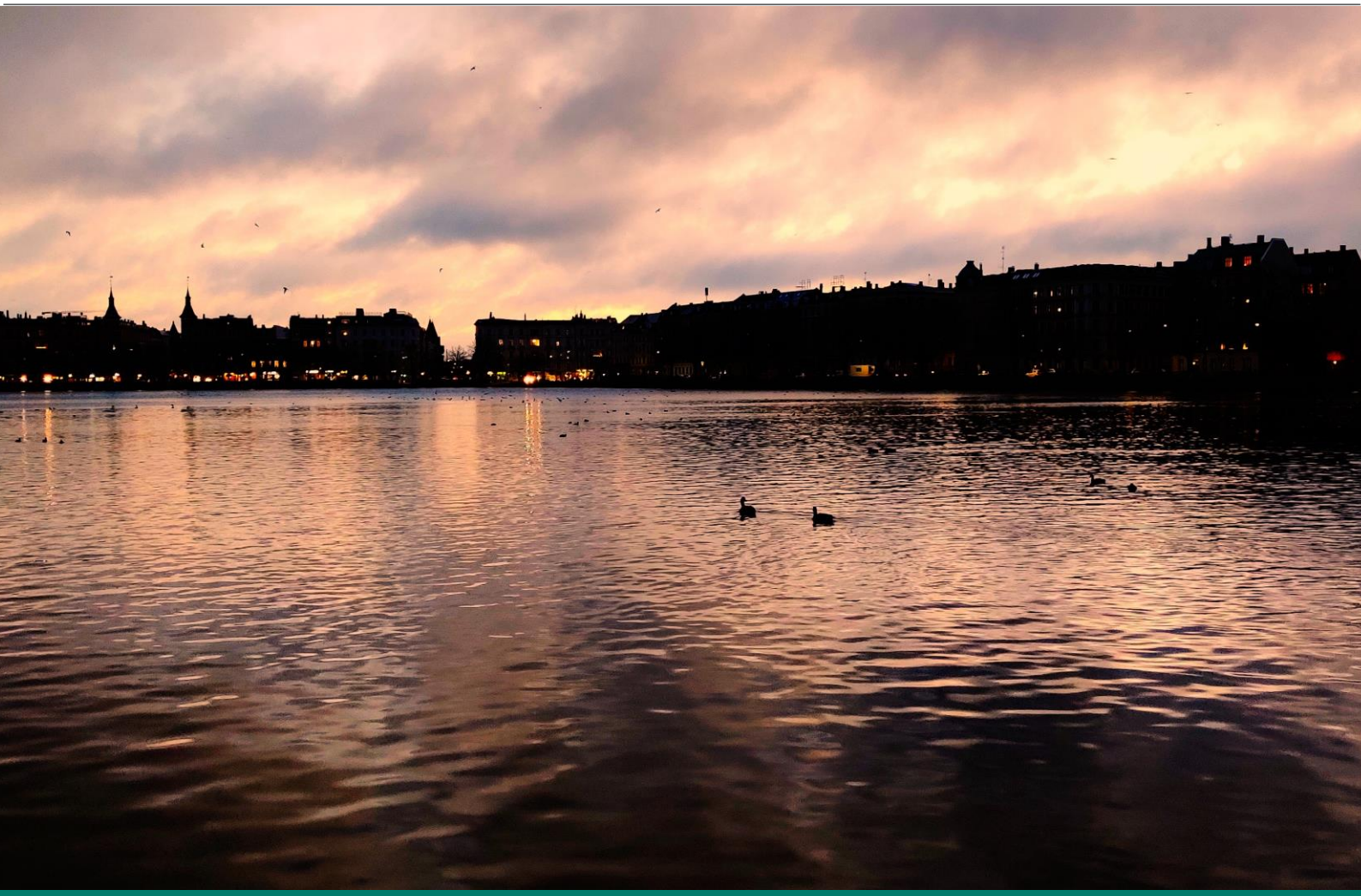
Circular economy country profile - Luxembourg



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Circular economy and resource use
https://www.eionet.europa.eu/etcs/etc-ce

Contents

Introduction

The European Commission requested the EEA to produce EU country profiles that offer an updated view of the following elements:

- circular economy policies being implemented at a national level with a particular focus on elements that go beyond EU mandatory elements; and
- best practice with a focus on policy innovation.

While implementing the EU Circular Economy Action Plan (CEAP 2020), Member States are encouraged to advance circularity at a national level by adopting policies and initiatives that go beyond EU regulations, while preserving the Single Market.

This circular economy country profile is based on information reported by the Eionet network and, in particular, the Eionet Group on Circular Economy and Resource Use in the second quarter of 2022. The information was reviewed and edited by the European Topic Centre on Circular economy and resource use (ETC CE). A selection of Eurostat data was made to further complement this country profile.

The information is current as of 16 August 2022 (final review), when members of Eionet verified the content of this profile.

