Waste prevention country profile

Estonia

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European Environment Agency

Country profile: Estonia

General information

Name of the country/ region	Estonia
Geographical coverage of the waste prevention programme (national/ regional)	National
Type of programme (stand alone or integrated into waste management plan or into the circular economy strategy)	Integrated
Title of programme and link to programme	National waste management plan (NWMP) 2023-2028 (Riigi jäätmekava 2023–2028) State Waste Management Plan 2023-2028 | Ministry of Climate (kliimaministeerium.ee)
Duration of programme	2023 - 2028
Language	Estonian
Contact person in the country/region	Katrin Koppel, Head of municipal waste | Department of Circular Economy | Ministry of Climate of Estonia katrin.koppel@kliimaministeerium.ee
Development process of the programme/ revision	The recent national waste plan was approved 20th December 2023.
Foreseen budget for implementation of the programme	Sustainable production and consumption and prevention of waste and promotion of re-use - €250 million safe circulation of materials - €318 million

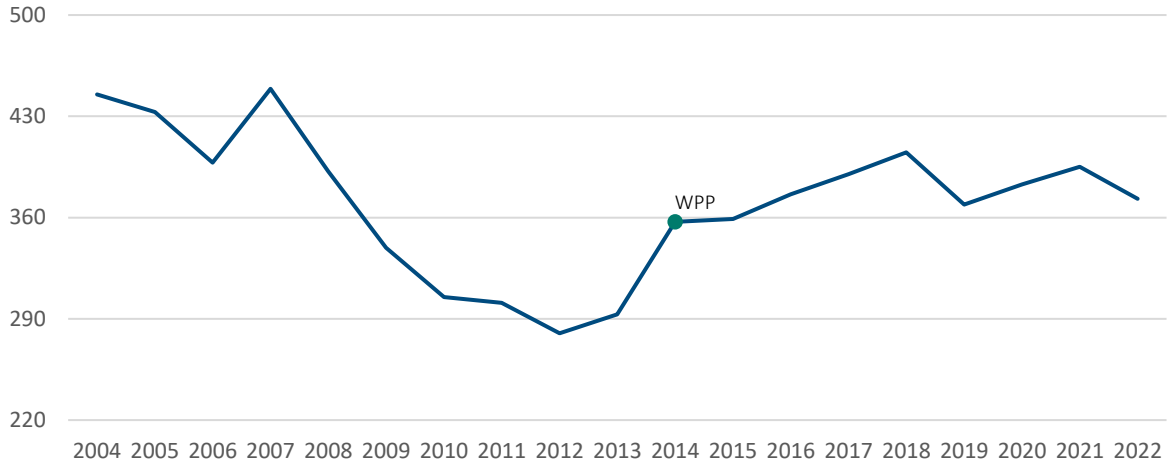
WASTE GENERATION

The following figures illustrate the progress towards waste prevention and decoupling of waste generation from economic growth in Estonia:

Municipal solid waste (MSW)

Estonia's municipal waste generation has slightly increased over the past decade. In 2022, the country generated 373 kg/cap of municipal waste (Figure 1), which is significantly below the estimated EU27 average of 513 kg/cap. Estonia has a low rate of preparing for reuse and recycling of 33 %, which is significantly below the estimated EU27 average of 49 % in the same year1, and with a stagnating trend since 2014, but a positive upwards development in 2022.

