

Tool 5 – Summary – Recyclable Waste Management – Assessment and Improvement

Recyclable waste management is an important component of SWM systems. Whenever possible, it is important to recover as many materials as possible to limit the need for disposal and increase material circularity. Recovering recyclables can also promote livelihoods by creating jobs and generating income.

Description

Recyclable waste management is the process of collecting, sorting, and reprocessing non-biodegradable materials, such as paper, glass, and plastics, for manufacturing new products or for reuse, thereby reducing waste and conserving resources. Recyclables recovery can happen throughout the SWM service chain. Ideally, recyclables are segregated at source, as this is an essential aspect for efficient separate collection and further management of clean recyclable fractions. The role of collecting recyclables can be taken on by both the service provider and the informal sector. The informal sector typically plays a crucial role in this value chain, spanning from the collection and gathering of recyclable materials to their sale to the recycling market. Including the informal sector and supporting it is recommended. Members of the informal sector are often the most vulnerable individuals, relying on recyclables for their subsistence. For the recovery of recyclables, it is essential to establish connections with existing recovery/recycling markets. Another option is to set up small-scale treatment and transformation of some recyclables, such as plastics, which can be used to produce useful recycled products. For possible technology options and guidance on sales of recyclables to markets, as well as small-scale treatment and transformation options, consult the [Compendium – Treatment and Recycling \(pp. 72-79, 90-95\)](#) and [Use and Disposal \(pp. 102-103\)](#).

The assessment of recyclable waste management provides an initial overview of the current system, allowing for evaluation of the infrastructure, design, and operations, as well as key service planning elements and governance. The specific case of on-site plastic treatment can also be evaluated (see **Tool 5.2, Table T5.2 C**). For each element of the evaluation, proposed improvement measures are provided for consideration and implementation when relevant.

Steps for the assessment and improvement of recyclable waste management:

1. Plan and prepare the assessment (1-2 days)

- a. Engage with key stakeholders who can provide information, contribute to the assessment, and support implementation during the assessment and improvement process, as well as beyond. These stakeholders may include current service providers, local government representatives, informal waste pickers, planners, camp managers, and WASH promoters. Empowering stakeholders from the outset ensures their ownership of the process, strengthens local capacity, and facilitates a smoother transition when humanitarian actors phase out their operations.
- b. Gather any secondary information on the recyclables recovery system in the area of interest.
- c. Prepare yourself and key staff who will conduct the assessment using the proposed additional resources below.

2. Gain an overview of the current recyclable waste management system (1 day)

- a. Use **Tool 5.1 – Overview of Recyclable Waste Management** to gain an overview of the current recyclables recovery system.

3. Evaluate the recyclable waste management system (1-3 days)

- a. Do field observations of the different elements of the recyclable waste management chain.
- b. Use **Tool 5.2 – Evaluation and Improvement of Recyclable Waste Management** to evaluate the recyclables recovery system: use **Table T 5.2 A** to evaluate the infrastructure, design, and operations for recyclable waste management. Along with these physical aspects, **Table T 5.2 B** guides you to evaluate key service planning elements and governance. Finally, **Table T 5.2 C** is specific to the case of on-site plastic processing and treatment. With each element to evaluate, the tables provide actionable possible improvements that you should consider.
- c. Look at the options for possible improvement in the **Tool 5.2 – Evaluation and Improvement of Recyclable Waste Management**.

4. Analyse and process the evaluation's results (1-2 days)

- a. Evaluate the feasibility of implementing improvement measures with the available resources you have. Use **Tool 8 – Cost Evaluation**.
- b. Prepare a list of the key improvements to implement.

5. Plan for implementation (2-3 days)

- a. Prepare the details of the improvements you have selected and allocate resources.
- b. Plan a timeline for the implementation.
- c. Involve key stakeholders and validate your plan.

6. Implement improvements (over weeks or months with follow-up monitoring and adjustments)

- a. Train relevant staff on new operations and measures to be implemented.
- b. Implement the changes in the recyclables recovery system.
- c. Collect data and monitor the changes made, adjust if necessary.
- d. Consider redoing an assessment of the recyclable waste management in the future for further improvements.

Time requirements are a rough indication and will depend on the complexity of your system.



Resources

Tool 5.1 – Overview of Recyclable Waste Management

Tool 5.2 – Evaluation and Improvement of Recyclable Waste Management

Tool 8 – Cost Evaluation

The assessment and improvement of recyclable waste management considers the entire SWM service chain and connects to the following most relevant chapters of the Compendium:

- [Waste Separation \(pp. 34-37\)](#)
- [Storage \(pp. 42-53\)](#)
- [Collection and Transport \(pp. 54-71\)](#)
- [Treatment and Recycling \(pp. 72-79\)](#)
 - o [T.6 Plastic Recycling \(pp. 90-91\)](#)
 - o [T.7 Plastic Upcycling \(pp. 92-93\)](#)
 - o [T.6 Plastic Downcycling \(pp. 94-95\)](#)
- [U.1 Sale of Recyclable Materials \(pp. 102-103\)](#)



Additional resources

Ewers, L., Gensch, R., Hayman, S., Krähenbühl, M., Kucharski, M., Machado, A., Mertenat, A., Salem, F., Tosi Robinson, D., Ubbiali, S., Zurbrügg, C. (2025): Compendium of Solid Waste Management in Humanitarian Contexts. German WASH Network (GWN), Swiss Federal Institute of Aquatic Science and Technology (Eawag), Global WASH Cluster (GWC), International Federation of the Red Cross and Red Crescent Societies (IFRC), Sustainable Sanitation Alliance (SuSanA). Berlin. Germany. ISBN: 978-3-906484-81-5. [PDF](#)

GIZ (2011): Recovering resources, creating opportunities – Integrating the informal sector into solid waste management. [PDF](#)

Gensch, R., Ferron, S., Sandison, P., Bindel, A., Coerver, A., Cottafavi, L., Deniel, K., Ewers, L., Friedrich, M., Harter, M., Hoffmann, O., Lloyd, A., Machado, A., Shrinivasan, S., Vallis, S. (2022): Compendium of Hygiene Promotion in Emergencies. German WASH Network (GWN), Global WASH Cluster (GWC), Sustainable Sanitation Alliance (SuSanA) and International Federation of the Red Cross and Red Crescent Societies (IFRC). Berlin. Germany. [PDF](#). Especially: [Social and Behaviour Change](#)