Circular economy country profile 2024 – Croatia

European Environment Agency
European Topic Centre
Circular economy and resource use

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European Topic Centre on
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:

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

With the EU Circular Economy Action Plan (CEAP 2020) "the Commission [..] encourages Member States to adopt or update their national circular economy strategies, plans and measures in the light of its ambition".

These country profiles originate in the work leading to the EEA More from less report (2016)[1], that presented an overview of approaches to material resource efficiency and to circular economy in thirty-two European countries. The More from Less report was followed by the 2019 EEA Report 'Resource efficiency and the circular economy in Europe 2019 – even more from less: An overview of the policies, approaches and targets of 32 European countries'[2].
It presented an updated and extended assessment of approaches and identified trends, similarities and new directions taken by countries in the connected policy areas of resource efficiency and the circular economy.
These reports, comprising a compilation of extensive survey responses from countries, were accompanied by 32 country profiles.

In the second quarter of 2022 a new survey with questions and guidelines was launched. Based on information reported by the Eionet network, in particular, the Eionet Group on Circular Economy and Resource Use, and after review and editing by the European Topic Centre on Circular economy and resource use (ETC CE), the 30 2022 CE country profiles[3] were published alongside the EEA report 'Circular Economy policy innovation and good practice in Member States'[4] (2022).

These 2024 CE country profiles are an update of the 2022 ones and based on the responses of 29 countries to the survey questions and guidelines that were launched in March 2024. The information in the countries' responses was again reviewed and edited by the European Topic Centre on Circular economy and resource use. A selection of Eurostat data was made to further complement these country profiles.

The main objectives of these assessments and its updates are to: • stimulate exchange of information and share good practice examples among country experts; • support policymakers in Eionet countries, the European institutions and international organisations by providing an updated catalogue of circular economy actions being undertaken in European countries.

This circular economy country profile is based on information reported by the Eionet network and, in particular, the National Reference Centres on Resource Efficiency and Circular Economy in the second quarter of 2024. Proposals for the further development or amendment of policies represent the view of the reporting country. For Croatia, all input was provided by the Ministry of Environmental Protection and Green Transition of Croatia. The information was reviewed and edited by the European Topic Centre on Circular economy and resource use. A selection of Eurostat data was made to further complement this country profile.

[1] More from less — material resource efficiency in Europe — European Environment Agency (europa.eu)
[2] Resource efficiency and the circular economy in Europe 2019 — European Environment Agency (europa.eu)
[3] Country profiles on Circular Economy in Europe — Eionet Portal (europa.eu)
[4] draft-report-for-dg-env_final.pdf (europa.eu)

The information is current as of September 2024, when members of Eionet verified the content of this profile.

Croatia – facts and figures

GDP: EUR 76.5 billion (0.4 % of EU27 total in 2023)

GDP per person: EUR 17,500 in 2022 (purchasing power standard) (72.9 % of EU27 (from 2020) total per person)

Use of materials (domestic material consumption (DMC))
46.2 million tonnes DMC (0.7 % of EU27 total in 2022)
12.0 tonnes DMC/person (84.2 % of EU27 average per person in 2022)

Structure of the economy (2023):
Agriculture: 3.6 %
Industry: 22.6 %
Services: 73.8 %

Employment in circular sectors:
52,113 people employed in CE sectors (1.2 % of EU total in 2021)
People employed expressed as a percentage of total employment: 3.1 % (compared to 2.1 % for EU average in 2021)

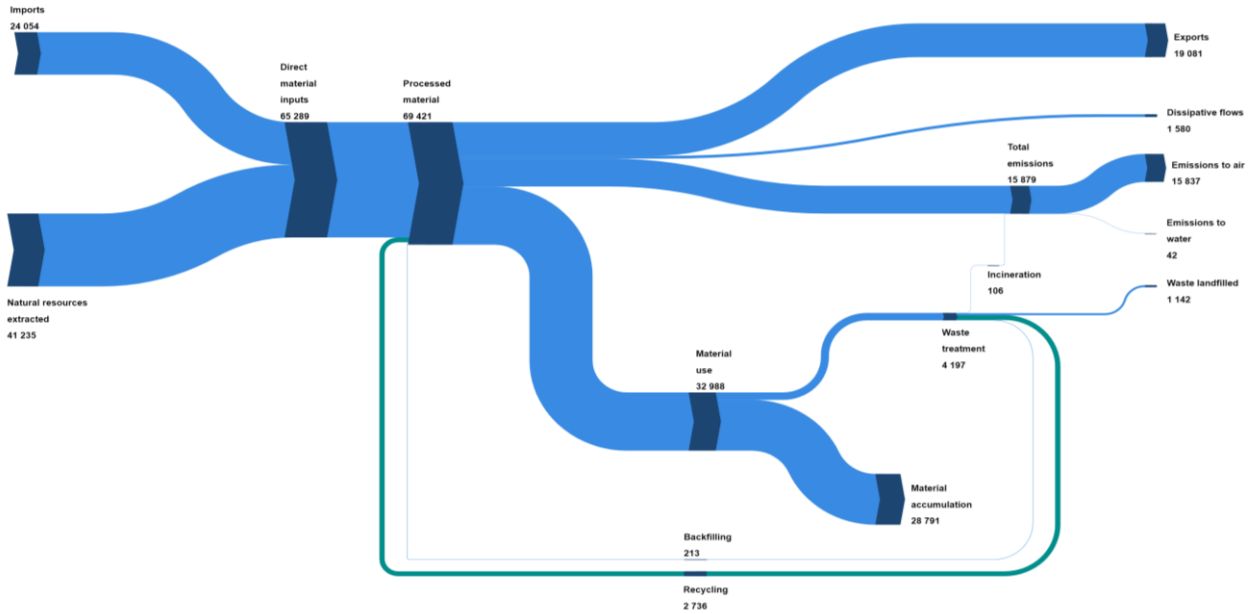
Surface area: 56,594 square kilometres (1.3 % of EU27 total)

