

Overview of national waste prevention programmes in Europe



Croatia 

2021

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General information

Name of the country/region	Croatia
Coverage of the waste prevention programme (national/regional)	National
Type of programme (stand alone or integrated into waste management plan)	Integrated into waste management plan
Title of programme and link to programme	<p>Odluka o donošenju Plana gospodarenja otpadom Republike Hrvatske za razdoblje 2017-2022 godine https://narodne-novine.nn.hr/clanci/sluzbeni/2017_01_3_120.html</p> <p>Waste management plan of the Republic of Croatia for the period 2017-2022 https://mingor.gov.hr/UserDocsImages/UPRAVA-ZA-PROCJENU-UTJECAJA-NA-OKOLIS-ODRZIVO-GOSPODARENJE-OTPADOM/Sektor%20za%20odr%C5%BEivo%20gospodarjenje%20otpadom/Ostalo/management_plan_of_the_republic_of_croatia_for_the_period_2017-2022.pdf</p>
Duration of programme	2017-2022
Languages	Croatian English
Development process of the programme/revision	The revision of the waste management plan 2017-2022, which takes Directive 2018/851 into account, is in preparation.
Budget envisaged for implementation of the project	HRK 10 000 000 (approx. EUR 1 400 000)

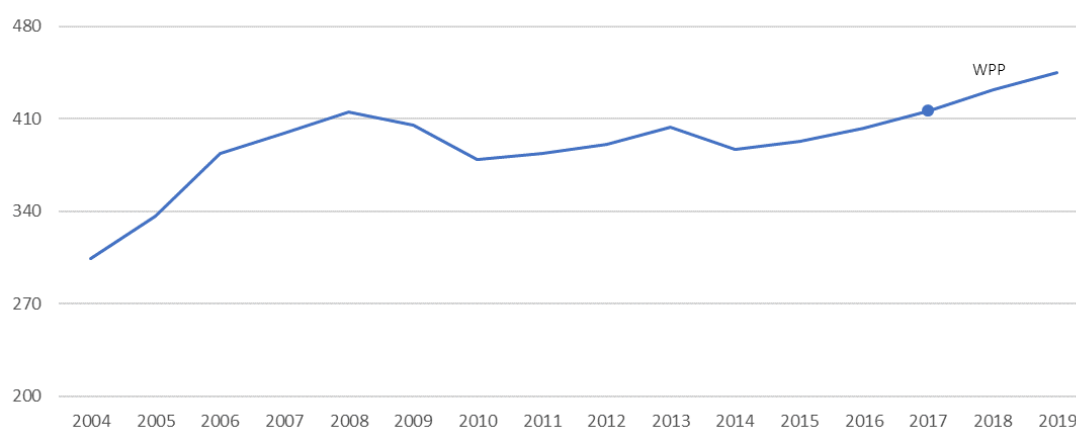
Waste generation

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

Municipal solid waste

- According to Eurostat, municipal solid waste (MSW) generation in Croatia increased from 304 kg per capita in 2004 to 445 kg per capita in 2019. The trend shows small peaks in 2008 and 2013 and continuous growth since 2014.
- However, the 2019 figure for MSW generation of 445 kg per capita remains below the European average of 489 kg per capita per year.
- The slightly decreasing trend between 2008 and 2010 can probably be explained by the global financial crisis of that period.
- Although the first waste prevention programme (WPP) was implemented in 2017, an effect on MSW generation has not yet been recorded.

