Country profile

Overview of national waste prevention programmes in Europe

Luxembourg

2021

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European Environment Agency

General information

Name of the country/region	Luxembourg
Coverage of the waste prevention programme (national/regional)	National
Type of programme (stand alone or integrated into waste management plan)	Integrated into the waste and resource plan
Title of programme and link to programme	National waste and resource plan (Plan national de gestion des déchets et des ressources (PNGDR)) https://environnement.public.lu/fr/offall-ressourcen/principes-gestion-dechets/Plan_national_de_gestion_des_dechets_PNGD.html
Duration of programme	2016-2022
Language	French
Development process of the programme/revision	The waste prevention programme as part of the national waste management plan does not include a specific description of the waste prevention programme's development process
Budget envisaged for implementation of the project	The waste prevention programme does not include a specific budget for waste prevention. However, it refers to the national Environmental Protection Fund, which invested EUR 10 251 644.95 in projects on waste management and prevention

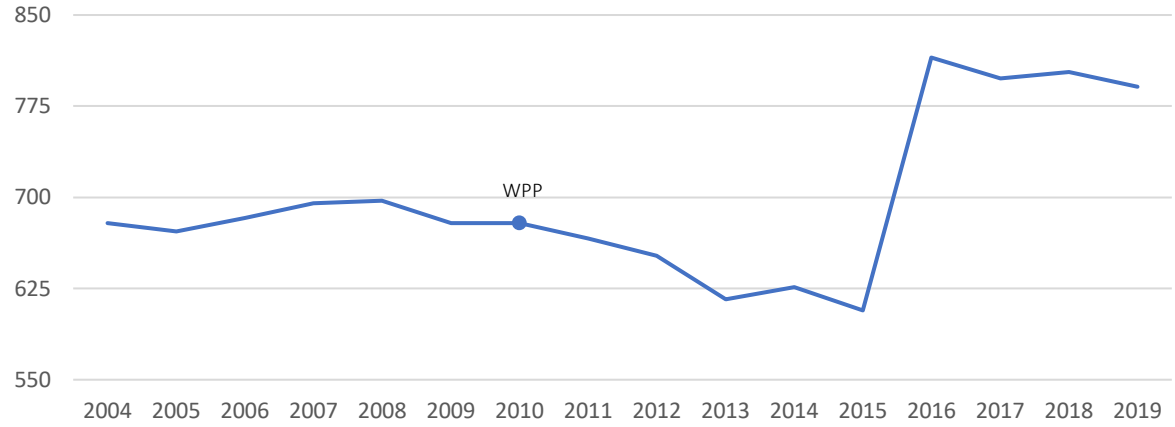
Waste generation

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

Municipal solid waste

- Between 2004 and 2010, the generation of municipal solid waste (MSW) per capita remained at more or less the same level with only minor fluctuations, between 672 kg per capita and 697 kg per capita (see Figure 1).
- Although MSW generation is influenced by many factors (including population and household expenditure), a continuing downwards trend followed the implementation of the second waste management plan in 2010 (the first plan was implemented in 2000), reaching its lowest point (607 kg per capita) in 2015.
- After 2015, however, the MSW generation per capita increased, reaching 803 kg per capita in 2018.
- Note from Luxembourg: due to a change in how MSW is defined, the share of non-household waste has significantly increased (from 12 % to 35 %), and this is the main reason behind the increase between 2015 and 2016. To avoid erroneous comparison with historical figures, a break in the time series was introduced in the Eurostat statistics.