Luxembourg – facts and figures

GDP: EUR 64.2 billion (0.5 % of EU27 total in 2020)

GDP per person: EUR 101 760 (purchasing power standard) (262.7 % of EU27 average per person figure in 2020)

Use of materials (domestic material consumption (DMC))
13.6 million tonnes DMC (0.2 % of EU27 total in 2020)
21.6 tonnes DMC/person (160.6 % of EU27 average per person in 2020)

Structure of the economy:
Agriculture: 0.2 %
Industry: 12.3 %
Services: 87.5 %

Employment in circular sectors:
Eurostat data are confidential

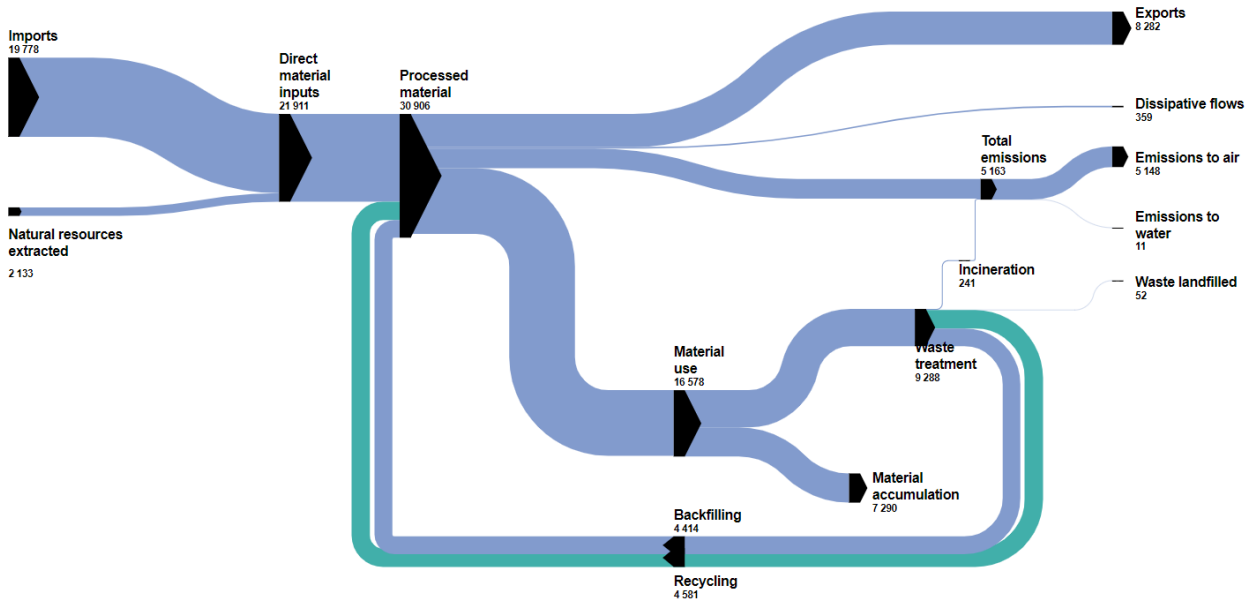
Surface area: 2 600 square kilometres (0.06 % of EU27 total)

Population: 626 108 (0.1 % of EU27 total in 2020)

Note: all definitions and metadata used in this profile are taken, as shown, from Eurostat

