2         3         5         3         2         1         1         3           1         2         3         5         3         2         0         1         4           1         2         3         5         3         2         0         1         4           1         2         3         5         3         3         1         3         4           1         2         1         5         3         3         1         3         4           1         2         4         4         1         3         3         4         2           1         4         1         5         3         1         1         4         2         3           1         4         3         2         5         3         1         1         4           33         21         38         36

### Sub-Sector Poverty Reduction Scenario Analysis Tables

POVERTY REDUCTION SCENARIO	- MAGNIT	UDE								
		Organics	Paper & Cardboard	Plastics & Rubber	Metals	Glass	Textiles	Wood	WEEE	Inerts or Residues
Evaluation Metrics:	Mainhte	organics	Caruboaru	Rubber	wetars	Glass	Textiles	wood	VVEEE	Residues
	Weights		-	3		-	1	1	2	-
Waste Quantity	1	4	2	-	3	2	1		3	2
Immediate Value Potential Growth Potential	1		2	4	5	1		1		1
	· ·	2	3	5		2	0		4	
Job Creation	3	15	3	9	12	6	3	3	9	3
Consistency with Revised NESP	1	4	2	5	3	3	1	3	4	1
Environmental Consideration	1	2	1	5	3	1	2	1	4	3
Gender Consideration	3	6	12	12	3	9	9	12	6	12
Improving Urban Waste Management		8	2	10	8	4	2	4	6	2
Initial Capital Requirement	2	10	4	4	10	4	2	2	10	2
Ability to Process Sub-Sector Materi	1	4	3	2	5	3	1	1	4	1
Total		56	34	59	55	35	22	28	54	28
POVERTY REDUCTION SCENARIO	- ATTRIB	UTION								
			Paper &	Plastics &						Inerts or
		Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Evaluation Metrics:	Weights									
Waste Quantity	1	4	2	3	3	2	[ 1	1	3	2
Immediate Value Potential	1	1	2	4	5	1	1	0	4	1
Growth Potential	1	2	3	5	3	2	0	1	4	1
Job Creation	3	15	3	9	12	6	3	3	9	3
Consistency with Revised NESP	1	4	2	5	3	3	1	3	4	1
Environmental Consideration	1	2	1	5	3	1	2	1	4	3
Gender Consideration	3	6	12	12	3	9	9	12	6	12
Improving Urban Waste Management	2	8	2	10	8	4	2	4	6	2
Initial Capital Requirement	2	10	4	4	10	4	2	2	10	2
Ability to Process Sub-Sector Materi	1	4	3	2	5	3	1	1	4	1
Total		56	34	59	55	35	22	28	54	28
POVERTY REDUCTION SCENARIO			Paper &	Plastics &						Inerts or
TOTALS		Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Magnitude		56	34	59	55	35	22	28	54	28
Attribution		56	34	59	55	35	22	28	54	28

### Sub-Sector Growth Scenario Analysis Tables

GROWTH & COMPETITIVENESS	SCENARI	D - MAGNITU	JDE							
			Paper &	Plastics &						Inerts or
		Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Evaluation Metrics:	Weights								_	_
Waste Quantity	1	4	2	3	3	2	1	1	3	2
Immediate Value Potential	1	1	2	4	5	1	1	0	4	1
Growth Potential	1	2	3	5	3	2	0	1	4	1
Job Creation	3	15	3	9	12	6	3	3	9	3
Consistency with Revised NESP	1	4	2	5	3	3	1	3	4	1
Environmental Consideration	2	4	2	10	6	2	4	2	8	6
Gender Consideration	1	2	4	4	1	3	3	4	2	4
Improving Urban Waste Managemer	1	4	1	5	4	2	1	2	3	1
Initial Capital Requirement	2	10	4	4	10	4	2	2	10	2
Ability to Process Sub-Sector Mate	3	12	9	6	15	9	3	3	12	3
Total		58	32	55	62	34	19	21	59	24
GROWTH & COMPETITIVENESS	SCENARIO	) - ATTRIBU	TION							
			Paper &	Plastics &						Inerts or
		Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Evaluation Metrics:	Weights		_				-		-	
Waste Quantity	1	4	2	3	3	2	1	1	3	2
Immediate Value Potential	1	1	2	4	5	1	1	0	4	1
Growth Potential	1	2	3	5	3	2	0	1	4	1
Job Creation	3	15	3	9	12	6	3	3	9	3
Consistency with Revised NESP	1	4	2	5	3	3	1	3	4	1
Environmental Consideration	2	4	2	10	6	2	4	2	8	6
Gender Consideration	1	2	4	4	1	3	3	4	2	4
Improving Urban Waste Manageme		4	1	5	4	2	1	2	3	1
Initial Capital Requirement	2	10	4	4	10	4	2	2	10	2
Ability to Process Sub-Sector Mate	3	12	9	6	15	9	3	3	12	3
Total		58	32	55	62	34	19	21	59	24
			Paper &	Plastics &						Inerts or
GROWTH SCENARIO-TOTALS		Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Magnitude		58	32	55	62	34	19	21	59	2
Attribution		58	32	55	62	34	19	21	59	24

### Sub-Sector Sponsor (Gates) Scenario Analysis Tables

SPONSOR SCENARIO - MAGNITU	IDE									
			Paper &	Plastics &						Inerts or
		Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Evaluation Metrics:	Weights	_					_	_		
Waste Quantity	1	4	2	3	3	2	1	1	3	2
Immediate Value Potential	1	1	2	4	5	1	1	0	4	1
Growth Potential	2	4	6	10	6	4	0	2	8	2
Job Creation	3	15	3	9	12	6	3	3	9	3
Consistency with Revised NESP	1	4	2	5	3	3	1	3	4	1
Environmental Consideration	2	4	2	10	6	2	4	2	8	6
Gender Consideration	3	6	12	12	3	9	9	12	6	12
Improving Urban Waste Managemer	3	12	3	15	12	6	3	6	9	3
Initial Capital Requirement	1	5	2	2	5	2	1	1	5	1
Ability to Process Sub-Sector Mate	1	4	3	2	5	3	1	1	4	1
Total		59	37	72	60	38	24	31	60	32
SPONSOR SCENARIO - ATTRIBU	TION									
			Paper &	Plastics &						Inerts or
		Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Evaluation Metrics:	Weights									
Waste Quantity	1	4	2	3	3	2	1	1	3	2
Immediate Value Potential	1	1	2	4	5	1	1	0	4	1
Growth Potential	2	4	6	10	6	4	0	2	8	2
Job Creation	3	15	3	9	12	6	3	3	9	3
Consistency with Revised NESP	1	4	2	5	3	3	1	3	4	1
Environmental Consideration	2	4	2	10	6	2	4	2	8	6
Gender Consideration	3	6	12	12	3	9	9	12	6	12
Improving Urban Waste Managemer	3	12	3	15	12	6	3	6	9	3
Initial Capital Requirement	1	5	2	2	5	2	1	1	5	1
Ability to Process Sub-Sector Mate	1	4	3	2	5	3	1	1	4	1
Total		59	37	72	60	38	24	31	60	32
			Paper &	Plastics &						Inerts or
SPONSOR SCENARIOS - Totals		Organics	Cardboard	Rubber	Metals	Glass	Textiles	Wood	WEEE	Residues
Magnitude		59	37	72	60	38	24	31	60	32
Attribution		59	37	72	60	38		31	60	