Figure 1: Municipal waste generation in Luxembourg (kg per capita), 2004-2019

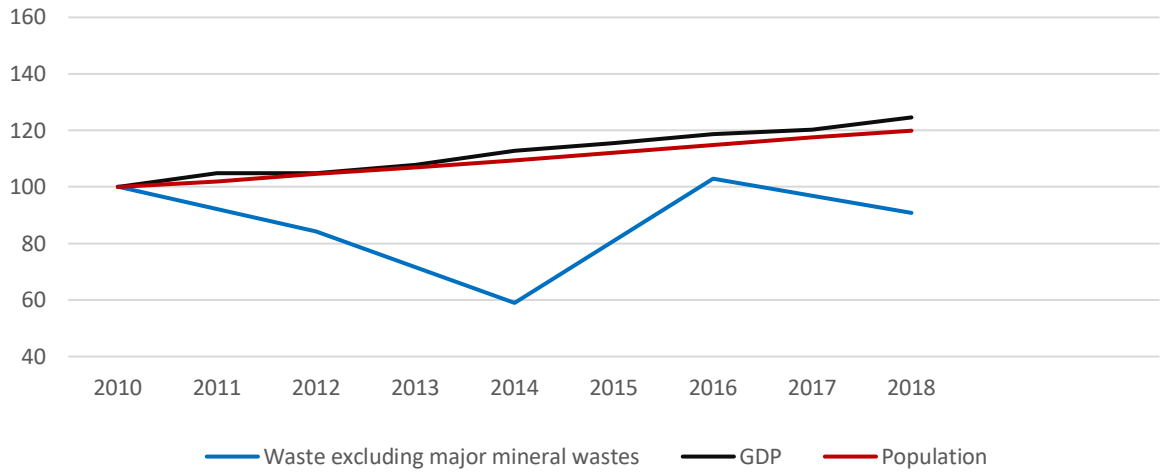


Source: Eurostat Circular Economy Monitoring Framework.

Total waste

- Luxembourg's waste generation (excluding major mineral waste) fluctuated between 2010 and 2018 (see Figure 2).
- It decreased significantly between 2010 and 2014 but had increased to its former level by 2016. It showed a slightly decreasing trend in the following years.
- As both GDP and population increased steadily during this period, an impact on waste generation cannot directly be observed.
- Similar to MSW, a slight downwards trend can be seen from 2016, which potentially indicates a trend towards decoupling of waste generation and economic growth in Luxembourg.
- Note from Luxembourg: the data are based on annual waste reports submitted by waste handlers. Although the reliability of the collected data has increased over the years, historical data often lack specific industrial waste streams. With regard to 2014 and 2016, the difference can also be explained by different ways of accounting for secondary waste (which should be counted separately under waste generation and hence leads to double counting). When the 2018 data were submitted, a revised version of the 2016 data was also introduced. Unfortunately, the revised data have not yet been published by Eurostat. The difference in the amounts of waste generated between 2016 and 2018 is 5 % (1 465 469 tonnes in 2016 and 1 384 978 tonnes in 2018).

Figure 2: Growth rate of waste (excluding major mineral wastes), GDP and population in Luxembourg, 2010-2018 (2010 = 100)



Source: Eurostat.

Waste prevention programme

Objectives and priorities

1.	Waste prevention objectives of the p[rogramme: quantitative objectives (waste reduction) and qualitative objectives (reduction of hazardous substances/environmental impacts)	The PNGDR aims to: • prevent and reduce waste at its source • prepare waste for reuse • promote recycling and any other type of recovery • dispose of waste in an environmentally friendly way Among these measures, the reduction of waste at source is one of the highest priorities
2.	Sectors covered	• Agriculture • Construction and infrastructure • Manufacturing • Sale, retail, transport • Households • Private service activities, hospitality • Public services
3.	Priority waste types	• Food/organic • Construction and demolition waste • Hazardous waste (batteries, accumulators, waste oils, polychlorinated biphenyl (PCB) waste, healthcare waste) • Household/municipal waste • Packaging • Waste electrical and electronic equipment (WEEE) and batteries • Manufacturing waste • Other (e.g. bulky waste, littering waste, waste from sewage treatment, used tyres, end-of-life vehicles)
4.	Target groups	Target groups are not specified, but most measures target consumers (citizens), producers and waste management companies Various stakeholders are involved in the programme implementation: • the Environment Agency • SuperDrecksKëscht • non-profit organisation Valorlux (https://www.valorlux.lu/en/mission) • the Ministry of Agriculture, Viticulture and Consumer Protection • the Ministry of Sustainable Development and Infrastructure

Targets, indicators and monitoring

1.	Indicators proposed	**No indicators have been proposed**
2.	Quantitative targets	Residual household waste and similar waste (PNGDR, p. 64): • prevent the generation of mixed municipal waste • recycle a minimum of 55 % of all household waste • send a maximum of 10 % of municipal waste to landfill • provide separate collection facilities at a reasonable distance from residents' homes • ensure the quality of the collected waste streams • connect all Luxembourg municipalities to one or more mobile or fixed recycling centres Bulky waste (PNGDR, p. 74): • reduce bulky waste by 20% • promote repair and reuse • increase the amount of waste recovered • strictly apply the definition of bulky waste during collection Food waste (PNGDR, p. 84): • prevent food waste • reduce food waste by 50 % (also a UN Sustainable Development Goal). Wood waste (PNGDR, p. 102): • promote reuse of certain wood products • recover wood waste • reduce the fraction of wood waste in the bulky waste Construction and demolition waste: • prevent the generation of waste from excavated soils • encourage backfilling with excavated soil • stabilise current recovery rates (90 %) • promote reuse of construction materials Packaging waste (PNGDR, p. 121): • ban the use of single-use plastic bags • prevent packaging waste • achieve the objectives of Directive (EU) 2015/720 on packaging and packaging waste • reduce the consumption of lightweight plastic bags without an overall increase in the production of packaging • promote the use of reusable packaging Littering (PNGDR, p. 126): • achieve 'zero' littering WEEE (PNGDR, p. 138): • achieve a WEEE collection rate of at least 65 % • promote repair, reuse and modularity