Population: 3,850,894 (0.9 % of EU27 total in 2023)

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

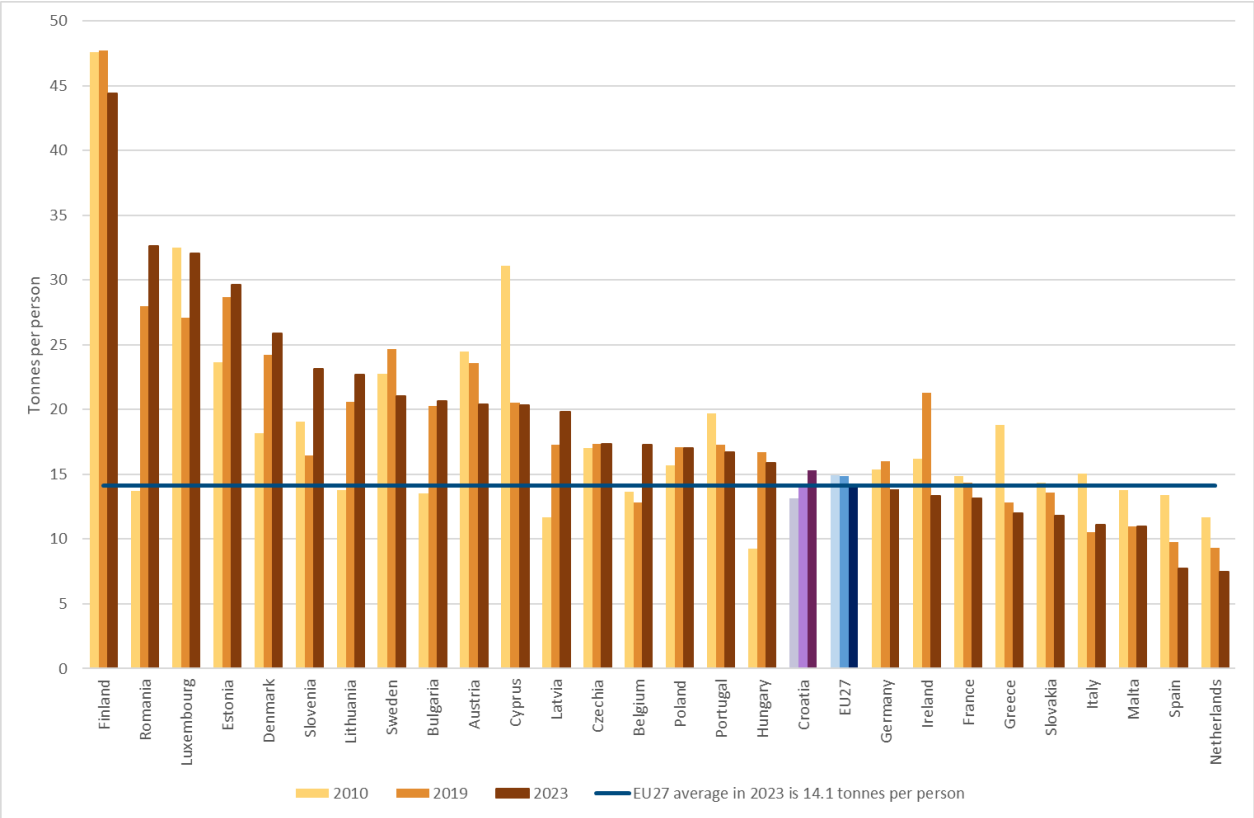
Source: Eurostat datasets, EU27 2021 EU27 2022 and EU27 2023 (accessed 21 August 2024)