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

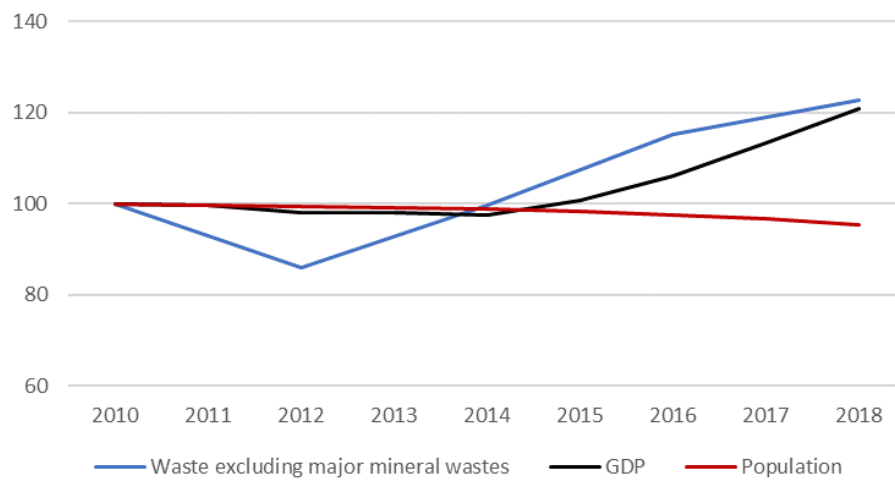


Source: Eurostat Circular Economy Monitoring Framework.

Total waste

- Total waste generation in Croatia steeply decreased between 2010 and 2012 and increased steadily in the years that followed (see Figure 2).
- Between 2010 and 2014, GDP decreased slightly but grew rapidly in the years since.
- Although a longer time series is needed to confirm any conclusions on decoupling, Croatia does not seem to be on track to decouple total waste generation from economic growth; however, data from the 2016 on show certain improvement.
- A link between waste generation and population growth, which followed a decreasing trend between 2010 and 2018, cannot be observed.

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



Source: Eurostat.

Waste prevention programme

Objectives and priorities

1.	Waste prevention objectives of the programme: quantitative objectives (waste reduction) and qualitative objectives (reduction of hazardous substances/environmental impacts)	<p>The overall objective is to establish a high-quality waste management system based on waste prevention and an efficient system of separate waste collection and adequate recovery (p. 75). General objectives (p. 75) are:</p> <ul style="list-style-type: none"> • to separate economic growth from the increase in waste • to protect natural resources • to reduce the amount of landfilled waste • to reduce pollutant emissions into the environment • to reduce the hazard to human health and the environment
2.	Sectors covered	<ul style="list-style-type: none"> • Agriculture • Construction and infrastructure • 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 • Household/municipal waste • Paper/cardboard • Packaging • Waste electrical and electronic equipment/batteries (WEEE)
4.	Target groups	<p>Although target groups are not mentioned directly, the programme mentions:</p> <ul style="list-style-type: none"> • municipalities • industries • households • institutions

Targets, indicators and monitoring

1.	Indicators proposed	<p>The annex (Section 12.4 Waste prevention measures overview) includes a list of various indicators related to the proposed measures (see point 14).</p> <p>General indicators:</p> <ul style="list-style-type: none"> • EU funding spent on waste management projects in the field of waste prevention • an increase in the number of green and sustainable public and corporate procurements • an increase in the number of education programmes/sessions on green and sustainable public procurement • an increase in the number of informative materials on the topic of reuse of used products • the number of events organised for the collection, exchange and trading of useful products <p>1. Construction and demolition waste prevention:</p> <ul style="list-style-type: none"> • a reduction in the total amount of construction and demolition waste generated • an increase in the number of users taking advantage of the subsidy for the reuse of demolition material <p>2. Bio-waste prevention:</p> <ul style="list-style-type: none"> • the number of national, as well as local (in local self-government units), campaigns conducted • the number of local waste management plans that include food waste prevention measures • the number of cities/municipalities conducting educational and informative campaigns on waste prevention • the number of workshops organised at a local level • the number of informative flyers and brochures produced • a reduction in food waste that ends up in landfill (% or tonnes) • a reduction in the total amount of food waste generated (% or tonnes) • the number of households that compost their own waste • the number of campaigns on composting at home • the number of food donation initiatives <p>3. Municipal waste prevention:</p> <ul style="list-style-type: none"> • a reduction in the total amount of municipal waste generated (% or tonnes) • a reduction in the consumption of light plastic bags (number of bags put on the market) • an increase in the number of companies recovering or using useful parts of waste • the number of new businesses set up to reuse waste <p>4. WEEE waste prevention:</p> <ul style="list-style-type: none"> • a reduction in the total amount of WEEE generated • an increase in the number of companies recovering or using useful parts of waste • the number of newly opened workplaces in waste reuse
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		5. Paper/cardboard waste prevention: <ul style="list-style-type: none"> • a reduction in the total amount of paper and cardboard waste generated
2.	Quantitative targets	The waste management plan of the Republic of Croatia for the period 2017-2022, (in Chapter 2, Table 11) defines the following quantitative target in relation to waste prevention that has to be met by 2022: 1. Goal 1 — improve the system of municipal waste management: <ul style="list-style-type: none"> • Goal 1.1 — decrease the total quantity of municipal waste produced by 5 %
3.	Monitoring of programme	
4.	Evaluation of the programme	At least once every 6 years (Article 109 of the new Waste Management Act ⁽¹⁾).

