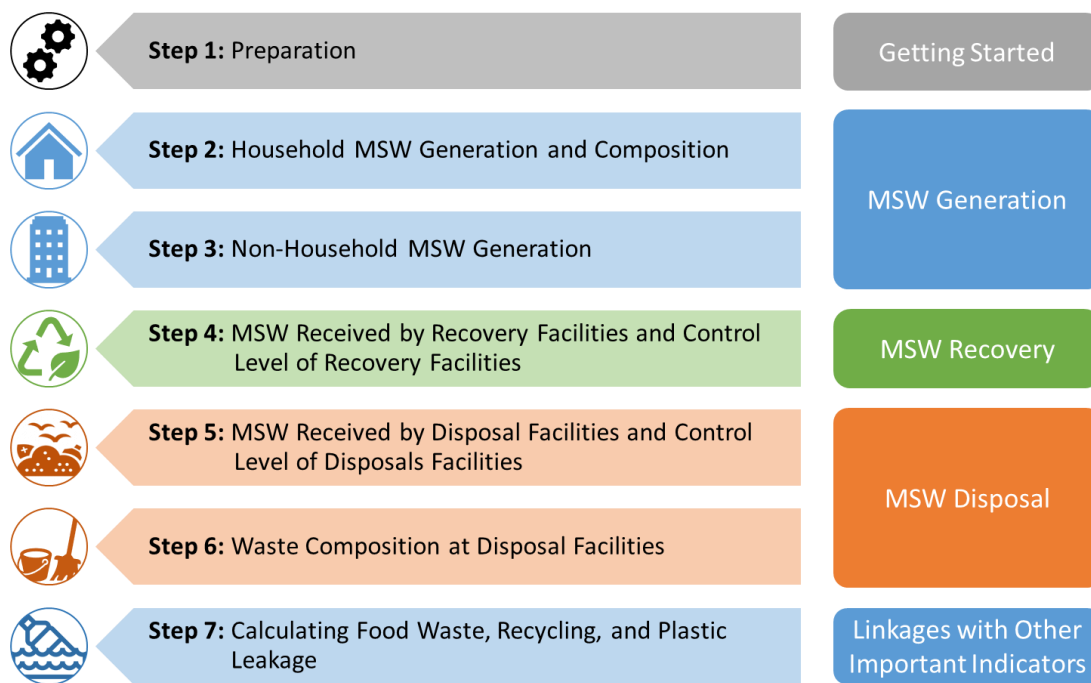


Brief description of Waste Wise Cities Tool

The **Waste Wise Cities Tool (WaCT)** supports cities and countries in establishing better waste and resource management strategies, creating business and livelihood opportunities, and transiting towards a circular economy. Globally basic data on municipal solid waste (MSW) generation and management is lacking, especially in low- and middle-income settings. This lack of data hinders the development of management strategies and investments in infrastructure, leading in many countries to insufficient or absent MSW management services. Poor MSW collection and management pose severe threats to public health and environment, by polluting air, soil and waterbodies. Mismanaged waste is also the main contributor to marine litter.

The WaCT, which is based on SDG indicator 11.6.1¹ parameters, consists of 7 steps that guide cities to:

- collect data on MSW generated, collected, and managed in controlled facilities, establishing a baseline;
- identify the MSW recovery chain and its actors, as well as check the environmental control level of waste management facilities;
- measure plastic leakage from MSW management systems;
- develop a Waste Flow Diagram (WFD) – waste flows and plastic leakage maps;
- identify infrastructure gaps in MSW management system;
- engage all waste chain stakeholders, from waste pickers, to recycling and collection companies, and in a participatory approach identify key intervention areas.



¹ Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated, by the city.

In the last step linkages with other SDG indicators are elaborated and an assessment using a Waste Flow Diagram (WFD) is introduced. The WFD is a separate but complementary methodology to the Waste Wise Cities Tool. It uses rapid and observation-based assessment for mapping waste flows and quantifying plastic leakage from MSW management².

The WaCT addresses also the lack of internationally harmonized concepts, definitions and methodologies that leads to incomparability of data and overlapping of concepts, while supporting cities and countries to report on their progress towards achieving the SDGs.

The time required for its application ranges between 2-3 weeks and necessitates a team of 2-3 MSW experts as well as at least 20 helpers (in mega cities 30 helpers). The figures below are example of outcomes of the WaCT application in Nairobi (Kenya) and plastic WFD generation.

What the Waste Wise Cities Tool can achieve:

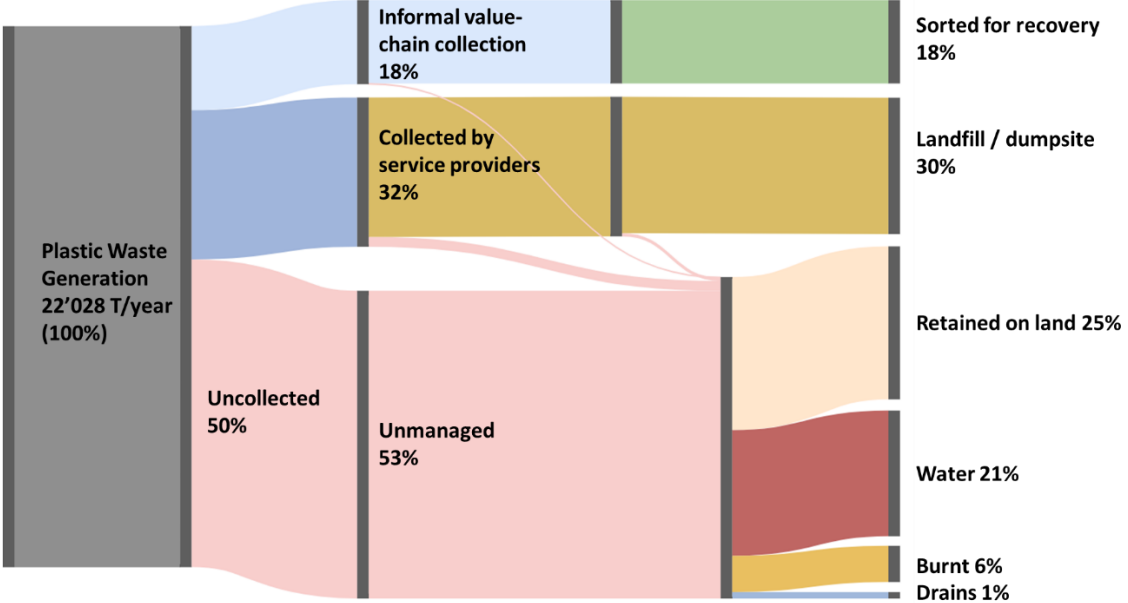
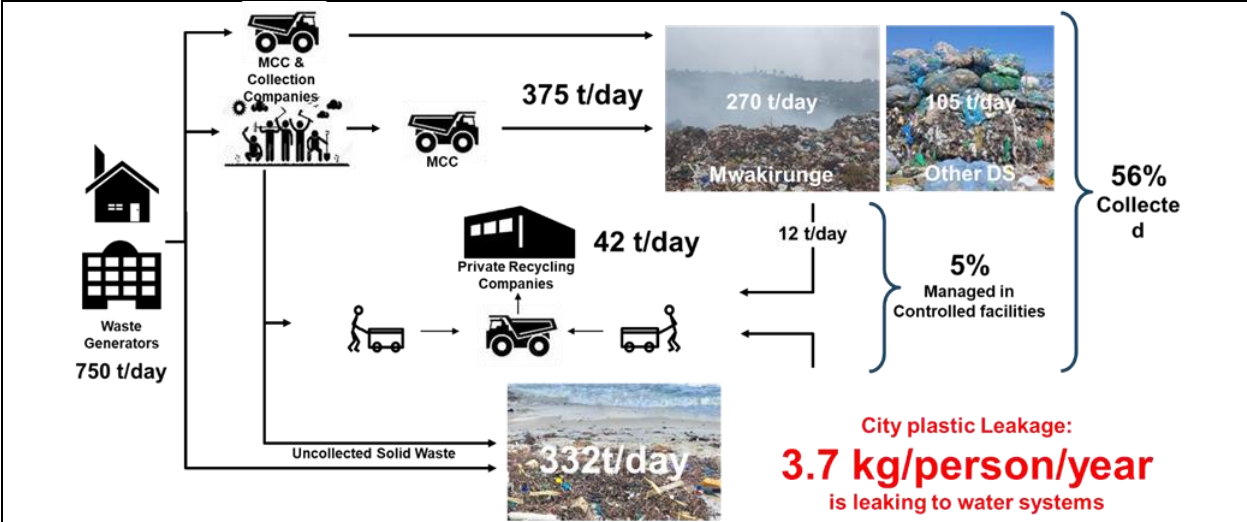
The *Waste Wise Cities Tool* has been field-tested in Nairobi (Kenya), Mombasa (Kenya) and Mahé Island (Seychelles). It has been developed in parallel with the Waste Flow Diagram, a tool which enables estimation of plastic waste emissions to the environment.

These assessments were followed by local stakeholders' workshops, helping the cities to identify key intervention areas and service/infrastructure investment gaps. Workshop attendees included stakeholders from the waste management chain as well as civil society: local government officials, private recycling and collection companies, informal waste pickers, representatives of manufacturers and residents, and many more.

The first figure below depicts the results from the SDG 11.6.1 assessment in Mombasa, a Kenyan coastal city of 1.2 million inhabitants. Results show that about 750 t/day of MSW is generated, of which 56% is collected and 5% of that is managed in controlled facilities. Around 330 t/day remain uncollected.

Based on this data and using the WFD plastic leakage is estimated to be 3.7 kg per person/year. The second figure below breaks down and categorises the sources and pathways of plastic leakage, presented using a Sankey diagram that can be generated from the WFD tool.

² GIZ, University of Leeds, Eawag-Sandec, Wasteaware (2020). User Manual: Waste Flow Diagram (WFD): A rapid assessment tool for mapping waste flows and quantifying plastic leakage. Version 1.0. Principal Investigator: Velis C.A. Research team: Cottom J., Zabaleta I., Zurbruegg C., Stretz J. and Blume S. Eschborn, Germany. Obtain from: <http://plasticpollution.leeds.ac.uk>



Following a city assessment using the WaCT and WFD, a participatory planning workshop to identify future strategies and priority investments can be held inviting local waste management stakeholders. In the case of Mombasa, a local stakeholder workshop was held which resulted in the identification of key services and infrastructure gaps and strategizing for potential future investments.