Figure 1 Municipal waste generation in Estonia (kg per capita), 2004-2022

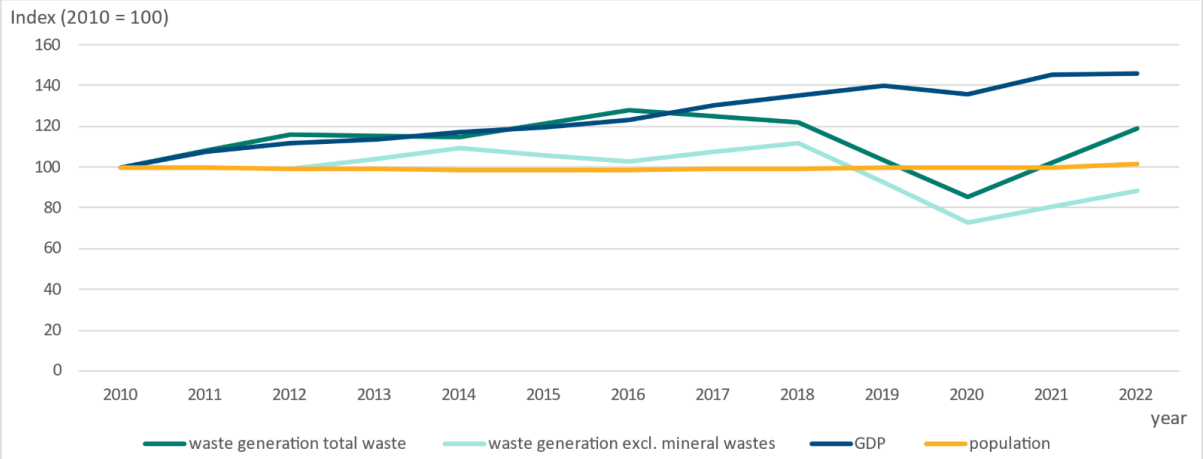


Source: Eurostat [ENV_WASMUN].
Note: As of reference year 2020, new reporting rules apply for calculating recycled municipal waste pursuant to the targets laid down in Article 11.2(c-e) of Directive 2008/98/EC. The Estonian authorities have indicated that the new reporting rules have been implemented since reference year 2019 with some exemptions.

Total waste

The total amount of waste generated in Estonia significantly increased throughout the considered timeframe (Figure 2). The increasing trend is primarily driven by major mineral wastes. When major mineral wastes are excluded, a moderate decrease can be observed which is largely influenced by combustion wastes. Estonia's GDP showed a steady growth, but dropped slightly in 2020, most likely due to the Covid-19 outbreak. Overall, a decoupling from economic growth can be observed for total waste excluding major mineral wastes, however this is only partly the case for total waste.

Figure 2 Generation of waste (total and excluding major mineral wastes), population and economic development, 2010-2022



Source: Eurostat [ENV_WASGEN, NAMA_10_PC, DEMO_GIND].
Note: Waste generation data for odd years are interpolated.

WASTE PREVENTION PROGRAMME

Objectives and priorities

1.	Waste prevention objectives of the Programme - quantitative objectives (waste reduction) - qualitative objectives (reduction of hazardous substances/ environmental impacts)	The objective of the programme is to support: • prevention of waste generation and increased reuse • sustainable production and consumption • safe circulation of materials The goal of the Estonian food waste prevention plan is to reduce food waste and food loss generation in the entire food supply chain.
2.	Sectors covered	• private and public sectors • construction and infrastructure • agriculture • manufacturing • retail • households • services
3.	Priority waste types	In the NWMP 2023-2028 emphasis is placed on the following types of waste: • hazardous waste • oil shale industry waste • construction and demolition waste • household waste • biodegradable waste • textile waste • plastic waste • packaging waste • waste from problem products In addition to the above waste streams also food waste was given an emphasis and food waste prevention plan is attached to the NWMP as appendix 2.
4.	Target groups	Local authorities, associations, enterprises, general public, industry, companies, research institutes,

