



GHANA
NATIONAL PLASTIC
ACTION PARTNERSHIP



Gender Analysis of the Plastics and Plastic Waste Sectors in Ghana

Baseline Analysis Report

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Glossary

Acronyms and abbreviations

CBOs	Community-based organizations	MESTI	Ministry of Environment, Science, Technology, and Innovation
CEO	Chief Executive Officer	MGCSF	Ministry of Gender, Children and Social Protection
DANIDA	Danish International Development Agency	MINT	Materials in Transition
EPA	Environmental Protection Agency of Ghana	MLGRD	Ministry of Local Government and Rural Development
ILO	International Labour Organization	MMDAs	Metropolitan Municipal and District Assemblies
IPS	Inter Press Service	MMT	Million metric tonnes
NPAP	National Plastic Action Partnership	MSW	Municipal solid waste
NESSAP	National Environmental Sanitation Strategy and Action Plan	MSWR	Ministry of Sanitation and Water Resources
NGO	Non-Governmental Organization	MT	Metric tonnes
NPMP	National Plastics Management Policy	OECD	Organisation for Economic Co-operation and Development
GHS	Ghanaian cedi (currency)	PPE	Personal protective equipment
GPAP	Global Plastic Action Partnership	PET	Polyethylene terephthalate
GSS	Ghana Statistical Services	PP	Polypropylene
HDPE	High-density polyethylene	PS	Polystyrene
KG	Kilogram	PVC	Polyvinyl chloride
LDPE	Low-density polyethylene		

Definition of concepts

Access: The opportunity to make use of a resource.

Control: The power to decide how a resource is used, and who has access to it.

Gender: Refers to all the attributes, activities and responsibilities connected to being a male or a female in a given society. Gender norms and practices determine how men and women are perceived, and the particular gender roles they are expected to perform.

Gender analysis: A rigorous exploration of the conditions and positions of women relative to men. It highlights how gender relations and inequalities – within households, at the community level, in value chains, as well as in legal and policy environments – affect investments, and in particular, how inequalities can lead to differential risks, impacts and outcomes for women and men.

Gender equality: Means that women and men are valued equally and have equal conditions, status, and opportunities for realizing their full potential, human rights and dignity, and for contributing to and benefitting from economic, social, and political development.

Gender inequality: The unequal treatment or perceptions of individuals based on their gender. It arises from differences in socially constructed gender roles.

Gender issues: Concerns and problems arising from the distinct roles of women and men and the relationships between them. Gender issues also look into inequalities in the aspects of work, social, political, and economic spheres.

Gender neutral policies: Policies not aimed specifically at either men or women and are assumed to affect both sexes equally.

Gender norms: Social principles and rules that govern the behaviour of girls, boys, women, and men in society and restrict their gender identity into what

is considered to be an appropriate gender role at the time. As with gender roles, gender norms are neither static nor universal and change over time.

Gender barrier: Any circumstance or obstacle which prevents girls, boys, women, or men, based on their gender, from claiming their equal rights to services, resources, information, opportunities, or systems.

Gender gap: Disproportionate difference between sexes in attitudes and practices. A gender gap can exist in access to a particular productive resource (e.g., land, education and employment), in the use of a resource (e.g., credit and other services), or levels of participation, such as in government and on decision-making bodies. A gender gap is a form of gender inequality.

Gender sensitive policies: Considers gender norms, roles and relations but does not seek to address inequalities.

Gender and social inclusion: Access to opportunities and productive resources that transcends mere equality of women and men, taking cognisance of their heterogeneity by age, ability, ethnic group, and socio-economic status, amongst others.

Gender stereotypes: Over-generalised beliefs about people based on their membership in one of many social categories. Gender stereotypes vary in four dimensions: traits, roles, physical characteristics and occupations.

Mainstreaming gender: The integration of gender equality perspectives and strategies throughout the different areas of work, throughout the cycle of work and throughout the internal arrangements of an organization.

Practical gender needs: Basic day-to-day needs of both women/girls and men/boys that are short-term (e.g., reproductive hygiene).

Reproductive work: Associated with the conception of and giving birth

to children. It also refers to activities related to taking care or nurturing of the family – the husband, children, and other family members. It extends to household chores, which are usually not quantified or valued and taken for granted.

Women empowerment: A process of ongoing change through which women's ability to influence choices that affect their lives is expanded, and their capacity to voice concerns and control decisions that shape their futures strengthened.

Women as regulators: This group recognises the role of women in their leadership position at various governmental and political levels, as they create and enforce laws, policies and regulations that shape how plastic products are sourced, produce, purchased, used, sold, discarded and/or recycled.

Women as market actors: This group recognises women who participate in the plastic sector as investors and/or leaders in the private sector field. It includes all women-owned and women-led businesses ventures that deal with the sourcing, production, purchase, usage, sale, discarding and/or recycling of plastic products.

Women as workers: This group represents all women working in the formal and informal dimensions of the plastics value chain.

Women as consumers/end-users: This group covers all women who use plastic products in its various forms, within and outside the household. This would include household plastic use, but also all plastic materials used as a part of women's livelihoods activities such as plastic bags and packaging.

Women as community members: This is a catch-all group that highlights the effects that the plastic value chain has in the lives of women. It recognises the adverse impacts that pollution from plastics has on the lives of women in general.

Executive summary

In the last three decades, Ghana, like many of its neighbouring countries, has been challenged with the exponential growth of plastics use, coupled with its alarming mismanagement. As part of mainstreaming gender into Ghana's National Plastic Action Partnership (NPAP), we have conducted a gender analysis to understand the gender roles, barriers, and impacts across the plastics value chain on gender inclusion and women's empowerment. The objective of the gender baseline analysis is to highlight gender equalities gaps along the value chain, which can in turn inform gender policy considerations and recommendations on all national action roadmaps in the plastics and plastic waste management sectors, so that ultimately gender equality outcomes are achieved.

Primary data collection in the form of online and in-person qualitative interviews, focus group discussions, and website profiling of companies were conducted. Due to COVID-19 restrictions, five regions in Ghana representing mega and medium cities were selected for the fieldwork. A sample size of 176 people made up of 88 males and 88 females in 32 institutions (formal/informal/government) and 10 communities were engaged for the analysis.

A hybrid gender framework was developed for this analysis. The Harvard framework and the Social Relations Approach were used. Roles, responsibilities, time use, access to and control over resources and decision making were assessed in relation to key institutions along the value chain such as the state, market, community and family. Women's participation in these institutions were categorised as regulators (policy-makers), market actors (business owners), workers, end-users (consumers) and community members.

Key findings from the study

1. Gender and inclusion analysis of workforce:

- There are more women in the informal segment of the plastics supply chain than men. Not a lot of data is available on the number of workforce along the value chain, but data gathered during fieldwork and secondary data reviewed indicated that out of 32 organizations and waste pickers in 10 communities sampled for the analysis, men constitute about 61% and women about 39% in both the formal and informal sectors of the plastics value chain.
- Out of the 13 recycling companies sampled for the analysis, women constitute about 68% of the workforce,

compared to men representing about 32%. There are also more women itinerant pickers as compared to men in the study areas. Of the itinerant pickers sampled from recycling companies, aggregators, communities and NGOs for the analysis, women constitute about 64%, compared to men representing about 36%. However, on landfill sites, there are more men; they constitute about 65% of pickers, while women represent 35% at the five dumpsites sampled for the analysis. With regards to the waste collection and manufacturing companies, out of the six and five organizations sampled for the manufacturing and waste collection sectors respectively, male workers constitute a higher proportion than female workers, with men representing about 89% and 92% of the total workforce respectively.

2. Gender roles, responsibilities and barriers for equal participation along the value chain:

- **Women as market actors:** Generally, most of the businesses in the plastics value chain (i.e., large, medium or small) are owned by men. About 80% of data sampled saw men in the position of CEOs or business owners, while women represent about 20%. Decision-making across sectors in the value chain is dominated by men, constituting 74% in leadership as compared to 26% of women. To start any business along the value chain, capital investment is needed (with the exception of waste picking). Women actors face several barriers, such as lack of finance to upscale business or move up the value chain. Other barriers identified in the study that affect women's equal participation include lack of access to land to operate recycling businesses and lack of market information.
- **Women as workers:** Data analysed indicated there is widespread perception of certain roles being that of males versus females along the value chain. Gender norms negatively affect more women in the informal sector than the formal sector, as women in the informal sector work at lower levels, while a few women in the formal sector work in mid-level or senior level positions. Roles such as machine operators, drivers, riders, janitors, and procurement are heavily skewed towards men, representing 80% and above of data analysed. Washers and sorters and cash collectors are skewed towards women, representing 99% and 81% respectively. A nearly fair balance of men and women exists in the area of administration, comprising 47% men and 53% women.



