

Croatia Circular Economy Approaches in Solid Waste Management (P173141)

ACTIVITY 1.1: Diagnostic analysis for a Circular Economy in Croatia

TASK 1: Assessment of Croatia's Policy Landscape Regarding Circular Economy (Annex 1)



 CIRCULAR ECONOMY
APPROACHES IN
SOLID WASTE
MANAGEMENT

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TASK 1: Assessment of Croatia’s policy landscape regarding Circular Economy

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Abbreviations

\$	US Dollar
%	per cent
CCTC	Croatian Chamber of Trades and Crafts
CE	Circular Economy
CEA	Croatian Employers' Association
CEAP	Circular Economy Action Plan
CEPEEF	Croatian Environmental Protection and Energy Efficiency Fund
CERA	Croatian Energy Regulatory Agency
CHE	Croatian Chamber of Economy
CRM	Critical Raw Materials
EMAS	Eco management and Audit Scheme
EPEEF	Environmental Protection and Energy Efficiency Fund
EPR	Extended Producer Responsibility
EU	European Union
GDP	Gross Domestic Product
GoC	Government of Croatia
GPP	Green Public Procurement
km ²	Square kilometre
MESD	Ministry of Economy and Sustainable Development
NDC	Nationally Determined Contributions
NWMP	National Waste Management Plan
OG	Official Gazette
OJ	Official Journal
PPP	Public Private Partnership
RAS	Reimbursable Advisory Service
SDG	Strategic Development Goals
SI	State Inspectorate
WMP	Waste Management Plan

1. General facts about Croatia

Surface area (km ²): 56,542
Population: 4,058,165 (2020)
Population density: 71,8 inhabitants/km ²
Average number of persons per private household: 2.6
Percentage living in rural areas: 39.1% / living in urban areas: 60.9%
Composition of GDP: \$56 billion (nominal, 2020)
GDP per capita: \$14,936.10 (2019)
GDP by sector: agriculture: 3.7%, industry: 26.2%, services: 70.1%

Table 1: General Information about Croatia

2. Introduction

Croatia is lagging other European Union (EU) countries in transitioning towards a circular economy (CE). Even though the Croatian Government has acknowledged the need to move towards a CE, and national and local authorities have made efforts focusing on waste management and green public procurement, this only partially covers the actions needed to reach the CE goals defined by EU legislation. Moreover, the implementation of the current National Waste Management Plan (NWMP) is lagging behind which poses the risk of meeting EU targets, putting Croatia at facing infringement procedures as well as losing funding under the current EU operational programme.

Overall CE assessments for Croatia already performed in recent years:

EC Early Warning Report (2018) points out that Croatia is considered at risk of failing to meet the 2020 target of 50% preparation for re-use/recycling for municipal waste with the recycling rate at 30,2% (2019) and with the 77% rate of municipal waste landfilling in 2016 (which is among the highest in the EU).

The warning highlights that

- the separate collection of recyclables, including bio-waste, is not yet carried out effectively;
- economic incentives for citizens and municipalities are yet to be implemented;
- the extended producer responsibility schemes in Croatia do not fully cover the costs of separate collection;
- more investment is needed in projects higher up the waste hierarchy which go beyond the treatment of residual waste.

The Environmental Implementation Review (2019) is providing analysis on reasons for the current distance to EU waste targets:

- suboptimal planning of waste management;
- insufficient incentives to manage waste according to the waste hierarchy;
- insufficient ('door-to-door') separate collection of waste;
- lack of clear allocation of tasks;

- lack of coordination between the different administrative levels;
- insufficient enforcement capacity.

Transitioning towards a CE requires a system-wide thinking to consider all stages of the life-cycle of products and services, with particular attention to strategic planning and early designing stages. To this end, the World Bank is supporting the Government of Croatia (GoC) through a Reimbursable Advisory Service (RAS) project which was signed in September 2020 and will be carried out within 24 months. The objective of this RAS is to support GoC towards delivering on its commitments to comply with EU directives in the waste sector and other relevant policy framework upon the adoption of the EU Circular Economy Package. The RAS will inform Croatia's future (post-2022) NWMP to incorporate the CE approaches.