### **MAGNITUDE - NEUTRAL SCENARIO**

### **ATTRIBUTION - NEUTRAL SCENARIO**



#### Sub-Sector Poverty Reduction Scenario Analysis Graph



### **MAGNITUDE - POVERTY SCENARIO**

### **ATTRIBUTION - POVERTY SCENARIO**





### **MAGNITUDE - GROWTH SCENARIO**

### **ATTRIBUTION - GROWTH SCENARIO**



Sub-Sector Sponsor Poverty Scenario Analysis Graph



### **MAGNITUDE - SPONSOR SCENARIO**

### **ATTRIBUTION - DONOR SCENARIO**



# **POVERTY MAT**



# **GROWTH & COMPETITIVENESS MAT**



### SPONSOR MAT



### List of General Terms and Terminologies for Value Chain Selection Tool

Definition of General Terms and Termin	ologies
Sub-Sectors	This refers to individual components of the solid waste stream. For the purposes of this manual, these have been identified as organic, paper and cardboard, plastics and rubber, glass, textile, metals, wood, Waste-Electrical-and-Electronic-Equipment (WEEE) and inerts/residues.
Main Funding Source	This refers to the key sponsor (source of funds) for intervention/programme/project
Magnitude	The extent to which {MAIN FUNDING SOURCE} investments impacts a specific sub-sector
Attribution	The extent to which (MAIN FUNDING SOURCE) can take credit for demonstrated improvements in the waste management sub-sector. So, for example, the metal sub-sector will likely see growth no matter whether (MAIN FUNDING SOURCE) invests in that sector or not. But if (MAIN FUNDING SOURCE) invests in the WEEE sub-sector, that sub-sector may see distinctly attributable growth that is a direct result of (MAIN FUNDING SOURCE) assistance.
Evaluation Metric	The criteria by which we evaluate a sub-sector. Availability of Data, Generation Quantity, Immediate Value Potential, Growth Potential, Export Potential, Job Creation, DFI Potential, Consistency with Revised NESP, Interest/Commitment of MMDAs, Ability to Leverage with other Youth Programmes, Leverage with other CHF Activities, Environmental Consideration, Gender Consideration, Inclusion of MSMEs (local private sector), Impact in CHF Partner (and Iow-income) Communities, Inclusion of CBOs/NGOs, Improving Urban Waste Management System, Initial Capital Requirement, Ability to Process Sub-Sector Material
Definition of Evaluation Metrics	
Waste Quantity	This is a metric for measuring the quantity of waste generated per period (in tonnage or volume, m <sup>3</sup> ) or per capita ( in kg or m <sup>3</sup> )
Immediate Value Potential	This is a metric for measuring the saleable value for a component of the waste stream. It is measured by current market price-usually GH 🗆 per tomme.
Growth Potential	This is a metric for measuring the potential for growth of the different components (sub-sectors) of the waste stream. It is measured by the rate of growth of the components of the waste stream.
Job Creation	This is a metric for measuring the potential number of jobs that can be created in the sub-sectors. It is measured by the number of jobs and job-growth in the past 3-5 years, focussing on the youth.
Consistency with Revised NESP	This is a metric for measuring how the targets or activities relating to the sub-sector conform to the measures of the revised National Environmental Sanitation Policy (NESP) of Ghana. The NESP promotes the adoption of 4Rs; Reduction, Re-use, Recycle, Recovery. This is measured by ranking based on the 4Rs on a scale of low to high progressing from reduction to recovery.
Environmental Consideration	This is a metric for measuring the negative impact of each waste component on the environment. It is measured by a pollution factor relating to a combination quantity, visual, olfactory and toxic level.
Gender Consideration	This is a metric for measuring gender equity in the sub-sector. This is measured by the perceived potential to provide equal opportuunity to males and females.
Improving Urban Waste Management System	This metric measures the extent to which urban waste management in the Greater Accra Metropolis will be improved by effective management of the sub-sector. This is measured by the reduced quantity of waste stream sent for final disposal.
Initial Capital Requirement	This is a metric for measuring the initial investment needed for start-up of job for the informal actors, MSME, etc. This is measured by start-up equipment cost and transportation cost.
Ability to Process Sub-Sector Material	This is a metric that measures the ease of processing the specific component of the waste stream. This is measured by the number of separate stages of processing required (e.g. unit processes of physical, biological and thermal).
Definition of Prioritised Value Chain Pa	rameters
Compostables	These are the fraction of the organic waste that can easily be used for composting
Thermal Feed Stock	This parameter defines the fraction of the organic waste that require high thermal energy in an industrial process to recover material. Eg. fuel
Thin Film	These are the plastics which are made of thin molecule plastic base. Eg. Sachets, polyethylene bags, etc
1	These are the plastics which are made of thin molecule plastic base. Eg. Sachets, polyethylene bags, etc.
High-Density	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc
High-Density Pneumatic Tyres	
	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc
Pneumatic Tyres	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc All vehicle tyres and wheels
Pneumatic Tyres Ferrous	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc All vehicle tyres and wheels Ferrous metals are those metals that contain iron.Eg. Steel Metals that do not contain iron. Eg. Copper, aluminium etc As the name suggests
Pneumatic Tyres Ferrous Non-Ferrous	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc All vehicle tyres and wheels Ferrous metals are those metals that contain iron.Eg. Steel Metals that do not contain iron. Eg. Copper, aluminium etc As the name suggests Comprises of all those electrical and electronic gadgets that can be linked to information and communication technology (ICT). Eg. Computers, televisions, mobile phones, radio sets, video sets, etc.
Pneumatic Tyres Ferrous Non-Ferrous Used Batteries	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc All vehicle tyres and wheels Ferrous metals are those metals that contain iron.Eg. Steel Metals that do not contain iron. Eg. Copper, aluminium etc As the name suggests Comprises of all those electrical and electronic gadgets that can be linked to information and communication technology (ICT). Eg. Computers,
Pneumatic Tyres Ferrous Non-Ferrous Used Batteries E-Waste	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc All vehicle tyres and wheels Ferrous metals are those metals that contain iron.Eg. Steel Metals that do not contain iron. Eg. Copper, aluminium etc As the name suggests Comprises of all those electrical and electronic gadgets that can be linked to information and communication technology (ICT). Eg. Computers, televisions, mobile phones, radio sets, video sets, etc. Bulky waste comprise of refrigerators, cookers, blenders, microwave ovens, Air Conditioners and those electric and electronic gadgets apart from the
Pneumatic Tyres Ferrous Non-Ferrous Used Batteries E-Waste Bulky	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc All vehicle tyres and wheels Ferrous metals are those metals that contain iron.Eg. Steel Metals that do not contain iron. Eg. Copper, aluminium etc As the name suggests Comprises of all those electrical and electronic gadgets that can be linked to information and communication technology (ICT). Eg. Computers, televisions, mobile phones, radio sets, video sets, etc. Bulky waste comprise of refrigerators, cookers, blenders, microwave ovens, Air Conditioners and those electric and electronic gadgets apart from the
Pneumatic Tyres Ferrous Non-Ferrous Used Batteries E-Waste Bulky Definition of Modelling Scenarios Neutral Scenario	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc All vehicle tyres and wheels Ferrous metals are those metals that contain iron.Eg. Steel Metals that do not contain iron. Eg. Copper, aluminium etc As the name suggests Comprises of all those electrical and electronic gadgets that can be linked to information and communication technology (ICT). Eg. Computers, televisions, mobile phones, radio sets, video sets, etc. Bulky waste comprise of refrigerators, cookers, blenders, microwave ovens, Air Conditioners and those electric and electronic gadgets apart from the ones for communication The measurement of sub-sector impact when all criteria have equal weight. The measurement of sub-sector impact when certain metrics related to poverty alleviation have been given a heavier weighted importance (such as
Pneumatic Tyres Ferrous Non-Ferrous Used Batteries E-Waste Bulky Definition of Modelling Scenarios Neutral Scenario Poverty Scenario	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc All vehicle tyres and wheels Ferrous metals are those metals that contain iron.Eg. Steel Metals that do not contain iron. Eg. Copper, aluminium etc As the name suggests Comprises of all those electrical and electronic gadgets that can be linked to information and communication technology (ICT). Eg. Computers, televisions, mobile phones, radio sets, video sets, etc. Bulky waste comprise of refrigerators, cookers, blenders, microwave ovens, Air Conditioners and those electric and electronic gadgets apart from the ones for communication The measurement of sub-sector impact when certain metrics related to poverty alleviation have been given a heavier weighted importance (such as impact in low-income areas, MSMEs, number of jobs/youth employment) The measurement of sub-sector impact when certain metrics related to growth have been given a heavier weighted importance (such as export
Pneumatic Tyres Perrous Non-Ferrous Used Batteries E-Waste Bulky Definition of Modelling Scenarios Neutral Scenario	These are made of plastic bases with very high density. Eg. Rubber buckets, basins, bowls, etc. All vehicle tyres and wheels Ferrous metals are those metals that contain iron.Eg. Steel Metals that do not contain iron. Eg. Copper, aluminium etc As the name suggests Comprises of all those electrical and electronic gadgets that can be linked to information and communication technology (ICT). Eg. Computers, televisions, mobile phones, radio sets, video sets, etc. Bulky waste comprise of refrigerators, cookers, blenders, microwave ovens, Air Conditioners and those electric and electronic gadgets apart from the ones for communication The measurement of sub-sector impact when all criteria have equal weight. The measurement of sub-sector impact when certain metrics related to poverty alleviation have been given a heavier weighted importance (such as impact in low-income areas, MSMEs, number of jobs/youth employment)

### **Value Chain Statistics**

SOLID WASTE MANAGEMENT	SUB-SECT	OR VALU	E CHAIN D	ATA (200	5 - 2009)					
	Compostabl es	Thermal Feed Stock	Thin-Film	High- Density	Pneumatic Tyres	Ferrous	Non- Ferrous	Used Batteries	E-Waste	Bulky
Growth Potential	high	medium	high	medium	medium	medium	medium	low	high	medium
Ranking	1	4	2	5	6	6	6	9	3	6
Immediate Value Potential (local market price)	low	low	low	very high	low	high	very high	low	high	low
Ranking	7	7	5	1	9	3	1	5	3	9
Job Growth Potential	high	low	high	low	very low	very high	high	low	high	low
Ranking	2	6	2	6	9	1	4	8	4	8

### Value Chain Neutral Scenario Analysis Tables

NEUTRAL MAGNITUDE SCENARIO		Orga	anics		Plastics		Ме	tals		WEEE	
		Compostables	Thermal Feed Stock	Thin-Film	High-Density	Pneumatic Tyres	Ferrous	Non-Ferrous	Used Batteries	E-Waste	Bulky
Evaluation Metrics:	Weights	compostables	SLUCK	11001-F0011	nigh-bensity	Tyres	renous	Non-remous	Datteries	E-Waste	Durky
Waste Quantity	1	5	2	5	2	2	3	1	1	4	2
Immediate Value Potential	1	1	1	2	5	1	4	5	2	4	1
Growth Potential	1	4	3	4	3	2	3	3	3	4	3
Job Creation	1	4	2	4	3	1	5	4	2	4	2
Consistency with Revised NESP	1	4	4	5	3	1	2	1	2	3	2
Environmental Consideration	1	4	4	5	3	2	2	1	1	3	1
Gender Consideration	1	3	2	5	4	1	1	1	2	3	1
Improving Urban Waste Management System	1	4	4	5	4	1	1	0	1	2	2
Initial Capital Requirement		4	2	2	1	0	5	5	4	4	3
Ability to Process Sub-Sector Material	1	4	2	1	1	0	4	4	3	3	2
Total		37	26	38	29	11	30	25	21	34	19
		51	20	50	23		50	23	21	54	13
NEUTRAL ATTRIBUTION SCENARIO											
			Thermal Feed			Pneumatic			Used		
		Compostables	Stock	Thin-Film	High-Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
Evaluation Metrics:	Weights										
Waste Quantity	1	5	2	5	2	2	3	1	1	4	2
Immediate Value Potential	1	1	1	2	5	1	4	5	2	4	1
Growth Potential	1	4	3	4	3	2	3	3	3	4	3
Job Creation	1	4	2	4	3	1	5	4	2	4	2
Consistency with Revised NESP	1	4	4	5	3	1	2	1	2	3	2
Environmental Consideration	1	4	4	5	3	2	2	1	1	3	1
Gender Consideration	1	3	2	5	4	1	1	1	2	3	1
Improving Urban Waste Management System	1	4	4	5	4	1	1	0	1	2	2
Initial Capital Requirement	1	4	2	2	1	0	5	5	4	4	3
Ability to Process Sub-Sector Material	1	4	2	1	1	0	4	4	3	3	2
Total		37	26	38	29	11	30	25	21	34	19
			Thermal Feed			Pneumatic			Used		
NEUTRAL SCENARIO-TOTALS		Compostables	Stock	Thin-Film	High-Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
NEUTRAL MAGNITUDE SCENARIO	1	37	26	38	29	11	30	25	21	34	19
NEUTRAL ATTRIBUTION SCENARIO		37	26	38	29	11	30	25	21	34	19

### Value Chain Poverty Reduction Scenario Tables

POVERTY REDUCTION SCENARIO	- MAGNIT	TUDE									
			Thermal Feed		High-	Pneumatic			Used		
		Compostables	Stock	Thin-Film	Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
Evaluation Metrics:	Weights										
Waste Quantity	1	5	2	5	2	2	3	1	2	1	2
Immediate Value Potential	1	1	1	2	5	1	4	5	1	2	1
Growth Potential	1	4	3	4	3	2	3	3	3	3	3
Job Creation	2	8	4	8	6	2	10	8	4	4	4
Consistency with Revised NESP	1	4	4	5	3	1	2	1	2	2	2
Environmental Consideration	1	4	4	5	3	2	2	1	1	1	1
Gender Consideration	3	9	6	15	12	3	3	3	3	6	3
Improving Urban Waste Management	2	8	8	10	8	2	2	0	4	2	4
Initial Capital Requirement	2	8	4	4	2	0	10	10	6	8	6
Ability to Process Sub-Sector Materi	1	4	2	1	1	0	4	4	2	3	2
Total		55	38	59	45	15	43	36	28	32	28
POVERTY REDUCTION SCENARIO	- ATTRIB										
			Thermal Feed		High-	Pneumatic			Used		
		Compostables	Stock	Thin-Film	Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
Evaluation Metrics:	Weights	-		-							_
Waste Quantity		5	2	5	2	2	3	1	1	4	2
Immediate Value Potential				2	5	1	4	5	2	4	1
Growth Potential	1	4	3	4	3	2	3	3	3	4	3
Job Creation	2	8	4	8	6	2	10	8	4	8	4
Consistency with Revised NESP	1	4	4	5	3	1	2	1	2	3	2
Environmental Consideration	1	4	4	5	3	2	2	1	1	3	1
Gender Consideration	3	9	6	15	12	3	3	3	6	9	3
Improving Urban Waste Management		8	8	10	8	2	2	0	2	4	4
Initial Capital Requirement	2	8	4	4	2	0	10	10	8	8	6
Ability to Process Sub-Sector Materi	1	4	2	1	1	0	4	4	3	3	2
Total		55	38	59	45	15	43	36	32	50	28
			Thermal Feed		High-	Pneumatic			Used		
DOMEDTIC COENTRIC TOTAL O		Compostables	Stock	Thin-Film	Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
POVERTY SCENARIO-TOTALS		compostables	SLUCK	11001-11001	Density	1,100					
POVERTY SCENARIO-TOTALS Magnitude		55	38	59	45	15	43	36	28	32	28