Figure 1 Material flow diagram for Croatia in 2022, thousand tonnes



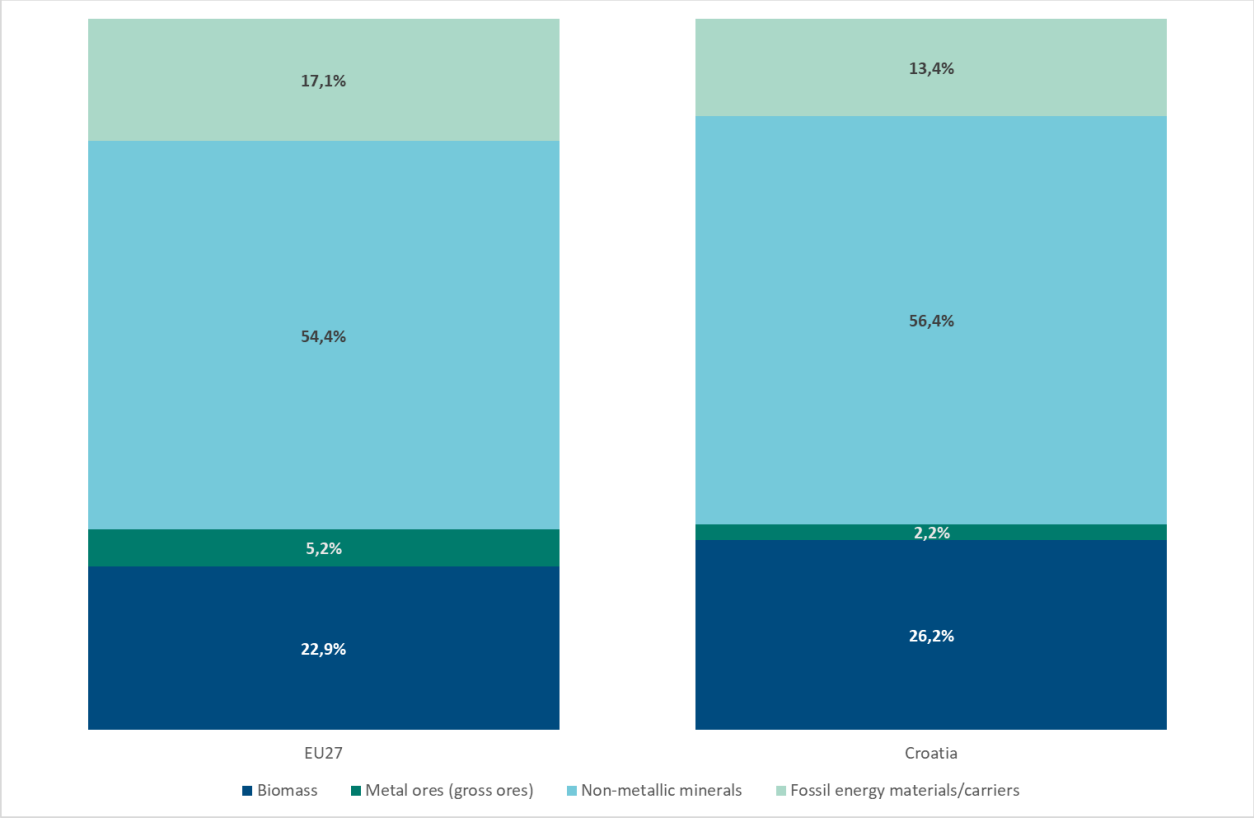
Source: Eurostat (2024) [env_ac_mfa], [en_ac_sd], [env_wassd] (accessed 21 August 2024)

Figure 2 Material footprint (raw material consumption), 2010, 2019 and 2023, tonnes per person



Source: Eurostat (2024) [env_ac_rme] (accessed 21 August 2024)

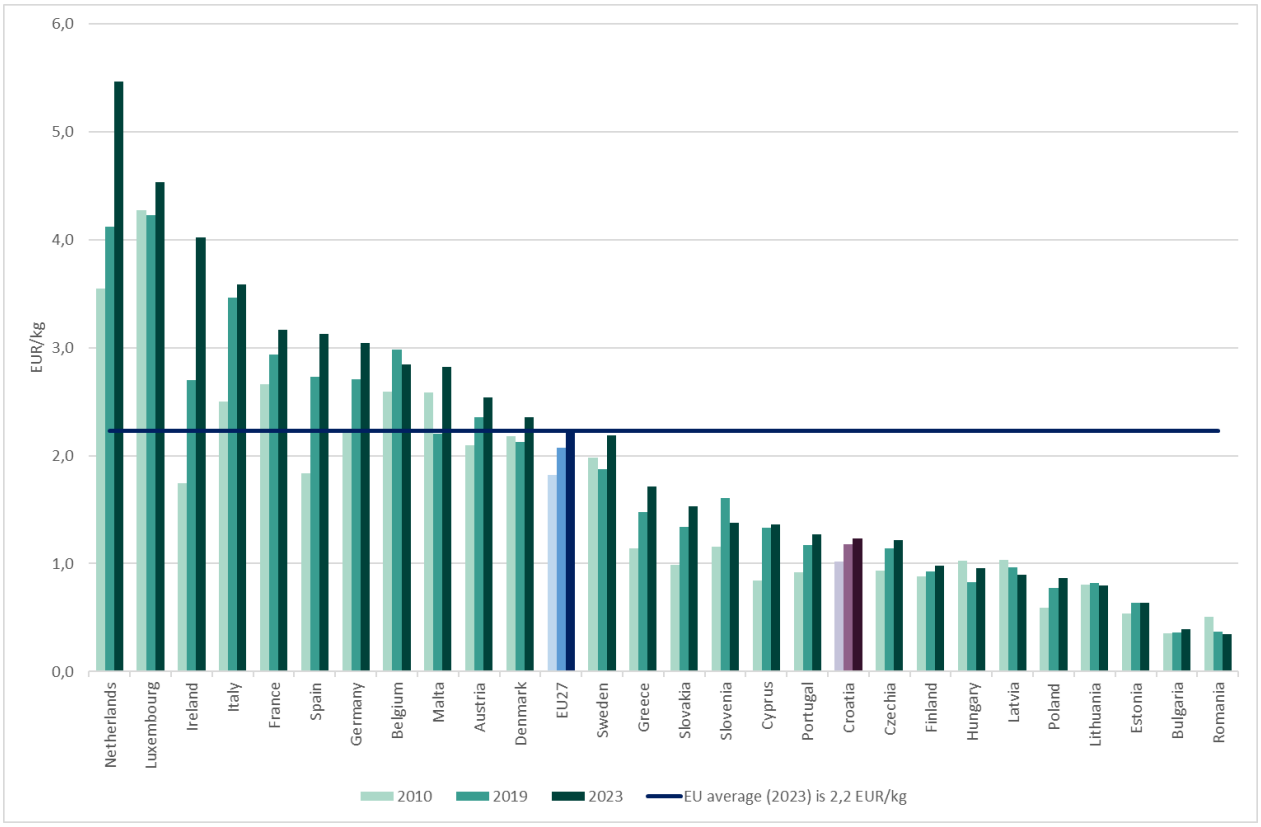
Figure 3 Domestic material consumption by selected material category, EU and Croatia, 2023, per cent