With respect to managerial positions, men represent 69%, compared to 31% of women. Informal waste pickers and workers generally lack access to and control of personal protective equipment (PPE) resources and trainings in occupational health and safety. In comparison, the formal sector commonly provides PPE to staff. Concerning equipment, transportation, and market information, men have more access and control as compared to women business owners. Female itinerant pickers usually collect light-weight plastics (LDPE and PET), which are less valuable compared to the male itinerant pickers, who collected more valuable plastics such as HDPE, PP, PS and PVC. Female itinerant pickers were limited in the choice of recyclables to collect due to their lack of access to push carts and tricycles, which would help them more easily transport their recyclables.

- **Women as regulators:** Three ministries with oversight responsibility for the plastics and waste management sectors are skewed towards men, who make up 57% (compared to 43% for women) of decision-makers within the ranks of Minister to Deputy Chief Directors. The unequal representation of women among decision makers in regulatory institutions limits the participation of women when policy decisions are being made.
- **Women as end-users:** Women consume more single-use plastics compared to men. Women make up to about 70-80% of consumer purchasing decisions in homes as the main cooks, caretakers, and shoppers for their families (Forbes, 2015). Women are key stakeholders to be engaged in the reduction of plastics and management of plastic waste.
- **Women as community members:** The high consumption of thin plastic films – LDPE and HDPE – in communities by women and low-income groups account for the high tonnage of plastic waste generated in households in Ghana as compared to other types of plastics. Women and children are responsible for household practices such as cleaning and waste disposal. In compound houses, men do not sweep nor take responsibility for disposal of refuse. It is therefore not surprising that most NGO initiatives in waste collection initiatives are led by women. Nonetheless, women are excluded from high-level discussions of managing waste in communities as well as community campaigns and engagements, despite their ability to champion source segregation of plastic waste in communities.

3. National policies guiding the sector and institutional policies are generally gender neutral. Organizations do not pay specific attention to creating policies that will benefit women and vulnerable persons such as flexible working hours, gender quotas and employing persons with disabilities. National policies have no measures in place for the implementation of gender activities that will influence behavioural change. However, national policies have made provisions for supporting persons with disabilities and youth in sanitation and plastic waste management.

Recommendations and conclusions

1. Women as market actors: There is a need to increase access to finance and market information for female waste pickers, recyclers, and women entrepreneurs in the formal and informal sectors. Financing schemes must be set up and targeted at women and vulnerable persons within the sector so they can compete evenly with foreign industries in recycling. Government should create industrial hubs for informal sector recyclers to address the issue of a lack of land for current actors to fix recycling machines for their operations. There is also the need to strengthen women's organizations within the sector by identifying and working with existing women's organizations and enterprises to build their organizational, leadership, and business-management skills.

2. Women as workers: Encourage the employment of women workers in the production and manufacturing sectors to bring about new and diverse ideas in redesigning plastics. There is also the need to improve the welfare of waste pickers through fair wages, the provision of PPE, the organization of Occupational Health and Safety training and the building of safe disposal sites to minimise accidents and provide an accommodating environment for workers.

3. Women as regulators: Build the capacity of women in government agencies and ministries to take up leadership and decision-making positions, so as to have a fair representation of women.

4. Women as end-users: Women as consumers could influence brand owners and retailers to shift to reusable and biodegradable business models. This can be achieved through raising awareness around the negative impact of plastics usage on the health and environment of women, children and marginalised communities.

5. Women as community members: There is the need to conduct outreach to women as major consumers of plastics, who often assume the role of disposing and managing waste at home. They are a target audience for awareness creation campaigns on transforming behaviour to reduce plastic pollution.

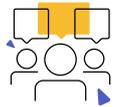
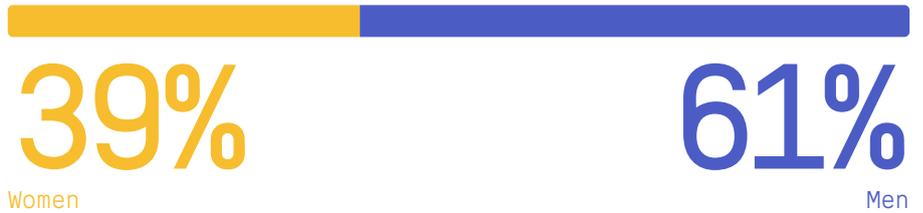
6. National and institutional policies: National policies must outline how gender equality will be achieved by indicating measures that will be put in place, with budgets to ensure that policy targets on gender equality are achieved. Institutional policies must introduce mechanisms that will protect female staff.

In conclusion, the plastics and plastic waste management sectors are not currently gender neutral. Activities in these sectors impact women and vulnerable persons in different ways. Thus, there is a need to ensure that women and marginalised groups are empowered to participate and benefit fully from across the plastics value chain.

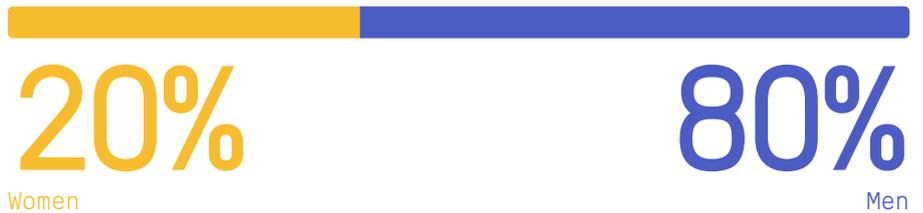
Key findings from the study



The formal and informal sectors of the plastics value chain



CEOs and business owners in the plastics value chain



Workforce of recycling companies



Waste pickers on landfill sites



Lower level roles such as washers and sorters



Introduction and background

Global production of plastics increased by more than twenty-fold between 1964 and 2015, with an annual output of 322 million metric tonnes (MMT). This is expected to double by 2035 and almost quadruple by 2050 (Barra et al. 2018). In Ghana, about 13,000 metric tonnes (MT) of solid waste are generated per day. Of this amount, more than 3,000 metric tonnes (MT) are plastic waste, which makes up 10–14% of the entire municipal solid waste stream (MSW) (Troutman and Aseidu-Dankwa, 2017; Miezah et al. 2015). It is estimated that only 14% of solid waste is collected, 38% is dumped in open spaces, 24% is deposited at “community containers”, 9% is dumped indiscriminately, 11% is burned in the open, and 4% is buried (GSS, 2013). Only about 2–5% of plastics are currently collected for re-use and/or recycling in Ghana (Adama-Tettey, 2012).

The effectiveness of waste management initiatives and plastic waste management can be improved through the integration of a gender and inclusion strategy in a circular economy model. The circular economy is an alternative to the current “make-use-dispose” linear economy model; instead, it aims to keep resources in use for as long as possible, to extract the maximum value from them whilst in use, and to recover and regenerate products and materials at the end of their service life. It offers an opportunity to minimise the negative impacts of plastics while maximising the benefits from plastics and their products, and providing environmental, economic, and societal benefits (Barra et al. 2018). The concept of waste is not a neutral, objective concept but rather determined by factors such as lifestyle, social structure, gender, class, and ethnicity. In many societies,

women are responsible for managing the waste within their household, and globally they are the primary users of waste management services. Therefore, it is important to understand women’s needs and preferences, which may differ from those of men.

Gender analysis is however generally also the weakest point in most value chain analyses, and it is largely ignored in most value chain manuals. Gender differences and inequalities affect the ways in which value chains operate at every level: women and men are likely to be involved at different stages of the chain as producers and entrepreneurs, in marketing and as consumers. Those areas where women are involved are often less visible and may be overlooked in both analysis and development. Large parts of the value chain, which are essential to upgrading, are often ignored, particularly homeworking, ‘putting out’ and temporary work. These are generally very important in explaining how value chains operate and indicate critical links at which upgrading or change should happen in order to bring about development of the chain as a whole, and for poverty reduction (ILO, 2007). Men and women play different roles during the plastic lifecycle. Women are often dominant in the informal waste/plastic pickers sector. Often the working conditions are unsanitary and unhealthy and needs special attention as women, especially pregnant women, might be exposed to toxic emissions and a dirty working environment (Barra et al., 2018).