### Value Chain Growth Scenario Tables

GROWTH & COMPETITIVENESS SCENARIO - MAGNITUDE											
		Compostabl	Thermal		High-	Pneumatic			Used		
		es	Feed Stock	Thin-Film	Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
Evaluation Metrics:	Weights										
Waste Quantity	1	5	2	5	2	2	3	1	2	4	2
Immediate Value Potential	1	1	1	2	5	1	4	5	1	4	1
Growth Potential	1	4	3	4	3	2	3	3	3	4	3
Job Creation	3	12	6	12	9	3	15	12	6	12	6
Consistency with Revised NESP	1	4	4	5	3	1	2	1	2	3	2
Environmental Consideration	2	8	8	10	6	4	4	2	2	6	2
Gender Consideration	1	3	2	5	4	1	1	1	1	3	1
Improving Urban Waste Managemer	1	4	4	5	4	1	1	0	2	2	2
Initial Capital Requirement	2	8	4	4	2	0	10	10	6	8	6
Ability to Process Sub-Sector Mate	3	12	6	3	3	0	12	12	6	9	6
Total		61	40	55	41	15	55	47	31	55	31
GROWTH & COMPETITIVENESS	SCENARI	O - ATTRIBU	TION							·	
		Compostabl	Thermal		High-	Pneumatic			Used		
		es	Feed Stock	Thin-Film	Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
Evaluation Metrics:	Weights										
Waste Quantity	1	5	2	5	2	2	3	1	1	4	2
Immediate Value Potential	1	1	1	2	5	1	4	5	2	4	1
Growth Potential	1	4	3	4	3	2	3	3	3	4	3
Job Creation	3	12	6	12	9	3	15	12	6	12	6
Consistency with Revised NESP	1	4	4	5	3	1	2	1	2	3	2
Environmental Consideration	2	8	8	10	6	4	4	2	2	6	2
Gender Consideration	1	3	2	5	4	1	1	1	2	3	1
Improving Urban Waste Managemer	1	4	4	5	4	1	1	0	1	2	2
Initial Capital Requirement	2	8	4	4	2	0	10	10	8	8	6
Ability to Process Sub-Sector Mate	3	12	6	3	3	0	12	12	9	9	6
Total		61	40	55	41	15	55	47	36	55	31
		Compostabl	Thermal		High-	Pneumatic			Used		
		Compostabl	mermai								
GROWTH SCENARIO-TOTALS		es	Feed Stock	Thin-Film	Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
GROWTH SCENARIO-TOTALS Magnitude				Thin-Film 55	-	Tyres 15	Ferrous 55		Batteries 31	E-Waste 55	Bulky 31

### Value Chain Sponsor Scenario Tables

SPONSOR SCENARIO - MAGNITU	IDE										
		Compostabl	Thermal		High-	Pneumatic			Used		
		es	Feed Stock	Thin-Film	Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
Evaluation Metrics:	Weights										
Waste Quantity	1	5	2	5	2	2	3	1	2	4	2
Immediate Value Potential	1	1	1	2	5	1	4	5	1	4	1
Growth Potential	2	8	6	8	6	4	6	6	6	8	6
Job Creation	3	12	6	12	9	3	15	12	6	12	6
Consistency with Revised NESP	1	4	4	5	3	1	2	1	2	3	2
Environmental Consideration	2	8	8	10	6	4	4	2	2	6	2
Gender Consideration	3	9	6	15	12	3	3	3	3	9	3
Improving Urban Waste Managemer	3	12	12	15	12	3	3	0	6	6	6
Initial Capital Requirement	1	4	2	2	1	0	5	5	3	4	3
Ability to Process Sub-Sector Mate	1	4	2	1	1	0	4	4	2	3	2
Total		67	49	75	57	21	49	39	33	59	33
SPONSOR SCENARIO - ATTRIBUT	TION										
		Compostabl	Thermal		High-	Pneumatic			Used		
		es	Feed Stock	Thin-Film	Density	Tyres	Ferrous	Non-Ferrous	Batteries	E-Waste	Bulky
	Weights										
Waste Quantity	1	5	2	5	2	2	3	1	2	4	2
Immediate Value Potential	1	1	1	2	5	1	4	5	1	4	1
Growth Potential	2	8	6	8	6	4	6	6	6	8	6
Job Creation	3	12	6	12	9	3	15	12	6	12	6
Consistency with Revised NESP	1	4	4	5	3	1	2	1	2	3	2
Environmental Consideration	2	8	8	10	6	4	4	2	2	6	2
Gender Consideration	3	9	6	15	12	3	3	3	3	9	3
Improving Urban Waste Managemer	3	12	12	15	12	3	3	0	6	6	6
Initial Capital Requirement	1	4	2	2	1	0	5	5	3	4	3
Ability to Process Sub-Sector Mate	1	4	2	1	1	0	4	4	2	3	2
Total		67	49	75	57	21	49	39	33	59	33
		-	_			-					
SPONSOR SCENARIO-TOTALS		Compostabl es	Thermal Feed Stock	Thin-Film	High- Density	Pneumatic Tyres	Ferrous	Non-Ferrous	Used Batteries	E-Waste	Bulky
			49	75	57	-		39	33	E-Waste 59	33
Magnitude		67			57	21	49				
Attribution		67	49	75	57	21	49	39	33	59	33



# **MAGNITUDE - NEUTRAL SCENARIO**

# **ATTRIBUTION - NEUTRAL SCENARIO**





# **MAGNITUDE - POVERTY SCENARIO**

**ATTRIBUTION - POVERTY SCENARIO** 





# **MAGNITUDE - GROWTH SCENARIO**

**ATTRIBUTION - GROWTH SCENARIO** 


Value Chain Sponsor Scenario Analysis Graph



## **MAGNITUDE - SPONSOR SCENARIO**

**ATTRIBUTION - DONOR SCENARIO** 



# **POVERTY MAT**



# **GROWTH & COMPETITIVENESS MAT**



#### SPONSOR MAT



#### **Appendix 3 – Interview Guidelines (Questionnaires)**

The questionnaires used are as listed:

- Guide I Exporters
- Guide 2 Packaging Materials End Market Users
- Guide 3 Dealers, Brokers, Intermediaries
- Guide 4 Value Pickers

#### **GUIDE 1: EXPORTERS**

- 1. Introductions, purpose of in-depth interview and research.
- 2. *Show and explain the value chain map.* What do you think of this illustration/representation? How does it seem to you?
- 3. What changes do I need to make to improve it?
- 4. Can you identify yourself on the value chain? Where are you located?

#### **Questions about International Clients/Buyers**

- 5. What type of materials do you export?
- 6. Which countries do you export to?
- 7. Are there any trade barriers, import quotas etc in those foreign markets?
- 8. Who are your main clients (buyers)?
- 9. Where and how did you find your clients for the first time?
- 10. How do you learn about your clients preferences? (*probes*: types of recyclables, order quantities, standards, quality requirements, delivery dates)
- 11. How would you characterize your relationships with your principal clients? (*probes*: independent, close, collaborative, difficult, lots of information passes between you, client is in charge, they direct you)
- Does your firm receive any assistance/help or collaboration from your clients? (*probes*: Advances, credit, information, inputs, technical assistance, recommendations)
- 13. What are the steps you usually take to ensure that you meet your clients' specifications, including delivery date and quality? (Is it difficult to comply with your clients' requirements? What do you have to do?)

14. Do you share information with other exporters? If so, what kind of information and why? (*probes*: to meet large contracts, set prices, legal issues, etc.)

#### **Questions about Suppliers/Dealers**

- 15. What are all the ways you source your recyclables product? Who are your main suppliers?
- 16. Do you buy your product from individual producers, micro-enterprises etc?
- 17. How many dealers do you work with?
- 18. Are there male, female and youth suppliers/ dealers? (Probe further to find the general representations if any)
- 19. If you have different types of suppliers, how would you characterize the differences between each type of supplier? (What are the characteristics of each type of supplier?)
- 20. How do you communicate information to your suppliers regarding your requirements in terms of quality of produce, size, chemical use, delivery dates, etc?
  - How do you demand that you suppliers meet the requirements?
  - What difficulties do your suppliers have in meeting your demands?
  - Do you help them? How?
- 21. What changes would you like your suppliers to make?
  - Have you communicated your wishes to them?
  - How do they respond?
  - What can you do to facilitate or demand these changes?
- 22. How do you work with producers to ensure that they satisfy your requirements for quality? What do you do to encourage them? What pressures do you apply?

#### Finance

- 23. How do you finance your operations
- 24. Do you have need for additional financing e.g. bank loans, loan sharks?
- 25. Have you had difficulty in repaying your loans?
- 26. Have you received assistance from third parties (NGO, MFI, bank, etc.) in obtaining loans?

27. In general, do you feel that it is you are treated fairly when trying to access finance? Do other people receive preferential treatment?

#### **Processing of Recyclables**

- 28. Are your processing operations labour-intensive or mechanized?
- 29. Are your processing equipment locally manufactured or imported?
- 30. Do your have a need of expatriate technical personnel for your operations?
- 31. What are the main occupational health and safety issues you have to deal with?

#### To Finish Up

- 32. Are there any government policies that are helpful to your business? Are there any policies that you would like to see changed? What changes would be helpful?
- 33. What are the three most serious risks for your enterprise?
- 34. What do you think about the competitiveness of the value chain?
- 35. Do you have additional observations or comments that we have not discussed?

Thank you for your time. Are there other players in this value chain that you think we should talk to? Could you give me referrals?

#### **GUIDE 2: PACKAGING MATERIALS END MARKET USERS**

#### **Introductory Questions**

- 1. Introduction and purpose.
- 2. What is the nature of your business?
- 3. Why do you prefer to use secondary raw materials instead of virgin material?
- 4. What recyclables to you purchase locally and what quantities do you require for production?
- 5. Has there been the need to turn to the West African sub-region to source for additional materials?