⁽¹⁾ https://narodne-novine.nn.hr/clanci/sluzbeni/2021_07_84_1554.html

Prevention measures

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

Promote and support sustainable consumption models	<ul style="list-style-type: none"> • Introducing obligatory payment for light plastic bags • Defining the usual criteria for procurement objectives that can simply be included in the competition documentation • Establishing a database of ‘green’ products • Educating those conducting public and corporate procurements about environmental waste prevention specifications
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 .	<ul style="list-style-type: none"> • Awarding prizes for best eco-design and ecologically responsible business
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	<ul style="list-style-type: none"> • Creating guidelines to establish a reuse system in Croatia • Conducting a pilot project for the establishment of a reuse system • Establishing common spaces (reuse centres and repair centres) • Establishing cooperation with repairmen and social institutions • Establishing subsidy fees for the reuse of demolition material
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	<ul style="list-style-type: none"> • Publishing a guide for repair/loan/use of used electrical and electronic devices and equipment
Reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques	<ul style="list-style-type: none"> • Introducing the topic of ‘green building’ in professional exams • Creating a guide to green and sustainable building

<p>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</p>	<ul style="list-style-type: none"> • Educating LSGUs via workshops and preparing educational material on methods of defining measures and activities for bio-waste prevention • Conducting statistical analyses to obtain the complete and reliable data necessary to monitor progress in bio-waste prevention
<p>Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and reprocessing into non-food products</p>	<ul style="list-style-type: none"> • Adopting an ordinance on regulating the food donation system • Starting food donation-themed campaigns • Starting food donation initiatives in the Croatia
<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 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</p>	
<p>Reduce the generation of waste, in particular waste that is not suitable for preparing for reuse 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 should ensure that such restrictions are proportionate and non-discriminatory</p>	<ul style="list-style-type: none"> • Introducing an obligatory fee for light plastic bags and an obligation on sellers to inform consumers about the negative effect of high consumption of plastic bags on the environment at the location where plastic bags are sold, including locations where consumers take plastic bags by themselves (bags on rolls for fruits and vegetables, etc.)
<p>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</p>	
<p>Develop and support information campaigns to raise awareness about waste prevention and littering</p>	<ul style="list-style-type: none"> • Conducting informational campaigns including making and promoting flyers and textbooks • Adding content and directions for waste prevention to the Ministry of Environment and Energy website

	<ul style="list-style-type: none"> • Organising an educational campaign in schools and kindergartens • Creating a textbook for citizens • Improving the existing or designing a new waste prevention internet portal • Media advertising
<p>Additional implemented prevention measures, not covered by Article 9 of the Waste Framework Directive</p>	<ul style="list-style-type: none"> • According to the new Waste Management Act, more substances or objects that arise during production are to be considered as by-products and not waste (Article 15) ⁽²⁾ • The new Waste Management Act also prohibits the placing of certain single-use plastic products on the market (Article 17) • According to the new Waste Management Act, the Ministry encourages waste prevention through financial incentives and grants (Article 99) • Furthermore, product manufacturers now have more obligations to ensure the reuse/recycling of the product and the prevention of waste (Article 92) • The new waste management information system serves to supervise the implementation and management of waste prevention activities and provides a waste prevention portal and application for monitoring projects and activities on waste prevention, reuse and educational and information (Article 129)

Food waste prevention

Food waste generation

According to the data provided by the Ministry of Environment and Energy, it is estimated that approximately 400 000 tonnes of food waste is disposed of annually at landfills in Croatia ⁽³⁾.