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

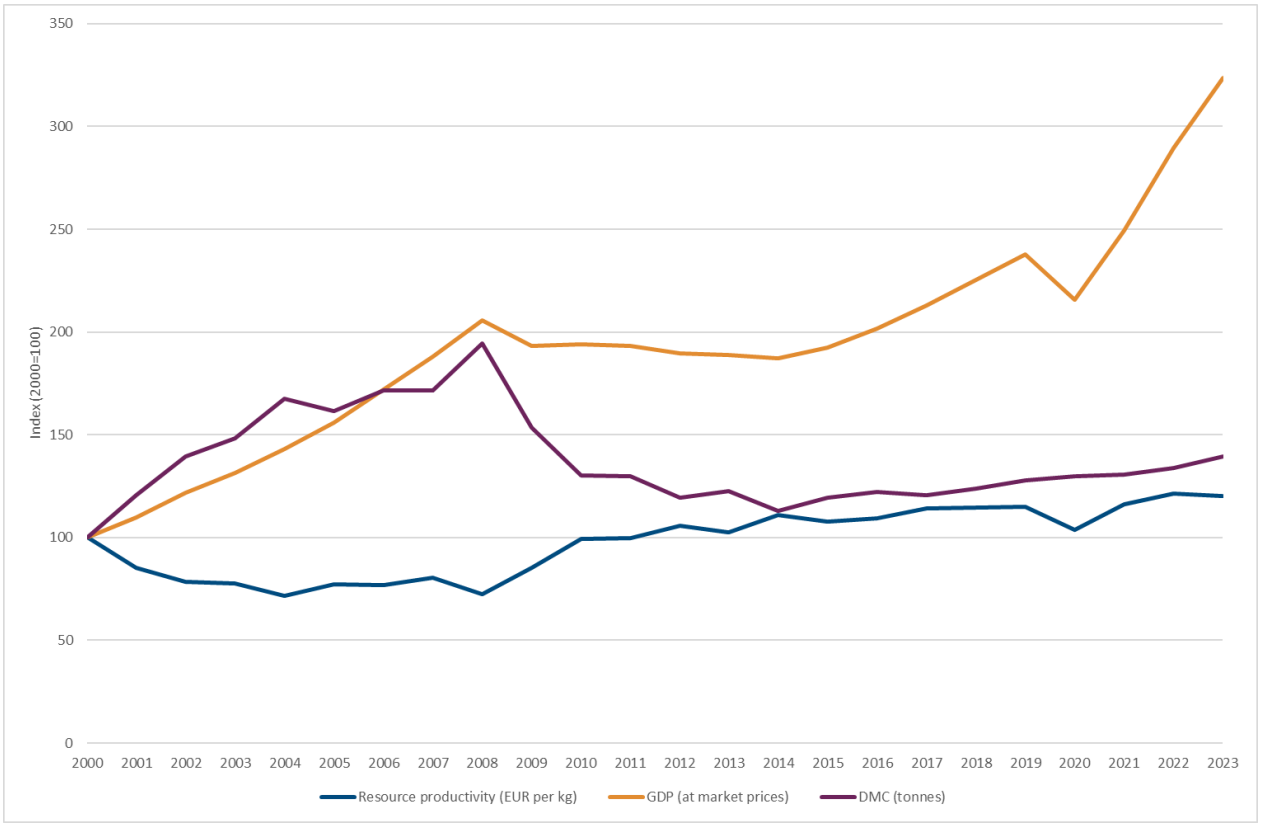
Source: Eurostat (2024) [env_ac_mfa] (accessed 21 August 2024)