Targets, indicators and monitoring

1.	Indicators used to monitor progress	Key indicators to monitor progress include: • waste generation per capita (except oil shale waste) • circular material use rate • the share of reuseable packaging of the total packaging placed on the market • recycling of hazardous waste • electrical and electronic waste collection rate • battery and battery waste collection rate
2.	Quantitative targets	The plan sets specific targets to be achieved by 2028: • waste generation per capita (except oil shale waste) 4000 kg per capita • circular material use rate 25% • the share of reuseable packaging of the total packaging placed on the market 10% • recycling of hazardous waste 55% • electrical and electronic waste collection rate 65% • battery and battery waste collection rate 63% Other targets: To reduce the generation of packaging waste per person by at least 5% by 2028 (reference year 2018) To reduce the consumption of single-use plastic food packaging and drinking cups by 25% (compared to 2022) by the end of 2026. To reduce the generation of construction and demolition waste by 10% through selective demolition of buildings and the separate collection and reuse of materials generated at construction and demolition sites.
3.	Monitoring mechanism of the programme	General monitoring of the implementation of activities is carried out by the Ministry of Climate. The results of the planned activities can be evaluated based on the metrics set in the NWMP, i.e., targets and indicators. The implementation of the set goals is regularly evaluated. To promote the implementation of an effective monitoring system, the digitalization of the waste sector is being prepared. Estonia intends to introduce a real-time waste management monitoring system.
4.	Evaluation of the programme	The activities of the NWMP are implemented based on the attached action plan (measures) and in accordance with the waste framework directive. The food waste prevention plan submitted as an appendix to the national waste plan was updated in the first half of 2023.
5.	Evaluation of policy effectiveness in the programme (policy measures evaluated, waste streams addressed, brief methodology description	The NWMP provides an overview of the current situation and the fulfilment of the goals of the national waste management plan 2014– 2020. The evaluation of the previous plan is included as APPENDIX 6 ‘Meeting the objectives of the national waste plan 2014–2020’ to the new plan.

	and, availability of an evaluation report with a link)	In chapter 1.2 major waste streams and key areas were evaluated. The aspects taken into consideration were: the amount and sources of waste generation, opportunities for recycling and other re-use; applicable EU and Estonian legislation and their implementation.

Prevention measures

Implemented prevention measures according to Article 9

The waste prevention programme includes the following measures.

Table 1: Specific waste prevention measures structured according to Art 9 WFD

Promote and support sustainable consumption models	• The EMAS environmental management system promotes sustainable and responsible production across various sectors. It provides companies with a framework to regulate their activities and optimize resource use. Waste generation is minimized through practices such as reuse. • From January 1, 2022, it became mandatory for public sector and network sector procurers to use environmentally friendly criteria in public procurement in four product groups, starting from the limit of simple procurement: furniture, cleaning products and services, office IT equipment, and copy and drawing paper. • Promoting the adoption of circular economy-based production and consumption models
Encourage the design, manufacturing and use of products that are resource-efficient, durable (including in terms of life span and absence of planned obsolence), reparable, re-usable and upgradable.	• Scientific research in the field of circular economy (waste, environmental management, chemicals), innovative environmental management solutions, hazardous waste and, waste prevention and reuse of products or product components, environmental management systems and informal environmental management systems, eco-labels • The Ministry of Climate, in collaboration with producers, associations, municipalities, and universities, will analyze possibilities and technical solutions for reusing and recycling used tires by 2028.
Target products containing critical raw materials to prevent that those materials become waste.	• For batteries and battery waste, update and enhance regulations concerning notification, e-commerce, handling, and authorization.
Encourage the re-use of products and the setting up of systems promoting repair and re-use activities, including in particular for electrical and electronic equipment, textiles and furniture, as well as packaging and construction materials and products.	• In order to reduce household waste, reuse and the habit of separate collection should be encouraged, communication should be diverse, targeted where possible, and conducted regularly. (p.96 chapter on household waste) • In order to reduce the construction waste and promote reuse in construction sector, the following measures are suggested in the annex to the plan: a) Cooperation with