Measures to prevent food waste

Croatia, together with other EU Member States, has committed to achieving the goal set out in the UN 2030 agenda for sustainable development with the relevant sustainable development goals, specifically Target 12.3, Ensure sustainable consumption and production patterns, with the specific aim to halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains. For this reason, the Government of the Republic of Croatia adopted a food waste prevention and reduction plan (2019-2022) in 2019, together with an accompanying programme for its implementation. The Ministry of Economy and Sustainable Development (MoESD), as the national competent authority for waste management, is responsible for monitoring and measuring food waste, and the Ministry of Agriculture is the competent authority for food waste reduction and prevention.

The food waste reduction and prevention plan contains six main measures and related activities that apply to the entire food value chain, which were designed in cooperation with relevant actors. The planned activities, some of which have already been implemented, include:

- drafting of sectoral guidelines for food waste reduction;
- the promotion of short supply chains;

⁽²⁾ https://narodne-novine.nn.hr/clanci/sluzbeni/2021_07_84_1554.html

⁽³⁾ https://ec.europa.eu/food/system/files/2020-05/fw_lib_fwp-strat_national-strategy_hrv_en.pdf

- the launch of a platform to share experiences and best practices;
- the establishment of voluntary agreements with stakeholders to reduce food waste;
- the definition of criteria for the most successful food waste fighters and the organisation of an award ceremony;
- a campaign to raise awareness of the issue;
- the development of educational materials for pre-school and school-age children;
- providing financial support to innovative and research projects in the field of food waste;
- activities related to monitoring food waste levels.

The food waste prevention and reduction plan defines prevention as the most desirable option and, in the case of surplus food, the first option would be to redistribute it to people in need and then to use it for animal feed.

Encouraging food donation is one of the most important measures in the national food waste prevention plan. Rules on donation of food and feed are stipulated in the Agriculture Act (O.G. 118/18, 42/20, 127/20, 52/21) and in the ordinance on food and feed donation (O.G. 91/19). Based on the EU food donation guidelines, Croatia developed similar guidelines at national level in 2019. The legal framework for food donation has been improved to reduce the administrative burden for food business operators, and to allow the donation of food products until the end of their 'use by' date and after the expiry of their 'best before' date if they are still safe for human consumption. Workshops were held with food business operators to clarify the legal food safety requirements in relation to food donation and to encourage them to join the food donation system.

Since 2015, there have been tax incentives for food donations: VAT is not imposed on donations of foods close to their expiry date, nor on foods that could not be placed on the market (for reasons other than food safety). Also, if made under certain conditions, donations from companies are tax deductible, and income tax payers can also benefit from a tax deduction on food donations. Furthermore, the Ministry of Agriculture launched an IT system to facilitate food redistribution, which improves the communication between donors and charities. Moreover, a food bank feasibility study was conducted.

Several activities and informative materials have been organised and developed to raise consumers' awareness of the issue of food waste, including a video explaining the difference between date markings, a brochure 'Understanding food information and consumer attitudes about food waste', a short animated film to encourage consumers to use surplus food, a consumer campaign (2020) under the slogan 'Eat and share! #Food is not waste!', etc. Tips for reducing food waste are usually published before holidays periods on the Ministry of Agriculture website.

For the International Day of Awareness of Food Loss and Waste (IDAFLW 2021), the Ministry of Agriculture organised a thematic week dedicated to food waste prevention and conducted several activities. On 29 September 2021, in Ban Jelačić Square in Zagreb, an exhibition entitled 'Food is not a waste, I can influence!' was held. Exhibiting work by high school students on the topic of food waste prevention and reduction, the aim was to raise consumer awareness. This thematic week ended on 5 October when an expert meeting entitled 'Food is not waste, together to the goal' was held. This meeting gathered representatives from public authorities, local and regional government bodies, food business operators, intermediaries in the food donation system, academia and the scientific community and civil society with the aim of exchanging knowledge, information and experiences on the topic of food waste prevention.