In the last three decades, Ghana, like many of its neighbouring countries, has been challenged by the exponential growth of plastics use. The alarming mismanagement of plastic waste, including wide-spread littering and indiscriminate dumping and

burning, has resulted in severe risk to the environment and public health (Quartey et al. 2015). To address this challenge, the World Economic Forum (“The Forum”) has joined forces with Ghana as the first regional partner in Africa to host the Global Plastic Action Partnership (GPAP), a public-private collaboration platform that translates commitments to address plastic pollution into meaningful action at both the global and national levels through three pillars of work: Convening stakeholders and curating conversations; generating knowledge and action roadmaps; and catalysing strategic investment in high-potential solutions.

This collaboration has created the Ghana National Plastic Action Partnership (NPAP) to support the development of a circular economy framework as the primary vehicle for reducing plastic waste and plastic pollution in Ghana. To do so effectively, “new approaches need to take gender equality issues and relations into consideration in a systematic way”

322M

Global production of plastics amounts to an annual output of 322 million metric tonnes (MMT).

2–5%

Only about 2–5% of plastics are currently collected for re-use and/or recycling in Ghana.

(Ellen MacArthur Foundation, 2016). In this regard, NPAP has commissioned a gender analysis of the plastics and waste management sectors in Ghana to assess the main gender equality issues that would underpin the shift to a new circular plastics economy.

Objective

This work aims to mainstream gender into the work of NPAP to ensure that gender equality outcomes are achieved. As a first step, NPAP has conducted this sector-specific baseline analysis of gender equality issues in the plastics and waste management sectors in Ghana. The analysis highlights gender and inclusion gaps, as well as inequalities along the value chain, which can inform the development of gender policy considerations and recommendations in all national action roadmaps in the plastics and plastic waste management sectors.

Overview of the assignment

This work takes an integrated approach to mainstream gender into the Ghana National Plastic Action Partnership using its three pillars: Baseline and Scenario modelling; Action Roadmaps; and Investment strategy. This assignment constitutes the first phase of the gender workstream. The baseline analysis will result in gender recommendations for the NPAP. This includes providing policy considerations and recommendations on all action roadmaps in which gender issues in plastics and waste management can be addressed in the short, medium, or long term by government, the private sector and civil society actors.



Overall approach

Methodologies used for the assignment

The methodology used in this report covers a range of data collection methods, including primary data collection in the form of online and in-person qualitative interviews, focus group discussions, and website profiling of companies. Secondary literature and research data on previous studies were also reviewed for gender consumption patterns and on policy and regulatory frameworks

guiding the sector. Due to COVID-19 restrictions, five regions in Ghana representing mega and medium cities were selected for the fieldwork in Ghana, namely Greater Accra, Eastern, Northern, Upper East and Western Region. A cross-section of men and women actors along the value chain were interviewed. The results and insights included in this report have been analysed with the

additional perspectives gained by observation during fieldwork and anecdotal evidence of plastic use and pollution in country. In all, 176 people were interviewed, including 88 men and 88 women across 32 institutions and 10 communities. The table below provides a summary of the research methodology and related stakeholders engaged in the interviews for data points.

Table 1: Categorisation of stakeholders interviewed

Survey types	Stakeholder	Number of companies / people	Gender distribution	
			Male	Female
Face to face interviews	Aggregators/buyers	10	9	1
	Waste collection companies	3	2	1
	Manufacturers	1	1	
	Recyclers	9	7	2
	Communities (Itinerant waste pickers)	31	9	22
Focus group discussions	Dumpsites (waste pickers)	103	51	52
Website/media profiling	Recycling/Reuse companies	3	2	1
	Manufacturing	2	2	
	Ministries/Government agencies	3	1	2
Online surveys and virtual interviews	Manufacturer	3	1	2
	Recycling	1	1	
	Waste collection company	2	1	1
	NGO	2		2
	Ministries/Government agencies	3	1	2
Total number		176	88	88



Gender analysis framework

There are a number of different gender analysis frameworks. Each of the frameworks has its own focus and was developed to address different aspects of gender equality. To guide the development of a gender analysis framework, five broad categories were identified to capture key issues on gender and plastics along the value chain. These are:

- Gender roles, responsibilities and time use
- Access to and control over services and resources (finance, market information, equipment and machines, training)
- Benefits/outcomes (income, health, environment)
- Decision making
- Policies, regulations, and institutional practices

Based on the categories identified and a review of gender analysis frameworks, a hybrid framework was developed for the purpose of this work. The gender analysis framework was adapted from the Harvard framework and the Social Relations Approach.

The Harvard Analytical Framework in this context was used to identify the gender roles and responsibilities of men and women along the value chain, such as who controls and has access to which resources and services, and influencing factors on the access and control dynamics. The Social Relations Framework focused on the significant interplay of social relations and power dynamics in the sector, with a focus on how gender inequality is produced in institutions such as the state, market, community and family.

The domains for the analysis in these institutions are:

- Women as regulators (policy makers, legal and administrative frameworks)
- Women as market actors (women owned businesses and entrepreneurs)
- Women as workers (labour, working conditions)
- Women as end-users (consumers of plastics, household management of plastic waste)
- Women as community members (informal networks, NGOs, voluntary associations)



The Harvard Analytical Framework in this context was used to identify the gender roles and responsibilities of men and women along the value chain.



Gender and the plastics value chain

The plastic value chain is made up of different actors, from importers of raw pellets of plastic to recyclers and exporters of plastic waste. Different factors such as physical, financial, and human assets influence the roles men and women play along the value chain and the opportunities derived from such. The benefits of value chains can vary depending on how one participates (e.g., permanent employee or contract staff, income, etc). Factors such as gender dynamics and power relations in the value chain also determine who benefits and how the benefits are accessed and distributed. Empowerment can be defined as 'a process by which those who have been denied the ability to make strategic life choices acquire the ability to do so' (Kabeer, 1999). Thus, in relation to gender and value chains, empowerment is about changing gender relations in order to enhance women and marginalised groups in society to gain the ability to shape their lives (DANIDA, 2010). Understanding the position of women in value chains and promoting

women's empowerment is an issue also affecting (and affected by) men, and therefore, it is necessary to remain attentive to the local context, including the diverse notions of masculinity that might both challenge or support gender empowerment (DANIDA, 2010).

The plastics value chain includes plastic material sourcing (importers of pellets of virgin and recycled plastics and finished products), producers, manufacturers, distributors, plastic waste generators, plastic waste management, plastic waste pickers, plastic recyclers and plastic exporters (recycled pellets and finished products).

Many of the actors appear in more than one category. In most cases, the importers of raw plastic pellets are also the owners of plastic manufacturing companies. Some of these manufacturers go on to recycle plastic waste and re-use in their production. The figure below shows the description of actors in the sector.



The plastic value chain is made up of different actors, from importers of raw pellets of plastic to recyclers and exporters of plastic waste.

Figure 1: The plastics value chain



Findings from fieldwork and discussions

Gender and inclusion analysis of workforce

Advancing women's economic empowerment and ensuring that women benefit more fully from economic activity has sparked a lot of discussions for a considerable time. The most important clue to a woman's status anywhere in the world is her degree of participation in economic life and her control over property and what she produces. Thus, to enhance efficiency and support survival, societies divide and specialise in labour tasks to some extent, and this division of labour has been knowingly or unknowingly drawn along sex lines (Amu, 2005). According to Ghana's 2010 population and housing census, 51% of the economically active population (15 years and older) is female: specifically, they number 5,379,312 out of the total economic active population of 10,819,283 aged 15 years and older. Nevertheless, a lower employment-to-population ratio of women to men is reported, suggesting that a lower proportion of women than men are employed. Employment of women relative to

men had improved considerably over a period of five decades, based on the substantial rise in gender parity (measured by female-male representation ratio) from 0.65 in 1960, to 0.96 in 2010. However, the decline in the parity index over 2010–2015, from 0.96 in 2010 to 0.91 in 2015, suggests a decrease in the participation of women in the labour market (Bah Boateng & Twum, 2018).