Objectives of this report

This document conducts a diagnostic analysis of CE approaches in Croatia. It provides a review of the current landscape of existing CE/waste management related legislation, strategies, policies, regulations, ongoing projects/studies in Croatia and other existing literature. Topics covered comprise: resource efficiency, circular product design, greenhouse gas emission reduction commitments (e.g., the Paris Agreement and Nationally Determined Contributions - NDCs), resource productivity goals, green procurement plan, extended producer responsibility, waste management, plastic pollution, green economy, eco-innovation, etc.

The report outlines the framework of major thematic areas of a CE as reflected in EU policy documents and compares them with strategies and other relevant documents in Croatia. The result is an overview how the identified policies and regulations are contributing to moving forward in making Croatia's economy more circular. The report also shows where strategies not yet reflect the concept of CE. Besides strategies we also look into ongoing initiatives, e.g. of the Business Community and EU projects, including EU cross border research projects and screen them regarding CE aspects.

A Summary of findings can be found at the end of this report.

3. Methodology

The consultant has collected all available material relevant for the topic using desk research and conducting interviews with local experts and state officials. In line with the requirements of the Terms of Reference (ToR) the crosscutting nature of the task is taken into account, i.e. regulations and policies in the sectors of Climate Change, product policy and eco-innovation and green public procurement are also analysed.

A gap assessment matrix has been developed providing information on existing policies and regulations and how they contribute to achieving the goals of the major thematic areas of CE. Through this matrix a gap analysis is provided showing which themes are well covered, partly covered or still need to be addressed in future policies and regulations in Croatia. Through this gap assessment matrix information is provided how existing and planned policies in Croatia may support the advancement of circular economy activities, or create more enabling market and other relevant framework conditions.

4. EU strategies and programs related to CE

In this chapter the following relevant EU strategies and other planning documents are presented and screened regarding their relevance for Croatia's future policy shaping in the field of CE:

- **The Commission's Green Deal**
- **EU Circular Economy Action Plan, 2015 and 2020**
- **EU's Circular Economy package: revision of EU Waste Legislation**
- **The EU Industry Strategy**
- **EU Strategy for plastics in CE**
- **The EU's strategy for sustainable textiles roadmap**
- **The EU Chemicals Strategy for Sustainability**
- **The EU Farm to Fork Strategy**
- **The Bio economy Strategy**
- **Eco-design and Energy Labelling Regulation**
- **The EU Ecolabel**
- **Critical Raw material Initiative**
- **Eco management and Audit Scheme (EMAS)**
- **Green Public Procurement (GPP)**

The European Green Deal

The European Commission in 2019 released the Green Deal¹. It is a roadmap outlining instruments intended to tackle EU obligations related to climate change and other environmental issues. The European Green Deal aims to boost the efficient use of resources by moving to a clean, circular economy and stop climate change, revert biodiversity loss and cut pollution. It outlines investments needed and financing tools available and explains how to ensure a just and inclusive transition. The European Green Deal covers all sectors of the economy, notably transport, energy, agriculture, buildings, and industries such as steel, cement, Information and Communication Technology (ICT), textiles and chemicals. The European Green Deal sets the objective of creating new markets for climate neutral and circular products, such as steel, cement and basic chemicals. The Green Deal states that the circular economy reduces pressure on natural resources, and is a precondition for achieving the climate-neutrality target by 2050 and halting biodiversity loss. Half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing.

EU action plan for the Circular Economy (CEAP)

The Circular Economy Package² has been adopted with a view to boosting global competitiveness, fostering sustainable economic growth and generating new jobs. It consists of two EU Action Plans for the Circular Economy (2015 and 2020), with measures covering the full life cycle of products: from production and consumption to waste management and the market for secondary raw materials.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1596443911913&uri=CELEX:52019DC0640#document2>

² https://ec.europa.eu/environment/strategy/circular-economy-action-plan_en

The European Commission adopted **the new Circular Economy Action Plan (CEAP II)**³ in March 2020 in the form of an EC communication outlining future trends and actions. Building on the work done on circular economy since 2015, the CEAP II focuses on resource intensive sectors where the potential for circularity is high. The CEAP cover the full economic cycle from production to consumption, repair and remanufacturing, to waste management and secondary raw materials. Cross-cutting measures to support this systemic change through innovation and investments were also mentioned.

