

Tool 3 – Summary – Disposal – Assessment and Improvement

The safe and controlled disposal of waste is essential to ensure public health and environmental protection. The assessment of disposal sites allows for evaluating their level of control and determining potential improvements through mitigation measures to contain the impacts of the waste. This tool heavily relies on the publication [Guidelines for the Safe Disposal of Solid Waste in Humanitarian Contexts \(Tosi Robinson et al., 2024\) – GTH disposal guidelines](#) – which should be used alongside the resources provided.

Description

The role of disposal sites is to safely contain waste and minimise impacts on public health and the environment. Site assessments help determine the level of control in place and identify potential mitigation measures. Wherever feasible, such measures should be implemented to ensure at least a basic level of control. In cases where sites are poorly located and mitigation is not feasible, they should be closed, and a new, more suitable site should be established. Disposal sites should be appropriately designed and operated to manage waste impacts and reduce risks. The focus of this tool is on sites regularly used by the SWM service, while uncontrolled dumpsites created due to service gaps should be considered hotspots (see **HAWAI guidelines Step 1: Hotspot identification and prioritisation**). These hotspots should be closed whenever possible and cleaned up if they present immediate or critical health or environmental risks.

Minimum requirements at disposal sites include:

- Waste disposal is organised through a filling plan, including a waste placement plan
- Disposal of waste at a designated location called the tipping face
- Waste should be compacted and covered with inert material periodically
- The site should be fenced and the access supervised by staff
- Staff and equipment are required for handling the waste, cover material and other operations
- Rainwater is carefully managed to prevent it from entering the site
- No smoke nor fire should be present at the site
- Workers are protected by personal protective equipment (PPE)

Additional protection measures going beyond minimum requirements include:

- Containment of leachate in ponds and leachate recirculation to the disposal site
- Gas evacuation through exhaust chimneys constructed in the disposal site.

Steps for the assessment and improvement of disposal:

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.
- b. Gather any secondary information on the SWM 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 waste disposal system (1 day)

- a. Use **Tool 3.1 – Overview of Disposal** to gain an overview of the current disposal system. Use **Table 3.1 A** for each disposal site to obtain an overview.

3. Evaluate the disposal sites (1-2 days)

- a. Visit all disposal sites for the evaluation.
- b. Use **Tool 3.2 – Evaluation and Improvement of Disposal** to evaluate the disposal sites: use **Table T 3.2 A** to evaluate the infrastructure, design, and operations at each disposal site. Along with these physical aspects, **Table T 3.2 B** guides you to evaluate key service planning elements and governance.

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

- a. Decide if the location of current disposal sites is adequate or identify a new disposal site location (**Tool 3.2 2 – Evaluation and Improvement of Disposal** and **GTH disposal guidelines**).
- b. Evaluate the expected lifetime of current or new disposal sites (**Tool 3.2 2 – Evaluation and Improvement of Disposal** and **GTH disposal guidelines**).
- c. Identify potential mitigation measures to be implemented (**Tool 3.2 2 – Evaluation and Improvement of Disposal** and **GTH disposal guidelines**).
- d. Evaluate the feasibility of implementing mitigation measures with the available resources you have. Use **Tool 8 – Cost Evaluation**.
- e. 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.

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

- a. Train relevant staff on new operations and measures to be implemented.
- b. Implement the mitigation measures at the disposal sites.
- c. Collect data and monitor the changes made, adjust if necessary.
- d. Consider redoing an assessment of the disposal site in the future for further improvements.

Time requirements are a rough indication and will depend on the complexity of your system and the number of disposal sites to assess (if multiple).

Resources

Tool 3.1 – Overview of Disposal

Tool 3.2 – Evaluation and Improvement of Disposal

Tool 8 – Cost Evaluation

The assessment and improvement of disposal directly links to the following chapter of the Compendium: **U.9 Controlled Disposal Site/Landfill (pp. 118-119)**

Additional resources

Dorian Tosi Robinson, Sara Ubbiali, Adeline Mertenat and Christian Zurbrügg (2024). *Guidelines for the Safe Disposal of Solid Waste in Humanitarian Contexts*. First edition. Geneva Technical Hub, UNHCR, Eawag, Geneva, Switzerland. [PDF](#)

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](#)

Eawag – Sandec. *Municipal Solid Waste Management online course. Week 1: Upgrade your disposal site.* [LINK](#)