

Waste prevention country profile

Luxembourg

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European Environment Agency



Country profile: Luxembourg

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 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
Contact person in the country/region	Stephanie Goergen (Stephanie.Goergen@aev.etat.lu)
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.
Foreseen budget 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 that invested 10,251,644.95 EUR in projects on waste management and prevention.

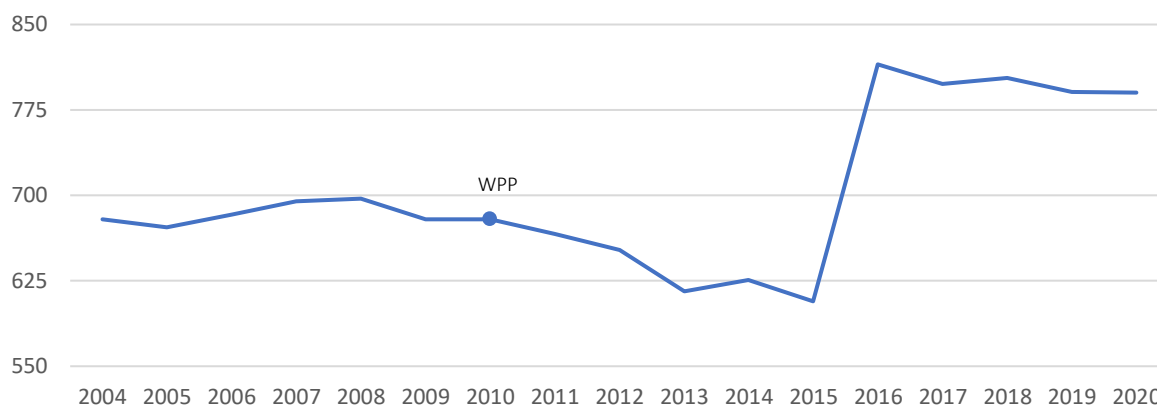
WASTE GENERATION

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

MSW

- Between 2004 and 2010, the generation of municipal waste per capita remained more or less on the same level with minor fluctuations only between 672 kg per capita and 697 kg per capita (see Figure 1).
- Although municipal waste generation is influenced by many factors (population, household expenditure), a continuous decreasing trend took place with the implementation of the second waste management plan in 2010 (first plan was implemented in 2000), reaching its lowest point (607 kg per capita) in 2015.
- After 2015, however, the municipal waste generation per capita increased by more than 100 kg per person and remained on a high level of 790 kg per capita in 2020. This is rather much higher than the European average in the same year of 517 kg¹ per capita.

Figure 1: Municipal waste generation in Luxembourg (kg per capita), 2004-2020



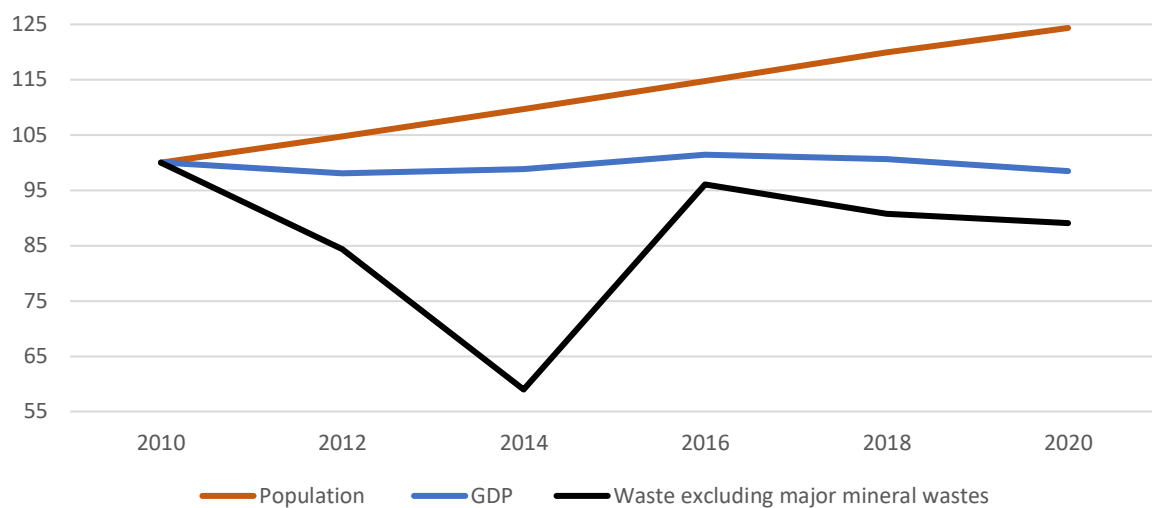
Source: Eurostat [ENV_WASMUN]