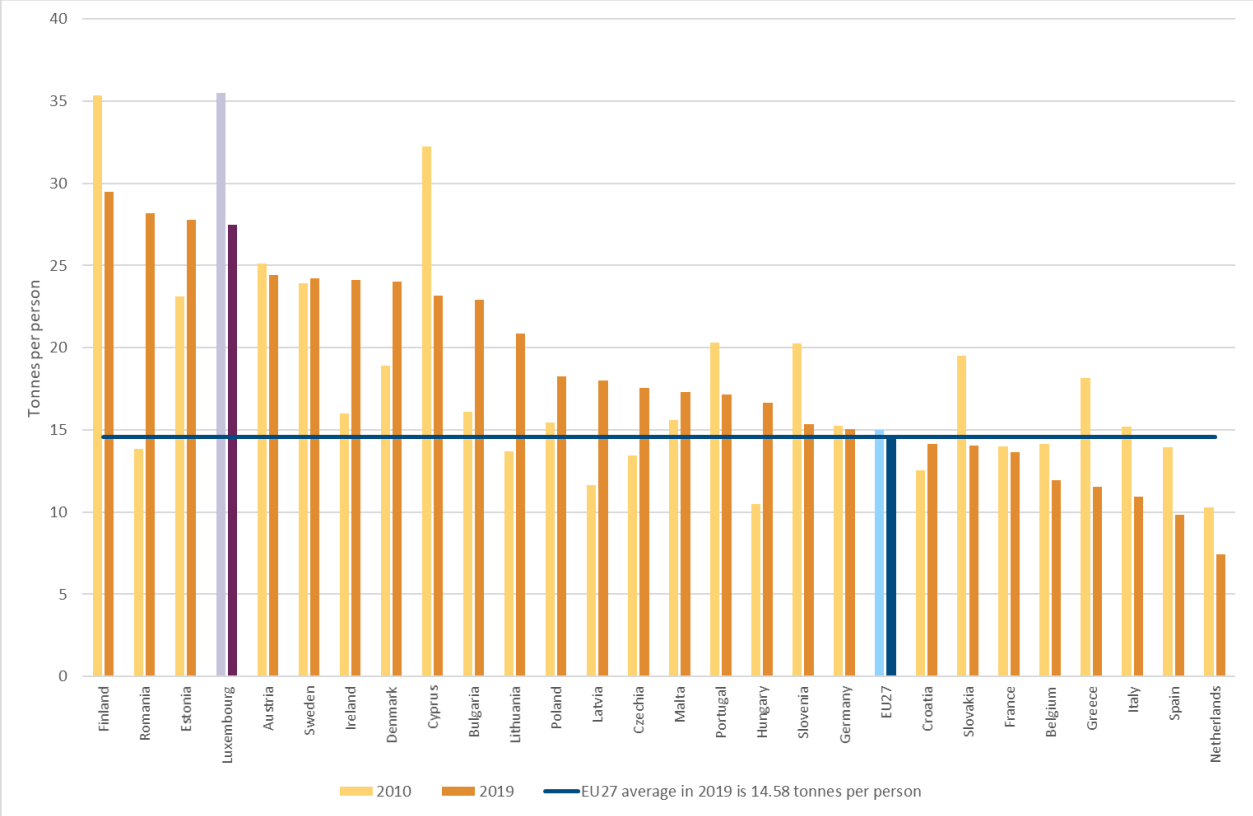
Source: Eurostat datasets, EU27 2020 (accessed 20 June 2022)

Figure 1 Material flow diagram for Luxembourg in 2020, '000 tonnes



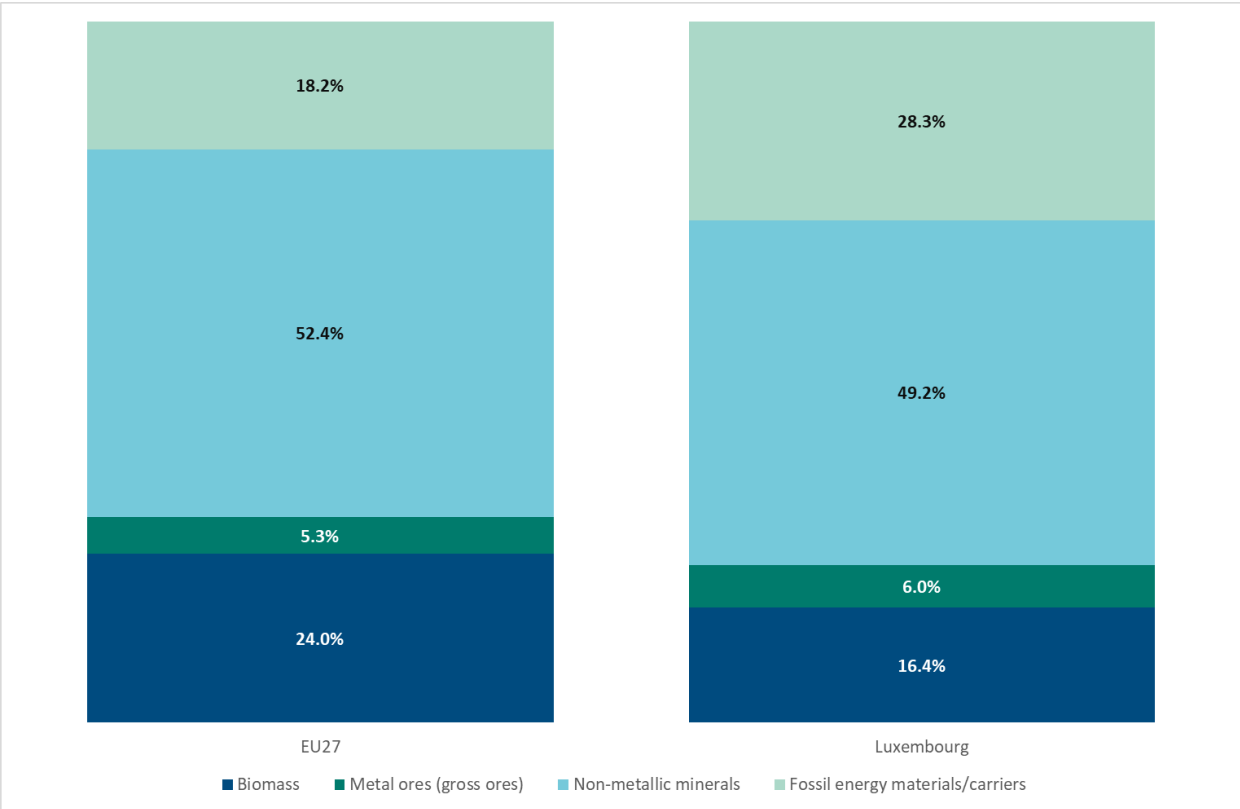
Source: Eurostat (2022) [env_ac_mfa], [en_ac_sd], [env_wassd] (accessed 20 June 2022)