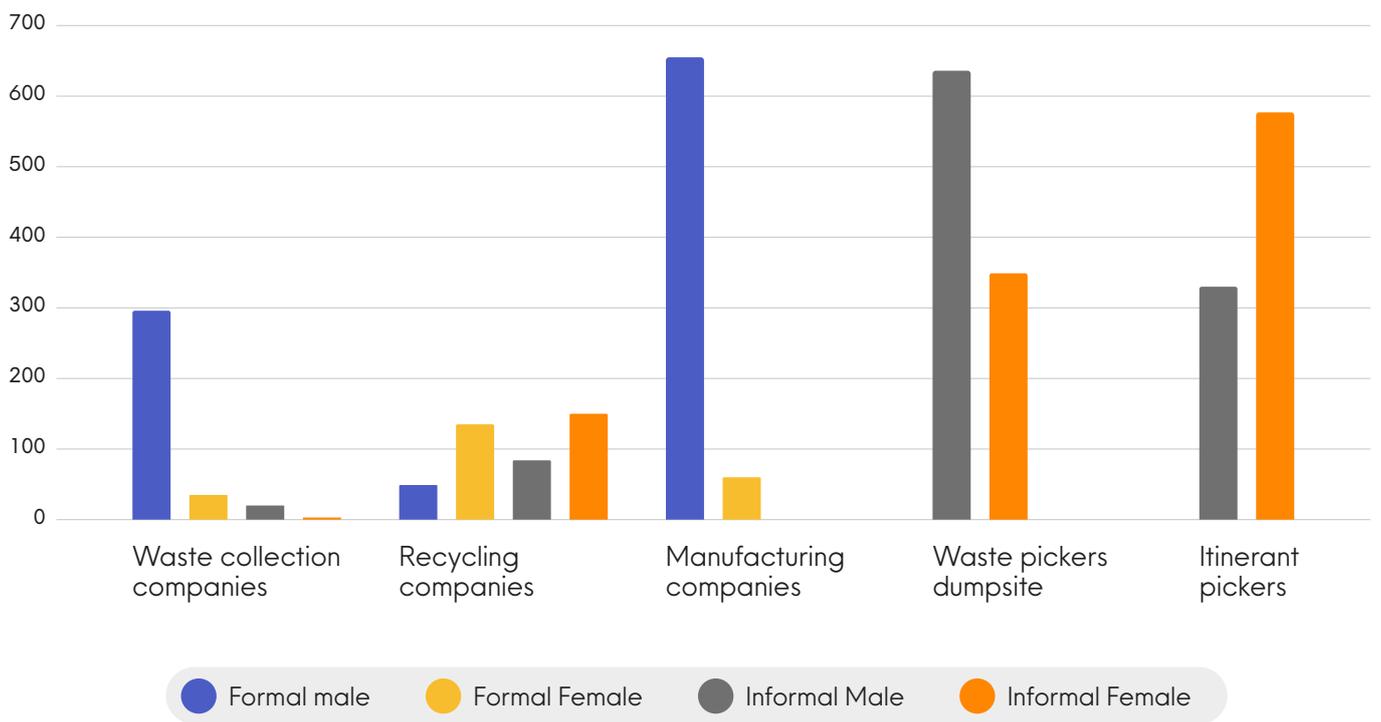
Gender roles determine the way we work with plastics. Gender segregation of the labour force is widespread and leading to inequality in terms of pay, conditions and the kind of work done by men and women. In all the sectors, power dynamics are connected with gender, social standing, roles occupied, and the rewards reaped in terms of pay, which are intrinsically connected to the impacts on health (OECD, 2020).

In view of this background, the gender analysis sought to understand the dynamics of the workforce involved

in plastics and plastic waste sectors along the value chain. For the purpose of this analysis, the informal sector comprises "borla" taxis, i.e., tricycles for door-to-door collection of refuse; recycling companies and registered waste pickers on landfill sites; and itinerant pickers registered with some buyback centres and aggregators. Not a lot of data is available on the number of workers along the value chain, but data gathered during fieldwork and secondary data reviewed indicated that out of 32 organizations and 10 waste picker groups sampled for the analysis, men constitute about 61% and women about 39% in both the formal and informal sectors across the plastic value chain. The figure below provides a summary of the sex-disaggregated workforce in the formal and informal sectors along the value chain (i.e., waste collection, waste recycling and manufacturing) as per data collected during fieldwork.



Figure 2: Gender analysis of workforce along the value chain



Source: Fieldwork, 2020

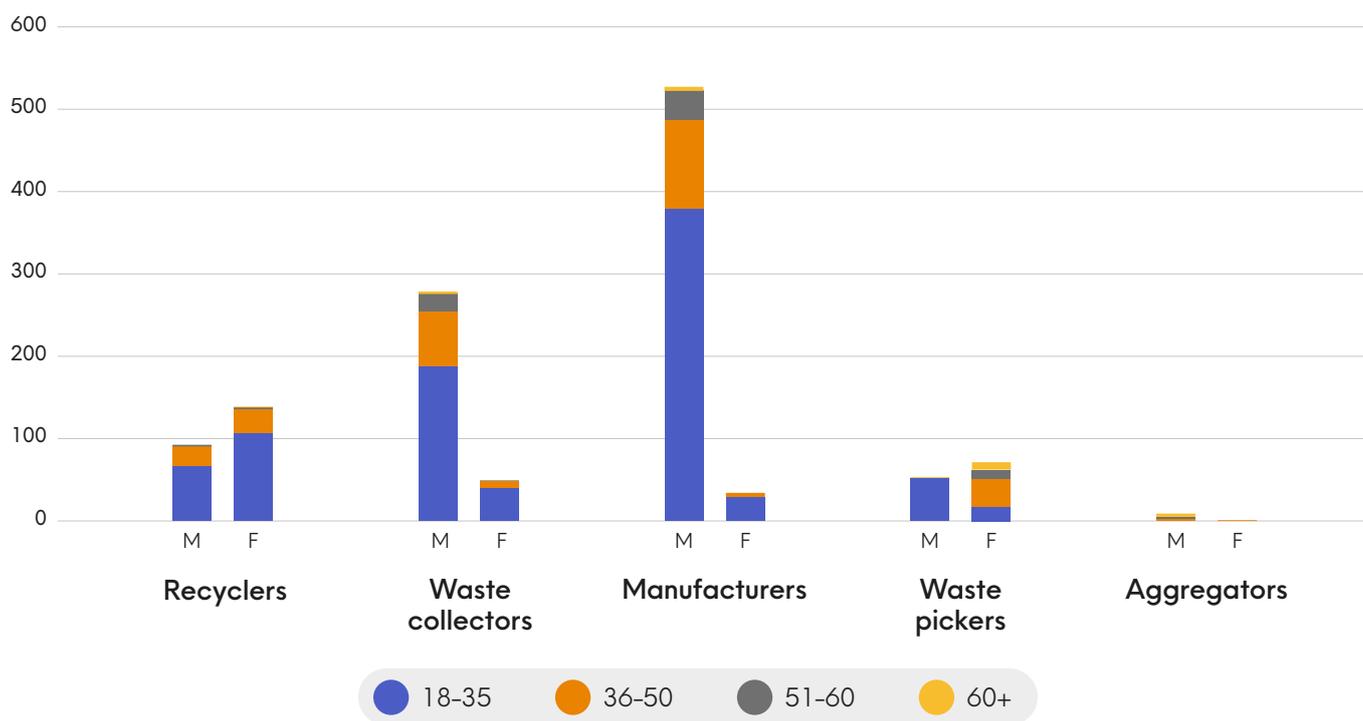
Although the sectors are male dominated generally, gender dynamics differ in relation to each sector along the value chain. Out of the 13 recycling companies sampled for the analysis, women constitute about 68% of the workforce, compared to men representing about 32%. There are also more women itinerant pickers, compared to men in the study areas. Of the itinerant pickers sampled from recycling companies, aggregators, communities and NGOs for the analysis, women constitute about 64%, compared to men representing about 36%. However, at the 5 dumpsites sampled for the analysis, there are more men (about 65%) working as pickers than women (35%). With regards to the waste collection and

manufacturing companies, out of the six and five organizations sampled for the manufacturing and waste collection sectors respectively, male workers constitute a higher proportion than female workers, with men representing about 89% and 92% of the total workforce respectively. Out of the total sample of workers in the formal and informal sectors, only four men are persons with disabilities. 92% of female waste pickers sampled were middle-aged age, compared to their male counterparts who were largely youthful (75%). The sector has 67% youthful workers between the ages of 18-35 years for all workers along the value chain. The figure below gives a breakdown of ages for actors in the sector.