		Batteries and accumulators (PNGDR, p. 145): • prevent batteries and accumulators wastes • achieve a separate collection rate of 65 % Problematic waste (PNGDR, p. 152): • reduce the amount of problematic waste contained in household waste by 25 % Waste oils (PNGDR, p. 157): • prevent the generation of waste oils • recover waste oils (regeneration) Healthcare waste (PNGDR, p. 163): • reduce the quantity of infectious waste PCB waste (PNGDR, p. 167): • ensure the correct disposal or decontamination of equipment containing PCBs Sewage sludge (PNGDR, p. 173): • make use of sewage sludge in sectors other than agriculture • prevent the contamination of sewage sludge • ensure the recovery of phosphorus Used vehicles (PNGDR, p. 179): • stabilise reuse, recovery and recycling rates • make use of recyclable materials
3.	Monitoring of programme	See below
4.	Evaluation of the programme	A general review of the previous waste management plan (2010-2015) has been carried out (PNGDR, Chapter 2.8, p. 45). Out of 110 measures, 58 have been implemented; 35 have been partially implemented or are in the process of being implemented; and 17 have not been implemented. Annex V (PNGDR, pp. 213-240) provides a summary of the assessment and/or implementation status of all measures in the waste management plan 2010-2015. Further effort is needed for the following waste streams: inert waste, construction and demolition waste, biowaste (food waste, green waste), waste from the health sector and waste from sewage treatment plants. Projects proposing practical alternatives to certain products to promote waste prevention have been implemented

Prevention measures

Prevention measures implemented in accordance with Article 9 of the Waste Framework Directive	The national waste and resource plan highlights successfully implemented prevention measures in the following areas: 1. sustainable consumption models 2. sustainable production of products 3. reuse of products 4. reduction of food waste 5. reduction of littering 6. awareness-raising campaigns Detailed information on specific measures can be found in the following overview (see Table 1)

Table 1: Specific waste prevention measures structured in accordance with Article 9 of the Waste Framework Directive

Promote and support sustainable consumption models	Launch of the project 'Clever lessen' to promote sustainable consumption and food waste reduction. The project focuses on: • local products • seasonality • cooperation • implementation of a system for reusing containers (deposit system) • topic of food waste included in the school subject 'waste management and sustainable consumption'
Encourage the design, manufacture and use of products that are resource-efficient, durable (including in terms of life span and absence of planned obsolescence), repairable, reusable and upgradeable	Construction and demolition waste: • consolidation and systematisation of the upstream consideration of waste management issues in the planning, design and development of construction projects • promotion of design for disassembly WEEE: • continuation of the project 'Clever akafen' (promotion of products and devices that have a long service life) Accumulators and batteries: • continuation of the project 'Clever akafen' (promotion of rechargeable batteries and accumulators without batteries) Problematic waste: • continuation of the project 'Clever akafen' by the SuperDrecksKëscht (promotion of products that are more environmentally friendly and contain less hazardous substances) Waste oils: • promotion of long-lasting engine oils • pilot project for the direct reuse of oils after filtration

Target products containing critical raw materials to prevent those materials becoming waste	
Encourage the reuse of products and the setting up of systems promoting repair and reuse activities, including in particular for electrical and electronic equipment, textiles and furniture, as well as packaging and construction materials and products	Bulky waste: • development of a system for the recovery and repair of consumer goods deposited in recycling centres • development of a guide or a platform for existing systems for repair and borrowing • promotion of repair services Wood waste: • reinforcement of the reuse of furniture or wooden objects that are still in good condition WEEE: • promotion of repair services • continued cooperation between Ecotrel (www.ecotrel.lu) and various social service providers specialising in the preparation of WEEE for reuse • taxing non-repairable goods
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 reuse of products without compromising their quality and safety	
Reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques	
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 UN 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	• Collaboration with other institutions to combat food waste
Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and reprocessing into non-food products	Support for initiatives in the field of donation and redistribution of food and feed for human or animal consumption

