

Sustainable Waste Management

From Dumpsites to Circular Economy:
Pathways for Sustainable Waste Management



Photo: Alfonso Navarro on Unsplash

Solid waste management plays a decisive role in tackling the triple planetary crisis of climate change, biodiversity loss, and pollution. Poorly managed waste drives emissions, degrades ecosystems, creates significant health risks and disproportionately affects vulnerable communities. By advancing circular, low-pollution waste systems, development cooperation can accelerate climate action, protect nature, improve public health and support a just green transition that benefits all.

This paper provides Sida staff and partners with an overview of key challenges, risks and entry points for engagement in the waste sector, with a focus on

advancing from today's often mismanaged waste systems towards circular and sustainable solutions.

The focus is on municipal solid waste¹, which, although representing a relatively small share of total waste volumes, is primarily a public sector responsibility. Municipalities play a pivotal role in planning, financing and providing waste management services. Municipal solid waste reflects patterns of production and consumption and has direct implications for public health, environmental quality and livelihoods, particularly for people living in poverty. Waste management also contributes to the achievement of several Sustainable Development Goals, particularly those related to health (SDG 3), sustainable cities (SDG 11), responsible consumption and production (SDG 12), and climate

¹ Other waste categories, such as construction, demolitions, mining and industrial wastes, often constitute the larger portions of total waste volumes. However, the principles presented in this brief are applicable in virtually all sectors.

action (SDG 13), as well as goals related to ecosystems and natural resources (SDG 14, 15), and sustainable food systems (SDG 2).² **Waste management is about safeguarding public health, sanitation and environmental quality.**

A HIGHLY UNEQUAL SITUATION

According to recent assessments, global municipal solid waste generation is rising faster than previously projected, driven by urbanisation, population growth and rising consumption, particularly in rapidly growing urban areas. The World Bank estimates that 2.56 billion tonnes of municipal solid waste were generated in 2022, and that this could increase to 3.86 billion tonnes by 2050 under a business-as-usual scenario. **While high-income countries generate the most waste per capita, the fastest growth is projected in low-income countries, particularly in Sub-Saharan Africa and South Asia, where waste systems are often underdeveloped.**³

Without improvements in waste management systems, environmental, social and economic costs are expected to increase substantially.⁴ The challenge is not only how waste is treated at the end of its life, but how materials are produced, consumed, reused and kept in circulation **as part of a broader transition towards a circular economy.**⁵

Access to adequate waste management services remains highly unequal. According to the World Bank, waste collection rates⁶ are close to universal in high-income countries, while only around 28 per cent of waste is collected in low-income countries. Municipal collection rates also vary between regions, with South Asia and Sub-Saharan Africa having the lowest collection rates of all the regions. Globally, around 30 per cent of municipal solid waste is either openly dumped or remains uncollected. As a result, large volumes of waste are openly dumped, burned or otherwise mismanaged, leading to significant risks for public health, air and water quality, ecosystems and local economies. **These waste service gaps are particularly acute in low-income countries and rapidly growing regions, where waste volumes are increasing faster than collection and treatment systems can expand.**⁷



Kenya/Dandora: Many open landfill sites expose nearby communities and informal waste workers to pollution, health hazards and unsafe working conditions. Photo: Ulrika Åkesson/Sida

Disparities based on gender and socioeconomic status further shape exposure to waste-related risks. Marginalised communities are more likely to live near dumpsites or in areas with inadequate waste services, increasing their exposure to pollution and associated health hazards. **In low- and middle-income countries, waste management and recycling support the livelihoods of an estimated 18 million urban waste workers globally, with informal workers playing a central role in waste collection, sorting and material recovery.**⁸ Informal waste pickers, many of whom are women and sometimes children, play an essential role in waste management. However, they often work in unsafe and poorly regulated conditions, face exploitation, and have limited access to social protection and formal markets.⁹

Improved waste management is therefore not only an environmental necessity but also a critical public health intervention. Inadequate waste collection and disposal contribute to the spread of waterborne diseases, respiratory illnesses and exposure to hazardous substances, particularly in low-income and informal settlements.¹⁰ Addressing waste management can reduce these risks, improve health outcomes and strengthen resilience among vulnerable populations.

SUSTAINABLE WASTE MANAGEMENT AS A CLIMATE SOLUTION

With the right system design and policy frameworks, waste can increasingly be managed as a resource rather than a burden.

2 United Nations Environment Programme (2024). Global Waste Management Outlook 2024; UN SDG Action Article: Closing the loop 2024, 11 July 2024.