#### **Questions about Suppliers**

- 6. How you obtain your secondary raw materials or recyclables (the selected natural product). Do you purchase for micro enterprises, waste management facilities, waste haulage contractors, individuals etc.?
- 7. Which type of supplier do you prefer to buy from? Why?
- 8. Who are your most important suppliers? What makes these the most important?
- 9. How many suppliers (of each type) do you buy from?
- 10. What kinds of help or services do you provide to your suppliers? (*probe:* inputs, , credit, advice on market demand)
- 11. How do you communicate your product requirements to your suppliers? (*probe:* quality of produce, size and appearance, delivery dates)
- 12. What are the difficulties suppliers have in meeting these requirements?
- 13. What changes would you like your suppliers to make?
- 14. Do you pay different prices for different qualities of the same product?

#### Finance

15. How do you finance your purchases of secondary raw materials?

- 16. What are the terms you use to pay suppliers?
- 17. Do you have need for bank loans, etc?
- 18. Have you had difficulty in repaying your loans?
- 19. Have you received assistance from third parties (NGO, MFI, bank, etc.) in obtaining loans?
- 20. In general, do you feel that it is you are treated fairly when trying to access finance? Do other people receive preferential treatment?

#### **To Finish Up**

- 21. What are the three most serious risks for your enterprise?
- 22. What do you think about the competitiveness of the value chain?
- 23. Do you have additional observations or comments that we have not discussed?

#### **GUIDE 3: DEALERS, BROKERS, INTERMEDIARIES**

- 1. Introduction and purpose.
- 2. What is the nature of your business i.e. micro enterprise or sole operator?
- 3. Are you registered with the Municipal Assembly etc?
- 4. What types of recyclables do you buy and sell?

#### **Questions about Buyers/Clients**

- 5. Which markets do supply recyclables to i.e. steel producers, paper packaging, plastic manufacturers etc/ are your sources of your recyclables i.e. households, commercial centers, institutions, industries etc?
- 6. What quantities do you supply weekly/monthly?
- 7. Do you also supply recyclables to waste exporters? If so what quantities?
- 8. What is the level of processing done before recyclables are sent to the manufacturing firms i.e. baling, crushing etc?
- 9. Are your processing methods environmentally friendly?
- 10. Do you use manual or mechanized processes? Do your employees have safery gadgets and equipment e.g. face masks etc?
- 11. What is the mode of transportation do you use in the haulage of recyclables?
- 12. How do you learn about the new products that buyers want? How do you learn about market taste and quality requirements?
- 13. Do receive any from of assistance/help from your clients/buyers? (*probe*: cash advances, advances in materials, training, transport, record keeping)
- 14. What steps to you take to meet your client/buyers specifications, including delivery date and quality?
- 15. What challenges do you face when it comes to your buyers?

#### **Questions about Suppliers/Producers**

- 16. What are all the ways you obtain the recyclables? What are your sources of your recyclables i.e. households, commercial centers, institutions, industries etc?
- 17. What quantities do you buy weekly/monthly? the main products that you sell?
- 18. Which type of source do you prefer to buy from?
- 19. What quantities do you buy weekly/monthly? the main products that you sell?
- 20. What kinds of help or services do you provide to your suppliers?

- 21. How do you communicate your product requirements to your suppliers?
- 22. What are the difficulties suppliers have in meeting your requirements?

#### Finance

24. How do you finance your purchases of secondary raw materials?

- 25. What are the terms you use to pay suppliers?
- 26. Do you have need for bank loans, etc?
- 27. Have you had difficulty in repaying your loans?
- 28. Have you received assistance from third parties (NGO, MFI, bank, etc.) in obtaining loans?
- 29. In general, do you feel that it is you are treated fairly when trying to access finance? Do other people receive preferential treatment?

#### To Finish Up

- 30. What are the three most serious risks for your enterprise?
- 31. What do you think about the competitiveness of the value chain?
- 32. Do you have additional observations or comments that we have not discussed?

#### **GUIDE 4: INDIVIDUAL/FOCUS GROUP INTERVIEW FOR VALUE PICKERS**

#### **Background information**

Name of association (if		Location (City/Town):	
applicable):		Number of People:	
Number of members (if		Number of Youth:	
applicable):		Number of Women:	

- 1. Greetings, welcome, introduction, and purpose. (no specific benefit)
- 2. Guidelines/Rules: everyone should speak, raise hands to speak, take turns and speak one at a time, speak briefly, think about what is typical, common or usual. Allow as many people to talk.

#### **Input Supply/Source**

- 1. Which specific recyclable(s) do you collect?
- 2. Why do you collect those particular types of recyclables?
- 3. Where are the sources of your recyclables i.e. households, commercial areas, industrial facilities, street litter, communal container, waste disposal sites etc.?
- 4. What is the mode of transport you use during collection?
- 5. How far do you have to walk/ride before you finish a day's workload?
- 6. What quantity of recyclables do you collect daily/weekly?

#### **Questions about Intermediaries/Dealers**

- 1. Who buys your recyclables i.e. middlemen, cottage industries, manufacturing firms etc?
- 2. What level of processing i.e. washing, baling, crushing etc is required before your sell the recyclables are accepted by these buyers?
- 3. What difficulties do you have in meeting your buyers' requirements?
- 4. What kind of specialized services/training do your buyers provide for you?
- 5. Do your buyers pay immediately or credit?

#### Finance

- 1. What are the capital requirement for weekly or daily collection activity
- 2. How do you finance your activities?
- 3. Do you have access to credit facilities?
- 4. If yes, where e.g. susu, micro-finance?
- 5. Do you sometimes have difficulty in paying back these loans?

#### **Occupational Health and Safety**

- 1. Do you suffer from back or waist pains after each days routine?
- 2. Do you have access to gloves, hard boots, face masks etc?
- 3. Do you always use these safety gadgets and accessories?
- 4. How do you treat cuts and pricks from sharp objects during collection?
- 5. Are there any special risks or health problems women face while engaged in the collection of recyclables?

#### Membership of Trade Associations or Community-based Organizations

- 1. Are you a member of any trade association or community organization that promotes the interests of the value pickers either currently or in the immediate past?
- 2. What are the advantages of being a member of this association or organization?
- 3. Are you aware of any NGOs who provide special services for value pickers?

#### To Finish Up

- 1. Do you think the government or metropolitan assembly has to enact any special legislation to protect or promote the interest of value pickers?
- 2. Would you be in a position to offer any specific suggestion?
- 3. How lucrative is this recyclables business?
- 4. What challenges do you face in this business?
- 5. Finally, would like to talk about anything we have not discussed so far?

#### **Appendix 4-List of Interviewees**

#### **Initial Interviews**

Sub-sector	Company	Location	Date of Interview	Contact Person
Plastics	Blowplast Industries Ltd	Accra	27/01/2010	Manoj Lakhiani
	Universal Cosmetics Ghana	Accra	29/01/2010	Mr. H. Amanye
	Petroplast	Accra	27/01/2010	Mr.Abbey
	SMP Company	Accra	29/01/2010	Mr. Abbass
	Obesi Trading Company	Accra	28/01/2010	Mr. Micheal
	Trashy Bags	Accra	27/01/2010	Mr.Elvis
	Value Pickers	Accra	29/01/2010	James
Metals	Tema Steel Works	Tema	27/01/2010	Mr. Patel
	Scrap Metal Agents	Tema	27/01/2010	Alhadji Sulemana
E-Waste	Atlantic Computers	Accra	28/01/2010	-
	Ultimate Phones	Accra	28/01/2010	-
	Freddie's Corner	Accra	28/01/2010	-
E-Waste	Jake Phones	Accra	28/01/2010	Mr. Kofi
	Non-ferrous metal Buyer	Accra	28/01/2010	Uche
	Value Pickers	Accra	28/01/2010	Christopher
Organic (Composting)	Parks and Gardens	Accra	27/01/2010	Nursery Manager
	AMA Compost Plant	Accra	28/01/2010	Mr.Awuyee

#### Validation (Testing Solutions) Interviews

Description	Company	Location	Date of Interview	Contact Person	Position
Financial Service Providers	Opportunity International	Accra	4/02/2010	Mr. Kwabena Boafo	Customer Relations Officer
	Women World Banking	Accra	4/02/2010	Mr. Johnson	Customer Relations Officer
	Boafo Micro finance	Accra	4/02/2010	Mrs. Osei Tutu	Mobilisation Manager
Local Government Assemblies	Accra Metropolitan Assembly	Accra	5/02/2010	Mr. Offei-Gyenti	Chief Environmental Health Officer
	Ashiedu-Keteke Sub-metro	Accra	5/02/2010	Nana Agyeman, Mr.Quashie	Sub-Metro Director, District Cleansing Officer
Policy/Regulatory Agencies	EPA	Accra	04/02/2010	Emilia Tetteh	Programme Officer
Workforce Development Providers	GACEED	Accra	4/02/2010	Mr. Mustapha	-
	Hackplast	Accra	4/02/2010	Mr. Hackman	C.E.O.
	Aid to Artisan Ghana (ATAG)	Accra	4/02/2010	Mrs. Bridget Kyeremanteng-Darko	Director
	NIMCOSS	Accra	4/02/2010	Kwasi Amoak	Project Officer
	EYG Enterprise	Accra	4/02/2010	Emelia Glover	C.E.O.

#### **Appendix 5-Interview Responses**

Interview responses from the following are presented:

- Thin film plastics value chain actors
- Ferrous metal value chain actors
- E-waste value chain actors
- Micro-finance institutions
- Workforce Development Providers
- Metropolitan, Municipal and District Assemblies (MMDAs)
- Ministries Departments and Agencies (MDAS)
- Target Community Focus Group Interviews

## Thin film plastics value chain actors

VALUE CHAIN INTERVIEW			
GENERAL INFORM	IATION	QUES, NO	RESPONSES
VALUE CHAIN SUB SECTOR	THIN FILM	2	Recycling plastic wastes into plastic products
VALUE CHAIN PLAYER CATEGORY	END USER	3	Secondary raw materials are cheaper(about 40% cheaper than virgin raw materials)
		4	Our maximum capacity is 24 tonnes per day, but we only process 10 tonnes per day due to inadequate supply
COMPANY NAME	BLOWPLAST	5	No. In case of inadequate secondary raw materials, virgin raw materials are added.
NAME OF INTERVIEWEE	MANOJ	6	eg. Voltic, aqua-fill, etc
POSITION (CAPACITY) IN COMPANY		7	No preference. Any supplier is welcome
DATE OF INTERVIEW	27/01/10	8	N/A
INTERVIEWER(S)	KOJO KEELSON, SHIRLEY OSEI-TUTU, RHODA BOAKYE, RICHARD, BEN MAHMOUD JNR	9	More than 200 agents; including individuals and sub-contractors
		10	None. You just have to bring your waste and we buy them.
		11	Any thin film plastic is welcome, (whether clean or dirty, except the black polyethene bags)
		12	
		13	
		14	Yes. Since we weigh to calculate for payments, those that contain water are paid lesser than the others. There is 20% reduction if supply is dirty.
		15	Self-financing
		16	35p/tonne, 20% reduction if supply is dirty
		17	NA
		18	NA
		19	N/A
		20	N/A
		21	
		22	
		23	Since we are into recycling of plastic wastes, we should be given tax exemption.