Figure 4 Resource productivity (gross domestic product/domestic material consumption), EU27, 2010, 2019 and 2023, EUR per kilogramme



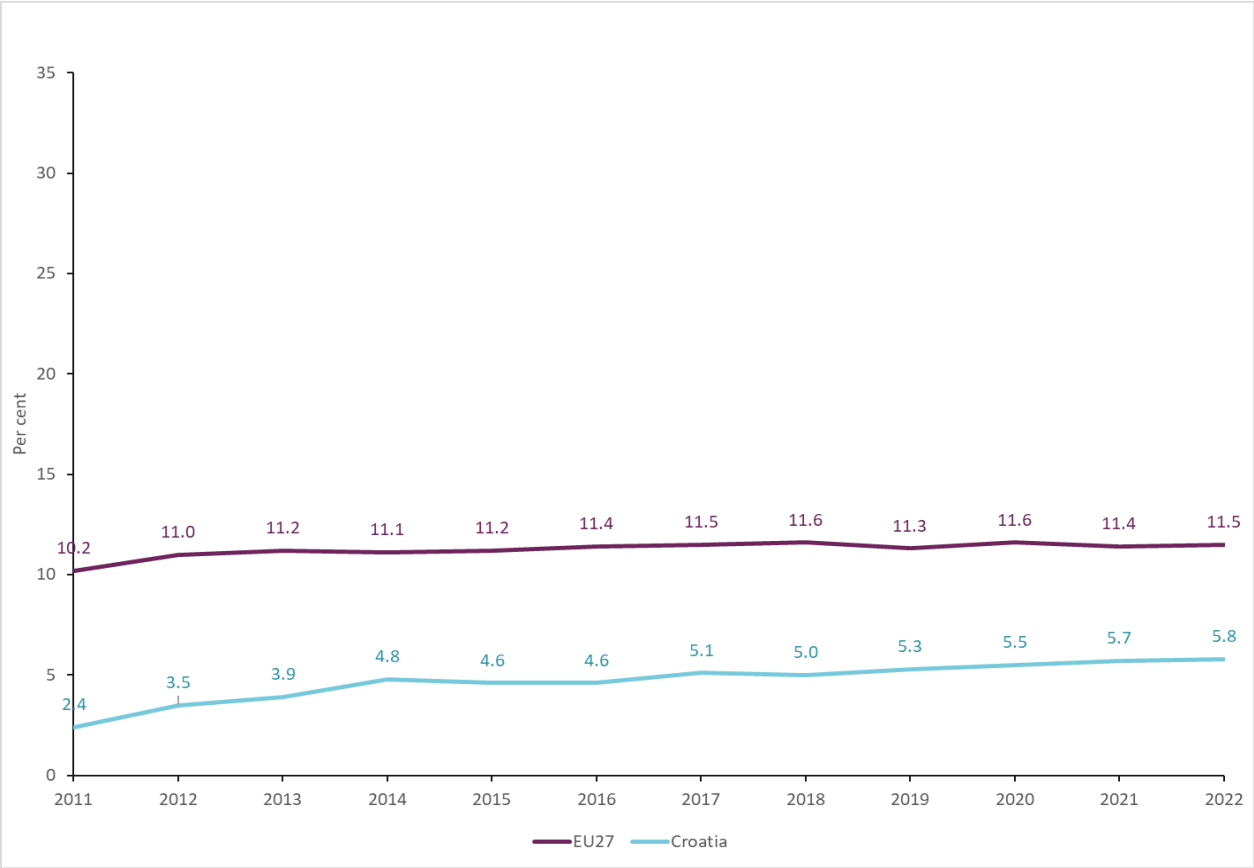
Source: Eurostat (2024) [env_ac_rp] (accessed 21 August 2024)

Figure 5 Gross domestic product, domestic material consumption and resource productivity trends, Croatia, 2000–2023, index (2000=100)