3 World Bank. (2026) What a Waste 3.0.

4 World Bank (2026), What a Waste 3.0; UNEP's Global Waste Management Outlook 2024.

5 European Environment Agency (EEA). 2024. Webpage: Circular Economy.

6 Waste collection rates are; in high-income countries near 100%; in upper-middle-income countries, at 89%; in lower-middle-income countries, collection rates are about 61%, and in low-income countries, collection rates are approximately 28%. Source: World Bank. (2026) What a Waste 3.0. figure 2.11.

7 World Bank. (2026) What a Waste 3.0.

8 World Bank (2026), What a Waste 3.0.

9 International Labour Organization, (2025). Decent Work Opportunities and Challenges in Recycling. ILO Technical Brief.

10 World Health Organization (2023). Air Pollution - Fact Sheet.

Under business-as-usual scenarios, global waste generation and associated emissions are projected to increase substantially by 2050. It is estimated to account for around five per cent of global greenhouse gas emissions primarily through methane released from decomposing organic waste in landfills and dumpsites.¹¹

Reducing methane emissions through prevention, source separation, composting, anaerobic digestion and improved landfill management represents a significant and cost-effective opportunity for short-term climate mitigation. However, many countries lack reliable data on waste-related emissions, complicating effective planning and investment.¹²

In addition, poorly managed waste contributes to biodiversity loss and ecosystem degradation. Plastic pollution, hazardous waste leakage and uncontrolled dumping contaminate soils and water, degrade terrestrial and aquatic ecosystems, and threaten species and habitats. These impacts can also reduce agricultural productivity and affect food systems and livelihoods, particularly in vulnerable regions.¹³

As global waste volumes continue to grow, so do the social, environmental and economic challenges they pose. At the same time, **improving waste management systems represents a significant opportunity to reduce emissions, protect ecosystems, improve public health and recover valuable materials.**

The global framework

Global frameworks on climate change and biodiversity, such as the Paris Agreement and the Convention on Biological Diversity, **provide the overarching direction for how countries plan, regulate and invest in climate and environmental action.** These commitments are translated into national policies and plans through instruments such as **Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and National Biodiversity Strategies and Action Plans (NBSAPs), which guide implementation across sectors, including waste management.**

According to the United Nations Framework Convention on Climate Change (UNFCCC) NDC Synthesis Report, most countries include waste-related measures in their NDCs, particularly targeting **methane emissions and improved waste systems.**¹⁴ Countries' NAPs also highlight how climate impacts such as **flooding, heat and extreme weather can disrupt waste systems, increase pollution and create health risks,** underscoring the need to strengthen the resilience of waste systems. Similarly, NBSAPs address **pollution as a key driver of biodiversity loss,** where improved waste prevention, recycling and safe disposal can help reduce pressures on ecosystems and support biodiversity objectives.¹⁵

In addition to climate and biodiversity commitments, **waste management also contributes to the fulfilment of internationally recognised human rights,** including the rights to health, water and sanitation, and to a clean, healthy and sustainable environment.¹⁶

Together, these frameworks provide important entry points for development cooperation and investments. Aligning waste management interventions with national climate, adaptation and biodiversity plans can strengthen policy coherence, support access to financing and increase the likelihood of sustainable and coordinated outcomes.

PRIORITISING ACTION: THE WASTE HIERARCHY

Municipal solid waste is generated across all parts of society and is closely linked to patterns of production and consumption. The way materials are designed, produced, used and managed at the end of their life directly influences resource efficiency, environmental impacts and system costs.¹⁷

A sustainable approach to waste management is guided by the waste hierarchy, which prioritises actions based on their overall environmental, economic and social value.

11 Intergovernmental Panel on Climate Change (2022/2023); United Nations Environment Programme & Climate and Clean Air Coalition (2022). World Bank. (2026) What a Waste 3.0.

12 UNDP, (2024) Global Waste Management Outlook 2024

13 United Nations Environment Programme (2021–2024). Plastic pollution and ecosystem impacts reports.

14 United Nations Framework Convention on Climate Change (2024). NDC Synthesis Report 2024.

15 United Nations Environment Programme (2024). Global Waste Management Outlook 2024.

16 Office of the United Nations High Commissioner for Human Rights (2025). Report of the Special Rapporteur on the Human Right to a Clean, Healthy and Sustainable Environment (A/80/187).