VALUE CHAIN INTERVIEW			
GENERAL INFORM	IATION	QUES, NO	RESPONSES
VALUE CHAIN SUB SECTOR	THIN FILM	2	Production of take away black polythene bag, plastic bowls and cups
VALUE CHAIN PLAYER CATEGORY	END USER	3	Secondary raw materials/plastic wastes are cheaper compared to virgin raw materials
		4	Water sachets and Broken plastic product
COMPANY NAME	UNIVERSAL COSMETICS GHANA	5	No. Usually, when we don't get enough recyclables, we use virgin raw materials
NAME OF INTERVIEWEE	Mr. Henry T. Amanye	6	From recyclable companies around Accra.
POSITION (CAPACITY) IN COMPANY		7	A waste management processing company from Agbobloshie.
DATE OF INTERVIEW	29/01/10	8	N/A
INTERVIEWER(S)	J.A. AFARI, SHIRLEY OSEI- TUTU, RHODA BOAKYE, RICHARD, BEN MAHMOUD JNR	9	Anyone who comes to sell to us is welcome
		10	We advice them to bring clean recyclables
		11	Through Telephone conversation
		12	Not being able to clean them well
		13	To make the recyclables clean to enables us have quality products
		14	Not really aas they most of the time bring quality recyclables here.
		15	Self-financing
		16	Cash is given to them as soon as they deliver the products.
		17	Yes but with a lesser interest rate.
		18	NA
		19	No
		20	N/A
	21	High electricity bills, shortage of recyclables and ineffective method of payment by exporters.	
		22	
		23	There should be some quality in the recyclables sent to us as poor quality ones causes damaged to their machines. The government should also minimises the imported plastics materials to enable the recyclable ones being sold well.

GENERAL INFORM	ATION	QUES, NO.	RESPONSES
VALUE CHAIN SUB SECTOR	THIN FILM	2	To use recycled plastics to make products like bags, rain coats, aprons etc. based on th fact that though a lot of plastics outlive their time, they can be used for other things which will improve the lives of the people while keeping he environment clean.
VALUE CHAIN PLAYER CATEGORY	END USER	3	Only plastic or recycled plastic wastes are used.
		4	Sachet water bags, tampico, fanice ect. In general the thin film plastics are used for production (all plastic bags except the black polyethene bags)
COMPANY NAME	TRASHY BAGS	5	No. Our major concern is to help reduce the plastic waste situatuon within our local sector
NAME OF INTERVIEWEE	ELVIS	6	From individuals (i.e. value pickers)
POSITION (CAPACITY) IN COMPANY	DIRECTOR	7	We don't have any specific people to buy from. Anyone who walks oru premises with waste gets paid right there and then.
DATE OF INTERVIEW	28/01/10	8	NA
INTERVIEWER(S)	, TUTU,RHODA BOAKYE,	9	As many as can be obtained
		10	Cash down. "Bring waste, get paid instantly".
		11	Quality of materials
		12	
		13	Cleaner plastics should be brought.
		14	Yes. Clean ones are paid higher than very dirty ones
		15	Self financing( Steward Gold)
		16	1kilo of water sachet =30p, 500pcs of Icecream=5cedis, 600pcs of tampico=6cedis
		17	No
		18	NA
		19	NA
		20	NA
		21	inadequate supply of produce
		22	
		23	Mostly the plastic brought into our premises which are not immediately usable by our company are sent to bigger companies like Blowplast

VALUE CHAIN INTERVIEW			
GENERAL INFORM	IATION	QUES, NO.	RESPONSES
		2	Thin film sold to Plastic Manufacturing Companies to be used for production of Rubber
VALUE CHAIN SUB SECTOR	THIN FILM	2	products like, Black polythene bag.
VALUE CHAIN PLAYER CATEGORY	INTERMEDIARIES	3	Yes
		4	We buy all types of thin film and sells to the manufacturing companies.
COMPANY NAME	OBESI TRADING COMPANY	5	To Munufacturering Companies.eg, Petroplast and Blowplast
NAME OF INTERVIEWEE	MR MICHAEL	6	From Households, market places and Institutions
POSITION (CAPACITY) IN COMPANY	DIRECTOR	7	3 tonnes per week.
DATE OF INTERVIEW	28/01/10	8	Frequently
INTERVIEWER(S)	J.A. AFARI,SHIRLEY OSEI- TUTU,RHODA BOAKYE, RICHARD, BEN MAHMOUD JNR	9	No.
		10	n/a
		11	No.
		12	The Manufacturing Companies bring their trucks to collect them.
		13	Through communication
		14	Yes. We receive transportation from them.
		15	Accra andKade
		16	Men
		17	3 tonnes per week.
		18	No assistance
		19	Through communication
		20	Most of them pack them and there is no vehicle to go and collect them.
		21	Self financing
		22	Cash in hand as you bring the waste.
		23	Yes. Needs an amount which can purchase a vehicle
		24	No.
		25	No.
		26	Unknown
		27	Unavailability of transport which leads most value pickers burning their waste
		28	Yes
		29	Very lucrative
		30	Transportation problem
		31	Buying Centers should be open so people can walk there and leave their waste.

VALUE CHAIN INTERVIEW			
GENERAL INFORM	IATION	QUES, NO	RESPONSES
		2	Thin film and Plastis chairs recycling into pellets to be used by other companies for
VALUE CHAIN SUB SECTOR	THIN FILM	-	production of Rubber products like, Black polythene bag, plastic cups and others.
VALUE CHAIN PLAYER CATEGORY	INTERMEDIARIES	3	Yes. However the high cost of electricity is the main problem we are facing.
		4	We buy thin film, broken plastic things and recycle them into pellets and sells to the manufacturing companies.
COMPANY NAME	SMP COMPANY	5	To Plastic Munufacturers and Rubber manufacturers.
			Purchased from agents who collects them from commercial centers,
		6	institutions, market places and surrounding environments. Some individuals also bring
NAME OF INTERVIEWEE	MR. ABBAS		smaller quantities too.
POSITION (CAPACITY) IN COMPANY	DIRECTOR	7	6-7 tonnes per thin film and 3 - 4 tonnes per hard plastics
DATE OF INTERVIEW	28/01/10	8	About 3 - 4 tonnes each and very frequently
	SHIRLEY OSEI-		Yes to pellets ready for manufacturing
	TUTU,RHODA BOAKYE, RICHARD, BEN	9	
INTERVIEWER(S)	MAHMOUD JNR		
Interviewen(5)	MAHMOOD JNK	10	Sorting, washing and recycling.
		10	Yes
		12	Uses the companies truck to send them to the manufacturers and some also come for
		13	Through communication
		14	No.
		15	Accra and Tema
		16	Men and some male youth.
		17	6-7 tonnes per thin film and 3 - 4 tonnes per hard plastics
		18	We send the recyclyed materials to them
		19	Through communication
		20	
		21	Self financing
		22	Cash in hand as you bring the waste.
		23	No.
		24	No.
		25	No.
		26	Unknown
		27	Shortage of the raw material and high cost of water and electricity bills
		28	Yes
		29	Very lucrative
		30	Shortage of raw materials

VALUE CHAIN INTERVIEW			
GENERAL INFORM	IATION	QUES. NO.	RESPONSES
		2	Thin film sold to Plastic Manufacturing Companies to be used for production of Rubber
VALUE CHAIN SUB SECTOR	THIN FILM	2	products like, Black polythene bag.
VALUE CHAIN PLAYER CATEGORY	INTERMEDIARIES	3	Yes
		4	We buy all types of thin film and sells to the manufacturing companies.
COMPANY NAME	HACKPLAST	5	To Munufacturering Companies.eg, Petroplast and Blowplast
NAME OF INTERVIEWEE	MR HACKMAN	6	From Households, market places and Institutions
POSITION (CAPACITY) IN COMPANY	DIRECTOR	7	3 tonnes per week.
DATE OF INTERVIEW	28/01/10	8	Frequently
INTERVIEWER(S)	J.A. AFARI,SHIRLEY OSEI- TUTU,RHODA BOAKYE, RICHARD AMFO-OTU, BEN MAHMOUD JNR	9	No.
		10	n/a
		11	No.
		12	The Manufacturing Companies bring their trucks to collect them.
		13	Through communication
		14	Yes. We receive transportation from them.
		15	Accra andKade
		16	Men
		17	3 tonnes per week.
		18	No assistance
		19	Through communication
		20	Most of them pack them and there is no vehicle to go and collect them.
		21	Self financing
		22	Cash in hand as you bring the waste.
		23	Yes. Needs an amount which can purchase a vehicle
		24	No.
		25	No.
		26	Unknown
		27	Unavailability of transport which leads most value pickers burning their waste
		28	Yes
		29	Very lucrative
		30	Transportation problem
		31	Buying Centers should be open so people can walk there and leave their waste.
			, o

VALUE CHAIN INTERVIEW			
GENERAL INFOR	MATION	QUES. NO.	RESPONSES
VALUE CHAIN SUB SECTOR	THIN FILM		INPUT SUPPLY/SOURCE
VALUE CHAIN PLAYER CATEGORY	VALUE PICKER	1	Water Sachets
		2	For purchasing by middlemen.
COMPANY NAME	INDIVIDUAL	3	From our cossumption of sachet water ie household.
NAME OF INTERVIEWEE	BERNICE	4	It is within the house so we just store them in sacks. No need for transportation.
RESIDENCE	GBAWE	5	NA
DATE OF INTERVIEW	29/01/10 RHODA BOAKYE,SHIRLEY OSEI-TUTU, RICHARD AMFO-OTU, BEN MAHMOUD JNR	6	Sixty pieces of water sachets per week INTERMEDIARIES/DEALERS
		1	Middlemen go around buying them.
		2	There are no processing required because we do source separation and they are no normally dirty
		3	No difficulties as those middlemen buys everything.
		4	None
		5	Immediately
			FINANCE
		1	NA
		2	Self financing
		3	NA
		4	NA
		5	NA
		21	OCCUPATIONAL HEALTH AND SAFETY
		1,2,3,4&5	NA
			MEMBERSHIP OF ASSOCIATION
		1	No.
		2	NA
		3	No
			TO FINISH UP
		1	Yes
		2	Yes, Door-to-door services must be given intensive publicity so that we would not have to store them up for so long in our house.
		3	Not very lucrative but it helps to tidy our environment.
		4	Buyers do not come frequently to buy the waste, hence bulky and taking up space in our house and also rodents hides in them.