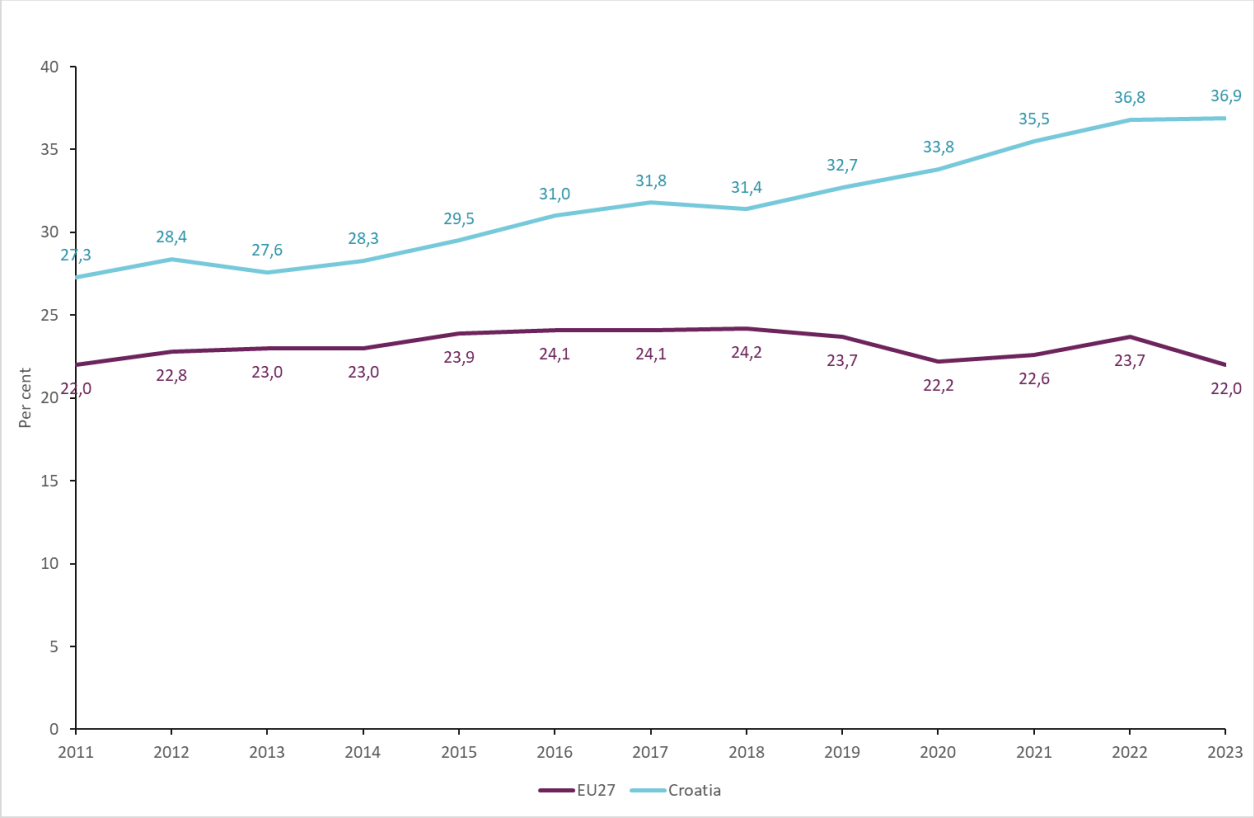
Source: Eurostat (2024) [env_ac_mfa], [env_ac_rp] & [nama_10_gdp] (accessed 21 August 2024)

Figure 6 Circular material use rate in Croatia, 2011–2022, per cent



Source: Eurostat (2024) [env_ac_cur] (accessed 10 June 2024)

Figure 7 Material import dependency in Croatia, 2011-2023, per cent



Source: Eurostat (2024) [cei_gsr030] (accessed 21 August 2024)

Existing policy framework

Dedicated national and/or regional strategy, roadmap or action plan for circular economy

There is no single strategy on circular economy in Croatia yet but a wide range of Croatian national strategies that might have a potential for pushing circular economy approaches.

Circular economy policy elements included in other policies [5]

In the area of waste management, the European Green Deal and the Action Plan for a circular economy, in the Republic of Croatia is implemented by the measures specified in the **Waste Management Plan of the Republic of Croatia for the period 2023-2028**, which are determined in accordance with the principles of the circular economy. Those measures promote a model of production and consumption which includes sharing, borrowing, reusing, repairing and renewing existing products and materials as long as possible, enabling the extension of the life span of products, and at the same time contributing to the prevention and reduction of waste. Also, the model promotes high quality recycling prior to other waste treatment procedures.

Measures prescribed by other national legislative acts (Waste Management Act, Ordinance on packaging and waste packaging, single-use plastic products and fishing gear containing plastic, Ordinance on the management of special categories of waste in the Fund system, etc.) were also adopted for the purpose of protecting the environment and human health by preventing or reducing the generation of waste, reducing the negative effects of waste generation and waste management, reducing the overall effects of the use of raw materials and improving the efficiency of the use of raw materials and increasing the recycling and reuse of recyclates. All mentioned purposes are necessary for the transition to a circular economy and ensuring the long-term competitiveness of the Republic of Croatia and the European Union. The aforementioned legislative acts specifically regulate issues related to packaging and waste packaging, waste electrical and electronic equipment, waste batteries, waste tires and waste oils, as well as issues related to preventing and reducing the impact of certain plastic products on the environment.

