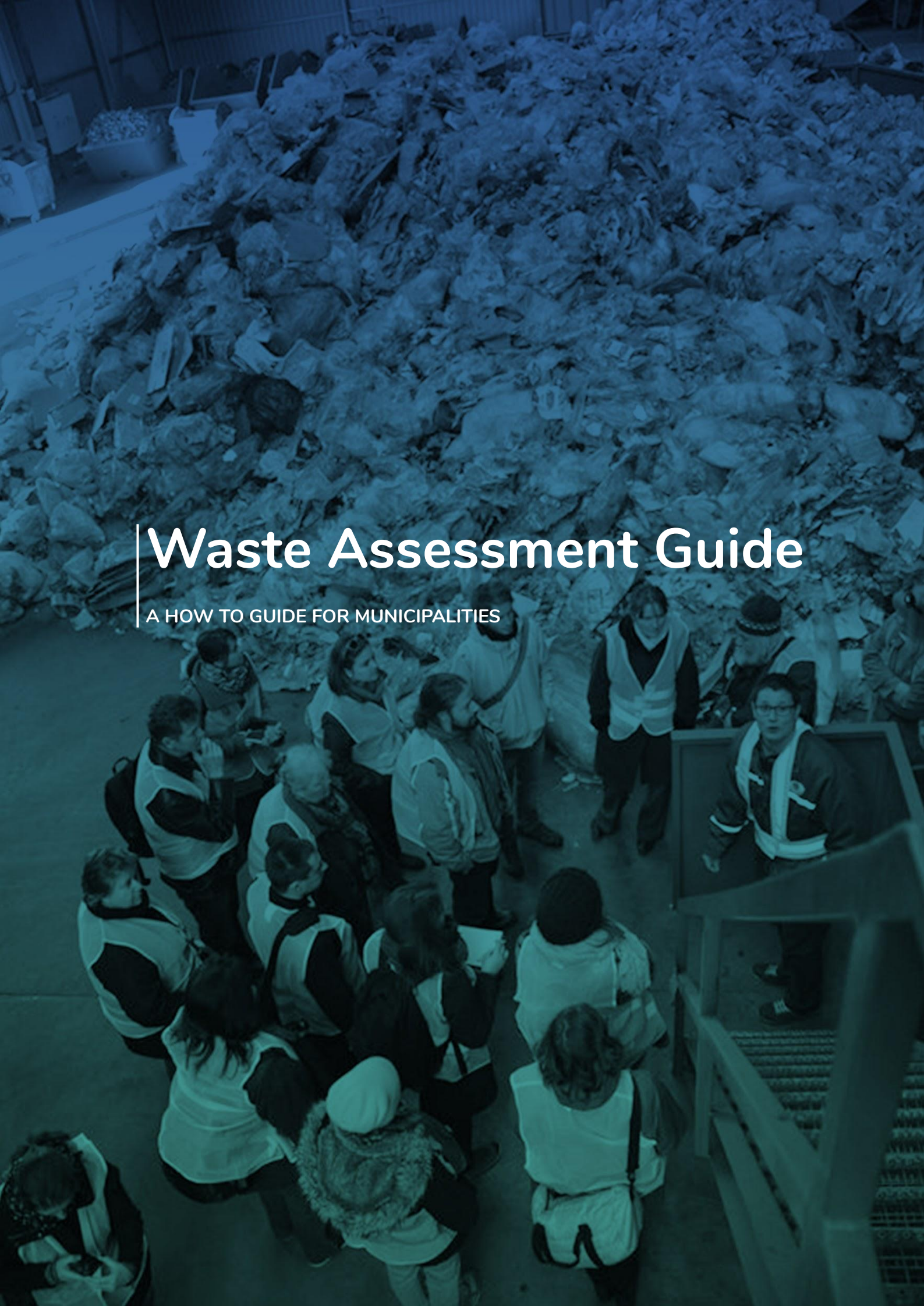

Waste Assessment Guide

A HOW TO GUIDE FOR MUNICIPALITIES

Defining what a waste assessment is for cities and communities

WHAT IS EXACTLY A WASTE ASSESSMENT?