VALUE CHAIN INTERVIEW			
GENERAL INFOR	RMATION	QUES. NO	RESPONSES
VALUE CHAIN SUB SECTOR	THIN FILM		INPUT SUPPLY/SOURCE
VALUE CHAIN PLAYER CATEGORY	VALUE PICKER	1	Water Sachets
		2	For purchasing by middlemen.
COMPANY NAME	INDIVIDUAL	3	From the surrounding areas eg. Street litter.
NAME OF INTERVIEWEE	JAMES	4	I just go around and pick them around our area.No need for transportation.
RESIDENCE	GBAWE	5	Not far because there are a lot around the area.
DATE OF INTERVIEW	29/01/10	6	Sixty pieces of water sachets per day
INTERVIEWER(S)	RHODA BOAKYE,SHIRLEY OSEI-TUTU, RICHARD AMFO-OTU, BEN MAHMOUD JNR		INTERMEDIARIES/DEALERS
		1	Middlemen come around to buy them.
		2	There are no processing required as they accept all of them.
		3	No difficulties as those middlemen buys everything.
		4	None
		5	Immediately
			FINANCE
		1	No capital regirement needed.
		2	Self financing
		3	NA
		4	NA
		5	NA
		21	OCCUPATIONAL HEALTH AND SAFETY
		1,2,3,4&5	NA
			MEMBERSHIP OF ASSOCIATION
		1	No.
		2	NA
		3	No
			TO FINISH UP
		1	Yes
		2	Yes, intensive publicity must be given so that we would not have to store them up for a longer time.
		3	Not very lucrative but it helps to tidy our environment.
		4	Buyers do not come frequently to buy the waste.

### Ferrous Metal value chain actors

			Ferrous Metal recycling into Iron Rods and other Steel Materials used in the
ALUE CHAIN SUB SECTOR	FERROUS METAL	2	Building/Construction Industry
		_	Unavailable/ Limited Quantities of Virgin materials (Iron ore); ore deposits are
ALUE CHAIN PLAYER CATEGORY	END USERS	3	dispersed and the yield is low (less than 30%).
			Residual (low grade) Scrap Metals, Min: 100-150 tonnes/dayTema Steel; There are 4
OMPANY NAME	TEMA STEEL COMPANY	4	other steel mills and so total for 5 No. around 800 tonnes/day.
			Yes, need to consider buying from neighbouring countries. However the current
		5	situation of the unavailabilty of scrap metals due to exports of scrap metals in Ghana
IAME OF INTERVIEWEE	MR. J. PATEL		exists in the neighbouring countries also.
OSITION (CAPACITY) IN COMPANY	DIRECTOR	6	Purchased mainly from scrap dealers and some individuals (Value Pickers)
ATE OF INTERVIEW	27/01/10	7&8	Scrap dealers; reliable and regular supplies.
	LUKMAN SALIFU/SELASI		
NTERVIEWER(S)	AMEKUDZIE	9	Scrap dealers; 40 - 50
			Advice in times of emergencies (occupational/health hazards) and how to sort
		10	(process) scrap metals through guidance from Field Officer.
		11	Product requirements communicated to suppliers through a Field Officer.
		12	Unknown.
			Suppliers should sort and bale (package) scrap metals to reduce transportation cost a
		13	volume. They can use simple hydraulic press.
		14	Pricing based on volume/density and type of scrap metals (e.g. highly oxidized metal
		15	interest from local banks too high; loans from India and especially Europe (6 -9%).
		16	Cash. GHC 280-350/tonne depending on scrap metal type and world market price.
		17	No.
		18	NA
		19	NA
		20	NA
		21	Export of scrap metals create shortage and leave only low-grade;high cost of electricit and Residual-Fuel Oil (RFO) for reheating/firing of furnace when rolling/billeting.
		22	There is no competition.
		23/24	Waste/ By- product disposal : steel slag (by-product) is currently given out freely to prospective developers for reclamation. TMA not in favour and insist disposal at landfill at a cost of GHC100 per trip. However with the permit of the Tema Metropolit. Assembly (TMA) without any extra fine, the slag can be re-used for land reclammatio purposes/sea defence, as well as boulders or processed (grinded) into chips of variou sizes for the road construction industry and also as an alternative to concrete blocks. Recommended that GoG bans totally exports of scrap to enable local steel mills have access to high grade material. Especially heavy-duty scrap from mining industries with high ferro-alloy content is the preserve of traditional rulers who have the right of firs refusal.

VALUE CHAIN INTERVIEW (Report or	n Intitial Meeting)	
GENERAL INFORM	IATION	Initial Meeting
VALUE CHAIN SUB SECTOR	FFRRQUS METAL	There was an introduction of the Wastecare Team to the president and some members of the association present at the time of call. The group was then briefed on the purpose and benefits of the survey/study. After a cordial discussion on how to improve the operations of the agents as well as solid waste managment on a broader scale, a meeting was scheduled to meet the group (Scrap Metal Agents Association) formally. It was revealed in the discussion that a tonne of the scrap metal was being sold at GHC 400.00 to the exporters. The meeting date is however yet to be confirmed although scheduled for next week.
VALUE CHAIN SUBJECTOR	DEALERS IN	
VALUE CHAIN PLAYER CATEGORY	RECYCLABLES	
	SCRAP METAL AGENTS	
COMPANY/ASSOCIATION NAME	ASSOCIATION	
	ALHAJI SULEMAN/	
NAME OF INTERVIEWEE (S)	TIJANI UMAR	
CONTACT NUMBER(S)	020-8130014/0245- 106250, 0244- 282150/0262-282150	
POSITION (CAPACITY) IN COMPANY	PRESIDENT/ SECRETARY	
DATE OF INTERVIEW	27/01/10	
	LUKMAN SALIFU/SELASI	
INTERVIEWER(S)	AMEKUDZIE	

### E-waste value chain actors

VALUE CHAIN INTERVIEW			RESPONSE	
VALUE CHAIN SUB SECTOR	E-WASTE	1	Discarded computers and fridges.	
VALUE CHAIN PLAYER CATEGORY	VALUE PICKERS	2	All over Accra.	
NAME OF INTERVIEWEE/VALUE PICK	E CHRISTOPHER	3	Households, Computers and computer accessories sales and repair shops and waste disposal sites.	
CONTACT NUMBER	0546 267193	4	Gathered at a temporary collection point and conveyed to the processing site by mear of vehicles provided by their agents. Sometimes conveyed to processing (burning) site using of trucks.	
DATE OF INTERVIEW	28/01/10	5	As far as one can go to get the recyclables. Sometimes on foot, by motobike or bicycle	
NTERVIEWER(S)	KOJO KEELSON/ SAMIRATU ALHASSAN/ SELASI AMEKUDZIE	6	Varies.	
	SECASI AMERODZIE	7	Agents. (Middlemen)	
		8	Burning and washing.	
		9	No difficulty	
		10	No specialized	
		10	Pay immediately	
		11	No specific capital requirement needed.	
		12	Self financed or sometimes borrowed from friends/agents.	
		13		
			No	
		15	NA	
		16	NA	
		17	Waist pains	
		18	No	
		19	NA	
		20	Don't have any cuts	
		21	Don't know of any.	
		22	No	
		23	NA	
		24	No.	
		25	Yes.	
		26	No.	
		27	Vey lucrative. (GH¢ 3.00/pound of cupper and GHp 70/pound of Aluminium). Supports his education with income earned from the business.	
		28	No challenges.	
		29	No.	

VALUE CHAIN INTERVIEW			
GENERAL INFOR	MATION	QUES, NO.	RESPONSES
VALUE CHAIN SUB SECTOR	E-WASTE	2	Phone and phone accessories repair and sales.
		3	Are cost saving since you don't have to purchase the new phone parts/components
VALUE CHAIN PLAYER CATEGORY	END USERS	2	("engine") which are also scarce
		4	Phone Circuit boards ("engine").Not purchased are the remains of spoilt phones
COMPANY NAME	JAKE'S PHONE REPAIRS	-	brought for repairs by customers.
NAME OF INTERVIEWEE	MR. COFIE (OWNER)	5	No.
DATE OF INTERVIEW	28/01/10	6	Clients (individuals ) who bring phones for repairs.
	KOJO KEELSON/		
	SAMIRATU ALHASSAN/	7	
INTERVIEWER(S)	SELASI AMEKUDZIE		NA
		8	NA
		9	NA
		10	NA
		11	NA
		12	NA
		13	NA
		14	NA
		15	Self financed although secondary materials are not purchased.
		16	NA
		17	Yes. To expand business
		18	NA
		19	NA
		20	NA
		21	There are no risks.
		22	There is no competition.
		23	No
		24	No

#### **Micro-finance Institutions**

VALUE CHAIN INTERVIEW				
GENERAL INFORM	IATION	QUES. NO.	RESPONSES	
VALUE CHAIN SUB SECTOR	ALL	1	Before one can have access to any of the facilities, one has to open an account with the bank and save continuously for 6 weeks. With the micro, there is something we call cash security. Here, one is loaned an amount equivalent to 4 times the amount of money in their savings account	
VALUE CHAIN PLAYER CATEGORY	FINANCIAL SERVICE PROVIDERS	2	We do only short term micro- account. Repayment of micro-finance should be within 6 monts.	
		3	Current interest rate is within 3.2-4% per month	
COMPANY NAME	WOMEN'S WORLD BANKING	4	NA	
NAME OF INTERVIEWEE	Mr. Johnson	5	traced	
POSITION (CAPACITY) IN COMPANY	CUSTOMER RELATIONS	6	<ol> <li>Your Association should be able to locate all of your members so that the Bank can fall on you for loan recovery 2. Individuals in a group loan system should look out for each other in terms of payment of the loans 3. Personal guaranters should be provided for those whom we lend money to.</li> </ol>	
DATE OF INTERVIEW	4/2/2010	7	Textile dealers, scrap metal dealers, petty traders, etc.	
INTERVIEWER(S)	Mr. JAMES AFARI, SHIRLEY OSEI-TUTU, RHODA BOAKYE	8	Minimum amount is calculated on how much the person saves with the bank. 2. The borrower must have a permanent residence 3. Must bring a guaranter	
		9	Yes, provided the people honour their obligations of paying the previous amount loaned them.	
		10	We have virtual banking staff who go around marketing our facilities. We do advertise a lot too.	
		11	We design a scheme for them depending on their demand	

GENERAL INFORM			RESPONSES
GENERAL INFORM	All	1	We have group loans, individual loans, salary loans, susu scheme. But before we can give loans to a group of people, they must form a group of not less than 10 members with leaders, and they should be engaged in active business. Then the members co- guarantee for each other. Also, each member must save with the bank for at least 8 weeks.
VALUE CHAIN PLAYER CATEGORY	FINANCIAL SERVICE PROVIDERS	2	For short-term loans, the maximum amount the bank can give is 1.5 years
		3	For group loans, interest rate is 41.04% per annum, and 42% per annum for individual loans
COMPANY NAME	OPPORTUNITY INTERNATIONAL	4	
NAME OF INTERVIEWEE	Mr. Kwabena Boateng	5	Defaulters. i. e. Most people do not repay the loan they obtain.
POSITION (CAPACITY) IN COMPANY	CUSTOMER RELATIONS OFFICER	6	Your venture can help by serving as guaranters for those they seek loans for.
DATE OF INTERVIEW	4/2/2010	7	Individuals and groups
INTERVIEWER(S)	Mr. JAMES AFARI, SHIRLEY OSEI-TUTU, RHODA BOAKYE, RICHARD AMFO-OUT	8	the maximum loan is GHC5000. However one must have saved with the bank with not less than 25% of the loan in their account.
		9	For now, the maximum we can give is GHC5000
		10	Through existing clients, at churches and other social gatherings, mass media advertisement, etc.
		11	Through interraction with people