17 European Commission (2008) Waste Framework Directive (2008/98/EC); UNEP (2024); World Bank. (2026) What a Waste 3.0.

FIGURE 1. WASTE HIERARCHY ILLUSTRATION BY EUROPEAN COMMISSION



The pyramid shows the preferred order of actions to maximize resource value and minimize environmental impact. Preventing waste is the first option.

At the top of the hierarchy is **waste prevention**, which focuses on reducing the amount of waste generated in the first place. This includes more efficient use of materials, improved product design and shifts in consumption patterns.

Policy instruments such as Extended Producer Responsibility (EPR) are central at this stage, as they shift responsibility upstream¹⁸ to producers and create incentives to reduce waste, improve product design and increase recyclability.

The next step is **reuse and repair**, which extends the lifespan of products and materials. Reuse can create local economic opportunities, including repair services and second-hand markets, and can support livelihoods for small businesses and informal actors.

This is followed by **recycling** and biological treatment, including composting and anaerobic digestion, where materials and nutrients are recovered and reintroduced into the economy. Recycling reduces the need for virgin materials and can generate income and employment, including for informal workers. Biological treatment is particularly important where organic waste represents a large share of municipal solid waste.

Material recovery options, including waste-to-energy, can play a role in managing residual waste and recovering energy from materials that cannot be reused or recycled. However, such investments should be carefully assessed to avoid undermining efforts higher up in the hierarchy, particularly waste prevention, reuse and recycling.

At the bottom of the hierarchy is **disposal, including sanitary landfilling**, which remains necessary but should be minimised and properly managed to reduce environmental and health risks. Open dumping and uncontrolled burning should be avoided due to their severe impacts on human health, air quality and ecosystems.

Effective implementation of the waste hierarchy depends on enabling policy and regulatory frameworks. Legislation, planning systems and economic instruments should support its implementation and create incentives for higher-value waste management options. Cost recovery mechanisms, such as user fees, are important to ensure financial sustainability, while social considerations, including affordability and inclusion, need to be addressed to ensure equitable access to services. **Successful implementation of the waste hierarchy also requires inclusive approaches adapted to local contexts and actors.**



Sevan Municipality/Armenia. City-wide waste sorting at source, introduced in 2025 with support from the Sweden-funded Waste Policy Armenia programme. Photo: Waste Policy Armenia Program Team / American University of Armenia



Hrazdan sanitary landfill/Armenia. Improving landfill management helps reduce methane emissions, pollution and environmental impacts while supporting the transition towards more circular waste management. Photo: Waste Policy Armenia Program Team/ American University of Armenia

¹⁸ In waste management, “upstream” refers to measures that influence how products are designed and produced, while “downstream” refers to how waste is collected, treated and managed after use.

In practice, however, waste management in many developing countries remains concentrated at the lower levels of the hierarchy, with large volumes of waste still openly dumped, burned or unmanaged. Weak governance systems, limited financing and insufficient institutional capacity often result in low collection coverage, illegal dumping, uncontrolled burning and other forms of mismanagement. Addressing these challenges is often a prerequisite for moving up the waste hierarchy and developing more sustainable waste systems. Therefore, basic waste management needs, such as reliable collection and safe landfill, must always be a top priority.

Turning organic waste into a resource

Organic waste, including food waste, garden waste and other biodegradable materials, often represents a large share of municipal solid waste, particularly in low- and middle-income countries. When disposed of in dumpsites or landfills, organic waste is a major source of methane emissions. Separating organic waste at source can therefore significantly reduce emissions and decrease the volume of waste requiring final disposal. If properly managed, organic waste can instead become a valuable resource. Composting can produce soil improvers and fertilisers that support soil health and agriculture, while anaerobic digestion can generate biogas for heat, electricity or cooking fuel. These approaches can simultaneously contribute to climate mitigation, improved waste management and more circular use of nutrients and resources.



Biowaste installation in the West Bank, Palestine, producing cooking gas, electricity and fertiliser. Photo: WeEffect

KEY CONSIDERATIONS FOR SYSTEM DESIGN

When engaging in the waste sector, a system perspective is essential. Early system design choices can have long-term implications, shaping waste systems for decades and influencing future flexibility, costs and environmental performance as well as public health outcomes.

A key priority is to **establish effective separation of waste at source as early as possible**. Without sufficient separation, downstream investments in collection, treatment or energy recovery risk becoming inefficient, costly or environmentally suboptimal.