Figure 2 Material footprint (raw material consumption), EU27, 2010 and 2019, tonnes per person



Source: Eurostat (2020) [env_ac_rme] (accessed 4 July 2020)

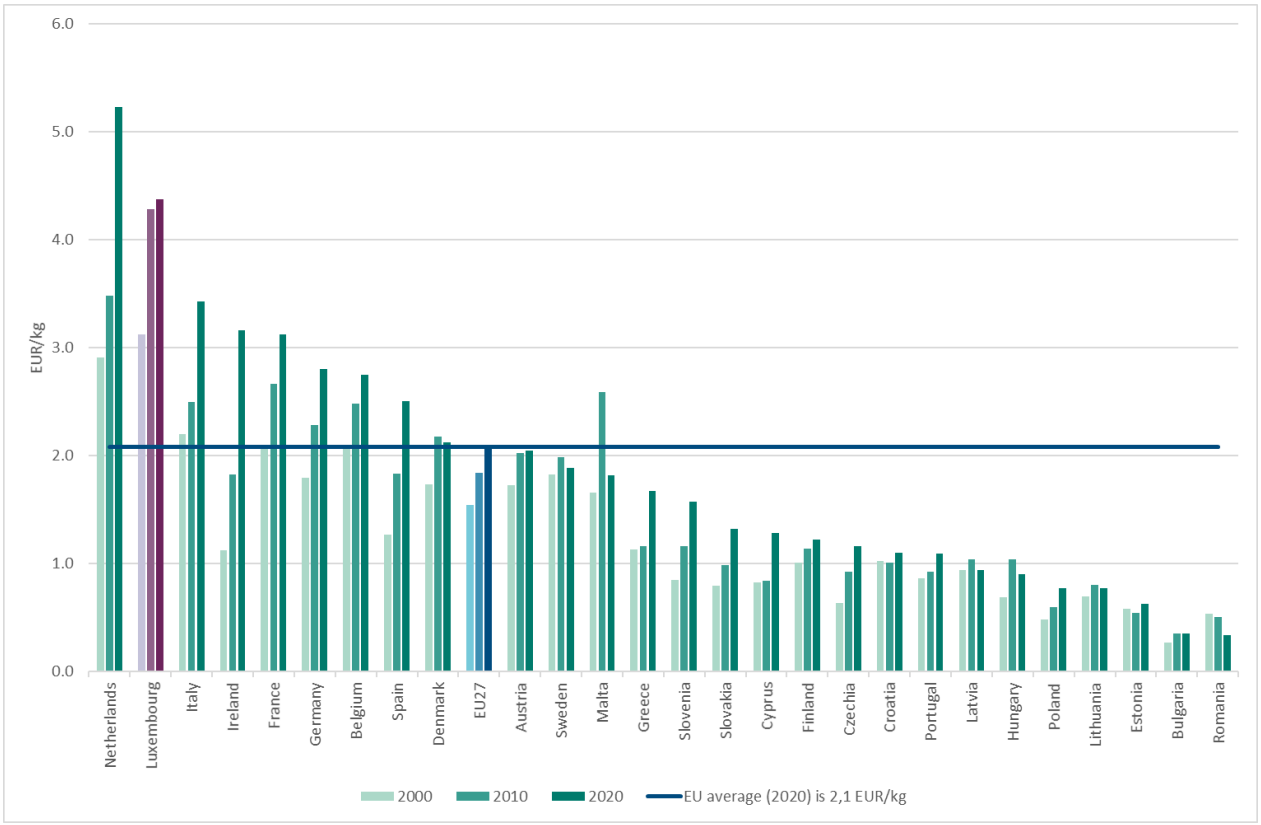
Figure 3 Domestic material consumption by selected material category, EU27 and Luxembourg, 2020, per cent