VALUE CHAIN INTERVIEW				
GENERAL INFORM	GENERAL INFORMATION		RESPONSES	
VALUE CHAIN SUB SECTOR	ALL	1	Yes, we have facilities for purchase of equipment, direct purchase or leasing of vehicles, expansion of operations for intermediaries and value pickers depending on the state of the customer in service. Except that we don't give working capital to low income people like that. The person in question must be economically active and must have made some savings continuously with the bank for not less than 8 weeks, then based on the amount s/he has contributed, a loan can be given them. We also have Susu scheme but here the individual must have made contributions continuously for 64 working days. We also organise training for the customers and educate them on how to save money	
VALUE CHAIN PLAYER CATEGORY	FINANCIAL SERVICE PROVIDERS	2	6months to not more than 2years	
		3	4% per month	
COMPANY NAME	BOAFO MICROFINANCE	4	NA	
NAME OF INTERVIEWEE	Mrs. EVELYN OSEI-TUTU	5	Non-repayment of loans by customers	
POSITION (CAPACITY) IN COMPANY DATE OF INTERVIEW	MOBILISATION MANAGER 5/2/2010	6	<ol> <li>Make sure the people you bring have guaranters 2. The people should have a permanent residential address 3. As much as possible, let the people form groups so that the members can look out for each other in terms of loan repayments Credit facilities are provided for low and moderate income earners</li> </ol>	
INTERVIEWER(S)	Mr. JAMES AFARI, SHIRLEY OSEI-TUTU, RHODA BOAKYE, RICHARD AMFO-OUT, SELASI AMEKUDZIE	8	GHC100 -GHC10,000. The amount can be increased depending on your consistency in payment. Payment periods is from 4-12 months. No middle or long-term loans are given	
		9	Yes, provided the people honour their obligations of paying the previous amount loaned them.	
		10	Client inferrals, one on one advertisement	
		11	We study the market to know the demands of the people. We also send people out to them to seek information from them as to their needs.	

## Workforce Development Providers

VALUE CHAIN INTERVIEW	UTION .		
GENERAL INFORM	IATION	QUES. NO.	RESPONSES
		1	ICT centre at Korle Gonno, centre for training on bamboo craft. We are in the process of
VALUE CHAIN SUB SECTOR	ALL	1	training people on mobile phone repairs
VALUE CHAIN PLAYER CATEGORY	WORKFORCE DEV'T PROVIDERS	2	Money to pay the trainers. Limitation of number of people if the funds are not available
		3	We have facilities to train a lot of people but they will need support and assistance in terms of payment
COMPANY NAME	GAMASHIE CENTRE FOR EDUCATION AND ENVIRONMENTAL DEVELOPMENT (GACEED)	4	Jupiter, a training centre, trains people on our behalf. Sometimes if jupiter cannot, they get other trainers to train them. The Gamashie council also brings people for training
NAME OF INTERVIEWEE	Mr. MUSTAPHA	5	Trainees pay a token fee and some stakeholders help as well. The training fee for mobile phone repair is GHC40 for 6 months
POSITION (CAPACITY) IN COMPANY		6	Attachment opportunities are available. We also give them toolkits after the training to help set them up for business
DATE OF INTERVIEW	4/2/2010	7	Yes. Sencosade also provides training for the youth
	Mr. JAMES AFARI, SHIRLEY OSEI-TUTU, RHODA BOAKYE, RICHARD AMFO-OUT	9	150 people in 6 months
			It depends on the training available. Eg. You are likely to find more people in the ICT
		10	and bamboo craft business, whilst the males dominate the mobile phone repair.
		11	Through the communication with the communities and Youth Needs Assessment
		12	Through stakeholders, ie. Churches, mosques, youth groups, etc

VALUE CHAIN INTERVIEW				
GENERAL INFORMATION		QUES. NO.	RESPONSES	
VALUE CHAIN SUB SECTOR	ALL	1	I am prepared to go into machine manufacturing and training to support the youth.	
VALUE CHAIN PLAYER CATEGORY	WORKFORCE DEVELOPMENT PROVIDERS	2	Cost of plastic grinding machine is very expensive almost GHC3000, Also, the youth are very lazy. They do not like to work; they want quick money	
VALUE CHAIN FLATER CATEGORY	PROVIDERS	3	Loan acquisition is our major problem. Also, the NGOs should help us to get the extruder set to be able to process the pellets into finished products like buckets, polyethene bags, etc.	
COMPANY NAME	HACKPLAST	4	Training on how to group the plastics into different kinds, like PP, HD, LD	
NAME OF INTERVIEWEE	Mr. HACKMAN	5	expand my business	
POSITION (CAPACITY) IN COMPANY	C.E.O.	6	I give them training on how to group the plastics, on how to operate and service the machines and give them better pay, so that they can be on their own when the time comes	
DATE OF INTERVIEW	4/2/2010	7	No.	
INTERVIEWER(S)	Mr. JAMES AFARI, SHIRLEY OSEI-TUTU, RHODA BOAKYE, RICHARD AMFO- OUT	9	I can train 50-100 people in a year provided they will come. There is a large training centre at Kasoa where lecctures and practicals can take place.	
		10	more male-dominated, because of job preferrences	
		11	They know the kind of busines I do. So when they come, I train them how to go about my business so that they can also set themselves up someday.	

VALUE CHAIN INTERVIEW				
GENERAL INFORMATION		QUES. NO.	). RESPONSES	
	FERROUS METAL/	1	Resource Persons available depending on the technical and organizational skills to be	
VALUE CHAIN SUB SECTOR	E-WASTE	1	developed, teaching aids, training centres can be arranged for if necessary.	
VALUE CHAIN PLAYER CATEGORY	WORKFORCE DEV'T PROVIDERS (NGOs)	2	Identifying the youth that have the interest in a particular industry (pre-selection) (e.g kente weaving, beads making) and pursuing it as a trade/occupation after training.	
COMPANY NAME	AID TO ARTISANS GHANA (ATAG)	3	N/A	
NAME OF INTERVIEWEE	Mrs. BRIDGET KYEREMANTENG-DARKO	4	Organizing lectures/tutorials and training workshops.	
POSITION (CAPACITY) IN COMPANY	DIRECTOR	5	Support from donor agencies, income from organizing workshops, revenue from small craftshops operated by ATAG.	
DATE OF INTERVIEW	4/2/2010	6	Sometimes provide youth with start-up capital and raw materials, link trainees to established industries and market trainees in marketing their products.	
INTERVIEWER(S)	KOJO KEELSON/ SELASI AMEKUDZIE	7	No.	
		8	Varies. Depends on the availability of funds.	
		9	An average of 33% but may vary depending on the craft category. (e.g. in bead-making which is a female dominated art).	
		10	Information obtained from trainees.	
		11	Advertize through the internet and through recommendations by clients to other individuals/bodies/NGOs.	

GENERAL INFORM	ATION	QUES. NO.	RESPONSES
VALUE CHAIN SUB SECTOR		1	Hire facilities when necessary.
VALUE CHAIN PLAYER CATEGORY	WORKFORCE DEV'T PROVIDERS (NGOs)	2	Availability of logistics and other facilities. (e.g. training centres.)
COMPANY NAME	Nimba Community Support Services (NIMCOSS)	3	Funds.
NAME OF INTERVIEWEE	KWASI AMOAK	4	Through the formation of associations (organised bodies) to build up the organizational capacity of the youth.
POSITION (CAPACITY) IN COMPANY		5	Cost borne by clients who request for services.
DATE OF INTERVIEW	4/2/2010	6	Have the ability to develop and build up community based associations of which the majority is the youth.
INTERVIEWER(S)	KOJO KEELSON/ SELASI AMEKUDZIE/EUGENE ANIWEI	7	Yes.
		8	N/A
		9	Have no fixed percentage but focused on youth and female empowerment.
		10	Information obtained from trainees.
		11	Through the recommendations by clients to other individuals/bodies/NGOs.

GENERAL INFORMATION		QUES. NO.	). RESPONSES	
VALUE CHAIN SUB SECTOR	ALL	1	I have no facility. I use my shop as the training room since I have all the tools needed for training there.	
VALUE CHAIN PLAYER CATEGORY	WORKFORCE DEV'T PROVIDERS	2	Money for training materials, shed, and possibly furniture	
		3	Money	
COMPANY NAME	E. Y. G. ENTERPRISE	4	Practical demonstration	
NAME OF INTERVIEWEE	MS. EMELIA GLOVER	5	I only recover cost of training material and service pay	
POSITION (CAPACITY) IN COMPANY	C.E.O.	6	Low initial start-up capital, provides materials in manageable quantities so that with little money, business can be made.	
DATE OF INTERVIEW	4/2/2010	7	No.	
INTERVIEWER(S)	Mr. JAMES AFARI, SHIRLEY OSEI-TUTU, RHODA BOAKYE	9	15 persons per month. Has capacity but there is a limitation of material fees from the trainees.	
		10	60& females, 40% males	
		11	Spreading through word of mouth by already trained persons.	
		12	Trainees are counselled on which job market is more lucrative in the business.	

## Metropolitan, Municipal and District Assemblies (MMDAs)

GENERAL INFORM	ATION	QUES. NO.	RESPONSES
VALUE CHAIN SUB SECTOR		1	Yes.
VALUE CHAIN PLAYER CATEGORY	MMDAs	2	Permit from the legal department of AMAThere is no fixed time frame
COMPANY NAME	Accra Metropolitan Assembly (AMA) Waste Management Department	3	Yes. But AMA is limited with respect to land acquisition since it falls within the domain of the traditional leaders if the land is not a government acquired land.
NAME OF INTERVIEWEE	MR. OFFEI GYENTI	4	The WMD/AMA identifies the creating public awareness on such programmmes as a duty and is willing to support the initiative.
POSITION (CAPACITY) IN COMPANY	CHIEF ENVIRONMENTAL HEALTH OFFICER	5	Yes.
DATE OF INTERVIEW	5/2/2010	6	Decision on cost savings to be invested lies with the executive rank of AMA.
	SHIRLEY OSEI TUTU/ SELASI AMEKUDZIE/		
INTERVIEWER(S)	RICHARD AMFO-OTU.	7	N/A