A household waste assessment is a methodical and robust process of collecting & analysing residual waste in your local area.

Waste assessments help cities & communities determine the volume and types of waste generated by the households within the municipality. By analysing the residual waste, effective policies can be created to increase recycling and reduce waste generation.

The process can be done in municipalities where either separate collection of waste does or does not exist already.

This guide focuses on households, but the same process can be replicated for schools, hospitals and businesses within your municipality to help you understand the full picture of the waste that is being generated in your local area.

WHY ARE WASTE ASSESSMENTS IMPORTANT?

The process of a waste assessment provides an excellent opportunity to gather important data on the amount and types of waste generated in your community.

This information can then be used to inform your waste management & prevention policies:

- The size and design of local recycling / material recovery facilities.
- How to best manage organic waste and encourage composting.
- How often waste needs to be collected AND by what methods.

After a waste assessment, it is recommended that households keep the separate bins that they have used during the process, if they didn't already, to ensure that the momentum and knowledge gained from participating in the assessment remains and is built on.

Conducting a waste assessment can help bring a community together to help tackle waste & pollution issues. Conducting an assessment provides an opportunity to engage and educate the community on their waste generation, helping to visualise the problem and encourage greater actions to reduce & prevent waste.

HOW DOES THIS CONNECT TO YOU ZERO WASTE PLAN?

Conducting a waste assessment for your city is an important first step towards adopting your zero waste municipality plan, helping to analyse and understand the current levels of waste generation to which future policies can be based upon that ensures as much material and resource is recovered as possible.

A waste assessment can help the design of your zero waste plan by answering the following:

- What non-recoverable materials are most common and how can these be replaced with reusable, repairable or recyclable materials.

- How to design your separate collection system so that it encourages the least amount of residual waste generation as possible.

- What support residents need & therefore should receive to help them reduce their waste generation.

- How much budget to allocate to your zero waste plan and the level of income you can expect to generate from this.

The steps for conducting a waste assessment in your municipality

1 PREPARATION

- First step is to identify the households you want to participate in the WA - key factors to consider are the location and local context. Try to ensure a representative mix of households that have different size families and income levels to ensure your data creates an accurate picture of your municipality.
- Ideally, you want to aim for 10% of your local population, if possible.
- Identify and agree upon a location for the waste sorting activity. Ideally this is somewhere that is covered and has plenty of floor space.
- Form a team of officials or volunteers from the municipality, waste collection authorities & local NGOs who can help implement the assessment.
- Select a time frame for each step of the WA - E.G informing participating households can take 1 day, waste collection should be 8 days & then the waste assessment can also be done in 1 day.
- Agree on the plan with the local waste collection authorities for how you will dispose of the waste that has been collected once the assessment has been done.

2 INFORMING THE PARTICIPATING HOUSEHOLDS

- Once you have identified the households you want to participate, you will need to get their agreement for participating in the waste assessment. This should be done via a door-to-door service, educating residents on the importance and benefits of their participation in this activity whilst getting their format agreement via a form or small contract.

- You will need to ensure you provide clear instructions to participants on what each household is required to do during each phase of the assessment, with clear contact details should households be unsure or require further information.

- If not already provided or available, you will need to provide each household with the adequate tools & bins so that they can collect and separate their waste effectively for this activity, as well as information on what time the collection will be made each day.

- Further public awareness with the broader community should be done to raise the profile of this initiative, ahead of a potential future community-wide zero waste plan.

3 WASTE COLLECTION

- Set an agreed timetable for daily waste collection (8 days, ideally).

- Create a clear plan of action that has been agreed with the local waste collection authority. This will involve the separate collection of waste & recyclable materials from participating households daily or every other day. The residual waste is then left at the designated storage location to be weighed and assessed.

- Each day's collection is weighed, marked and then recorded. It's highly important to mark each day's collection so that a daily waste generation amount can be accurately calculated.

