

# MODULE 6

## The role of private and informal sectors in waste recycling.

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"Promotion of BAT/BEP to reduce uPOPs releases from waste open burning in the participating African countries of SADC sub-region"

# TABLE OF CONTENTS

Recycling occupies a relevant role in the waste hierarchy.....	3
Be aware: recycling begins with segregated collection .....	3
Who are the actors of recycling?.....	3
<b>INFORMAL WORKERS</b> .....	<b>4</b>
<b>PRIVATE FORMAL ECONOMY</b> .....	<b>4</b>
Who are the informal workers? .....	4
Did you know? the contribution of the informal workers is significant .....	5
Informal workers are active in several phases of a non-effective swm system.....	6
Did you know that informal collectors are part of a larger recovery chain?.....	7
Social and legal policies must address the recognition of informal workers.....	7
The role and financial involvement of the private formal economy increases with the evolution of a swm system .....	8
Case study: kenya - nairobi: connecting informal waste pickers with the industry for reprocessing .....	9
Extended producer responsibility (epi) schemes.....	10

## RECYCLING OCCUPIES A RELEVANT ROLE IN THE WASTE HIERARCHY

Recycling - i.e., the recovery of materials from waste - is part of a larger system.

Efficient recycling becomes possible only when, within a well-developed Solid Waste Management (SWM) system, there is a chain of recovery operations and plants that:

1. Begins with the separation of waste in homogeneous materials of a high enough quality to be reprocessed into secondary materials.
2. Ends with the selling of these materials, for production of new goods, to a relatively stable market.

## BE AWARE: RECYCLING BEGINS WITH SEGREGATED COLLECTION

The chain of operations and plants that allows an efficient recycling begins with the segregated collection of selected waste fractions.

Collection's operations are so important that to increase recycling, the SWM legislation often define numerical targets (quantified objectives like "50%" for example) to be reached by the segregated collection.



The possibility of recycling selected waste fractions and adopting specific waste treatments depends on the organization of collection.

- ◆ Collection is not only performed for health protection but is the initial step of an effective SWM system.

## WHO ARE THE ACTORS OF RECYCLING?

The types of actors that will perform recycling are strictly related to the level of development reached by the solid waste management system.

## **Informal workers**

Where collection coverage is low, waste collection is poorly organized and when the recycling chain is not organized as part of a larger SWM system, a space is open for un-regulated recycling practices to be carried out.

In this case workers manually perform the separation of materials that then enters a recovery chain.

After collection, the separation of recyclables can be performed as an extra and private activity by workers that have a collection contract with a Local Administration.

## **Private formal economy**

- With respect to collection: the capability of the formal (either public or private) actors to provide services to all waste generators (household, commercial premises...) evolves with the national income and the ability to collect service fees.
- With respect to the recovery chain: the main constraint for the development of the recovery chain is the availability of funding for investing in the plants.

Formal actors from the private sector intervene when there is the possibility of return for the investments made in the recovery chain.

## **WHO ARE THE INFORMAL WORKERS?**

Informal 'collectors' and 'recyclers' range from private person collecting recyclables to middlemen gathering recyclables to organized traders of recyclables.

The informal economy is neither temporary nor residual but an essential part of waste collection and recycling in low and middle-income countries.

Most informal waste workers deal with municipal solid waste. But they also address specific waste streams, in particular electrical and electronic waste.

Due to the informal nature of their work, statistics on informal workers are limited, but in 2013, the International Labour Office estimated that only one fifth of workers in the waste management and recycling industry are in formal employment.

Although little solid data exists, a significant number of workers involved in recycling and waste management are women, often working at the lower end of the informal economy.

There is no universally accepted definition of the informal economy, but the following framework can be adopted:

The informal sector refers to employment and production that takes place in unincorporated or unregistered enterprises.

Informal employment refers to employment without social protection: own-account workers; contributing family workers, i.e., not covered by legal protection or social security; members of informal producers' cooperatives.

However, informality exists across a continuum of rights and regulations, such that informal workers may conform to regulatory requirements in some respects (e.g., paying daily fees), but not in others (e.g., operating from insecure space)<sup>1</sup>.

### **DID YOU KNOW? THE CONTRIBUTION OF THE INFORMAL WORKERS IS SIGNIFICANT**

Informal workers drive recycling activities when no or weak public policy is in place. Their contribution can reach up to 15-20%: they substitute for a lack of efficiency and effectiveness when SWM system do not work effectively.