VALUE CHAIN INTERVIEW				
GENERAL INFORMATION			RESPONSES	
VALUE CHAIN SUB SECTOR	ALL	1	Composting and other recycling activities were happening some years back. We were into plastics in partnership with blowplast and other companies. A container was placed at vantage point where peoples bring their plastics for payments. We are very much prepared to approve anything that helps the solid waste sector.	
VALUE CHAIN PLAYER CATEGORY	MMDA	2	The Chief Executive (Accra Mayor) has to give his consent.	
COMPANY NAME	ASHIEDU KETEKE SUB- METRO	3	Yes. Land can be leased. But if you want partnership, then an agreement has to be met between the AMA and the NGO in question for the leasing of the land, on condition that AMA will benefit from the partnership	
NAME OF INTERVIEWEE	NANA AGYEMAN & MR QUASHIE	4	The Assembly is very much prepared in public awareness campaigns. In fact, that is our major responsibility; to create public awareness and to formulate policies	
POSITION (CAPACITY) IN COMPANY	SUB-METRO DIRECTOR & DISTRICT CLEANSING OFFICER	5	Yes, already we have existing bye-laws which are in force, and we are commited to making new bye-laws which will benefit the communities if the need arises. Presently, no law exists on recycling.	
DATE OF INTERVIEW	5/2/2010	6	We are prepared to support the people with logistics such as truck and other equipment that will help promote recycling	
		7	Assembly is ready to partner with NGOs. We did that some years back with UNDP, Africa-Asia Partnership, and others	
	Mr. JAMES AFARI, SHIRLEY OSEI-TUTU, RHODA BOAKYE, RICHARD AMFO-OTU,			
INTERVIEWER(S)	SELASI AMEKUDZIE			

## Ministries Departments and Agencies (MDAS)

GENERAL INFORMATION			RESPONSES	
VALUE CHAIN SUB SECTOR	ALL	1	Environmental Permit.	
VALUE CHAIN PLAYER CATEGORY		2	Depends on how fast the applicant provides all the relevant information/documents.	
COMPANY NAME	Environmental Protection Agency (EPA)	3	There are no guidelines.	
NAME OF INTERVIEWEE		4	A research by EPA and Green Advocay(NGO) is currently on-going to develop a much more environmentally friendly process for E-waste recovery to address the environmental pollution being caused at Agbogbloshie. The first phase of the project is however complete with the report to be in public domain soon.	
POSITION (CAPACITY) IN COMPANY				
DATE OF INTERVIEW	4/2/2010			
	KEELSON KOJO/ SELASI AMEKUDZIE/ EUGENE			
INTERVIEWER(S)	ANIWEI			

## Youth Focus Groups Interviews

BACKGROU	ND INFORMATION			
NAME OF COMMUNITY	AVENOR			
LOCATION OF CITY/TOWN	ACCRA			
NO. OF YOUTH AT THE MEETING	i			
NO. OF MALES				
NO. OF FEMALES	1			
	J.A. AFARI, RHODA BOAKYE, ADAMU			
	BEN MAHMOUD, AMEKUDZIE			
	SELASI, RICHARD AMFO-OTU,			
INTERVIEWERS	EUGENE ANIWE			
		Q.NO QUESTION	RESPONSE	
		SKILLS OF PARTICIPANTS/COMMUNITY MOBILIZATION		
		What are the educational background and highest educational	Majority of youth are Junior High School graduates and minority Senior High	
		qualifications of the residents/participants?	School graduates/drop outs.	
		2 What skills do the youth in the area have?	Do not have any specific skill however most of them work for a biscuit producing company (i.e. Piccadilly Biscuits at Nor	th Kane
		What training/skills programs are available and organized in this		
		3 community?	None.	
		4 What are the aspirations/desires of the youth in this community.	Youth aspire to become professional footballers, electrical engineers, singers/music producers, artists and carpenters.	
		5 Does the community have a youth association/mobilization scheme?	There are no youth associations. However, most the youth belong to "keep fit" clubs	
		What activities are the communities mobilized to undertake? Are they		
		6 income generating? If yes how are individuals rewarded for participating?	The community is mobilized only during communal clean-up exercises.	
		7 Are there any NGOs working in the community? What are their focus.?	Have some NGOs but do not know of their focus.	
		8 Do the participants belong to the association ? If not why?	No. Do not know of their focus.	
		9 What are some of the benefits of belonging to the youth association?	N/A	
		COMMUNITY ECONOMIC ACTIVITIES		
		What major economic activities are carried in this community? Which		
		10 types of activities?	Motobike & bicycle repairs and electrical/electronic equipments repairs.	
		11 How many people are currently engaged in these activities.	A minority of the youth population whiles the majority is unemployed.	
		COMPOSTING PLANTS		
		12 Have you heard or know about composts?	Yes	
		Are you prepared and willing to work in any of the processes of		
		13 composting to earn a living ?	Yes if trained and well remunerated.	
		14 Which of the processes will you like to work in?.	None.	
		Are you prepared to work outside your community? If yes how far are you		
		15 willing to travel	Yes if remuneration is good.	
		Do you have funds to engage in the activity? If no how do you plan to raise		
		16 the required funds	No.	
		17 How much do you expect to earn if you engage in this activity	About GH¢ 150.00 /month.	

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	THIN FILM PLASTICS	
18	Have you heard or know about thin plastics?	Yes.
19	Do you know of the various components of plastics?	No.
20	Are you aware of the economic benefits of working in the thin plastics sector?	Yes.
21	Are you prepared and willing to work in the plastics sector ? Which process will you like to work?	No.
22	Do you have funds to engage in the activity? If no how do you plan to raise the required funds	No.
23	Are you prepared to travel beyond your community to work/ engage in the activity? If yes how far are you willing to travel?	No.
24	How much do you expect to earn from the chosen activity?	GH¢ 150.00/month
	TRAINING IN FABRICATION/METAL WORKS	
25	Do you have the desire/ interest in acquiring skills in metal works/ fabrication? Which type of skills specifically?	Yes. Recyling of scrap into equipments sucu as ovens, household coal-pot,etc
26	If training is offered are you prepared to pay for the cost of tuition? If yes how?	No.
27	How do you plan to finance the other incidental costs associated with the training (transport, food, etc)?	Self financing through other trades or activities engaged in.
28	How do you plan to put your skills into practice after the training? Is the plan realistic?	Will be self employed.
29	How much do you expect to earn from the chosen activity?	GH¢ 150.00/month
	TRAINING IN COMPUTER REPAIRS	
	Do you have the desire/ interest in acquiring skills in computer repairs? Which type of skills specifically?	Yes. Computer/phone repairs.
31	If training is offered are you prepared to pay for the cost of tuition? If yes how?	Yes.
32	How do you plan to finance the other incidental costs associated with the training (transport, food, etc)?	Self financing through other trades or activities engaged in.
33	How do you plan to put your skills into practice after the training? Is the plan realistic?	Will be self employed.
34	How much do you expect to earn from the chosen activity?	GH¢ 150.00/month
35	Which of these four vocations or trades would you like to be involved in	1. Computer repairs 2. Metal works/fabrication 3. Thin Film Plastic recycling 4. Composting.

	OUTH IN PARTNER COMMUNITIES	5			
NAME OF COMMUNITY	NIMA				
LOCATION OF CITY/TOWN	ACCRA				
NO. OF YOUTH AT THE MEETING					
NO. OF MALES					
NO. OF FEMALES	:	1			
	J.A. AFARI, RHODA BOAKYE, ADAMU BEN MAHMOUD, AMEKUDZIE SELASI, RICHARD				
NTERVIEWERS	AMFO-OTU, EUGENE ANIWE				
		Q.NO	QUESTION	RESPONSE	
			SKILLS OF PARTICIPANTS/COMMUNITY MOBILIZATION		
		1	What are the educational background and highest educational qualifications of the residents/participants?	About 60% have completed SSS, 30% Basic education and 10% have no education	
		2	What skills do the youth in the area have?	Carpentry, Electricals, plumbing, Dressmaking, Computer repairs, and some are	e football
		3	What training/skills programs are available and organized in this community	Training in Carpentry, dressmaking	
		4	What are the aspirations/desires of the youth in this community.	To be rich and prosperous	
		5	Does the community have a youth association/mobilization scheme?	Yes. We have clubs. Example the Gentle Brothers Club.	
		6	What activities are the communities mobilized to undertake? Are they		
			income generating? If yes how are individuals rewarded for	No. These clubs are not income-generating. They are social clubs	
		7	Are there any NGOs working in the community? What are their focus.?	Yes. We have the Welfare Centre built by some whites	
		8	Do the participants belong to the association ? If not why?	Yes. Participants belong to the Association and some are currently with the We	lfare cer
		9	What are some of the benefits of belonging to the youth association?	We go for parties, jogging, football and other social activities	
			COMMUNITY ECONOMIC ACTIVITIES		
		10	What major economic activities are carried on this community? Which types of activities?	Food vending, Dressmaking, Carpentry, Hairdressing	
		11	How many people are currently engaged in these activities.		

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know about composts?	No. We only know about fertilisers					
nd willing to work in any of the processes of						
a living ?	This will be very difficult. This is because most of the youth in this community actually like quick money, ie. Something that fetches money quickly, like internet fraud etc. The youth will be interested only if they are given neat uniforms in order for them to look formal, neat and					
sses will you like to work in?.	agging. But we are likely to go for the collection if we will be suppoted with equipment, uniform, start-up money and other protective gadgets					
	e preparedness will come from the amount of money I can make per collection. If the moneys are okay for us, then we will be more than willing to go extra miles for the materials					
to engage in the activity? If no how do you plan to iunds	Io. We do not have any start-up capital. That is why we want to see this opportunity you are presenting to us whether we can engage without any big start-up capital					
expect to earn if you engage in this activity	Amount to be earned depends o the efficiency of the work I do. The more I do the job, the higher I'm expected to be paid. On the whole I'm not expecting anything less than GHC200 per month					
5						
know about thin plastics?	Yes					
e various components of plastics?	No					
ne economic benefits of working in the thin plastics	No					
nd willing to work in the plastics sector ? Which e to work?	We are prepared but that will depend on the income we will get. The higher the income, the farther we are prepared to go for materials					
to engage in the activity? If no how do you plan to iunds	No. We do not know					
o travel beyond your community to work/ engage in how far are you willing to travel?	Yes. Only if the business is lucrative					
expect to earn from the chosen activity?	Not less than GHC 200 per month					
CATION/METAL WORKS						
sire/ interest in acquiring skills in metal works/ type of skills specifically?	Desire comes with the type of end-product from this metal fabrication. An SHS leaver is not likely to go fabricating coalpots. It is considered degrading					
d are you prepared to pay for the cost of tuition? If	No					
finance the other incidental costs associated with ort, food, etc)?	I am responsible for my own feeding and other basic things					
put your skills into practice after the training? Is	We havent yet made the plans yet. Maybe some other time.					
expect to earn from the chosen activity?	Not less than GHC 300					
	now about composts? now about composts? nd willing to work in any of the processes of a living ? ses will you like to work in?. work outside your community.? If yes how far are o engage in the activity? If no how do you plan to unds xpect to earn if you engage in this activity now about thin plastics? various components of plastics? e economic benefits of working in the thin plastics e economic benefits of working in the thin plastics e economic benefits of working in the thin plastics a engage in the activity? If no how do you plan to unds t ravel beyond your community to work/ engage in ow far are you willing to travel? xpect to earn from the chosen activity? <b>CATION/METAL WORKS</b> sire/ interest in acquiring skills in metal works/ type of skills specifically? are you prepared to pay for the cost of tuition? If finance the other incidental costs associated with ort, food, etc)? put your skills into practice after the training? Is					