Note: totals may not sum to 100 % due to rounding

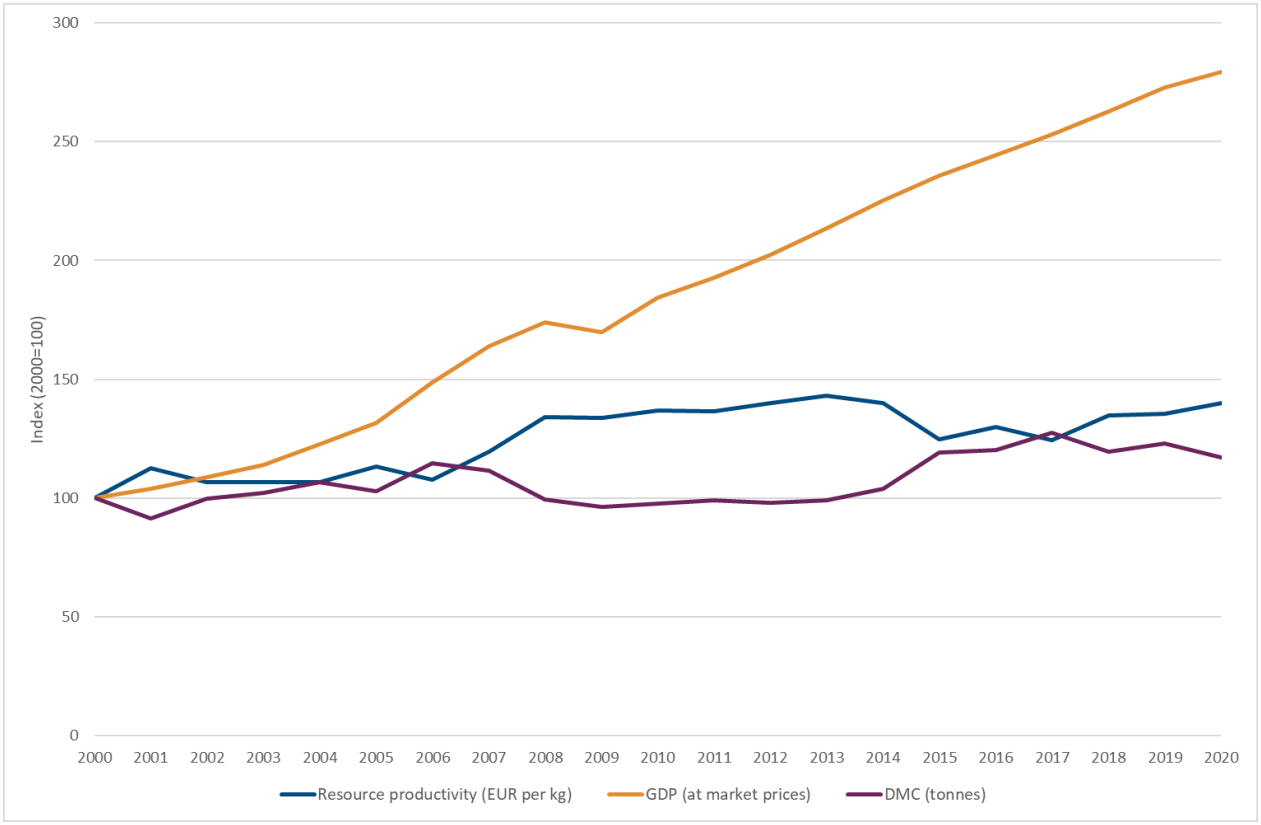
Source: Eurostat (2022) [env_ac_mfa] (accessed 20 June 2022)

Figure 4 Resource productivity (gross domestic product/domestic material consumption), EU27, 2000, 2010 and 2020, EUR per kilogram



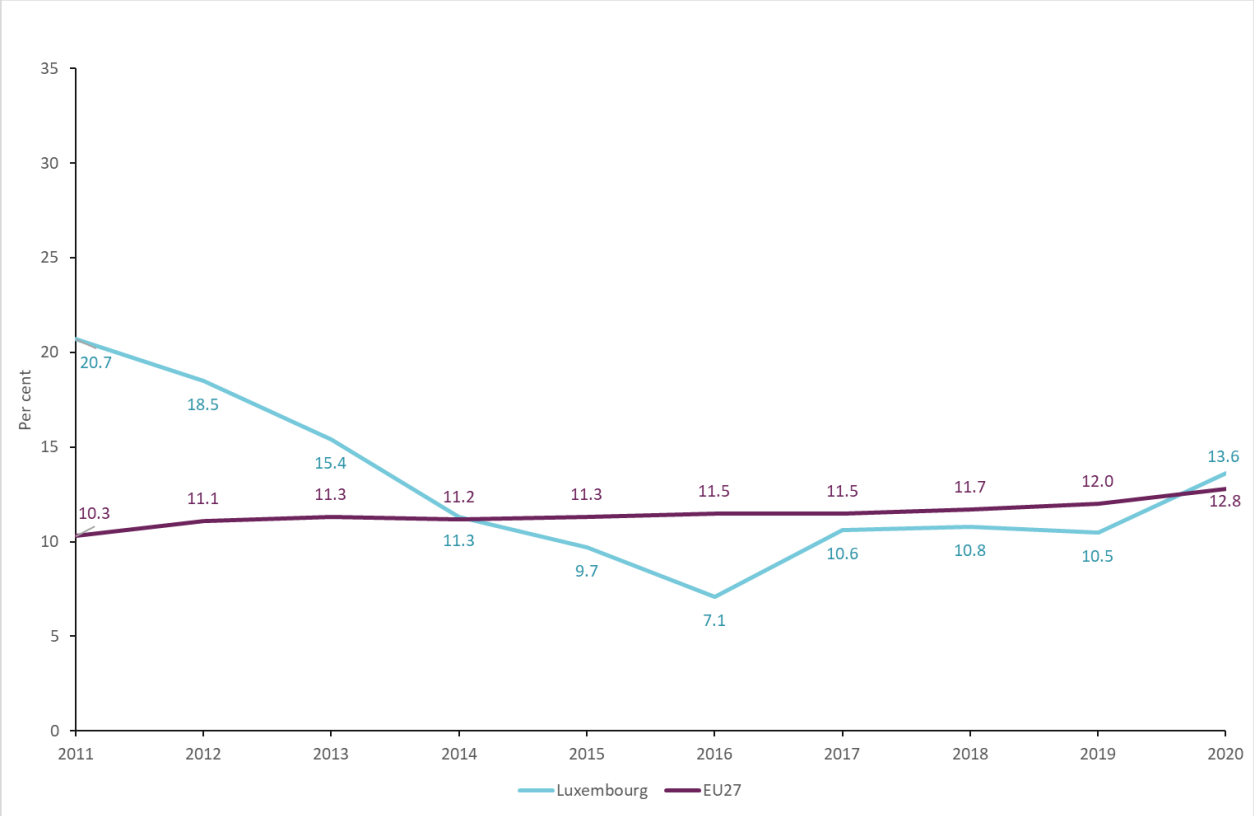
Source: Eurostat (2022) [env_ac_rp] (accessed 20 June 2022)