Investments in large-scale infrastructure, such as mechanical biological treatment (MBT) or waste-to-energy facilities, should therefore be carefully assessed in relation to existing and planned sorting systems. If introduced too early or without sufficient waste input, such investments may create lock-in effects by relying on continuous flows of mixed waste, thereby reducing incentives for waste prevention, reuse and recycling.¹⁹

Flexible and phased approaches can help systems adapt over time as waste volumes, regulations and recycling systems evolve, particularly in rapidly growing urban areas. Investments should be sequenced and adapted to local waste composition, institutional capacity and future policy directions to **avoid overcapacity, stranded assets and long-term dependencies**, while supporting more resilient and circular systems over time.

Sustainable waste systems also depend on **robust financial models**. Cost recovery mechanisms, including tariffs and user fees, need to be assessed in relation to **affordability, operational costs and long-term financial sustainability**.²⁰

Limited cost recovery, unclear responsibilities and insufficient institutional capacity can undermine the performance and maintenance of waste infrastructure over time.²¹

EU approximation and waste sector reform

In several countries neighbouring the European Union, waste sector reforms are also shaped by processes of EU approximation. Candidate and accession countries are expected to progressively align national legislation, institutions and infrastructure with the EU environmental acquis, including key waste directives and circular economy policies. This often requires significant investments in collection systems, source separation, recycling infrastructure, sanitary landfills, data systems and institutional capacity. Understanding these obligations and timelines can help ensure that development cooperation supports long-term reforms that are aligned with national commitments and future regulatory requirements.²²

19 World Bank (2026) What a Waste 3.0; Awino et al. (2024) Solid waste management in the context of the waste hierarchy and circular economy frameworks.

20 World Bank (2026) What a Waste 3.0; Awino et al. (2024) Solid waste management in the context of the waste hierarchy and circular economy frameworks.

21 World Bank. (2026), What a Waste 3.0.

22 European Commission (2024). The Environmental Acquis of the European Union; European Environment Agency (2024). Waste and Circular Economy Policies in the EU.; European Commission (2023). Communication on EU Enlargement Policy

Across all of these areas, institutional capacity, knowledge, coordination and communication are essential.

If guided by the waste hierarchy and supported by effective policies and system design, waste management can deliver economic, social and environmental benefits through improved resource efficiency, reduced pollution and emissions, strengthened public health and more inclusive livelihoods and green jobs.²³

STRUCTURAL CHALLENGES IN THE WASTE SECTOR

Effective waste management requires coordinated action across the entire waste chain, from production and consumption to collection, treatment and final disposal. In many countries, **governance gaps, limited financing and insufficient institutional capacity** continue to constrain the development of effective and integrated waste systems. These **challenges often result in incomplete collection, uncontrolled dumping, inefficient resource use and widespread environmental pollution**.

Governance challenges include inadequate regulation, limited enforcement capacity, unclear mandates and coordination gaps between national and local authorities, which can undermine system performance. In some contexts, limited transparency and accountability further reduce efficiency and trust in public systems.

Financial constraints are another major barrier. Waste management is often given low political priority and receives limited budget allocations compared to sectors such as energy, transport or housing. At the same time, cost recovery mechanisms are frequently underdeveloped, making it difficult to maintain services and invest in infrastructure over time.

Waste infrastructure is often perceived as high-risk by investors and financiers due to uncertain revenue streams, weak regulatory environments and insufficient data and transparency. These conditions can limit both public and private investment and slow the development of collection, sorting and recycling systems.

Institutional and technical capacity gaps also affect system performance. Many municipalities lack the **technical expertise, planning capacity and data** needed to design, implement and monitor effective waste systems.

Rapid urbanisation and growing waste volumes can further increase pressure on already constrained systems and institutions. Municipalities vary considerably in size, population and geography, which can affect the viability of waste services. Inter-municipal cooperation can help neighbouring municipalities pool resources, infrastructure and expertise to develop more effective and sustainable waste systems.

Private sector engagement is essential for expanding waste collection, recycling and resource recovery. Across the waste value chain, private actors can contribute with investment, technical expertise, operational capacity and innovation. In low- and middle-income countries, particularly in least developed countries (LDCs), the private sector is highly diverse and often dominated by micro, small and informal actors involved in waste collection, sorting and recycling.²⁴ Despite limited access to finance, infrastructure, formal markets and regulatory support, these actors provide essential operational capacity, local knowledge and service delivery. However, they are often not adequately recognised or integrated into formal waste systems and are frequently excluded from planning and investment processes, limiting both efficiency and social outcomes. **Limited public awareness and insufficient political prioritisation** further contribute to waste management remaining underdeveloped and underfunded in many contexts.