Aiming to keep resources in economic cycles as long as possible, the plan addresses key product value chains: **electronics and ICT, batteries and vehicles, packaging, plastics, textiles and food**. The new action plan announces initiatives along the entire life cycle of products. The CEAP II includes a new sustainable product policy framework targeting how products are designed, promotes circular economy processes, encourages sustainable consumption, and aims to ensure that waste is prevented and the resources used are kept in the EU economy for as long as possible. It introduces legislative and non-legislative measures targeting areas where action at the EU level brings real added value.

EU's Circular Economy package: revision of EU Waste Legislation

As part of the EU's Circular Economy package, in 2018 the EU suggested amendments of the following six pieces of EU legislation:

- The Waste Framework Directive (2008/98/EC);
- The Landfilling Directive (1999/31/EC);
- The Packaging Waste Directive (94/62/EC);
- The Directives on end-of-life vehicles (2000/53/EC), on batteries and accumulators and waste batteries and accumulators (2006/66/EC), and on waste electrical and electronic equipment (2012/19/EU).

The Package supports transition to a circular economy by stimulating waste prevention, improving resource efficiency and reducing the use of resources, while increasing targets for reuse and recycling. The revised waste legislation intends to improve waste collection and recycling. It introduced new obligations for separate collection of waste such as bio-waste and textiles. It set an overall 70% recycling rate target to be met by 2030 for all packaging materials. It also implemented a recycling target per material type. It also sets a new recycling calculation methodology for reporting on preparing for re-use and recycling, which will take into account only the materials that have been effectively recycled, thus leading to more real recycling. Rules stating that EPR fees should be based on real end-of-life costs were introduced. Additionally, targets to limit landfilling rates to 10% by 2035 were introduced.

EU Strategy for Plastics in the Circular Economy

To tackle plastic pollution and promote innovation the EC adopted in 2018 strategic document⁴ with the goal of transforming the way plastics and plastics products are designed, produced, used and recycled. The overall goal is to protect the environment and citizens from plastic pollution and to demonstrate business cases for the necessary transformation. One of the Strategy goals is that by 2030, all plastic packaging placed on the EU market is either reusable or can be recycled in a cost-effective manner. The Plastic Strategy proposes to look into actions to specifically tackle single-use plastic items and other marine litter, including lost or abandoned fishing gear and the intentional use

³ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN>

⁴ https://ec.europa.eu/info/publications/legal-documents-plastics-strategy-circular-economy_en

of micro plastics. Introducing Extended Producer Responsibility (EPR) schemes on a number of plastic items is an effective measure to tackle plastic. To achieve its ambitious vision, the Strategy foresees actions: to improve the economics and quality of plastic recycling;

- to curb plastic waste and littering;
- to drive investments and innovation;
- to harness global action;
- to integrate recycling criteria in Green Public Procurement.

The New EU Industrial Strategy

The EC released in March 2020 the new Industrial Strategy⁵ which highlights the transition towards more environmental and **circular standards in the industry sector** by utilizing the supply of clean and affordable energy's and raw materials. „Europe's industry must play a leading role in the ecological transition. This means reducing its carbon and material footprint and embedding circularity across the economy“. It highlights a shift from linear production to a circular economy and emphasises the shift from products to services and from exclusive to shared ownership of products and services. To lead this change, Europe needs novel industrial processes and more clean technologies to reduce costs and improve market readiness. **Circular Economy approach will ensure a cleaner and more competitive industry** by reducing environmental impacts, alleviating competition for scarce resources and reducing production costs. It states that applying **circular economy principles in all sectors and industries has potential to create new jobs across the EU.**

The EU's strategy for sustainable textiles roadmap

The forthcoming EU Textile Strategy⁶ will help the EU shift to a climate-neutral, circular economy where products are designed to be more durable, reusable, repairable, recyclable and energy-efficient. It will apply circular economy principles to production, products, consumption, waste management and secondary raw materials, while directing investment, research and innovation related to the textile sector.