Figure 5 Gross domestic product, domestic material consumption and resource productivity trends, Luxembourg, 2000–2020, index (2000=100)



Source: Eurostat [env_ac_mfa], [env_ac_rp] & [nama_10_gdp] (accessed 4 July 2022)

Figure 6 Circular material use rate in Luxembourg, 2011–2020, per cent



Source: Eurostat (2022) [env_ac_cur] (accessed 20 June 2022)

Existing policy framework

Dedicated strategy, roadmap or action plan for circular economy

Luxembourg has adopted a **national circular economy (CE) strategy** in February 2021, which has been published on the portal for CE ([1]).

The strategy was designed as a **toolbox for public authorities** to implement the CE in specific sectors and within their competence domains (construction; education and training; finance; food and biomaterials; industry; and retail).

It identifies general instruments for public authorities to activate and align in their respective competence domains (regulation and standards; financial aspects; knowledge creation and management), using a co-creation approach to involve other relevant public and private stakeholders.

Roadmaps are to be developed for these sectors in order to create tangible impacts, in line with meaningful objectives and indicators.

The key objectives and initiatives of the strategy were mainly the alignment of national initiatives with the creation of an information and coordination platform ([2]), involving (meanwhile) five national ministries (energy and spatial planning; economy; environment, climate and sustainable development; finance; labour, employment and the social and solidarity economy).

These ministries rely on various national agencies for concrete implementation projects, in collaboration with industry or municipalities.

Circular economy policy elements included in other policies

Circular economy policy element	Included in policy
Obligation to submit a digital material inventory for new constructions. A specific policy (Règlement grand-ducal (RGD)) is currently being prepared to set out the terms.	Loi du 9 juin 2022 modifiant : 1° la loi modifiée du 21 mars 2012 relative aux déchets; 2° la loi modifiée du 31 mai 1999 portant institution d'un fonds pour la protection de l'environnement. (in French)
Designing buildings as material storage. Promote construction methods that avoid excavation. Extend the useful life of buildings. Create markets for deconstruction products and materials.	Zero-waste strategy
Establishment of a general technical clause for deconstruction in public procurement tenders for construction.	Public Procurement for construction (work in progress) (in French and German)
Parties and public events will gradually replace single-use items with reusable products (cups, plates, forks, etc.). This first targets single-use plastic items (2023), then all single-use items (2024).	Loi du 9 juin 2022 modifiant : 1° la loi modifiée du 21 mars 2012 relative aux déchets ; 2° la loi modifiée du 31 mai 1999 portant institution d'un fonds pour la protection de l'environnement. (in French)
Advertisements affixed to cars will be prohibited.	Loi du 9 juin 2022 modifiant :