Total Waste

- Luxembourg's total waste (excluding major mineral waste) generation fluctuated highly between 2010 and 2016, with significant decrease between 2010 and 2014 and equally significant increase back to former levels in 2016, before decreasing more steadily until 2020 (see Figure 2).
- As both indicators GDP and population increased steadily within this period, an impact towards waste generation cannot directly be observed.
- Similar to municipal, a slightly decreasing trend occurs from 2016, which potentially indicates a decoupling trend between waste generation and economic growth in Luxembourg.

Figure 2: Growth rate of waste (excluding major mineral wastes), GDP (main GDP aggregates, chain linked), and population, 2010-2020, (2010=100).

¹ Based on data collected from Eurostat in September 2022.



Source: Eurostat [ENV_WASGEN, NAMA_10_PC, DEMO_GIND]

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 PNGDR aims to: <ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Agriculture;• construction and Infrastructure;• manufacturing;• sale, retail, transport;• households;• private service activities, hospitality;• public services.
3. Priority waste types	<ul style="list-style-type: none">• Food/organic;• construction and demolition waste;• hazardous waste (batteries; accumulators; waste oils; polychlorinated biphenyl waste; PCB; healthcare waste);• household/municipal waste;• packaging;• waste electrical and electronic equipment (WEEE)/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: <ul style="list-style-type: none">• 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
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2. Quantitative targets	<p>Residual household waste and similar waste (PNGDR p. 64):</p> <ul style="list-style-type: none">• prevent the generation of mixed municipal waste,• recycle min. 55% of all household waste,• send max. 10% of municipal waste to landfills,• provide separate collection facilities at a reasonable distance,• ensure the quality of the collected waste streams,• connect all Luxembourg municipalities to one or more mobile or fixed recycling centers. <p>Bulky waste (ebd., p. 74):</p> <ul style="list-style-type: none">• reduce bulky waste by 20%,• promote repair and reuse,• increase the amount of waste recovered,• strictly apply the definition of bulky waste during collection. <p>Food waste (ebd., p. 84):</p> <ul style="list-style-type: none">• prevent food waste,• reduce food waste by 50% (also a UN sustainable development goal). <p>Wood waste (ebd., p. 102):</p> <ul style="list-style-type: none">• promote reuse of certain wood products,• recover wood waste,• reduce the fraction of wood waste in the bulky waste,• develop synergies with the ‘wood cluster’. <p>Construction and demolition waste:</p> <ul style="list-style-type: none">• prevent the generation of waste from excavated soils,• encourage backfilling with excavated soil,• stabilise current recovery rates (90 %),• promote reuse of construction materials. <p>Packaging waste (ebd., p. 121):</p> <ul style="list-style-type: none">• ban the use of single-use plastic bags,• prevent packaging waste,• achieve the objectives of directive 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, <p>Littering (ebd., p. 126):</p> <ul style="list-style-type: none">• achieve ‘zero’ littering. <p>WEEE (ebd., p. 138):</p> <ul style="list-style-type: none">• achieve a WEEE collection rate of at least 65%,• promote repair, reuse and modularity.
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Batteries and accumulators (ebd., p. 145):

- prevent waste batteries and accumulators,
- achieve a separate collection rate of 65%.

Problematic waste (ebd., p. 152):

- reduce the amount of problematic waste, contained in household waste, by 25%.

Waste oils (ebd., p. 157):

- prevent the generation of waste oils,
- recover waste oils (regeneration).

Healthcare waste (ebd., p. 163);

- reduce the quantity of infectious waste.

PCB waste (ebd., p. 167):

- ensure the correct disposal or decontamination of equipment containing PCBs.

Sewage sludge (ebd., 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 (ebd., 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 (ebd., chapter 2.8., p. 45). Out of 110 measures, 58 measures have been implemented; 35 measures have been partially implemented or are in the process of being implemented; and 17 measures have not been implemented. Annex V (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 concrete alternatives to certain products to promote waste prevention have been implemented.