Engaging residents and civil society through effective communication and awareness-raising can support behavioural change, source separation, accountability and trust in waste systems.

Taken together, these challenges highlight the need for integrated approaches that address governance, financing, technical capacity and social inclusion in a coordinated manner.²⁵

A stepwise approach

Waste management systems need to be developed in ways that reflect local conditions, capacities and priorities. There is therefore no one-size-fits-all solution. Nevertheless, the 10-step approach developed by Avfall Sverige (the Swedish Waste Management Association) has been widely applied and provides a practical framework for identifying priorities and guiding the gradual development of sustainable waste management systems. See the 10-step approach in Annex 1.

TOWARDS A CIRCULAR ECONOMY

Waste management can serve as an important entry point towards a circular economy, but circularity extends beyond waste management itself. It involves shifting from linear production and consumption patterns towards systems that keep products and materials in use for longer, improve resource efficiency and reduce waste throughout the value chain. By doing so, countries can reduce demand for virgin raw materials, create green jobs, stimulate new business opportunities, strengthen economic resilience, green jobs and improved livelihoods and reduce environmental impacts.²⁶ However, the trans-

23 United Nations Environment Programme (2024). Global Waste Management Outlook 2024; World Bank. (2026). What a Waste 3.0.

24 World Bank. (2026). What a Waste 3.0.

25 World Bank 2026. What a Waste 3.0; United Nations Environment Programme (2024). Global Waste Management Outlook 2024; Organisation for Economic Co-operation and Development (2019/2023)

26 OECD (2025). The Circular Economy in Cities and Regions of the European Union. Paris: OECD Publishing; World Bank (2025). What a Waste 3.0.

ition towards more circular waste management also has important social dimensions. Millions of people rely on informal waste picking as a source of livelihood. Although often working under unsafe and vulnerable conditions, these workers provide important environmental and economic services, particularly where formal systems are limited or ineffective.²⁷

A just green transition in the waste sector therefore requires recognising and integrating informal workers into evolving systems, improving health and safety standards, and providing access to training, social protection and more secure livelihoods, including pathways into formal employment. Supporting affected communities in this way can help ensure that the benefits of circular economy reforms are shared more broadly and equitably.²⁸

Research on circular economy and household waste management also shows that responsibilities for waste sorting and recycling are often shaped by gendered divisions of labour. **Women are frequently active in informal waste work and may carry a disproportionate share of household waste responsibilities**, particularly in low-income contexts.²⁹ Ensuring women's participation in planning, collection and recycling initiatives can therefore strengthen both gender equality and the effectiveness of circular solutions.

HOW COULD SIDA ENGAGE?

Swedish development cooperation can contribute to more sustainable, inclusive and circular waste systems through several tools and approaches. Below are some examples of potential entry points for Sida's engagement.

Strengthening sector capacity and governance:

Through support to capacity building and institutional development, Sida can contribute to strengthening the overall framework and key actors in the sector. Sector performance can often be improved at both national and local levels. Strong governance at the national level, such as **coherent policies, legal and regulatory frameworks and effective institutional arrangements, is essential for a predictable and functional sector, while service delivery is typically managed at the local level.**

Enabling sustainable investments: Sida can help strengthen enabling conditions for sustainable investments by supporting sector-governance reforms and preparing the ground for future investments. This may include planning and reparatory studies as well as appropriate de-risking measures. Through grants, innovative financing, guarantees and blended finance instruments, Sida can help mobilise public and private capital for climate-resilient, resource-efficient and inclusive waste systems.

Advancing a just green transition: Sida's experience in multidimensional poverty reduction, job creation, human rights, gender equality and social inclusion provides a strong foundation for addressing issues related to inclusive economic development, informal work, livelihoods and equitable access to waste services.

Promoting circular economy approaches, including waste prevention, reuse, recycling and organic waste management

Leveraging Team Sweden and partnerships: Through Team Sweden and collaboration with public agencies, academia, civil society and the private sector, Sida can contribute with technical expertise, policy dialogue, innovation and knowledge exchange aligned with partner countries' priorities and national plans. Sweden's experience with integrated waste management, systems approaches, circular economy solutions and policy instruments such as Extended Producer Responsibility (EPR) can provide valuable entry points.

National climate and environmental frameworks, such as NDCs, NAPs and NBSAPs offer concrete entry points: NDCs, in particular, frequently include prioritised waste-sector interventions in the above areas that can be further developed and assessed for investment readiness.

