



A WREC CASE STUDY

The Role of Scrap Dealers in Cox's Bazar to support humanitarian response and reduce environmental impact

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Target audience

This case study is tailored for any organization’s Supply Chain and Programme officers planning to improve the management of recycling materials generated along their humanitarian supply chain.

The context

Since 2017, Teknaf and Ukhiya Upazilas, two of the southern sub-districts of Cox’s Bazar, Bangladesh, which combined weight less than 250.000 people, are hosting one of the largest emergency crises in the world with almost 1 million refugees from the neighboring country Myanmar. In the context of Cox's Bazar, where waste collection systems and infrastructures are lacking in the premises of refugee camps, the management of waste has emerged as a significant challenge. Additionally, another obstacle arises from the considerable distance between the humanitarian operations and the recycling industry, mainly located in the cities of Chittagong and Dhaka (up to 200 Km and 440 Km distance respectively). In this scenario, an existing market of Informal Recycling Sector (IRS), comprising individuals and small and medium enterprises (SME), are involved in the collection of valuable waste. These stakeholders supply the collected materials to recycling industries located in Chittagong and Dhaka. The IRS plays a crucial role in the recycling ecosystem, contributing to waste landfilling reduction and resource recovery. To address the challenge of waste management and minimize the environmental impact of the humanitarian response, it is crucial to engage these scrap dealers and leverage their expertise and networks. By establishing partnerships and collaborations, humanitarian organizations can tap into the existing infrastructure and knowledge of the IRS to enhance waste collection efforts within the refugee camps and avoid building parallel mechanisms. The issue was therefore to understand **how to engage scrap dealers to support humanitarian actors with collecting recyclable materials and reducing the negative environmental impact of the humanitarian response.**

The initiative

To respond to this urgent need on solid waste, the United Nations Development Program ([UNDP](#)) under the partnership framework with the Swedish International Development Agency ([SIDA](#)) and the Swedish Civil

Contingencies Agency (MSB) conducted a [Recycling Value Chain Analysis \(RVCA\) in Teknaf and Ukhia Upazila](#)¹ to learn more about the existing recycling market. The RVCA is a powerful tool for mapping the IRS which identifies the type of waste, the price, the steps of the value chain, and the stakeholders engaged, as well as the challenges and opportunities to strengthen the recycling sector. The RVCA is recommended to be conducted before any intervention with the private sector and *do no harm* to their livelihoods. The results of the RVCA, displayed in Table 1, highlighted some key challenges that were limiting the local market capacity to absorb recyclable materials in Cox’s Bazar. One example was the informality and exclusion of these stakeholders from the society which had an impact on the inefficiency of how recyclables were collected. A second example was the consequent lack of investment capacity of the sector to purchase, such as the balers used to reduce the volume of the cargo and optimize transportation costs.

Bottle necks of the value chain in Cox’s Bazar	
Poor quality of recyclables.	Inefficient primary collection system
Long distance value chain.	Informality of the sector
Lack of investment capacity	Least resilience to shocks
Transportation costs (distance, ‘hidden fees’, unprocessed materials, buyers’ requirements).	

Table 1. key challenges limiting the local market capacity to absorb recyclable materials

To overcome these challenges, UNDP and a technical local partner, [Garbageman](#), supported the IRS of Teknaf and Ukhia to gain recognition, visibility, formality, and capacity to collect larger amounts of recyclables. The sector became formalized under two [Associations of Scrap dealers](#)² which were registered by the [Bangladesh Ministry of Cooperatives](#). The dealers were also registered and provided with Health and Safety trainings, personal protection equipment, identification vests, and ID badges. The Associations were introduced to the local government authorities in the host communities and the refugee camps for their recognition and permission to operate. Awareness was created among the Households (HH) and waste workers in the host communities and refugee camps to segregate valuable waste and coordinate the collection frequency by the recycling sector. Information, Education, and Communication (IEC) materials were developed to easily identify the value materials and selling prices.

The scrap dealers also benefited from grants provided by UNDP project which allowed them to purchase machines such as balers and shredders, recyclable materials from HH, hire additional staff, and contribute positively to their business growth. To



Source: UNDP Bangladesh

¹ UNDP/MSB, 2019 - [Recycling Value Chain Analysis \(RVCA\) in Teknaf and Ukhia Upazila, Cox’s Bazar, Bangladesh.](#)

² Association of Scrap Dealers: <http://tudealersassociation.org>

receive the grant, the dealers had to commit to the environmental and social Associations principles such as *no-child labour* and participate in basic and advance training on business development.