Prevention measures

Implemented prevention measures according to Article 9	<p>The national waste and resource plan highlights successfully implemented prevention measures in the following areas:</p> <ol style="list-style-type: none"> 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 <p>Detailed information on specific measures can be found in the following overview.</p>
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Table 1: Specific waste prevention measures structured according to Art 9 WFD

Promote and support sustainable consumption models	<p>Launch of the project ‘Clever lessen’ to promote sustainable consumption and food waste reduction. The project focusses on:</p> <ul style="list-style-type: none"> • 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, manufacturing and use of products that are resource-efficient , durable (including in terms of life span and absence of planned obsolescence), reparable , re-usable and upgradable .	<p>Construction and demolition waste:</p> <ul style="list-style-type: none"> • 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. <p>WEEE:</p> <ul style="list-style-type: none"> • continuation of the project ‘Clever akafen’ (promotion of products and devices that have a long service life). <p>Accumulators and batteries:</p> <ul style="list-style-type: none"> • continuation of the project ‘Clever akafen’ (promotion of rechargeable batteries and accumulators without batteries). <p>Problematic waste:</p> <ul style="list-style-type: none"> • continuation of the project ‘Clever akafen’ by the SuperDrecksKëscht (promotion of products that are more environmentally friendly and contain less hazardous substances). <p>Waste oils:</p>

	<ul style="list-style-type: none"> • promotion of long-lasting engine oils; • pilot project for the direct reuse of oils after filtration.
Target products containing critical raw materials to prevent that those materials become waste.	
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.	<p>Bulky waste:</p> <ul style="list-style-type: none"> • development of a system for the recovery and repair of consumer goods deposited in recycling centers; • development of a guide or a platform of existing systems for repair and borrowing; • promotion of repair services. <p>Wood waste:</p> <ul style="list-style-type: none"> • Reinforcement of the reuse of furniture or wooden objects that are still in good condition. <p>WEEE:</p> <ul style="list-style-type: none"> • Promotion of repair services; • continued cooperation between Ecotrel (www.ecotrel.lu) and various social service providers specialising in the preparation of reusing of WEEE; • taxation of non-reparability.
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 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 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.	<ul style="list-style-type: none"> • Collaboration with other institutions to combat food waste.

<p>Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and the reprocessing into non-food products.</p>	<p>Support for initiatives in the field of donation and redistribution of food and feed for human or animal consumption.</p>
<p>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.</p>	
<p>Reduce the generation of waste, in particular waste that is not suitable for preparing for re-use or recycling.</p>	
<p>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.</p>	<p>Packaging waste:</p> <ul style="list-style-type: none"> • expansion of the ‘Eco-sacs’ project to other sectors (the project was initially launched in 2004, with an 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. initiative ‘Spullweenchen’, which provides dishwasher services at events); • promotion of alternatives for very lightweight plastic bags; • prevention of single-use cups.
<p>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.</p>	<p>Littering:</p> <ul style="list-style-type: none"> • investigation and prosecution of prohibited waste management activities.
<p>Develop and support information campaigns to raise awareness about waste prevention and littering.</p>	<p>Residual household waste and similar waste/ awareness-raising projects/information campaigns:</p> <ul style="list-style-type: none"> • reusable bag campaign ‘Eco-sacs’; • promotion of reusable cups; • organisation of sustainable events; • information campaign ‘Clever akafen’ to promote ecological products (https://www.sdk.lu/index.php/lu/nohaltegekonsum/clever-akafen-lux); • 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

	<p>organisation ‘Valorlux on Tour’, SuperDrecksKëscht;</p> <ul style="list-style-type: none"> • second-hand shops for books, clothing and household items; <p>Food waste:</p> <ul style="list-style-type: none"> • 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; • Magazine ‘GUDD!’, which was introduced to raise consumer awareness of food safety, nutrition, sustainable consumption (distributed twice a year to all letter boxes across the country); <p>Packaging waste:</p> <ul style="list-style-type: none"> • launch of awareness-raising campaigns about biodegradable bags and ‘greenwashing’ (i.e. making misleading or unsubstantiated claims about the environmental benefits of products/services). <p>Littering:</p> <ul style="list-style-type: none"> • launch of anti-littering campaigns <p>WEEE:</p> <ul style="list-style-type: none"> • awareness-raising campaigns to extend the use of electronic devices. <p>Problematic waste:</p> <ul style="list-style-type: none"> • information and awareness-raising campaigns about problematic waste (with a key focus on the prevention of this type of waste). <p>Sewage sludge:</p> <ul style="list-style-type: none"> • prevention at source (raise public awareness of what can be discharged into the wastewater system).
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Additional implemented prevention measures, not covered by Article 9

Residual household waste and similar waste: development of a common IT tool for waste management, with the aim of disseminating appropriate and consistent information.