68%

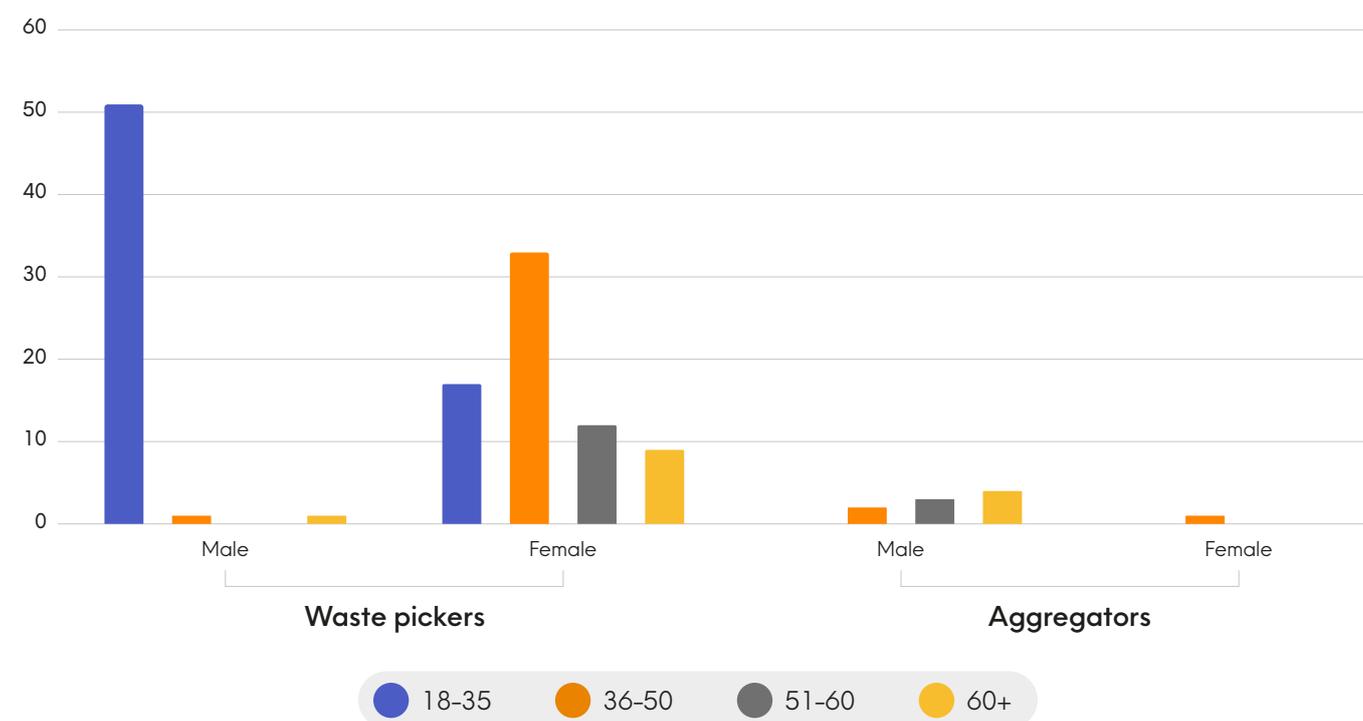
Out of the 13 recycling companies sampled for the analysis, women constitute about 68% of the workforce, compared to men representing about 32%.

Figure 3: Age distribution of all actors



Source: Fieldwork, 2020

Figure 4: Age distribution of informal actors



Gender roles, responsibilities and barriers for equal participation along the value chain

Women as market actors

Most of the businesses in the plastics value chain (i.e., large, medium or small) are owned by men. About 80% of data sampled saw men in the positions of CEOs or business owners, while only 20% were women. Decision-making across sectors in the value chain is dominated by men, constituting 74% in leadership as compared to 26% for women. The decision-makers were found to be CEOs, Directors, and Senior Managers. Dividing it along the plastic chain, most of the market actors of plastic manufacturing companies are men. Out of the six plastic manufacturing companies used for the purpose of this analysis, two companies had women in decision-making positions, either acting as Directors or in Senior Management Positions. The recycling or reuse companies were also heavily skewed towards men in decision-making. It is however noteworthy that though some of the recycling companies were owned by men, the businesses were jointly managed by both husband and wife in two instances. One woman was identified to be the owner of a recycling company. Although the recycling sector employs a large number of women, there are approximately six women nationwide who are owners of recycling companies, which convert plastic waste into pellets or flakes for remanufacturing. On waste collection, two different actors were found in the space. The first are the small, medium to large waste collection companies and the second group are NGOs that lead initiatives related to plastic waste. **Ownership and managerial positions in waste collection are dominated by men, though the NGOs have more women as founders and initiators of waste collection and waste segregation programmes.**

To own a business along the value chain, access to finance is a major requisite to participate in almost all the

sectors, with the exception of waste picking. In the formal sector, hundreds of thousands of USD capital investment is needed for the importation of virgin plastic pellets, purchase of equipment (e.g., injection moulders, extrusion moulders, blow moulders), infrastructure, human resources, amongst others. A minimum of about USD 200,000 to 500,000 is needed to start a small- or medium-sized plastics manufacturing company. Firms in this sector are largely owned by mostly foreign internationals with huge capital investments to support their business. Waste management companies are largely Ghanaian-owned and are mostly small to medium companies, though a few are large companies. To start a waste management company that transports only garbage, one will roughly need about USD 200,000. This cost, although comparatively lower than what is needed to start a plastic manufacturing company, will only be enough for purchasing, shipping and clearing of just one or two trucks and administrative costs.

With regards to the informal sector, generally actors self-finance their activities. Some recyclers pre-finance the purchase of plastic waste from aggregators so they can increase volumes bought from waste pickers as well as ensure a constant supply of plastic waste to feed their recycling industry. About 90% of aggregators in the sector are male, and most of these men moved from being waste pickers to becoming aggregators as they were able to save up some money to start buying from other waste pickers, acting first as middlemen selling to aggregators, then ultimately as aggregators. Recyclers also need finance to buy machinery such as crushers and recycling machines to aid their work. The most valuable end of pre-processing of recyclables is the production of recycled pellets that can be sold back into the manufacturing industry.

The financial benefits accrued by a recycler with an extruder that converts plastic waste into pellets outweighs a recycler who only has a baler or a shredder (i.e., intermediate processing activities along the recycling value chain). However, inadequate funding is a major barrier to informal sector operators, especially for women who aim to move up the value chain to participate in high-value and profitable activities (recycling and processing) which are dominated by financially resourced foreigners. Small businesses, particularly in developing countries, have limited access to capital markets, partly due to perception of higher cost of intermediation for small firms. In Ghana, access to bank loans involves paying high interest rates and collateral requirements, making it more difficult for women to access finance (Boateng and Poku, 2019).

Lack of finance for women actors makes it very difficult for them and lower income groups in the space as they must compete with actors who have a lot of funds. Generally the source of funding for the business is self-generated. This corroborates research findings by Frimpong and Antwi (2014) that small businesses in Ghana are financed from personal savings and borrowings from family and friends. Women and low-income groups will have to generate enough savings to put back into the business. The influx of international buyers in the recycling sector who are willing to buy from aggregators at much higher prices, especially in the rainy season

80%

About 80% of data sampled saw men in the positions of CEOs or business owners, while only 20% were women.



In the rainy season, you can be holding money in your hands and be moving from one aggregator to the other just to buy plastic waste to feed your machine and aggregators will not sell to you. They are keeping recyclables to give to the international buyers who have pre-financed or buy at higher rates than the available market rate.

An interviewee

when supply is in shortage, makes it challenging for local recyclers. Most of the informal recyclers do not have sufficient funds to pay above-market prices for waste plastics from waste pickers to match new international prices, thus inflating buying prices, which makes it difficult for them especially in the rainy season. As one interviewee said, “In the rainy season, you can be holding money in your hands and be moving from one aggregator to the other just to buy plastic waste to feed your machine and aggregators will not sell to you. They are keeping recyclables to give to the international buyers who have pre-financed or buy at higher rates than the available market rate.” A kilogram of LDPE/HDPE sachet and PET bottles is bought from waste pickers at 50 pesewas. Recyclers buy from aggregators ranging from 80 pesewas to 1 GHS. Thus, aggregators are willing to sell to recyclers who buy at the highest bid. Local actors are forced to also increase their buying price, which affects their profit margins.

Most female recyclers do not own recycling machines. They use the machines of others to process their recyclables. Upon exploring further to understand why more men owned recycling machines as compared to women, two concerns were raised. First and foremost, roughly an amount of USD 1,800 to 4,000 is needed for the purchase of the small shredder, and USD 8,000–10,000 is needed to purchase the recycling machines to begin operations on a small or medium scale. Second is the lack of demarcated space to fix the machines. The lack of access to land to set up machines for recycling is a big problem for both men and women engaged in the study. However, it was a major challenge for more women. Concerns of land guards and not

having an industrial hub to operate was amongst the major challenges reported. It is more difficult for women to acquire land because traditionally men are the custodians of lands. Below are some insights that were shared by female recyclers during interviews in Accra.