1 https://economie-circulaire.public.lu/en/publications/circular-strategy.html

2 www.economie-circulaire.lu

Circular economy policy element	Included in policy
From January 2024, only citizens who give their explicit consent may receive advertisements in their mailboxes. It will no longer be permitted to place advertisements in the mailboxes of all other citizens.	1° la loi modifiée du 21 mars 2012 relative aux déchets ; 2° la loi modifiée du 31 mai 1999 portant institution d'un fonds pour la protection de l'environnement. (in French)
From 2023, all food and drink in restaurants must be served in reusable containers. From 2025, take-out or delivered meals must also be supplied in reusable containers and include a take-back system.	Loi du 9 juin 2022 modifiant : 1° la loi modifiée du 21 mars 2012 relative aux déchets ; 2° la loi modifiée du 31 mai 1999 portant institution d'un fonds pour la protection de l'environnement. (in French)
From 2023, some fresh fruit and vegetables in small packages of less than 1.5 kg may no longer be sold in plastic packaging. From 2025, no bag – regardless of its material and size – may be distributed free of charge at points of sale, unless it is necessary for hygiene reasons. This is also applicable to beverage cups and food containers.	Loi du 9 juin 2022 modifiant la loi du 21 mars 2017 relative aux emballages et aux déchets d'emballages. (in French)
The law paves the way for the establishment of a national deposit system. A specific policy (Règlement grand-ducal (RGD)) must be prepared, to set out the terms.	Loi du 9 juin 2022 modifiant la loi du 21 mars 2017 relative aux emballages et aux déchets d'emballages. (in French)
Electronic devices that still work or that can be repaired will automatically be put into a reuse chain if the citizens who hand them agree.	Loi du 9 juin 2022 relative aux déchets d'équipements électriques et électroniques. (in French)
The national publicly-financed initiative "*Superdreckskëscht*", established by law in 2005, is an initiative to handle problematic waste, support companies in their waste management and develop information for the general public.	Loi du 25 mars 2005 relative au fonctionnement et au financement de l'action SuperDrecksKëscht
Ons Wirtschaft vu muer: roadmap for a competitive and sustainable economy 2025.	Building Block 2: driving the digitally enabled circular economy transition
White paper, *Social and circular: the economy of tomorrow*	How the social and solidarity economy can support the implementation of a circular economy in the Greater Region of Luxembourg (link in French)

Monitoring and targets

Assessment of circular economy performance

The EU Circular Economy Monitoring Framework relies largely on waste management data, which are used for monitoring the **efficiency of waste policies**. For a number of other indicators, no data are provided for Luxembourg. One of the reasons is confidentiality, where data would reveal details about individual companies.

The interpretation of these data is difficult due to the limited size of Luxembourg's economy and the large impact on waste flow statistics from a limited number of large companies carrying out, e.g. scrap recycling through arc-furnace technology. More detailed and sector-specific data are therefore needed.

Circular economy monitoring frameworks and their indicators beyond the ones from Eurostat

The national statistical office, STATEC is **working on a set of indicators** for a national CE monitoring framework, aligned with methodologies from the Bellagio process and the Organisation for Economic Co-operation and Development (OECD), and inspired by the Dutch Framework and baseline assessment for monitoring the progress of the circular economy ([3]).

Circular economy targets

Targets for the **reduction of waste and a better management of resources** are defined in the new *waste and resource* law (transposition of directives of CE package, published 9 June 2022). Otherwise, there are no specific CE targets. Nevertheless, the national plan for waste and resource management (2018) provides sectorial targets ([4]).

[3] Circular economy: what we want to know and can measure (europa.eu)

[4] Plan national de gestion des déchets et des ressources (PNGDR) - Offäll a Ressourcen - Portail de l'environnement - emwelt.lu - Luxembourg (public.lu)

Innovative approaches and good practices

Examples of public policy initiatives (national, regional or local)

➔ *Good practice example: data and transparency / traceability, producer /supplier responsibility*

Product circularity data sheet (PCDS) ([5])
The Circularity Dataset Initiative addresses the difficulty that industry and consumers have in accessing reliable data on the circular properties of a product. Trade secrets hinder transparency and reporting standards are lacking, forcing manufacturers to send out different data sets in diverse formats to customers and product platforms.
The International Organization for Standardization plans to make Luxembourg's Product Circularity Data Sheet a future ISO/NP 59040 standard for communicating the circular properties of products. Launched in 2018 by the Economy Ministry, as part of a national strategy to promote the data economy and the circular economy, the **open-source data sheet describes all circular information relevant to a product**, helping consumers and manufacturers make educated choices. Luxembourg's initiative to become an ISO-based international standard for the declaration, audit and exchange of circular properties of products, supports a shift towards a future that is more respectful of resources.

➔ *Good practice example: financial support programme, education (consultancy and training), innovative business models*

Fit 4 circularity ([6])
The Fit 4 Circularity programme has been designed to facilitate and accelerate company's transition to a circular economy. It helps companies identify and assess the growth potential and **integrate the circular economy into general innovation activities**. It has been successfully implemented with a range of companies and is currently being redesigned to assess the circularity potential of value chains with multiple companies in a co-creation process.

➔ *Good practice example: change in consumption patterns and consumer behaviour*

SuperDrecksKëscht® ([7])
The *SuperDrecksKëscht®* initiative was launched by the Luxembourg State and its missions were framed by law in 2005 (Loi 25 mars 2005 relative au fonctionnement et au financement de l'action SuperDrecksKëscht). It falls under the responsibility of the Ministry of the Environment, Climate and Sustainable Development is organised together with the local communes, the Chamber of Crafts and the Chamber of Commerce.