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 EU 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	
Reduce the generation of waste, in particular waste that is not suitable for preparing for reuse or recycling	
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 should ensure that such restrictions are proportionate and non-discriminatory	Packaging waste: • expansion of the 'Eco-sacs' project to other sectors (the project was initially launched in 2004, with the aim of minimising the distribution of disposable plastic bags) • prohibition of the free provision of plastic bags • promotion of the use of reusable tableware and reusable/refillable packaging (e.g. the 'Spullweenchen' initiative, which provides dishwasher services at events) • promotion of alternatives for very lightweight plastic bags • preventing the use of single-use cups
Aim to halt the generation of marine litter as a contribution towards the UN Sustainable Development Goal to prevent and significantly reduce marine pollution of all kinds	Littering: • investigation and prosecution of prohibited waste management activities
Develop and support information campaigns to raise awareness about waste prevention and littering	Residual household waste and similar waste/awareness-raising projects/information campaigns: • reusable bag campaign, 'Eco-sacs' • promotion of reusable cups • organisation of sustainable events • information campaign 'Clever akafen' to promote ecological products; • information campaign 'Keng Reklammen! w.e.g.' • repair cafes and workshops, e.g. 'Upcycle your textile' • educational activities at schools and public events organised by the non-profit organisations 'Valorlux On Tour' and SuperDrecksKëscht • second-hand shops for books, clothing and household items Food waste:

	• launch of information and awareness-raising campaigns for consumers:
	  ○ a new TV series ‘Manner ass méi’ (Less is more) about food waste, packaging waste, etc., sponsored by the Ministry of Sustainable Development and Infrastructure
	  ○ the awareness-raising campaign ‘Ensemble contre le gaspillage alimentaire’ (Together against food waste) — more information is available on the website www.antigaspi.lu
	  ○ the magazine ‘GUDD!’, which was introduced to raise consumer awareness of food safety, nutrition and sustainable consumption (distributed twice a year to all homes across the country)
	Packaging waste:
	• launch of awareness-raising campaigns about biodegradable bags and ‘greenwashing’ (i.e. making misleading or unsubstantiated claims about the environmental benefits of products/services)
	Littering:
	• launch of anti-littering campaigns
	WEEE:
	• awareness-raising campaigns to extend the use of electronic devices
	Problematic waste:
	• information and awareness-raising campaigns about problematic waste (with a key focus on preventing this type of waste)
	Sewage sludge:
	• prevention at source (raise public awareness of what can be discharged into the wastewater system)

Additional implemented prevention measures, not covered by Article 9 of the WEaste Framework Directive	Residual household waste and similar waste: developing a common IT tool for waste management, with the aim of disseminating appropriate and consistent information Food waste: promoting ecolabels (e.g. European ecolabel) Construction and demolition waste: optimisation of sites for inert waste; recovery of the topsoil layer (separate the topsoil layer from other geological layers) Healthcare waste: improving sorting at source (infectious, non-infectious, recoverable materials, etc.); development of a guide on good practices in the field of infectious waste Sewage sludge: initiating a study on the quantity of microplastics contained in sewage sludge Used vehicles: encouraging other forms of mobility (e.g. ‘Mam Vëlo op d’Schaff oder an d’Schoul’ is an activity encouraging

	students and workers to use other modes of transport — bicycles, car sharing, carpooling, etc.)

Food waste prevention

In 2019, the environmental administration published a study on the generation, management and prevention of food waste ([1]).

Food waste generation
The estimates of the amount and composition of food waste in Luxembourg were based on data from various waste statistics, on the results of a survey of selected companies in the distribution and food processing chain, on the results of the 2018/2019 analysis of mixed municipal waste, and on a range of secondary and tertiary data. The 2018/2019 data estimate a food waste volume of 70 800 tonnes disposed of each year by the catering, retail and hospitality sectors and households. On average, each citizen throws away 118 kg of food per year, of which about 48 kg could be avoided. Per consumer and day, 0.35 kg of food ends up in the bin.

The study shows that the total amount of food waste in all sectors increased by about 4.8 % compared with 2016. However, food waste per capita decreased by 3.8 %. The majority of food waste is produced by households. In Luxembourg, 53 270 tonnes of food, or about 88.5 kg per capita annually, is disposed of every year, mixed with municipal waste, organic waste and compost. As Luxembourg has 602 000 inhabitants (as of 2018), this represents about 75 % of the total food waste. The avoidable share is estimated at 14 200 tonnes or 23.5 kg per capita per year (-31 %).

Measures to prevent food waste
Measures to prevent food waste mainly focus on awareness raising.

The Ministry of Sustainable Development and Infrastructure sponsored a new TV series ‘Manner ass méi’ (Less is more) about food waste, packaging waste, etc., to raise awareness. The awareness-raising campaign ‘Ensemble contre le gaspillage alimentaire’ (Together against food waste) provides information about ways to reduce food waste (more information is available on the website www.antigaspi.lu). In addition, there will be support for initiatives involving the donation and redistribution of food and feed for human and animal consumption, respectively.