	relevant authorities to implement circular economy principles during the building design phase and to avoid the use of construction materials containing hazardous substances in the construction of new buildings and the renovation of existing buildings. b) Developing public procurement conditions that promote the separate demolition of buildings and the separate collection of waste. c) Developing solutions and creating a material bank for secondary raw materials. d) Preparation of instructions for the demolition of buildings and the separate collection of waste. • In order to reduce packaging waste and promote reuse in construction sector, the following measures are suggested in the annex to the plan: a) Develop standards for reusable packaging. b) Develop regulatory measures that would support the increased use of reusable packaging and motivate manufacturers to change packaging design to comply with circular economy principles. c) Direct national support mechanisms towards reducing packaging and promoting reuse, including supporting the infrastructure and deployment of reusable packaging. • Establishing an infrastructure in local governments with sufficient density and volume to enable convenient reuse of electronic equipment, while simultaneously increasing competence and motivation (national grants). (in annex to the plan on measures to reduce waste from electrical and electronic equipment) • Development and expansion of the reusable textile collection system. • Estonia has set a goal to ensure that only reusable or recyclable packaging is placed on the market by 2030.
Encourage, as appropriate and without prejudice to intellectual property rights, the availability of spare parts, instruction manuals, technical information, or other instruments, equipment or software enabling the repair and re-use of products	• Developing measures, e.g., updating supplementary regulations, to encourage collection of waste from products of concern[1] , especially electronic waste. (in annex to the national waste management plan, measures for electronic waste under safe circulation of materials)

[1] Product of concern is a product whose waste causes or may cause a health or environmental hazard,

without compromising their quality and safety.	• Digitalization of Estonian waste management system - which aims at providing high-quality, up-to-date, transparent data. The data is to give a comprehensive overview of waste management chain, to support decision making, and to provide information to companies to create circular business models. (in the annex to the national waste management plan)
Reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques.	• Preparation of a national textile strategy / action plan and creation of a collaboration platform. • Compliance with BAT requirements for the energy use of oil shale and oil production, which contribute to the reduction of waste generation. • To reduce oil shale waste, an analysis will be conducted to explore the possibility of amending legal acts regarding the waste status of residual materials generated by underground irrigation.
Reduce the generation of food waste in primary production, in processing and manufacturing, in retail and other distribution of food, in restaurants and food services as well as in households as a contribution to the United Nations Sustainable Development Goal to reduce by 50 % per capita global food waste at the retail and consumer levels and to reduce food losses along production and supply chains by 2030.	• Implementation of food waste prevention plan.
Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and the reprocessing into non-food products.	• The Ministry of Social Affairs supports the activities of Eesti Toidupank[2] (Food Bank) with significant amounts both within the framework of a strategic partnership and from European Social Fund (ESF). The broader goal of the partnership is to reduce food waste through food donation. • The Estonian state supports the organization of food rescue and donation activities through the Ministry of Social Affairs with financial EU funds and funds from the Estonian state budget. • In order to promote food donation, the Agricultural and Food Board prepared the

environmental disturbances or excessive littering of the environment. Problem products include: batteries and accumulators; motor vehicles and their parts; electrical and electronic devices and their parts; tires; agricultural plastic.

[2] https://www.toidupank.ee/meist/meie-lugu/

	guide "Food safety when donating" in 2022. The guide has also been translated into Russian, and food safety principles are continuously introduced to both food businesses and charitable organizations.
Promote the reduction of the content of hazardous substances in materials and products, without prejudice to harmonised legal requirements concerning those materials and products laid down at Union level, and ensure that any supplier of an article as defined in point 33 of Article 3 of Regulation (EC) No. 1907/2006 of the European Parliament and of the Council provides the information pursuant to article 33(1) of that regulation to the European Chemicals Agency as from 5 January 2021.	• Estonian national waste management plan (NWMP) introduces problem product which are products whose waste causes or may cause a health or environmental hazard, environmental disturbances or excessive littering of the environment. The problem products include motor vehicles and their parts, electrical and electronic equipment and their parts, batteries and accumulators, tires and agricultural plastics. Any natural or legal person who develops, manufactures, processes, sells or imports problem products in their economic or professional activities has the extended responsibility of the manufacturer. (chapter 2.4)
Reduce the generation of waste, in particular waste that is not suitable for preparing for re-use or recycling.	• To address the issue of free riders in e-commerce, efforts will focus on identifying the share of free riders by 2025 and implementing measures to reduce their prevalence thereafter. • To support, stimulate, and encourage research and development efforts aimed at reducing oil shale waste. • To reduce the share of construction and demolition waste generation by 10% through the demolition of buildings by type and the collection and reuse of materials generated at construction and demolition sites by type.
Identify products that are the main sources of littering, notably in natural and marine environments, and take appropriate measures to prevent and reduce litter from such products, where Member States decide to implement this obligation through market restrictions, they shall ensure that such restrictions are proportionate and non-discriminatory.	• In Estonia, the principle of producer responsibility applies to packaging. Packaging companies that place packaged goods on the market must ensure the collection and recycling of both the packages and the packaging waste generated. This is done in a way that meets the reuse and recycling targets set by the Packaging Act (PakS) (p.58). • In Estonia, market restrictions on single-use plastic products with a negative environmental impact began when the current single-use plastics directive was transposed into Estonian law on May 1, 2023 (p.77).