Circular economy policy element	Included in policy
Implementation plans and prevention programmes	
Waste management and waste prevention	Waste Management Plan (WMP) of the Republic of Croatia 2023-2028 incl. the Waste Prevention Plan 2023-2028 at its integral part
Food waste prevention and reduction	Food Waste Prevention and Reduction Plan of Croatia 2023-2028 (in Croatian)
Energy efficiency	National Action Plan on Energy Efficiency 2022-2024 (in Croatian)
Sustainable tourism	National Plan of the Sustainable Tourism Development until 2027 (in Croatian)
Strategies	
Sustainable tourism	Sustainable Tourism Development Strategy until 2030 (in Croatian)
Research, development and commercialization of innovations towards green and digital transition	Smart Specialization Strategy until 2029 (in Croatian)
Cooperation between the public, scientific research and business sectors for the development of new products, services, business processes and technology towards green and digital transition	Strategy for innovation encouragement of the Republic of Croatia until 2029 (in Croatian)

[5] Additional information of previously implemented relevant policies in the Circular economy country profile – Croatia of 2022 https://www.eionet.europa.eu/etcs/etc-ce/products/etc-ce-products/etc-ce-report-5-2022-country-profiles-on-circular-economy/croatia-ce-country-profile-2022_for-publication.pdf

Monitoring and targets

Assessment of circular economy performance

The European Commission has set up a monitoring framework to keep track of progress towards a circular economy. This framework provides a holistic view as it:

- measures direct and indirect benefits of 'becoming circular' and
- values the contribution of a circular economy in living well within the limits of the planet
- addresses energy and material supply risks.

It consists of **5 thematic sections** with a total of **11 statistical indicators**, some of which have additional sub-indicators. In some cases policy targets exist which should be achieved in the future, and the indicators monitor progress towards these targets. The current monitoring framework is a revision of the original framework which was set up in 2018.

This section elaborates on the assessment of Croatia's progress in terms of observed trends over the last 5 years and what country characteristics or policy actions may explain differences between the country its performance and the average EU performance.

Small progress is visible, although not significant. For example, the circular material use rate records an increase from 5.0% in 2018 to 5.8% in 2022.

Croatia still has no umbrella strategic document on a circular economy on national level and circular economy issues are spread among different institutions with weak coordination between them.

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

The Croatian Parliament accepted **the National Report on State of Environment for period 2017-2020** ([6]) in March 2023. Since the production of this report, there has not been revision of methodology and framework, but for future purposes, Croatia's intent is to (at minimum) follow recommendations, methodology and indicator list proposed by Eurostat.

Circular economy targets

Circular economy targets are the same as in the country profile of 2022. No new targets have been adopted in the meantime. No legal specific objective has been stated on the circular material use rate but, in general, Croatia refers to the objectives set in EU strategic documents, including the circular economy action plan.

Innovative approaches and good practices

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

➔ *Good practice example: Product-related policies, including on the R-strategies (repair, reuse, remanufacturing, etc)*

The Reduce Food Waste project ([7])

The Environmental Protection and Energy Efficiency Fund has upgraded the implementation of the very successful pilot project **"The Reduce Food Waste, cook for your Guests"** which started in 2021. The results of the pilot project showed a great potential for biowaste reduction by using special devices in hotel

[6] National Report (in Croatian)
[7] https://www.fzoeu.hr/en/pilot-project-reduce-food-waste-cook-for-your-guests-presented-in-pula/8598

kitchens. The following project step is oriented towards the acquisition of such devices in the institutions/companies that prepare lots of meals per day.

During 2022, the Fund published two public calls for co-financing the acquisition of devices for reduction of biowaste (food waste) in hotels and student centres kitchens. Upon those public calls the Fund co-financed 16 devices in four student centres with 175,000 EUR and 13 devices in 13 hotels with 163,000 EUR.

As a result of the expressed further interest in co-financing, the Fund published public calls in 2023 intended for hospitals and special hospitals and concluded contracts with 28 hospitals, for 33 devices which were co-financed with 560,000 EUR. The Fund also published a public call for homes for the elderly, homes for children and student homes, which resulted in 21 concluded contracts for 22 devices co-financed with 276,000 EUR.

Further public calls intended for kindergartens and the prison system bodies are planned for 2024.

By using a device to reduce food waste, the amount of generated waste can be reduced up to 70% compared to the amount of leftovers that is inserted into the device so the amount of bio-waste that is disposed is reduced. Therefore, the institutions/ companies that acquire devices make a double benefit – lower costs of waste collection and better environment protection.

Further use of mineral material that was generated as a result of the earthquake ([8])

After devastating earthquake in December 2020 in the area of Sisak-Moslavina County, magnitude 6.2 according to the Richter scale, a management system for the mineral material resulting from the earthquake was organized and implemented in following years.

The Decision of the Government of the Republic of Croatia on the adoption of a program of measures for the reconstruction of buildings damaged by the earthquake in the area of 4 counties impacted by the earthquake was adopted, as well as implementation plans on county level. By this document, the method of management and recording of the mineral material was established, in order to prevent the excessive generation of mineral waste during the removal of buildings in the area affected by the earthquake.

Separated mineral material from the demolition was not classified as waste and was transported from the location of origin to several official temporary locations/depots designated for this purpose by the decision of county authority.

Mineral material received at these locations was prepared for further use, processed by mobile crushers to several fractions, sorted, with the separation of any remaining unacceptable part of the material or waste (wood, bulky waste, asbestos, etc.).

After that, obtained aggregate was partly released for further use for construction and other purposes, part is still in storage, while estimated quantities which should be classified as waste is estimated to 15%.