The FEAD (Fund for European Aid) provides a way of financing the cost of collection, transport, storage and distribution of food donations ([2]).

In June 2008, the Ministry of Environment, Climate and Sustainable Development and the Environmental Administration jointly implemented the project ‘Clever lessen’ (Clever eating), which encourages sustainable consumption and aims to reduce food waste through the use of the ECOBOX. The ECOBOX is a reusable container, available in two sizes, which allows customers to take home food from restaurants, canteens, take-aways and other places after paying a deposit of EUR 5. In 2019, 117 restaurants and 60 canteens were participating and there were approximately 13 500 500 ml containers and more than 38 000 1 000 ml containers in circulation.

For a more comprehensive mapping of country efforts to prevent food waste prevntion, please visit the European Commission’s Food Loss and Waste Prevention Hub.

Reuse of products

Data
Article 9 of the revised Waste Framework Directive (WFD) requires Member States to monitor reuse using methodology to be developed by the Commission. Until now, no comparable data exist that would allow assessment of progress towards reuse.

([1]) https://gouvernement.lu/dam-assets/images/actualites/2020/09-septembre/22-aev-etude/Studie2.pdf
([2]) https://www.eca.europa.eu/Lists/ECADocuments/SR16_34/SR_FOOD_WASTE_EN.pdf

With regard to the Commission Implementing Decision (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.010.01.0001.01.ENG&toc=OJ%3AL%3A2021%3A010%3ATOC), this section will be updated by the EEA accordingly.

Measures to support reuse
Several measures support the reuse of materials and products; for example, a pilot project on waste ils concentrates on the direct reuse of oils after filtration, and the reuse of furniture or wooden objects that are still in good condition will be reinforced.

The initiative 'Eis Saache besser notzen' (Making better use of our things) is part of the 'Null Offall Lëtzebuerg' (No waste Luxembourg) strategy and aims to improve design for better use, develop a culture of repair and reuse, and transform recycling centres into resource centres ('centres de ressources' or 'CRES' in French).

Best practice examples

SuperDrecksKëscht
In 1985, the Luxembourg Ministry for the Environment launched the SDK, or SuperDrecksKëscht, which has been working in cooperation with the Chamber of Crafts since 1991. The SDK is a holistic system aimed at citizens, companies, commerce and administrative bodies with close consumer involvement.

Methods:

- Provide advice on marketing and brand emphasis to improve recognition by consumers.
- Provide ongoing general information and advice in schools and the media and hold training courses, all positively influencing action on waste prevention.
- Provide direct advice to businesses on waste prevention and setting up an efficient in-house waste system.
- Highlight the potential for waste prevention and recycling.
- Develop a label for businesses 'Clever akafen' (Clever shopping) to encourage shopping that is environmentally friendly, avoids waste and saves resources.
- Certify businesses and products in accordance with ISO 14024 if they comply with the 'Clever akafen'guidelines.
- Promote improved separation and collection of landfill waste and recyclable materials.

Results:

- SuperDrecksKëscht is now the third best-known brand in Luxembourg.
- Participating businesses employ more than half of Luxembourg's workforce.
- All commercial chains and many other businesses participate in 'Clever akafen'.
- Businesses advised by the SDK recycle 70 % of all the waste they produce.
- The SDK model has also been applied successfully in other countries (e.g. Switzerland).
- SDK is seen as a new commercial model based on the consumption-reconsumption philosophy

Further information:

- SuperDrecksKëscht: www.sdk.lu
- Ministry for Sustainable Development and Infrastructure: www.emwelt.lu
- Luxembourg Chamber of Crafts: www.cdm.lu

Links to the circular economy

Waste prevention is an integral part of the comprehensive transformation towards a circular economy. It reduces not only the input of natural resources into the economy but also the efforts required to collect and recycle waste.

Approaches to improving circularity are often linked to successful waste prevention. The following table shows which circular strategies are explicitly integrated into Luxembourg's waste prevention programme.

Topic	Addressed in the programme	Comments
Eco-design	Yes	For example, by promotion of products and devices that have a long service life
Repair, refurbishment and remanufacture	Yes	Several initiatives that focus on extending the use phase of products
Recycling	No	Not specifically mentioned
Economic incentives and finance	No	Not specifically mentioned
Circular business models	Yes	For example, sharing/leasing business models for mobility
Eco-innovation	No	Not specifically mentioned
Governance, skills and knowledge	Yes	For example, focusing on educational activities at schools and public events