In line with the national food waste prevention plan, the curricula for pre-school, primary and secondary education include topics such as sustainable development, civic education and health, which cover aspects of food waste. A teacher education module on the theme of sustainable development, including food waste prevention, has been created. In addition, the Agency for Vocational Education and Training has also developed teacher training on food waste as part of the module 'Socially Useful Learning'. In 2020, school projects were related to the topic 'prevention and

reduction of food waste (regional aspect)', in accordance with the food waste prevention and reduction plan, the action plan for education for sustainable development and the UN agenda 2030. On the occasion of IDAFLW 2021, as part of promoting the importance of education on the topic of food losses and waste, the Minister of Agriculture, Ms Marija Vučković, visited a primary school in Zagreb and handed out thematic picture books to first grade primary school children, after which an educational workshop 'Food is precious, not for garbage' was held. The thematic picture book, *How Dora and Mario have saved food*, has been distributed to first grade school children in all primary schools in Croatia.

Since 2013, Croatia has been implementing the school scheme for primary and secondary school students to promote healthy eating habits and to increase the share of fruits and vegetables, milk and dairy products in pupils' daily diet. Food waste prevention is one of the topics included as part of additional educational measures in the context of the scheme.

In line with the food waste reduction and prevention plan, the Ministry of Agriculture has published sectoral guidelines for retail and for hospitality and institutional kitchens. Publication of guidelines for the primary production and food processing sectors is planned to take place by the end of 2021.

In addition, the MoESD has developed and maintains the waste prevention portal, which contains general information related to waste prevention and prescribed waste prevention measures. It provides basic information on ways to prevent bio-waste and to reduce food waste, as well as examples of food waste prevention activities conducted by local self-governing entities and companies. A new web page dedicated to food waste prevention is being planned for 2022. The project is led by the Ministry of Agriculture, in the framework of Croatia's national recovery and resilience plan ⁽⁴⁾.

These measures are to be implemented between 2019 and 2022. The total investment for all measures amounts to HRK 8 020 500 (~EUR 1 068 000) ⁽⁵⁾.

For a more comprehensive mapping of country efforts towards food waste prevention, please visit the [European Commission's Food Loss and Waste Prevention Hub](#).

Reuse of products

Data

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

Croatia's first reuse centre opened in 2017 in Prelog. Discarded objects will be revived in the centre rather than ending up in landfill. The reuse centre consists of two parts, the exhibition-sales area of 220 square metres and the warehouse-workshop section, also of 220 square metres. Large items (bulky waste) such as furniture, as well as footwear and clothing, consumer goods (utensils, books, toys, children's and sports equipment) that is usually thrown away and ends up in landfill will be repaired or refurbished and reused. The benefits of the centre are a high level of work intensity, which requires a large number of employees, the employment of people with disabilities and, of course, prolonging the useful life of goods through reuse, which reduces environmental pressure ⁽⁶⁾.

⁽⁴⁾ https://ec.europa.eu/food/safety/food_waste/eu-food-loss-waste-prevention-hub/eu-member-state-page/show/HR

⁽⁵⁾ https://ec.europa.eu/food/system/files/2020-05/fw_lib_fwp-strat_national-strategy_hrv_en.pdf

⁽⁶⁾ https://zelena-akcija.hr/en/programmes/waste/first_re_use_center_in_croatia_and_2_new_zero_waste_municipalities

In February 2020 a second reuse centre was opened at the ‘Gripole’ recycling yard in Rovinj ⁽⁷⁾. The main goal of the centre is the reuse of discarded objects such as used furniture, dishes, electrical and electronic equipment, bicycles, baby prams and pushchairs, thus contributing to waste prevention and a circular economy.