Their role is essential in the initial steps of the development of a more effective SWM system, and their contribution should be carefully considered and incorporated in the development of the service provisions.

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<sup>1</sup> UN-HABITAT 2017 Prosperity for all Enhancing the informal economy through participatory slum upgrading.

## INFORMAL WORKERS ARE ACTIVE IN SEVERAL PHASES OF A NON-EFFECTIVE SWM SYSTEM

In a non-effective SWM system, informal workers could intervene in several stages:



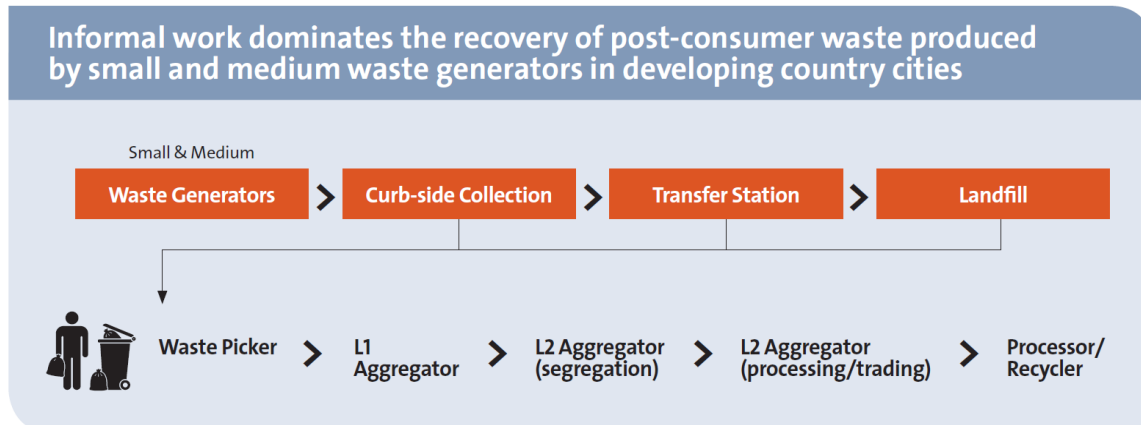
1. They collect waste from households / commercial / industrial premises where they perform the segregated collection of marketable recyclables.
2. At Transfer Stations and at non-sanitary landfills, they recover the more marketable waste fractions.
3. They can perform some form of non-standardized, industrial practice of recycling, mainly for plastics.

In non-sanitary landfills, informal recycling activities could receive a dedicated restricted area of the dumpsite, where sorting can be made easier and cleaner conditions can be guaranteed. Trucks should be instructed to offload the waste in that area only, where informal workers can be able to easily sort the recyclables.

The informal sector could be organized, registered, given an identification card. They should always receive Personal Protective Equipment for safer working conditions.

## DID YOU KNOW THAT INFORMAL COLLECTORS ARE PART OF A LARGER RECOVERY CHAIN?

Informal recyclers are the first link of a longer recovery chain.



They usually do not have access to the market where recyclables are traded, either nationally or via export and they thus bring the recyclables to 'dealers' who aggregate and redistribute recyclables (called L1, L2 ...in the figure). There is also a chain of 'dealers', who can be enterprise of different sizes and bargaining power; they can themselves be informal workers or small/medium enterprises with a more global connection to markets.

## SOCIAL AND LEGAL POLICIES MUST ADDRESS THE RECOGNITION OF INFORMAL WORKERS

Despite these environmental and social contributions, waste pickers are often not legally recognized as workers. They suffer from poor working conditions and lack social protection. The following are among the major difficulties waste pickers from around the world face:

- Hazardous working environment and lack of occupational safety and health. Those operating in open dumps or landfills confront particular risks of injuries or even loss of life, as they can be run over by trucks or become victims of surface subsidence, slides and fires
- Low earnings and weak position vis-à-vis middlemen: they have a weak bargaining position vis-à-vis middlemen.
- Exclusion from municipal waste management systems: increasingly, waste pickers are being displaced from dumpsites or excluded from bidding and contract processes of SWM due to the adoption of capital-intensive technologies (e.g. recovery plants and new disposal systems) and the privatization and outsourcing of SWM to relatively-large private companies.
- Social stigma and discrimination: waste pickers often belong to socially disadvantaged and vulnerable groups (e.g., migrants and refugees, unemployed, women, children, persons with disabilities, and ethnic and religious minorities).