At the refugee camps, the [WASH sector partners](#) had already established waste management systems in each camp from the beginning of the refugee influx. Waste value chain approach is currently prioritized in the camps. Organic waste is turned into compost, and recyclables are given to the scrap dealers. The remaining waste is transferred to a [sanitary landfill](#)³ and other environmentally friendly facilities (for more information see the [Rohingya response Solid Waste Management Strategy](#)⁴). The camps have also developed capacity to recycle non-valuable waste such as plastic bags into several items, such latrine labs, and furniture⁵. With the formalization and recognition of the role of the local recycling sector, the dealers' members of the Association have now the authorization of the Refugee Relief and Repatriation Commissioner ([RRRC](#)) – Bangladeshi government authority in charge of the refugee camps, to enter into the camps with their vehicles and collect recyclables in larger volumes making the collection more efficient.

In 2022 UNDP handed over the project to Garbageman who has been in continuous support to enhance the scrap dealers Associations.

The benefits

This initiative brought several benefits displayed below:

Economic	Environmental	Social	Organizational
Overall dealers increased their business capacity and income generation.	The monthly collection of recyclables increased leading in less damage on ecosystems, and less water and soil pollution.	General recognition of the scrap collection sector. Improved individual self-esteem. Less stigmatization within the community. Improved living conditions.	Enhanced communication and coordination among the dealers which makes them more capable to provide services. Awareness among the sector and camp workers increasing efficiency and enabling the introduction of further waste management initiative.

Table 2. Benefits of waste management by scrap dealers (UNDP/MSB, 2019)

The challenges

One of the main challenges of engaging with the IRS was their lack of formality and coordination among them.

In host communities, the scrap dealers relied on a network of waste pickers and *feriwalla* (collectors with three-wheel vehicles) to collect recyclables from HH, market areas and streets. Despite having their own licence to work issued by the government, the scraps dealers and overall IRS's role on collecting recyclables was not acknowledged by the government. Furthermore, the government of Bangladesh had a Reduce-Reuse-Recycle national policy but there was no promotion on waste segregation at source or formal collection systems at the local level. This situation limited the local scrap dealer's capacity to develop a more efficient collection system of recyclables.

³ UNDP, 2022 – [SOP Temporary Solid Waste Facility \(Sanitary Landfill\) in the Rohingya refugee camps](#).

⁴ WASH sector, 2020 - Rohingya response [Solid Waste Management \(SWM\) Strategy](#).

⁵ IOM, 2023 - [Innovative Plastic Recycling Helps Improve Rohingyas' Health and](#) | IOM Blog.

A similar situation occurred in the refugee camps, where the dealers faced several challenges in collecting recyclables as they were not authorised by the government to enter with their trucks and was not cost-effective for them to enter by foot or three-wheel motorized vehicle. These circumstances also had an impact to the WASH partners in charge of waste collection systems and Material Recovery Facility (MRF) management, which are facilities where the waste collected from the households is transferred for proper segregation. In many cases, MRF's ended up segregating and storing large quantities of recyclables that no dealer would pick up later. Moreover, the lack of formality of the sector added another layer of complexity, as many refugees residing in the camps became engaged in collecting recyclables, which they later would sell to the local dealers outside the camps.

The formalization and recognition of the IRS helped to improve the efficiency of collection of recyclables and coordination among them. The Scrap Dealers' Associations were introduced to the government authorities, the humanitarian actors (RRRC, WASH sector, Shelter sector, etc.), waste workers and waste generators in the camps and host communities. Dealers were organized among themselves to improve the collection of recyclables and engaged in formal waste collection systems and recognized as new stakeholders in the camps and host communities. The dealers were authorised to enter the camps by truck to pick recyclables in large quantities and called by any NGO working in and out the camps to collect recyclables when necessary.

One remaining challenge of the engagement with the IRS is the fact that only domestic waste such as plastics, cardboards, metals can be collected by the local networks. Other items such as hazardous waste or e-waste requires of specialized enterprises who can ensure an environmentally sound management of these materials. The linkage with these enterprises needs yet to be done.

Lessons learnt

The question of recyclability is often difficult on the field because of a lack of infrastructure, expertise, and support. This case study reveals that in contexts where recycling industries are far from humanitarian operations, collaboration between field-based practitioners and organizations that safeguard the IRS such as the technical partner GarbageMan, has revealed valuable lessons, which are explained below.

These networks of individuals and enterprises dedicated to collecting, aggregating, and transporting recyclables to recycling facilities, offer an accessible solution for humanitarian agencies to manage their recyclable materials and reduce landfill waste. By engaging with these existing local dealers and utilizing their expertise and truck capacity, instead of bypassing them and sending recyclables directly to companies, agencies can not only reduce costs but also contribute to the growth of the local recycling market.