Aim to halt the generation of marine litter as a contribution towards the United Nations Sustainable Development Goal to prevent and significantly reduce marine pollution of all kinds.	• Activities to reduce littering, including marine litter and waste from river basins are included in Annex 7. State Waste Plan 2023–2028 Implementation Plan (7.6) Reducing Littering (p. 6)
Develop and support information campaigns to raise awareness about waste prevention and littering.	• Raise awareness about waste management of hazardous waste through industry and production-related curricula. • In addition to information campaigns, instructional materials must be created and/or updated for planning waste management, conducting procurements, and implementing opportunities created by the Waste Act. • Continuous sharing of the good practices of local governments. • Communication and awareness raising campaigns on waste prevention and reuse.

FOOD WASTE PREVENTION

Food waste generation

In Estonia, households are the largest source of food waste compared to other sectors. In 2020, food waste generated in homes accounted for more than 48% of the total food waste produced. Following households, the food industry, primary production, and trade and catering establishments contribute to food waste generation. Estonia generated approximately 181 thousand tonnes of food waste in 2022, equating to 134 kg of food waste per capita based on most recent data from Eurostat (env_wasfw)[3]. However, it's important to note that both commercial companies and the food industry also produce animal by-products, which are not classified as waste and therefore are not included in waste calculations. These by-products are handed over to licensed companies for proper handling.

When comparing food losses across sectors in Estonia, households account for the largest share, with 40% of all food losses. This is followed by trade (24%), primary production (23%), catering establishments (9%), and the food industry (4%). Half of Estonia's food waste—approximately 84,000 tons annually—is food wasted while still suitable for consumption. The total value of food loss across the entire food supply chain is estimated at 164 million euros per year.

Measures to prevent food waste

The food waste prevention plan sets out six areas of action to prevent, reduce and increase social responsibility in the entire food supply chain from primary production to the end consumer:

- **Data collection and mapping of food waste generation amounts:** regular monitoring and assessment of food waste and food loss, preparation of guidelines for measuring the amount of food thrown away in companies and the company internally for analysis, implementation of guidelines; evaluation of the implementation of the objectives and activities of the food waste prevention plan and making interim summaries.
- **Legislative framework and agreement on regulatory goals:** agreeing on the goal of reducing food waste and the intermediate steps to move towards the achievement of

3 https://ec.europa.eu/eurostat/databrowser/view/env_wasfw__custom_13961078/default/table?lang=en&page=time:2022

sustainable development goal 12.3, creating incentives for companies to avoid food waste, designing and creating financing measures to prevent food waste.