First Female Interviewee: “It is difficult to acquire land in Accra, after purchasing a piece of land exorbitantly in Sowutuom for business I had to consider relocating here due to concerns from community members. We only arrived here, considering it is an industrial hub, just to be served notice for evacuation.”

Second Female Interviewee: “This business as you see, though lucrative is capital intensive, the lack of machines is a major concern, however what worries me the most is the land to install the machines. Currently we are having issues of neighbours complaining about our activities here.”

Lack of access to market information generally amongst some informal actors makes it difficult for actors, especially aggregators, re-processers and recyclers to explore new areas in the value chain. Although a lot of plastic waste is generated, there is heavy competition amongst actors. Although PET is the second largest waste generated in the country, the market is not clearly established. There is willingness to collect PET, but the established markets are small and not all actors in the space are aware of which companies will be interested in their PET. There are new companies who are interested in re-processing and exporting PET as well, but do not have the detailed information of actors who will be interested in supplying waste PET to ensure undisrupted manufacturing feedstock.



Women as workers

From the data collected, 74% of women occupy lower levels of roles along the value chain, dominating in areas such as production support, washing, sorting, and packaging. Only 7% of female respondents were in decision-making positions and 19% in mid-level positions. Most of the women in lower and mid-level positions, be it in the formal or informal sector, are engaged as contract staff. This corroborates findings by Baah Boateng and Twum (2018) that women are underrepresented in higher quality jobs, and overrepresented in poor quality jobs.

Several factors account for the workforce gender gaps in the plastics value chain. The plastics sector has more women predominantly working in the informal sector and in lower positions. The major barrier for the equal participation of women in formal employment in the plastics sector is the perception that certain roles belong to men while other roles belong to women.

Gender stereotypes are highly prevalent, with employers demonstrating gender bias in their recruitment practices. Employers (both male and female) have the perception that women are not strong enough to engage in physical activities such as loading and unloading and operating machines, and hence prefer hiring men to women for machine work. 95% of organizations sampled for the analysis had machine operators, truck drivers and tricycle riders being men and 90% of janitors, service providers or labourers represented being men as well. On the other hand, roles such as sales and cash collectors, waste separation and washing were made up of 81% and 99% of women respectively. However, the manufacturing and waste collection firms generally have about 10% to 12% of women to handle administrative tasks and support production. Women in manufacturing companies generally also work as quality controllers, inspecting the final product to ensure that it is of good quality and standard. The lowest level of education required in most cases in which women are encouraged to apply



74%

74% of women occupy lower levels of roles along the value chain, dominating in areas such as production support, washing, sorting, and packaging.

7%

Only 7% of female respondents were in decision-making positions and are underrepresented in higher quality jobs.

is a diploma or bachelor's degree. However, other roles which do not need high qualifications, where employees are trained on the jobs such as machine operators, are reserved for men in most of the organizations. This further dwindles women's participation in the sector.

Gender norms negatively affect women in the informal and formal sectors of plastic waste management more than they do men.

In the interviews, the prevalence of high attrition of female staff was reported in the recycling and waste collection sectors. Women who work in these sectors are seen as doing dirty jobs and are socially stigmatised in their communities. In some communities, people dissociate themselves especially from female workers with waste companies or as waste pickers. Women are expected to be feminine and therefore polite, accommodating, clean and nurturing, whereas men are expected to be masculine and therefore competitive, aggressive, and fearless. Waste management is associated with dirt or filth; people who work in the sector are referred to as "borla man" or "borla woman". The negative perception and name calling of waste workers, especially women, make them feel uncomfortable working in the sector and hence move on to do petty trading. These gender-biased attitudes clash harshly with reality. Women have traditionally been more involved in the waste management sector, usually through performing domestic labour such as cleaning at home.

The health and reproductive roles of women also serve as a hindrance for the few women working in the plastics sector. Time spent at work varies by companies as well as the section along the value chain the actor is involved in. Some manufacturing and recycling firms work for 24 hours, running on a 12-hour shift basis for production teams and operators of machines. Administrative staff, sorters, and washers, however, work eight hours a day. The cash collectors and salespeople have more flexibility in their working schedules. Thus, with the exception of the few women working as factory hands and hence running on a 12-hour shift, women

generally work no more than eight hours in a day. Waste pickers have more flexibility as they pick according to their strength. In interviews, landfill pickers generally report starting work at 6:00am and closing at 5:00pm. Most landfill pickers work five to six days in a week. Itinerant waste pickers usually go round at dawn and early hours of the morning and in the evenings or late afternoon when the weather is cooler to pick waste. The weekends are used for washing, cooking, cleaning, and attending social events such as weddings and funerals. Although cash collectors are not restricted to working eight hours a day, working on weekends has been challenging for some women. This sometimes conflicts with their reproductive and social roles; thus some women are not able to meet their targets, and this continues to be a factor for the high attrition rate of women in the waste management sector.

Income/pay gap: Although there is equal opportunity for both men and female waste pickers to pick recyclables of choice, the amount paid for recyclables varies between men and women and usually depends on the bargaining power of pickers. Although selling price of LDPE/HDPE sachet bags and PET is 50 pesewas a kilo, some middlemen/women buy as low as 20 pesewas from female pickers on some dumpsites as is the case in Tamale. However, in other regions visited, there was equality in terms of payment to landfill pickers. Female community pickers are not paid the actual value in terms of price for recyclables picked. Buyers who move from house to house to buy recyclables do not carry a scale to weigh plastics bought. Based on quantity the waste pickers have picked, they use their discretion to pay pickers based on volumes using the 30 x 60 sacks with price ranges from GHS 8.00 to GHS 20.00.

The dynamics differ for men, as they pick high value recyclables and sell directly to aggregators who weigh and buy at the correct price. Male pickers of LDPE/ HDPE in the communities are able to sell recyclables at the appropriate price, as they also transport recyclables to the aggregator for it to be weighed and





Waste pickers at dumpsites work under unhygienic and dangerous conditions and the tedious task of bending to pick causes waist and knee problems amongst the majority of female pickers.



priced. Male pickers rarely sell to aggregators who go to the homes to buy without weighing scales. The difference in income has a significant impact on the ability of most female pickers to climb up the value chain, as they do not raise enough to save or invest back into the business. Income made from recyclables for women are just enough to take care of food and basic needs. This improves their quality of life but does not challenge gender divisions or men's and women's position in society, nor does it lead to the empowerment of women.

Also, per the information gathered during the fieldwork, roles that are generally filled by women, such as cash collectors, factory hands/production support, sales, sorters, and pickers, tend to be contract and casual workers. Per the roles assigned, some receive their wages on a daily basis. Generally women as workers receive daily wages ranging from GHS 10-20 and men GHS 15-30. Thus, some workers are paid below the daily minimum wage of GHS 11.82. Others are paid weekly, while the formal organizations pay on monthly bases.

Remuneration for sales and cash collectors are performance-based compensation such as commissions.

Health: Waste pickers at dumpsites work under unhygienic and dangerous conditions. The tedious task of having to rush to refuse trucks, going through heaps of refuse, and bending to pick causes waist and knee problems amongst the majority of female pickers, while the male workers are less impacted, due to being younger and more energetic. Thus, even on dumpsites like Adepa in the Eastern Region, where women pick from morning to evening and men run shifts with the first batch working from 6am to noon and the afternoon shift taking over from noon to 6:00pm, women are still unable to pick more recyclables as compared to the men.

Another health concern is the poor sanitary conditions on dumpsites that breeds mosquitoes, which infest pickers with malaria. There was also high reportage of accidents occurring on landfill sites as some hospital and industrial waste are not properly disposed of, causing injuries amongst



pickers. There have also been incidents of excavators working on landfills accidentally hitting waste pickers, who were not wearing reflective jackets and thus could not be seen by machine operators.

Access to and control of resources has a great impact on the output of actors along the value chain. This has far reaching consequences on their health as well as economic gains made. The analysis showed that based on the gender roles assigned to men and women workers in the formal sector, they generally had sufficient resources needed to facilitate their work. The dynamics differ in the informal sector as workers (both men and women) generally lack PPE. The amount (volume and weight) of recyclables collected by women and processed in the informal sector is influenced by access to equipment and/or vehicles. Reflecting the realities of most developing nations, vehicles and/or equipment is typically owned by men with women gaining access generally with shared usage (Ocean Conservancy, 2019).