It was observed that many refugees residing in the camps were already engaged in collecting recyclables, which they later sold to the local dealers in the host community. Building upon this existing involvement, the formal engagement of refugees as waste workers



within the camps would be beneficial. In addition to that, introducing bring-back schemes at camp distribution points, where refugees could exchange recyclables for essential items such as food items at e-voucher points or non-food items at other distribution points, would help to avoid child labor and enhanced the efficiency of the system.

Creating a parallel transportation system for recyclable materials would be less stable compared to leveraging the established network of local dealers. This approach ensures a more sustainable and long-term solution for managing recyclables. However, it was crucial to conduct initial research, such as mapping the existing local market, to avoid causing harm and identify the challenges faced by the dealers. This knowledge was instrumental in providing better support to the dealers and strengthening their capacity to handle recyclable materials effectively.

To formalize the scrap business and overcome bureaucratic obstacles, the dealers formed an association. This association obtained permission from the Bangladesh government, allowing them to legally enter the camps and collect recyclables from Material Recovery Facilities (MRFs) and other camp facilities. This formal engagement not only facilitated smoother operations but also established a legitimate framework for collaboration between the dealers and humanitarian agencies, which is reflected in refugee camps SWM Strategy.

To sum up, the collaboration between field-based practitioners and scrap dealers demonstrated that working in synergy with existing local networks and leveraging their expertise can lead to sustainable and cost-effective solutions. By recognizing the value of the local recycling market, humanitarian agencies can support livelihood opportunities and contribute to the overall well-being of both the refugee and host communities. This collaborative approach highlights the importance of understanding local contexts, conducting thorough research, and establishing formalized structures to ensure the success and sustainability of such initiatives.

The scalability of the project

This initiative can be replicated in many contexts and brings field-based practitioners an alternative when recycling companies are distant from humanitarian operations, or no waste collection services exist. To do so, practitioners must work to identify the Informal Recycling Sector (IRS), the role of its different actors, and the challenges at hand. To scale up the project, formal effective approach is to establish formal partnerships through organizations that are already supporting the IRS, as it is the case of Garbageman, if the IRS is not organized. These organizations can bridge the gap between the humanitarian operations and the distant recycling companies, facilitating smoother communication, coordination, and collaboration.

By working through these intermediary organizations, the project can tap into their existing networks, resources, and expertise, thereby enhancing its scalability. These organizations can provide support to the IRS in terms of training, capacity building, access to equipment, and market linkages. They can also serve as a liaison between the project and the distant recycling companies, facilitating the smooth flow of recyclables and ensuring that the IRS receives fair compensation for their efforts.

In addition, by comprehensively assessing the value chain, the project can identify potential areas of improvement and ensure that engagement with the IRS is conducted in a way that avoids harm and maximizes benefits.

Furthermore, the scalability of the project can be enhanced by leveraging the expertise and knowledge gained through the value chain analysis. This analysis helps identify areas where efficiencies can be improved, processes

streamlined, and bottlenecks addressed. By continuously monitoring and evaluating the value chain, the project can adapt and refine its strategies, leading to increased scalability and effectiveness over time.

This approach not only strengthens the project's scalability but also contributes to the overall growth and development of the local recycling sector. By formalizing the engagement with the IRS and providing them with the necessary support, the project creates a more sustainable and inclusive value chain. This, in turn, stimulates the local economy, creates job opportunities, and reduces the environmental impact of waste through increased recycling rates.

In summary, the scalability of the project in a context where recycling companies are distant from humanitarian operations or absence of waste collection systems relies on conducting a value chain analysis of recyclables. This analysis helps identify the role and challenges of the Informal Recycling Sector (IRS) and ensures that engagement with them is conducted in a way that avoids harm. By establishing formal partnerships with intermediary organizations already supporting the IRS, the project can effectively bridge the gap between the humanitarian operations and the distant recycling companies. Leveraging their networks and resources, the project can enhance scalability, stimulate the local recycling sector, and contribute to sustainable development.

Conclusions

In conclusion, the innovative approach of seeking support from the informal network to address waste management in Cox's Bazar District offers valuable lessons for other organizations, especially those operating in environmentally challenged countries. The [WREC Project](#), in collaboration with the [Joint Initiative \(JI\)](#) on Sustainable Humanitarian Packaging Waste Management has successfully developed Recycling and Waste Management Infrastructure mapping, including one specifically designed for Bangladesh⁶, to promote sustainable practices which could complement this initiative. Additionally, following the ongoing efforts of the government of Bangladesh to enforce a plastic ban since 2020, organizations like WFP are actively exploring alternative solutions such as an e-voucher program to assist in the transition toward phasing out 90% of single-use plastic (SUP) by 2026⁷.

For more information on the project or on waste management, please contact: global.WREC@wfp.org

⁶ Bangladesh waste management and recycling infrastructure [assessment](#).

⁷ Global Logistics Cluster – [Managing packaging waste sustainably](#) – Lessons from humanitarian organizations.