Creation and Integration of Informal Sector Plastic Co-operatives into Municipal Assembly Framework:

LESSONS LEARNED
Environment360 (E360) is a Ghanaian NGO, which empowers informal sector plastic waste collectors (ISPWC), also known as waste pickers and introduces them into the waste value chain. To support this mission, E360 works with key players along the value chain, developing models to increase community-based plastic collection while growing collector profits for the creation of a circular economy. In 2018, E360 partnered with the German Federal State of North Rhine Westphalia through GIZ to test the efficacy of these models and glean best practices. During the past two and a half years, our participating collectors removed nearly 100 tons of plastic waste from the environment.

E360 tested three pilot projects to date. The first project aimed to diversify the income of scrap dealers in Kumasi through the collection of plastic bottles, the second project supported women and youth in the reduction of plastic litter in their communities, and the third project focused on strengthening the network of plastic collection agents in Kumasi.
In alignment with Ghana’s commitment to the Sustainable Development Goals and its National Plastic Action Plan, the objective of the Three-Pilot Project was to research, examine, and diagnosis integrative paths to move informal plastic waste collection into a powerful domestic circular economy. By nurturing existing informal networks, material recovery design, systemic motivators, and strategic collaborations, the Pilots aimed to test and develop proactive interventions and transitions for green growth.

National Plastic Action Plan (NPAP)

Objectives

Incentive and payment scheme
Plastic value chains
Integration into municipal waste management
Design & operation of collection points
Voluntary agreements with informal waste collectors

Actions

1. Provision of a Financial Incentive

Strengthening the plastic value chain is a top priority for the Government of Ghana and impacts most of the United Nations Sustainable Development Goals. High density, and hard plastics have a strong value chain with lucrative financial incentives. However, plastic bottles, also known as PET, face a myriad of complex challenges within the value chain, leading to low profits, and unattractive collection. Ghana produces more than 70,000 plastic bottles monthly, of which less than 2% are recycled. Unfortunately, the low value of PET results in the proliferation of gross waste material in communities, landfills, and waterways.

Large multinational organizations and local industrialists, alike, have expressed interest in the development of a PET chain. Plagued by a weak collection system and lack of community will, multi-sector stakeholders found it hard to justify investments. As a ground-breaking
innovator in West African recycling, E360 has taken the helm in researching financial incentives in waste collection to understand optimum PET pricing and value chain development.

During its projects, E360 worked with two main groups to support the collection of plastic bottles from communities. The first were scrap dealers who diversified their income through the collection of plastic bottles. The second group were youth and women who were presently collecting plastics or had an interest in collecting plastics. For both groups, E360 offered a tiered pricing system. The intent of the tiered pricing system was to better understand if ISPWCs were willing to pre-sort materials they collected.

Unsorted materials attracted the lowest purchase price of GHP.50 (€.083). Materials with a minimal level of sorting, such as the cap removed, attracted a buying price of GHP.70 (€.10) and fully sorted materials (cap, rim, and label removed) received the highest price of GHP.80 (€.11). The current buying price of plastic bottles in Ghana is GHC 1.00 (€.14).

Throughout the pilot projects, less than 30% of project participants sorted materials. Interviews with participants revealed mixed reasoning. Some collectors were willing to sort, but did not have the space to do so. Other collectors felt the price for sorted material was not worth the extensive labour. As a result, the majority of collectors chose to sell their plastics at the lowest price of GHP.50.

It should be noted that more than 70% of the participants had other trades or employment and looked at the collection of plastic as a supplemental income. The minority who collected plastic as a primary income source were more likely to segregate the plastics.

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**Key Lesson Learned:**

The price on plastic bottles is still too low for the business to be considered profitable. Many group leaders and members were unable to collect full time due to inadequate returns. To incentivize collection and segregation, it must be financially subsidized. Implementing an Extended Producer Responsibility (EPR) Scheme is a potential mechanism. EPR is a policy approach under which producers are given a significant responsibility, financial and/or physical, for the treatment or disposal of post-consumer products.
In Ghana, Co-operatives are legal business entities registered under the Department of Co-operatives within the Ministry of Labour and Employment. The Department of Co-operatives derives its powers from the Co-operative Societies Decree, 1968 (NLCD 252) and the Co-operative Societies Regulations (L.I. 604). Co-operative is defined as a group of people who work in the same industry, who share similar economic and social interests. Co-operatives are used in a variety of industries, locally and globally, such as agriculture, fishing and textiles.

To support the creation of co-operatives, E360 developed a train the trainer model, which empowered ISPWCs to create, develop, and train their own plastic collection networks or groups. In this model, E360 worked with group leaders exclusively and disbursed all payments for plastic materials directly to them.

To participate in the pilot programme, all trained trainers independently registered their groups with E360. As stipulated by the department of co-operatives to register; groups were encouraged to have at least ten members.

It was observed, that collectors from pre-established networks, such as Jamestown and Madina, had deeper group loyalty. Members from newly established networks, such as Old Fadama, openly expressed their distrust for each other and an unwillingness to work with strangers.

At the culmination of each project, E360 held focus groups to evaluate the co-operative model. 100 % of formed groups stated payments as the main issue. Group members did not understand how the
leader allocated money. These financial disagreements caused group fragmentation, wherein members created their own new groups.

None of the groups met the financial criteria to be registered as a legal co-operative within the Ministry. The main hurdle for groups was the lack of financial records showing profitability for six months or more; no group showed profitability for the duration of the project.