The objectives of the *SuperDrecksKëscht®* are:

- to **dispose of or recycle problematic waste** from households;
- to offer **assistance** and **advice** to support businesses and establishments from the public and private sectors in setting up ecological waste management plans;
- to **promote ecological waste management** through publicity and awareness campaigns;
- to **organise the collection** of small amounts of waste from businesses and public or private establishments.

The *SuperDrecksKëscht®* is protected by a trademark and has been exported as a concept to different countries.

5 www.pcds.lu
6 https://www.luxinnovation.lu/innovate-in-luxembourg/fit-4-performance-programmes/fit-4-circularity/
7 http://sdk.lu/en/

➔ *Good practice example: change in consumption patterns and consumer behaviour, education (awareness-raising and training), spatial planning and urban policy*

Circular Innovation Hub Wiltz ([8])
The municipality of Wiltz, in northern Luxembourg, has set up a Circular Innovation Hub, which is **offering training on the CE** to other municipalities, based on a range of implementation projects in Wiltz, targeting both citizens and local industry.

One of these implementation projects is the reconversion of an industrial brownfield site into a new urban area, in collaboration with the National Fund for Social Housing, relying on a specific circular economy charter and roadmap.

➔ *Good practice example: spatial planning and urban policy, change in consumption patterns and consumer behaviour, and education (awareness-raising and training)*

The Climate Pact ([9])
The Climate Pact is an agreement between municipalities and the national government. The municipalities commit to implementing environmental and climate-related measures. In return, they receive a financial contribution and environmental certification. Launched in 2012, it was mainly focused on action against climate change and with the relaunch in 2021 certain elements on **resource use have been strengthened and a thematic circular economy certification is delivered**. The climate pact is based on the European Energy Award.

Examples of public/private policy initiatives (sectoral)

SuperDrecksKëscht®
The *SuperDrecksKëscht®* (SDK), as indicated above, has developed a number of tools and guidance documents for a more sustainable management of resources, such as the resources potential concept ([10]). The resource potential is a resource indicator that puts companies (recycling plants or product producers) in a position to show the actual volumes of recovered raw materials and the proportion used for energy generation, and hence to reveal the potential to save primary resources. The concept of **resource potential certification** meets the requirements of standard DIN ISO 14024. The input and output flows are taken into account in the calculation in the course of resources potential certification.

8 https://www.wiltz.lu/fr/cap-2030-grands-projets/hotspot-de-l-economie-circulaire/circular-innovation-hub (in French)
9 https://pacteclimat.lu/fr/citoyen (in French and German)
10 https://sdk.lu/en/home/circular-economy/

The way forward

Addressing barriers and challenges

All the barriers indicated below apply, with the following remarks.

- Institutional challenge: the public sector too is linear and segmented with respect to competences and responsibility domains, as well as budgets. The CE is a **complex, cross-sectoral issue,** for which decision processes have to be adapted and budgets lines have to be made available for cross-sectoral projects.
- Market barriers: the new waste and resource law foresees a mechanism for reintegrating waste resources into resource stocks, but regulation should aim to keep useful products and resources out of waste flows. The situation for Luxembourg is **complicated by transnational value chains** with restrictions on waste transport.
- Good indicators and targets: even though the CE strategy provides tools and methods to set up roadmaps, specific sectoral CE objectives are currently missing in Luxembourg due to a **lack of data**; this is a major challenge.

There are a number of mechanisms in place to support companies in developing circular products and services, but both business-to-business (B2B) and business-to- consumer (B2C) companies need to actively participate to receive the support. In order to provide investment security for companies:

- **accounting and depreciation rules** for material stock value need to be adapted, e.g. for product-as-service business models;
- **waste** of materials need to be **taxed;**
- specific consumer and user information campaigns could help to raise more awareness among consumers and users, including those within businesses.

Ranking types of barriers

High barrier	Institutional challenge to develop policy for a complex cross-sectoral issue	
⬆	Good indicators and targets	
	Market barriers for recycled resources	
Low barrier	Companies' ability to grasp opportunities	Consumer behaviour and awareness

Future policy plans

➔ National recovery plan ([11])

There are no key objectives in relation to CE, but the definitions offer opportunities for boosting it, especially in Pillar 1 *Cohesion and social resilience* there are two components:

- Component 1A – **Skilling, reskilling and upskilling**: ideas for specific training offers are being developed in the construction sector (modular construction, deconstruction, bio-based materials and reuse);
- Component 1C – **housing challenge:** There are a number of larger urban projects for **recovering industrial brownfield sites** for housing purposes underway, such as *Neischmelz* in the south of Luxembourg. The public developer *Fonds du Logement* has developed master plans for these areas, including circular construction and resource recovery principles.

11 https://mfin.gouvernement.lu/dam-assets/publications/RRR-Final-EN-August-with-Cover.pdf

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