- The first day's collection is weighed but not included in the audit, as this may contain waste generated from previous days outside of the testing phase. Further doorstep education & orientation can be done on the first day, if residents remain unsure on the process.

- To decide whether bins are collected from participating households on final day or left with residents to encourage continued separation of waste.

Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
Orientation of households	Collection and weighing of segregated waste at households - Follow-up orientation if necessary - Collected waste is brought to temporary storage facility	Collection and weighing of segregated waste at households - Collected waste is brought to temporary storage facility	Collection and weighing of segregated waste at households - Collected waste is brought to temporary storage facility	Collection and weighing of segregated waste at households - Collected waste is brought to temporary storage facility	Collection and weighing of segregated waste at households - Collected waste is brought to temporary storage facility
	Day 6	**Day 7**	**Day 8**	**Day 9**	
	Collection and weighing of segregated waste at households - Collected waste is brought to temporary storage facility Day	Collection and weighing of segregated waste at households - Collected waste is brought to temporary storage facility	Collection and weighing of segregated waste at households - Collected waste, along with all bins, sacks, and containers, is brought to temporary storage facility	Collected waste from the last 8 days in the temporary storage facility is brought to sorting area for the Waste Assessment and Brand Audit	

Source: GAIA & Mother Earth Foundation's 2019 Waste Assessment & Brand Audit methodology.

4

ASSESSMENT AND SORTING OF LOCAL WASTE

The assessment and sorting of the residual waste is to be done the day after the final collection day.
Sorting of the waste should be segregated into primary and secondary categories, but broadly speaking there is 5 main types of waste that you will need to sort and record from the residual waste:

1. **Biodegradable Waste** (Kitchen/food/garden waste) - this kind of waste can immediately be diverted from landfill to composting facilities. An assessment of this category of waste will also help inform the size and methodology of your municipality's composting facilities.

2. **Recyclable Waste** - this can be measured to help gauge how much income a municipality would make from selling these materials to waste collectors & recycling companies.

3. **Residual Waste** - refers to the waste left that currently you do not have the technical capabilities to recycle in your municipality. An analysis of this will help inform what recycling facilities could be invested in to reduce residual waste sent to landfill, as well as exposing opportunities for new thinking on the re-design and reuse of many products.

4. **Residual-Special Waste** - refers specifically to disposable hygienic products such as diapers and sanitary pads. While these discards are bound for landfills, communities are encouraged to promote reusable solutions or set up a collection and disposal system for special residuals as part of the waste management plan.

5. **Toxic and Hazardous Waste** - often the lowest amount of waste in a community but hardest and riskiest to manage, therefore assessing the composition and volume of these materials is critical to help inform future treatment and disposal options.

Within these 5 types of waste, there are several primary categories that will be important for you to separately sort during this process:

1. Biodegradable Waste **-** kitchen waste, garden waste, other organics.

2. Recyclable Waste - metal, paper, carton, glass, plastics #1,2,4,5,6, (PET, HDPE, LDPE, Polypropylene & Polystyrene).

3. Residual Waste - textiles, ceramics, plastic packaging and more.

4. Special Waste - diapers, sanitary pads, cotton buds, tissues.

5. Hazardous Waste - light bulbs, electronic appliances & batteries, medicines.

Underneath each primary category are secondary categories which help provide your municipality further level of analysis & assessment of the local waste generated.

An example of a comprehensive waste assessment form which you could use to record the data from this process can be found here.

At your waste sorting and assessment location, the process to follow should resemble something like the below:

Key part: Clearly separated and labelled waste is then weighed. This is where you will be able to collect data and assess which materials & categories of waste your municipality is generated the most / least.

Visit the Zero Waste Europe and Zero Waste Cities websites to find out more information about zero waste and how to implement successful waste prevention & reduction policies at the local level.

GAIA Asia-Pacific & The Mother Earth Foundation's Cities Waste Assessment & Brand Audit toolkit (designed for Indonesian context but replicable for all)

Break Free From Plastic's Brand Audit Toolkit (focus on Plastic and for citizens rather than municipalities, but still a helpful resource).

Zero Waste Cities

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