27 International Labour Organization, (2015) Guidelines for a just transition towards environmentally sustainable economies and societies for all; International Labour Organization (2024) Article. On just transition and informal workers; World Bank (2026).

28 International Labour Organization, 2015; ILO 2024 Article Beyond the bin: Decent work deficits in the waste management and recycling industry

29 Pawa, M., Robson, E., & Deutz, P. (2026). A Feminist Political Ecology of household waste management in an urban township, South Africa. South African Geographical Journal, 108(1).

Recommended reading

World Bank (2026). What a Waste 3.0: Global Snapshot of Solid Waste Management toward Circularity until 2050.

[World Bank What a Waste 3.0](#)

United Nations Environment Programme & International Solid Waste Association (2024).

[Global Waste Management Outlook 2024](#)

Global Waste Management Outlook 2024: Beyond an Age of Waste – Turning Rubbish into a Resource.

[UNEP Global Waste Management Outlook 2024](#)

United Nations Environment Programme,

[Moving towards zero waste](#)

United Nations Development Program and Avfall Sverige:

Zero Waste Knowledge Hub, Short course for decision

makers, www.zerowastevision.com

International Labour Organization (2025). Decent Work Opportunities and Challenges in Recycling.

[ILO Technical Brief](#)

UN-Habitat: Topic solid waste management; Leaving No One Behind: Integrating Informal Waste Pickers into Resilient Urban Waste Systems. [UN-Habitat report](#)

Naturvårdsverket (2024). [Chapter 27 – EU accession](#)

European Commission. [Waste Framework Directive; Waste and recycling](#)

European Environment Agency (2026). Circular Economy. [EEA Circular Economy overview](#)

United Nations Framework Convention on Climate Change (2024). Nationally Determined Contributions Synthesis Report. [UNFCCC NDC Synthesis Report](#)

ANNEX 1 THE 10-STEP PROGRAM

Based on real-life conditions, the Swedish waste management organization, Avfall Sverige, has developed a ten-step program that can serve as a useful guide for developing waste management. This is not a complete manual, but it provides a good overview of how a step-by-step process can improve management based on long-term and clear goals.

1. Planning and goals

The starting point is national and local waste planning. It is crucial that such plans are consistent, have clear goals, and are continuously monitored.

2. Clear responsibilities and roles, as well as mechanisms for financing

The responsibilities of municipalities, producers, and other waste producers must be clarified. This also includes clarifying financial responsibility and how financial resources are to be collected and allocated. This also includes the application of various economic instruments, deposit systems, etc.

3. Organization and inter-municipal cooperation

The organization of waste management, both within the municipality and for producers and others, needs to be clarified. For municipalities, inter-municipal cooperation is essential to ensure that even smaller municipalities keep pace with developments.

4. Awareness and involvement

Knowledge-raising measures are needed for everyone, including decision-makers, to increase awareness of waste. Residents, NGOs, and, not least, the informal sector must be involved in this.

5. Close illegal dumping sites and establish updated landfills for waste

Most existing dumping sites pose a major environmental threat and must be closed as soon as possible and restored with long-term monitoring. At the same time, a network of approved environmentally sound landfills should be established, which will always have their place in an integrated waste management system.

6. Comprehensive waste collection and street cleaning

Waste collection must cover all citizens, otherwise full control of waste flows cannot be maintained. Streets, squares, and other public places must be maintained and cleaned to avoid littering.

7. Sorting and separate collection of organic waste

Organic waste, both green waste and food waste, is the driving force behind methane production in landfills, but it is also an important resource that must be managed. Initially through composting and, in the longer term, through digestion with biogas production. The market for compost and energy must be clarified.

8. Sorting and separate collection of hazardous waste, including electronic waste

Special collection systems should be established for hazardous waste, batteries, and electronic waste, whereby various forms of producer responsibility, known as EPR, can be implemented.

9. Sorting and separate collection of clean materials

Separate collection of clean materials for material recycling, e.g., paper, plastic, metal, glass, wood. The collection of packaging waste will be crucial here, and the market for recycled materials needs to be developed for the system to work in the long term.

10. Energy recovery from waste

For waste that cannot or should not be recycled, various forms of energy recovery may also be considered, especially in more densely populated areas. The aim is to further reduce landfill and increase energy conservation. This may involve the production of waste fuels, biogas, and conversion to electricity, heat, and steam.