Food waste: Promotion of ecolabels (e.g., European ecolabel).

Construction and demolition waste: optimisation of sites for inert waste; recovery of the topsoil layer (separate 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: a study on the quantity of microplastics contained in sewage sludge.

Used vehicles: encouragement of other forms of mobility (e.g., action ‘Mam Vëlo op d’Schaff oder an d’Schoul’ is 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 generation, management and prevention of food waste.²

Food waste generation

The amount and composition of food waste in Luxembourg were estimated based on data from various waste statistics, on the results of a survey of selected companies in the distribution and food processing chain, results of the 2018/2019 analysis of mixed municipal waste, and a range of secondary and tertiary data. The 2018/2019 edition presents a food waste volume of 70,800 tonnes, disposed each year by the sectors catering, retail, hospitality and household. 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 to 2016. However, food waste per capita decreased by 3.8%. The majority of food waste is produced in households. In Luxembourg, 53,270 tonnes of food, or about 88.5 kg per capita annually, are disposed 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 possibilities to reduce food waste (more information is available on the website

² <https://gouvernement.lu/dam-assets/images/actualites/2020/09-septembre/22-aev-etude/Studie2.pdf>

www.antigaspi.lu). In addition, there will be support for initiatives in the field of donation and redistribution of food and feed for human or animal consumption.

The FEAD (Fund for European Aid) provides the possibility of financing the cost of collection, transport, storage and distribution of food donations.³

In June 2008, the Ministry of Environment, Climate and Sustainable Development and the Environmental Administration have jointly implemented the project „Clever Iessen“ (clever eating). It encourages consumers towards a sustainable consumption and aims at reducing food waste through the usage of the ECOBOX. The ECOBOX is a reusable container in two sizes that allows customers to take home food from restaurants, canteens, take-aways and other places after placing a deposit of 5 EUR. In 2019, 117 restaurants and 60 canteens were participating. Approximately 13,500 500 ml containers and more than 38,000 1,000 ml containers were in circulation.

REUSE OF PRODUCTS

Data

Article 9 of the revised Waste Framework Directive (WFD) requires Member States to monitor reuse on the basis of methodology to be developed by the Commission. Until now no comparable data exists that would allow assessing progress towards reuse.

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

There are several measures to support reuse of materials and products. Regarding waste oils, for example, a pilot project concentrates on the direct reuse of oils after filtration. Furthermore, the reuse of furniture or wooden objects that are still in good condition will be reinforced. Concrete measures, however, are not reported.

The initiative ‘Eis Saache besser notzen‘ (making better use of our things) is part of the ‘Null Offall Letzebuerg’ (No waste Luxembourg) strategy and aims at improving the design for better use, developing a culture of repair and reuse, and transforming 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® and 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:

- Marketing for consumers and brand emphasis improve recognition.

³ https://www.eca.europa.eu/Lists/ECADocuments/SR16_34/SR_FOOD_WASTE_EN.pdf

- Ongoing general provision of information and advice: in schools, the media, training courses, positively influencing their action on waste prevention.
- Direct advice to businesses on waste prevention and setting up an efficient in-house waste system.
- Better presentation of the potential of prevention and recycling.
- The SDK has developed a label for businesses ("Clever Akafen" or "Clever Shopping") to encourage shopping that is environmentally friendly, avoids waste and saves resources.
- Businesses and products are certified in accordance with ISO14024 if they comply with these guidelines.
- Enhancing 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 Shopping".
- Businesses advised by the SDK recycle 70% of all the waste they produce.
- The SuperDrecksKëscht® model has also been applied successfully in other countries (e.g. Switzerland).
- New commercial model based on the consumption- re-consumption 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 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 Luxembourg's waste prevention programme.

Topic	Addressed in the programme	Comments
Eco-design	Yes	Inter alia 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	E.g. sharing/ leasing business models for mobility.
Eco-innovation	No	Not specifically mentioned.
Governance, skills and knowledge	Yes	E.g. focussing on educational activities at schools and public events