Article 16 of the Waste Management Act (adopted on 16 July 2021) contains information regarding the obligations and legal status of reuse centres in Croatia.

Measure 10 of the WPP includes reuse procedures to encourage the reuse of products. For example, within recycling yards, a so-called ‘reuse corner’ may be organised, where citizens can bring items they no longer need and other citizens can take these things for further use. In addition, a reuse campaign would include making posters, brochures, flyers and videos containing useful information on the value of so-called ‘used’ items and the possibilities for their repair and/or reuse. The campaign materials will contain information on where and how citizens can donate their used products, e.g. in exchange for others that they need. To achieve this goal, it is necessary to establish an internet portal for reuse, i.e. for collecting and distributing products (clothes, books, electronic and electrical equipment, computers, furniture, food, etc.) which can be used and are useful and necessary to someone, donated by people that no longer need them. The portal can be organised within the existing Croatian waste market, organised with the goal of connecting business partners offering or seeking all types of useful waste/secondary resources that can be used as input resource for further production.

Best practice examples

The city of Prelog

Within 5 years, the city of Prelog in northern Croatia has tripled the percentage of its separately collected waste. The city has reduced the amount of mixed waste local residents produce to below 100 kg per capita, becoming an example of zero waste best practice in Croatia and beyond. This progress was achieved by:

- door-to-door separate waste collections;
- construction of new local waste management infrastructures;
- creating a fair but profitable waste system;
- effective education and communication programmes for citizens;
- strong cooperation between the non-governmental organisations Zelena akcija/Friends of the Earth Croatia/Zero Waste Croatia, the city of Prelog and 11 other neighbouring municipalities (of different political affiliations) operated by the public company PRE-KOM from Prelog ⁽⁸⁾.

PRE-KOM

Twelve municipalities have joined the successful system run by the municipal company PRE-KOM, which is the national leader in sustainable waste management in Croatia, producing the best results in waste reduction, separate collection, recycling and composting, and whose services are available to more than 38 000 people.

New guidelines were implemented in 2015, and since then PRE-KOM has become the leading municipal waste company in Croatia with an average recycling rate of 56 % in 2018 (nationally, 24 % in Croatia) and disposing of only 79 kg of mixed waste per capita annually (Croatian average is 315 kg) in the 11 municipalities it serves. Municipalities raised the separate waste collection rates from 10-20 % to 50-60 % in a short period and are aiming to reach 70 % by 2020. Nationally, this is Croatia’s goal by 2030. According to the 2017 data published by the environment agency, in terms of waste management, of the 10 most successful municipalities in Croatia, six are part of PRE-KOM’s system. In 2017, the best results were achieved in Prelog with a separate waste collection rate of 55.9 % and preliminary results for 2018 indicate further progress, with Belica at 65.68 % and Prelog at 60.78 %.

⁽⁷⁾ <https://www.rovinj-rovigno.hr/novosti/otvoren-centar-za-ponovnu-uporabu-odbacenih-predmeta/>

⁽⁸⁾ <https://zerowastecities.eu/bestpractice/the-story-of-prelog/>

Links to the circular economy

Some policies and instruments in the EU and at the national level have already secured the tools and subsidies in accordance with the circular economy model.

Topic	Addressed in the programme	Comments
Eco-design	Yes	When it comes to measures affecting design, a positive movement has been noted in regard to the ISO 14001 waste management system
Repair, refurbishment and remanufacture	Yes	Activities organising common spaces (reuse and repair centres) would serve to collect, sort and/or repair used products and connect with humanitarian institutions that could reuse these products
Recycling	Yes	Recycling yards for construction and demolition waste
Economic incentives and finance	Yes	Economic instruments such as incentives for clean purchases or the institution of an obligatory payment by consumers for a given article or element of packaging that would otherwise be provided free of charge
Circular business models	Yes	For example, establishment of reuse centres
Eco-innovation	Yes	Briefly mentioned, but no detailed measure (p. 73)
Governance, skills and knowledge	Yes	Certain permits direct so-called 'large polluters' to use best available techniques