Issuing of material for further use is carried out based on the established procedure, which is under the supervision and based on the decisions of the local self-government units (LGU) located in the area affected by the earthquake. The material could be issued upon request to natural or legal persons for the purpose of rehabilitation at location of the removed object, or for the needs of LGUs for backfilling, restoration of unclassified roads and similar purposes. Part of material was used at site of depot or was sold to interested customers.

In 2021 and 2022, total of ca. 451,400 t of mineral materials, resulted as consequence of the earthquake, was counted as prevented construction and demolition waste.

8

https://mpgi.gov.hr/UserDocsImages/dokumenti/Potres/Svjetska%20banka/ESMF_Component_1_January%202022.pdf

Considering that this material has never been declared as waste, these quantities were not included in the amount of generated waste, but also neither in the amount of recycled or recovered waste. It was considered as prevented waste, with no impact on recovery rate.

Examples of private policy initiatives (sectoral)

➔ *Good practice example for construction sector*

The BLOOM project – empowering SMEs in the construction sector for circular economy ([9])

The project was co-financed by the Norwegian Financial Mechanism 2014-2021, within the framework of the Business Development and Innovation Croatia Program. The Croatian partner and leader was the Faculty of Civil Engineering University of Zagreb, and the Norwegian partner of the project was the Norwegian consulting company International Development Norway.

The BLOOM project dealt with the exchange of the world's best practices, gathering, and spreading the knowledge of entrepreneurs and companies in the field of circular economy in construction. The goal was to raise awareness and provide educational support for construction companies about the circular economy, with an emphasis on agility, financial framework, and digitalization. The focus was on entrepreneurs with registered construction activities in the areas affected by two major earthquakes that stroke central parts of Croatia in 2020. The project's idea was to support entrepreneurs from the construction sector (designers, contractors, supervisory engineers, construction companies, etc.) in Croatia, in earthquake-affected areas, through technical and business education to achieve better business results. The ambition of the project was to support entrepreneurs in those areas to develop their competencies in key business aspects. Also, key project activities included training for key participants and companies, trainer training by the Norwegian project partner, feasibility study on circular economy and its value for companies and the final conference on the topic: Circular economy for construction companies.

The project was being implemented from 2023 until mid-April 2024.

The way forward

Identifying and addressing barriers and challenges

The European legislation resulting from the European Green Deal and the Circular Economy Action Plan consists of Regulation (EU) 2023/1542 on batteries and waste batteries, Regulation on packaging and packaging waste, that is expected to be published in the EU Official Journal by end of 2024, and Regulation on circularity requirements for vehicle design and management of end-of-life vehicles and the Amendments of the Waste Framework Directive regarding food waste and textile waste.

The aforementioned regulations combine product policies, primarily sustainability requirements for placing these products on the market, with waste policies, which may pose a challenge in implementation and supervision. Also, the Republic of Croatia sees an additional challenge in ensuring flexibility in the new regulations, which will enable the recognition of a specific national waste management system based on a state organization for extended producer responsibility.

The Republic of Croatia considers that the new proposed regulations raise the question of the suitability of the existing definition of waste and the associated administrative burden for the competent authorities (e.g. through the issuance of permits) and the business sector (through increased monitoring obligations).

In addition, the Republic of Croatia considers it necessary to solve the issue of importing cheap recycled materials and primary raw materials from third countries in the context of developing the market for

[9] https://eeagrants.org/archive/2014-2021/projects/HR-INNOVATION-0062 and https://www.grad.unizg.hr/novosti_i_objave?%40=2b0ty (in Croatian)

secondary raw materials in the EU and encouraging investments in high-quality recycling in the member states.

The Republic of Croatia considers that, in connecting the green transition with economic growth, it is necessary to implement several measures, especially to:

- ensure equal conditions for circular materials and products, including for imported products
- provide (faster) access to funding sources for the development and scaling up of innovative sustainable technologies that drive economic growth and, on the other hand, ensure environmental sustainability and encourage research and innovation
- ensure stable access to circular (recycled) materials through the establishment of a reliable supply chain
- develop standards for the design of circular products to extend the life of products and improve the quality of recycled material, which applies to locally produced and imported goods.
- determine the criteria for the end of the status of waste at the EU level and harmonize the classifications of waste among the member states, in order to stimulate the market of secondary raw materials
- ensure stronger implementation of the green public procurement policy
- strengthen and institutionalize the exchange of information, knowledge and experience between member states.

Future policy plans

In the last quarter of 2024, the Republic of Croatia **plans to adopt a Regulation on the waste management fee and the return fee**. It will regulate the calculating of the waste management fee that is paid within the framework of extended producer responsibility in the Republic of Croatia for tires, vehicles, electrical and electronic devices and equipment, oils, batteries and accumulators and packaging, and from January 1, 2025, also for single-use plastic products and fishing gear containing plastic. This regulation prescribes the eco modulation of the waste management fee with regard to criteria such as durability of the product, the possibility of repairing the product, the possibility of reusing the product, the possibility of recycling product waste, the presence of dangerous substances in the product, the life cycle of the product, the content of recycled content in the product and others.

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