- **Implementation of effective cooperation to realize goals:** integrating the topic of food waste prevention into various relevant development plans, development documents and guidelines; development of public-private partnerships to reduce food waste at various stages of the food supply chain; in changing eating habits and preventing food waste in the EU contributing through the implementation of the school curriculum program.
- **Implementation of innovation and research and development activities to realize goals:** technological aids and IT solutions to prevent food waste implementation; new products with added value from residues in primary production and the food industry promotion of manufacturing and resource efficiency; implementation of research, innovation and financial instruments and promoting awareness of them in order to support the development of innovations with the aim of reducing the generation of food waste.
- **Promoting the redistribution of food to realize the goals:** promotion of compliance with the EU guidelines on food donation and dissemination and implementation of the domestic donation guide to raise the awareness of companies about food redistribution opportunities; analysing the need to change legislation regulating food redistribution and, where appropriate, regulatory promotion of food donation; strengthening the network of charitable organizations engaged in food redistribution and rescue; promoting the use of motivation and recognition systems.
- **Continuous awareness raising, information and training to realize the goals:** promotion of awareness of food waste prevention by target groups. integration of messages and goals into the communication of other areas (food safety, nutrition, climate change, etc.). Consistent notification of "best before" and "use by" dates. Celebrating International Food Waste and Food Loss Awareness Day; trainings, workshops and round tables on the prevention of food waste to share best practices and promote collaboration; raising awareness among catering establishments about the prevention of food waste; raising the awareness of consumers about the separate collection of waste and thus attention turning to the need to prevent waste generation; promotion of circular economy solutions in the public sector, including raising awareness of food waste prevention.

REUSE OF PRODUCTS

Data

According to 2021 data reported to the EEA according to Commission Implementing Decision (EU) 2021/19[4]), Estonia re-used:

- 5.4 ktonnes of textiles;
- 13.0 ktonnes of electrical and electronic devices;
- 20.9 ktonnes of furniture.
- 71.8 ktonnes of construction materials
- 9.6 ktonnes of other materials

It should be noted that this data has been reported for the first time. More information about the interpretation and limitations of the data set are available.[4]

Measures to support reuse

The activities of the NWMP 2023–2028 aim to ensure the country's sustainable development in accordance with conscious production and consumption, avoiding waste generation as much as possible and encouraging reuse.

Measures reported together with the 2021 data[4]:

- Reuse has been assessed by surveys and questionnaires.
- In order to avoid environmental or health hazards that may result from the WEEE delivered for reuse, the minister has established a regulation - the requirements for delivery of the WEEE for reuse.

Best practice examples

Prevention of food waste:

To reduce food waste generation, both the public and private sectors in Estonia have organized campaigns, primarily targeting households. Since 2020, the Ministry of Climate (Kliimaministeerium - KliM)[5] has hosted the annual campaign "Respect Food Without a Trace!" In addition, the Ministry of Regional Affairs and Agriculture has conducted information campaigns, including social media outreach, to explain the meanings of "best before" and "use by" labels and to promote ways to reduce food loss.

Rimi Eesti Food AS has developed a method for freezing fresh foods under the guidance of the Agriculture and Food Board to extend shelf life and increase donation opportunities.
Prisma has placed information about food loss on its refrigerators and launched a "smoothie box" project, where leftover fruit at the end of the day is collected in a box and sold to consumers at a very affordable price.

Eesti Toidupank (Estonian Food Bank) has been the most active organization in safe food redistribution. Founded in 2010, it was followed by the establishment of the Tallinn Food Bank and other regional food banks. Toidupank currently operates in 15 Estonian cities, partnering with over 200 organizations. It has signed long-term donation agreements with many food-handling companies. The food bank also operates refrigerated trucks and food warehouses that meet the necessary standards. Toidupank collaborates with the Ministry of Social Affairs to distribute EU food aid and manage food donations. From 2020 to 2023, it served as a strategic partner to help alleviate food shortages for the most vulnerable by distributing donated food and supporting their livelihoods.

[4] https://www.eea.europa.eu/en/datahub/datahubitem-view/0686c969-093c-450a-ac59-847a53d83ee6
[5] https://kliimaministeerium.ee/ministeerium-kontakt/ministeeriumi-tutvustus

Links to circular economy

Waste prevention is an integral part of the comprehensive transformation towards a circular economy. It reduces the input of natural resources into the economy as well as the necessary efforts to collect and recycle waste.

Approaches for improving circularity are often highly interlinked with successful waste prevention. The following table shows which circular strategies are explicitly integrated into the Estonian waste prevention programme.

Topic	Addressed in the programme	Comments
Eco-design	x	
Repair, refurbishment and remanufacture	x	
Recycling	x	
Economic incentives and finance	x	
Circular business models	x	
Eco-innovation	x	
Governance, skills and knowledge	x	