Key Lesson Learned:

It is recommended for ISPWCs to choose their own group members to establish trust. With training, waste picker leaders have the capacity to independently organize and train members. Leadership transparency is critical for group solidarity and success. Lastly, the Department of Cooperatives should review its definition of profitability as this new industry formalises and grows.
Municipal Assemblies are key stakeholders in identifying, organizing, and providing land for community collection points. However, lack of resources designated for oversight discourages follow through.

Key Lesson Learned:

3. Integration of Municipal Assemblies into Plastic Collection

For growth and sustainability of the plastic value chain in Ghana, it is advisable that the work of ISPWCs are integrated into Municipal Assemblies. Integration will not only reduce the financial burden of waste collection on Assemblies, but will also reduce plastic accumulation in landfills.

During its pilot, E360 engaged with three Assemblies; the La Nkwantanang Municipal Assembly (Madina), Ashiedu Keteke Municipal Assembly (Jamestown) and the Kumasi Metropolitan Authority. All of the Assemblies provided support by engaging ISPWCs and organizing community collection events. Kumasi Metropolitan Assembly (KMA) donated land for a plastic collection point in the Asafo area.

Dialogue with Assembly Executives revealed support for the creation of plastic waste initiatives, but not its management. They cited insufficient budgets as a defence.

The KMA expressed interest in registering plastic waste collectors to legitimize their work, however, a system had yet to be identified. The KMA believed it was more feasible to register ISWPCs if they were assigned to designated collection points.

Key Lesson Learned:

Municipal Assemblies are key stakeholders in identifying, organizing, and providing land for community collection points. However, lack of resources designated for oversight discourages follow through.
Fundied by the German Federal State of North Rhine Westphalia, E360 established four plastic collection points for the pilots, two of which continue to operate today. E360 acquired space for collection points from three different sources: private individuals, community organizations, and Assemblies. E360 tested centralized stationary collection points, accessible mobile collection points, and provided some agents with funds to create their own collection points.

Established collection points were to be managed by E360 trained ISPWCs. Collectors in Old Fadama and Madina were unwilling to assume responsibility citing their previous obligations interfered with daily management of the sites.

Stationary collection points yielded nearly 50% more materials than mobile collection points, though the quality of materials was significantly lower. Collection points rented from either a private individual or a community organization proved to be non-sustainable, given the operational costs of implementing infrastructure. Collection points where land was donated or independently acquired and operated by the ISPWCs proved to be most sustainable.

E360 found the use of oversight boards to be beneficial. For these projects, a board consisted of a community leader, a member of the solid waste department, an employee of E360 and an ISPWC.

**Key Lesson Learned:**

Local Assemblies are key to the creation of sustainable collection points. Although some ISPWCs possess the business acumen to run collection points, not all have the desire. Third-party intervention, from an NGO or private company, is needed to support the long-term growth of community collection points.
5. Development of a Local Transportation Network

Transportation is a fundamental concern for all ISPWCs. The cost of vehicular transport, volatile petrol prices, and the inability to physically carry large volumes often make transfer of plastics to recyclers undesirable and impractical for collectors.

E360 engaged with borla (waste) taxi associations in Accra and Kumasi, as well as private sector waste management companies to understand transport challenges and to strategize solutions. E360 conducted several focus group discussions with stakeholders and discovered most borla taxis were involved in segregation and selling of plastic materials themselves. Fees offered by ISPWCs were insufficient, resulting in the borla taxis’ independent collection and sales.

Private waste contractors expressed challenges of over-burdened staff and limited resources. Most claimed losses due to the inability of Assemblies to pay on time and the cost of fuel and labour.

Key Lesson Learned:

There is an opportunity to create a local transportation network for the conveyance of plastics from collectors to recyclers. The use of existing infrastructure presents obstacles; thus, more innovative approaches should be explored. A loan scheme that allows ISPWCs to purchase their own tricycles may be advantageous.
6. Private Sector Engagement

Private sector continues to be one of the greatest potential allies of the ISPWCs. Private sector not only has the opportunity to provide significant incentives to plastic collectors, but have the capacity to fill value chain gaps through in-kind donations.

When developing the Kumasi projects, private sector partners, such as Qualiplast, were vital in transporting plastics from Kumasi to Accra. As one of the oldest plastic manufacturing companies, in Ghana, Qualiplast, recognized the Kumasi project as a unique and strategic opportunity. Qualiplast contributed to the reduction of local plastics, while sourcing high quality local plastic for its applications. Qualiplast donated vehicles to transport plastic and hosted a seminar with plastic collectors concerning plastic quality to support the creation of a localized value chain for their company.

The project encouraged dialogue between ISPWCs and the Ghana Recycling Initiative by Private Enterprise (G.R.I.P.E) regarding an Extended Producer Responsibility scheme to further incentivize the collection of plastic. Additionally, G.R.I.P.E pledged support to increase community collection points using ISPWCs.

Key Lesson Learned:

In the right climate, the private sector is willing to support transportation of plastic waste and incentivize collection of plastic waste, leveraging monetary and in-kind resources.
Conclusion

Developing a stronger value chain for plastic bottles is undoubtedly complex. For sustainable growth, there must be a stronger financial incentive offered for the collection of plastic bottles. The low value of the PET material discourages its sorting and detracts from the passive collector’s full time employment. Insufficient income from plastic bottle collection slows the creation of a robust chain, which is required for private investment. ISPWCs who participated in E360 pilot projects demonstrated innate business acumen and the ability to mobilise fluid networks. However, without support from private and public sector stakeholders, ISPWCs are limited in their power and potential. Furthermore, reliable transportation systems and access to free land for collection points are critical factors in the development of the PET value chain.

Without holistic and strategic intervention, Ghana’s plastic waste crisis will erupt. E360’s Lessons Learned is essential to identifying barriers, generating solutions, and closing the circularity gap.