Itinerant women pickers predominantly use bags or sacks to collect and transport recyclables. Some women owned a metallic tool or stick for picking, others wore gloves whilst the majority used their bare hands in picking the plastic waste. The men typically push the carts and have access to tricycles as compared to the women. In the analysis, it was observed that 90% of female itinerant pickers usually picked light weight plastics (LDPE and PET) which are less valuable as compared to the male itinerant pickers who picked valuable plastics such as the HDPE, PP, PS and PVC. Female itinerant pickers were limited in the choice of recyclables to pick as a result of lack of access to push carts and tricycles that will help them easily transport their recyclables. Most male itinerant pickers either own a pushcart or tricycle or has access to one. Thus, not only are they able to pick high value recyclables but are also able to walk a much longer distance in the communities finding plastic waste as compared to the women. They are also able to pick a lot more of the recyclables as compared to the women.

Another area of concern for women waste pickers is lack of storage. Most of these itinerant pickers come from poor or lower income families and areas. Thus, they do not have places to store the recyclables picked on the streets, even if they want to store up an appreciable quantity before selling to the aggregators. Most of them are pushed to selling whatever quantities they picked on the same day or weekly for menial amount of money. Cross-checking with aggregators, it was mentioned that a kilo of LDPE and HDPE goes at a buying price of GHS 0.50 – 0.80. Generally female itinerant pickers who picked and sold recyclables on the same day sold on an average between 2 and 5 kg LDPEs/HDPEs sachet water bags making at most GHC 4. Itinerant pickers who are able to store and sell at the end of the week are able to sell between 30 kg to 40 kg of the sachet water bags making between GHS 15 and GHS 20. Female pickers on dumpsites complained of theft as a result of lack of storage. This affects them as after working tirelessly they are left with little recyclables to sell, thus reducing their income.

Women as regulators

The plastics sector is regulated by the Ministry of Environment, Science, Technology and Innovation (MESTI), Ministry of Sanitation and Water Resources (MSWR), Ministry of Local Government and Rural Development (MLGRD), Metropolitan, Municipal and District Assemblies (MMDAs) and Environmental Protection Agency (EPA). The ministries are responsible for the formulating, coordinating policies and programmes that will steer successful transition of Ghana's circular economy. The District Assemblies have oversight responsibility for the management of solid waste through MSW services provision or supervision (the Waste Management Department) and disease control, prevention, inspection, nuisance control (the Health Department). The EPA is responsible for the issuance of guidelines and standards, permitting, licensing and enforcement of all waste or plastic management activities that require a permit.

These three ministries with oversight responsibility for the plastics and waste management sectors are skewed towards men making up 57% and women 43% of decision makers within the ranks of Minister to Deputy Chief Directors. The Environmental Protection Agency is led by a man, and Board Members heavily skewed towards men, with just one woman sitting on the Board. The unequal representation of women among decision makers in regulatory institutions limits the participation of women when policy decisions are being made.

Women as end-users

There are several key areas of consumption that have a strong gender dimension, and where influencing behaviour needs a gender perspective to be effective in improving sustainability. On analysing gender and plastic waste generation, research has shown that women disproportionately use cosmetics and household cleaning products that are packaged in plastic containers as compared to men (Heise et al., 2019). Other studies have also shown that women often bear responsibility for buying short-term

usable products (household products, food, etc), while men tend to decide on the purchase of more long-term durable items (e.g. car tyres, electronics) (OECD, 2020). These corroborate anecdotal evidence on consumption patterns in Ghana, which is in line with traditional gender norms. As the main cooks, caretakers, and shoppers for their families, 70–80% of consumer purchasing decisions are made by women (Forbes, 2015). They are the primary consumers of plastic bags, when they purchase food and household items and when, as vendors, to package, carry, and sell a range of products (including hot cooked food) and goods (Braun, 2015; OECD, 2020). **Thus, considering women's decision-making roles in household purchasing, disposal and management of waste, they are key actors to consider in reducing plastic pollution.**

Women as community members

A review of plastic importation and production in Ghana indicates that LDPE and HDPE are the main stream of raw material imported, representing in total around 71% (26% for LDPE and 45% for the HDPE) of the total raw plastic imported for packaging and single use applications. HDPE is used to produce water sachets, cosmetic and food packaging; LDPE is also used for water sachets manufacturing and plastic bags. The quantity of PET imported represents around 21% of the total raw plastics imported.

On consumption patterns across socio-economic class, available data indicates that people in low-income groups adopted LDPE in a lot of situations. For water sachets and also to bring small quantities of food home from the markets, which are packed in LDPE plastic bags. On the other hand, medium- and high-income population use more PET packaging, which is mainly used for bottle packaging (Seureca, 2019). In an interview at Glefe, a coastal suburb of Accra, it was estimated that a family of five persons would use 30 single-use plastic bags per day for breakfast only if purchasing kenkey and fish (Oppong-Ansah, 2018). Through my own

90%

90% of female itinerant pickers usually picked light weight plastics (LDPE and PET) which are less valuable as compared to the male itinerant pickers.

observations, generally waste from lower income households contains clear polythene bags or plastic bags popularly referred to as “take away rubber”, food cans, sachet water bags, metal, glass and organic leftovers (e.g., cassava peel, plantain peel and leftover food).

On household practices related to cleaning and waste disposal, women and children are responsible for that. In compound houses, men generally do not sweep nor take responsibility for disposal of refuse. It is therefore not surprising that NGO initiatives in waste collection initiatives are led by women. Women are however excluded from high-level discussions of managing waste in our communities as well as

community campaigns and engagements. The high consumption of thin plastic films (LDPE and HDPE plastics) in low income communities account for 59% of tonnage of plastic waste generated in households in Accra and Tema as compared to the other types of plastics. In Ghana, plastic waste generated from households account for about 70% of total waste generated, with industries and offices accounting between 10%-30% (Seureca, 2019). Women when engaged will champion the source segregation of waste in our communities. The summary of plastic waste generated from households in the Greater Accra Region is summarised in the table below.

70%

In Ghana, plastic waste generated from households account for about 70% of total waste generated, with industries and offices accounting between 10%-30%.

Table 2: Plastic waste characterisation by income groups in Ghana

Type of Plastic	High Income	Medium Income	Lower Income
Plastic film/LDPE	15%	25%	36%
PET	24%	23%	14%
HDPE	23%	19%	23%
PP Rigid	11%	11%	8%
PS	4%	4%	4%
PVC	4%	4%	2%
Other plastics	18%	14%	14%

Source: Seureca, 2019



Gender analysis of national policy/ regulations and institutional frameworks

National policies/regulations:

There are a number of policies and regulations in place by Ministries with oversight responsibility for the plastics and waste management sector. In 2019, the government of Ghana, in its commitment to tackling plastic, formulated the National Plastics Management Policy (NPMP), which has been approved by the cabinet. Prior to the formulation of the NPMP, the sector was guided and regulated by the following policies and regulations:

- EPA Act (Act 490)
- The Customs and Excise (Duties and Other Taxes) (Amendment) Act, 2013 (Act 863)
- The directive issued by the MESTI requiring an oxo-biodegradable component in flexible plastics manufactured in or imported into Ghana (November 2015)

- National Environmental Sanitation Policy (2010)
- The National Environmental Sanitation Strategy and Action Plan (NESSAP) (2010)

The gender analysis focused on policies relevant to the plastic and waste management sector. From the review, the Environmental Sanitation Policy and the National Plastics Management Policy are gender neutral. Although gender has been identified as a guiding principle in all policies reviewed, it is only the NESSAP that has clearly outlined measures to achieve gender equality and inclusion. The table below gives a breakdown of gender analysis of policies in the sector.

Institutional Policies: The informal sector had no employee policies for both permanent and contract staff. Probing further to understand

the situation, permanent staff had no benefits be it paid leaves and insurances (e.g., social security, health etc). Staff were paid on actual days worked. The formal sector generally had employee manuals or guide that spells out employees' benefits, rules and regulation for the workplace and job specifications. Out of the 10 formal organizations interacted with, only two did not have an employee policy. In analysing how organizational policies are gender sensitive or neutral, all eight organizations have paid annual leave for staff, maternity leaves, and social security. Three of them had health insurance to cover staff members. Three organizations interviewed had a sexual harassment policy with one having policies targeted at achieving gender equality. Generally, policies within the sector were gender neutral as organizations didn't pay specific attention to having policies that will benefit women and vulnerable persons.