In response to these challenges, waste pickers have set up cooperatives and other social and solidarity economy organizations, especially in Latin America and South Asia.

A core function of the informal sector's cooperatives and other organizations is to formalize the role of waste pickers as public waste service providers.

## **THE ROLE AND FINANCIAL INVOLVEMENT OF THE PRIVATE FORMAL ECONOMY INCREASES WITH THE EVOLUTION OF A SWM SYSTEM**

Policymakers need to realize that an effective recovery chain is an industrial enterprise.

With increasing national income, the structure of the SWM system begins to change à the role of the formal sector in collection and management of plants becomes more relevant.

The recovery of materials from waste is an industrial sector which has been growing worldwide in the last three decades; the substitution of materials recovered from waste in production cycles results in the saving of raw resources and energy, thus reducing emissions, use of natural resources and environmental impacts.

The chain begins when waste is collected in segregated fractions and then transported to cleaning and sorting plants.

These industrial sorting plants vary from completely manual to semi-automated, but the presence of some manual workers, separating the waste is always essential in guaranteeing quality.

Homogeneous recyclable fractions are then transported to reprocessing plants. Reprocessing plants cover an ample range of production: glasswork, paper mills, aluminium, and scrap iron foundries.

When reprocessing plants are not operating, the chain ends with export.



The creation of an industrial chain for the recovery from waste requires investments and the ability to trade recyclables within a stable market.





For private actors to intervene there must be a clear and stable institutional and legislative framework and continuity must be ensured beyond political terms of office:

- ✓ the legislative definitions are clear
- ✓ the functions and responsibilities of each institutional tier are well defined and do not superimpose
- ✓ SWM objectives and targets are defined
- ✓ decisions on the building of facilities and plants, incentives and taxes are stable in the medium term, ensuring the return for investment in infrastructures for both public and private actors
- ✓ land is made available for plants
- ✓ time for permit release is short and kept within the timing set by the legislation.

### **CASE STUDY: KENYA - NAIROBI: CONNECTING INFORMAL WASTE PICKERS WITH THE INDUSTRY FOR REPROCESSING**

In Nairobi, a private, for-profit company established 2014, generates shredded and hot washed flakes from post-consumer polyethylene, polypropylene, and PET in different colors, with the plastics flakes being sold mainly to local plastic converters.

The basic idea is to abandon the traditional value chain of informal recycling based on multiple middlemen and replace it by a direct fair trade-like relation between the individual waste picker and the recycler (formal economy).

The company set up trading points throughout Nairobi where waste pickers sell collected plastic wastes to the company's buying clerks. The trading price is fixed, not subject to market price volatility.

Every picker is assigned a personal supplier profile in the company's mobile application that records and analyzes supplier productivity and reliability. Pickers trading regularly with MGA are eligible for a supplier loyalty program that grants a premium price in exchange for meeting monthly supply targets.

Interaction with company's agents allows for training of the waste pickers on which types of plastic to collect, while the company maintains a relatively steady supply of pre-sorted plastics fractions.

## **EXTENDED PRODUCER RESPONSIBILITY (EPR) SCHEMES**

EPR schemes have been established by Governments with a strong impulse since 2001, with the aim of making producers responsible - both from the organizational and the financial perspectives - for the environmental impacts of their products along the whole product chain, from design to the post-consumer stage.

A wide international experience shows that to involve the relevant private actors in the management of selected waste streams, Extended Producer Responsibility (EPR) Schemes need to be made mandatory by the legislation.

Several choices need to be made when setting the regulatory framework for the implementation of EPR schemes, such as:

- ✓ what actors the national regulation must involve and give specific responsibilities to
- ✓ is EPR going to remain voluntary or is it going to be made mandatory
- ✓ what are the types of waste that the EPR schemes must cover?
- ✓ what are the numerical targets to be given for the recovery of each type of waste?
- ✓ what are the selected methods for the recuperation of the waste: are take-back schemes from shops going to be made mandatory; how are the different types of waste going to be collected?
- ✓ is the legislation going to ask producers / importers to be organized in Responsible Producers organizations?
- ✓ What is the amount for the fees to be collected from producers/importers and what is the amount to be given to local administrations for participating in the segregated collection scheme?

Setting up an EPR scheme is always a complex legislative and institutional process: many tiers of government and administrations are involved; many actors of the private sectors must financially contribute to the whole life cycle of their products.



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