Table 3: Gender Analysis of Policies

	Title of Policy		
	The Environmental Sanitation Policy	National Environmental Sanitation Strategy and Action Plan (NESSAP) Materials in Transition (MINT)	National Plastics Management Policy
Description	Develop and maintain a clean, safe and pleasant physical and natural environment for all human settlements, to promote the socio-cultural, economic and physical well-being of all sections of the population	The NESSAP is a response to the need to refocus attention on environmental sanitation in Ghana and provide clear strategies and action plans that will guide implementation by Metropolitan, Municipal and District Assemblies (MMDAs).	To bring renewed focus and cohesion to the many existing policies and programmes within the public and private sectors to address the rapidly growing plastic pollution crises in Ghana
Date of entry into force	2009	2010	2019
Gender and Inclusion Analysis Guiding principles	The principle of improving equity and gender sensitivity	The principle of improving equity and gender sensitivity	The Principle of Improving Equity and Gender Sensitivity; fairness of treatment for women and men, according to their respective needs
Gender and Inclusion Analysis Measures	Identify the needs of the vulnerable and physically challenged in service provision Gender measures not captured	Ensure that services meet the needs of specific target groups including vulnerable people, women and children, and the poor	The Ministry of Gender Children and Social Protection (MGCSP) to ensure job creation through plastics waste management to address gender inequality
Gender and Inclusion Analysis Institutional responsibility	Ministry of Local Government and Rural Development	Ministry of Local Government and Rural Development Environmental Health and Sanitation Directorate	The Ministry of Science, Environment, Technology and Innovation (MESTI)
Gender and Inclusion Analysis Implementation modalities	Not stated	Implement micro-credit schemes targeting, initially, households with women as heads of families and community-based women associations Community-based organizations (CBOs), landlord associations, market-women associations etc), will serve as platforms for promoting the scheme Implement pro-poor improvements in low-income communities (school sanitation facilities)	Not stated
Gender score	Gender neutral	Gender sensitive	Gender neutral

Recommendations

Addressing gender gaps in the plastics and plastic waste sectors is key to achieving gender equality and inclusion outcomes. The following recommendations are therefore proposed for consideration and to guide the national action roadmaps.

Women as market actors:

Increase access to finance and market information for female waste pickers, recyclers, and women entrepreneurs in the formal and informal sectors.

Financing schemes targeted at women and vulnerable persons within the sector will ease the burden of actors who want to expand their businesses and move up the value chain. Access to finance can help women actors compete evenly with foreign industries in the plastics sector.

Fiscal support is needed, such as the waiving of high import duty on recycling machines to enable informal recyclers to purchase machines that **increase their recycling capacity**. Government should consider the creation of industrial hubs where land is demarcated for informal recyclers to operate, which would solve the challenges current actors face in not having land to fix recycling machines for their operations.

Finally, we must strengthen women's organizations within the sector by identifying and working with existing women's organizations and enterprises to build their organizational, leadership, and business management skills.

Women as workers:

Encourage employment of women workers in the production and manufacturing sector to bring about new and diverse ideas in **redesigning plastics**. Deliberate targeting of

increasing female employment and decision makers in production and manufacturing firms will yield sustainable business models of coming up with new innovations that are eco-friendly. Prioritising financial awards to new innovations from organizations that are led by women or have a strong representation of women and vulnerable persons could also encourage employment of women in well-paid positions.

Increase plastic waste collection

through improved infrastructure and welfare of waste pickers by establishing community buyback centres in all communities to encourage waste segregation in homes. This would also help community pickers easily access buyers who will buy recyclables at the correct price, thereby eliminating current disparities in buying price. Having community buyback centres would also solve the problem of high transportation cost that actors face and the concern of not getting buyers for PET bottles. Buyback centres will contribute to an established market for the sale of PET as well. Furthermore, professional waste pickers collecting plastic waste at the landfill, transfer stations, markets, lorry parks and communities should be registered and be a part of waste pickers' associations before being allowed to pick plastic waste. This will enable the regulatory authority to know the exact numbers of waste pickers working across the country. It will also reduce stigmatisation of waste pickers and they will be well recognised in their communities for the work they do and how they contribute to the sustainability of our environment. Professional pickers on dumpsites and communities should also be provided with PPE and other

logistical support to facilitate the work they do, so they can increase the collection of recyclable materials.

Build or expand safe waste disposal facilities

which are not far from town with good access roads to avoid the springing up of illegal dumpsites and also to reduce the cost of transportation to final disposal sites. (Currently these are concentrated on the outskirts of towns, thus increasing overturn time for few female actors in the sector.) The new waste disposal sites must have a sorting and storage centre so waste pickers can work in a more conducive environment. Also, occupational health and safety trainings must be organized periodically for all waste pickers in the communities and landfill sites. All landfill sites or waste disposal sites must be properly resourced with equipment and first aid centres so as to reduce accidents that occur onsite as well as respond to the health needs of waste pickers.

Women as regulators:

Include women in policy planning at all levels. Encourage the promotion of women to leadership positions in regulatory institutions and active participation at all levels within organizations, as well as their engagement in project planning and evaluation activities. This could be done through capacity-building and affirmative actions in organizations to have a certain percentage of women in all planning activities.

Women as end-users:

Women as consumers could influence brand owners and retailers to positively transform their product design and business models. This can be achieved when customers for single-use plastics



– a group that is largely women – reduce their demand and thus business owners will have to come up with more eco-friendly packaging materials to **reduce and substitute plastic usage**. Prior to the influx of single-use plastics on the market, women carried baskets made from cane or rafters when going shopping. Food vendors used leaves to wrap hot food. Finding alternative packaging and promoting its usage will go further to reducing the plastic menace in the country.

Women as community members: Transforming behaviour can be achieved by increasing awareness amongst women, children and members in marginalised communities, on the need to support the action to reduce plastic waste and pollution. Women are not only primary consumers of single use plastics, but are also responsible for the disposal and management of waste in the home. Thus, there is the need to target women, vulnerable persons, petty traders, food vendors, fast food joints, market women and the urban poor in advocacy campaigns on the harmful use of plastics and importance of

waste segregation. Targeting the youth is not enough, as they do not make household consumption decisions. Getting women to buy in to transforming behaviour will go a long way not only in reducing the consumption of single-use plastics but also increase involvement in waste segregation campaigns and reduction of the burning of plastic waste.

National and institutional policies: National policies must outline how gender equality will be achieved beyond identifying gender equality as a policy principle. Policies must clearly identify activities that could be implemented to achieve gender equality with its associated budget. At the institutional level, policies must accommodate care roles provided by women through the implementation of gender responsive policies such as flexible working hours and paternity leave amongst others. Institutional policies must provide the platform for empowering female staff through supporting and building their capacity to take leadership positions and having an anti-sexual harassment policy in place to protect staff.



Institutional policies must provide the platform for empowering female staff through supporting and building their capacity to take leadership positions

Conclusion

The concept of plastics and plastic waste management is not gender neutral. Outcomes of activities along the plastics value chain do not affect men and women equally, as gender consumption, gender roles and division of labour varies for men and women actors. Mainstreaming gender in the approaches, knowledge products and initiatives of the National Plastic Action Partnership will go a long way to close existing gender inequalities in the sector. Zero plastic leakage into the ocean will only be achieved through a concerted effort that engages all actors along the value chain, providing necessary support to increase their capacity in waste collection and recycling, as well as the transition to a circular economy for plastics.



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About the Ghana National Plastic Action Partnership

The Ghana National Plastic Action Partnership is a multistakeholder collaboration platform that brings together Ghana's policy-makers, business leaders, civil society organizations, researchers and innovators to address the challenges of plastic waste and pollution. It was co-created by the Government of Ghana and the World Economic Forum's Global Plastic Action Partnership in October 2019. Learn more: globalplasticaction.org/countries/ghana

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About the Global Plastic Action Partnership

The Global Plastic Action Partnership is a platform hosted at the World Economic Forum that aims to shape a more sustainable and inclusive world through the eradication of plastic pollution. Since its creation in March 2019, it has partnered with national governments to launch locally-owned, locally-driven national platforms for plastic action in Indonesia, Ghana, Viet Nam, and soon Nigeria. Learn more: globalplasticaction.org

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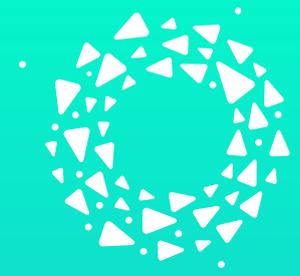
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