Critical raw materials Initiative

The European Commission has created a list of critical raw materials (CRMs) for the EU. CRMs combine raw materials of high importance to the EU economy and of high risk associated with their supply. The Raw Material Initiative⁷ define critical raw materials, Promote skills and focused research on innovative exploration and extraction technologies, recycling, materials substitution and resource efficiency, increase resource efficiency and foster substitution of raw materials.

The EU chemicals strategy for sustainability

The European Commission published a **Chemicals Strategy for Sustainability**⁸ in October 2020. It is part of the EU's zero pollution ambition, which is a key commitment of the European Green Deal. The Strategy will boost innovation for safe and sustainable chemicals, and increase protection of human health and the environment against hazardous chemicals. This includes prohibiting the use of the most harmful chemicals in consumer products such as toys, childcare articles, cosmetics, detergents, food

⁵ https://ec.europa.eu/info/sites/info/files/communication-eu-industrial-strategy-march-2020_en.pdf

⁶ <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12822-EU-strategy-for-sustainable-textiles>

⁷ https://ec.europa.eu/growth/sectors/raw-materials/specific-interest/critical_en

⁸ <https://ec.europa.eu/environment/pdf/chemicals/2020/10/Strategy.pdf>

contact materials and textiles, unless proven essential for society, and ensuring that all chemicals are used more safely and sustainably. The Chemical Strategy address technical barriers to recycling and the use of recycled materials caused by the presence of certain chemicals in products. Transitioning to a clean circular economy implies that the presence of substances of concern must be limited in virgin and recycled materials and that polluted waste is sorted and decontaminated.

Eco-design and Energy Labelling Regulation

The Eco-design Working Plan 2016 - 2019⁹ encourages a more holistic approach to design and extended the scope of eco-design requirements beyond energy efficiency. These new requirements take into account the whole life cycle of products and materials. By introducing material efficiency requirements on several products, the working plan promoted reparability, upgradeability, durability, and recyclability of consumer goods. New criteria, which will allow measuring of the circularity of a product and the presence of critical raw materials, will be developed. The Eco-design Directive is implemented through product-specific regulations, directly applicable in all EU countries.

- **The Eco-design Directive¹⁰** provides consistent EU-wide rules for improving the environmental performance of products, such as household appliances, information and communication technologies or engineering. The directive sets out minimum mandatory requirements for the energy efficiency of these products. This helps to prevent creation of barriers to trade, to improve product quality and environmental protection. The Eco-design Directive is implemented through product-specific regulations, directly applicable in all EU countries.
- **The Energy Labelling Regulation¹¹** complements those eco-design requirements with mandatory labelling requirements. Product requirements related to circular economy (e.g. availability of spare parts and repair information to professional repairers) have been incorporated in several eco-design regulations adopted by the Commission on 1 October 2019, concerning, for instance, electronic displays, washing machines, dishwashers and refrigerators.

The EU Farm to Fork Strategy

The Strategy¹² is part of the European Green Deal aiming to make food systems fair, healthy and environmentally-friendly. The Commission is committed to achieving per capita food waste reduction rates at retail and consumer levels by 2030 (SDG Target 12.3). Using the new methodology for measuring food waste and the data expected from Member States in 2022, it will set a baseline and propose legally binding targets to reduce food waste across the EU. Reducing food waste brings savings for consumers and operators. Furthermore, the recovery and redistribution of surplus food that would otherwise be wasted has an important social dimension. It also ties in with policies on the recovery of nutrients and secondary raw materials, the production of feed, food safety, biodiversity, bio economy, waste management and renewable energy. The Commission will revise EU rules to take account of consumer research, among others, misunderstanding and misuse of date marking ('use by' and 'best before' dates) lead to food waste. In addition to quantifying food waste levels, the Commission will investigate food losses at the production stage, and explore ways of preventing them. Coordinating action at EU level will reinforce action at national level, and the recommendations of the EU Platform on Food Losses and Food Waste will help show the way forward for all actors.

⁹ https://ec.europa.eu/energy/sites/ener/files/documents/com_2016_773.en.pdf

¹⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0125>

¹¹ <https://eur-lex.europa.eu/eli/reg/2017/1369/oj>

¹² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0381>

The Bioeconomy Strategy

The strategy¹³ contributes to the European Green Deal, as well as industrial, circular economy and clean energy innovation strategies. Bioeconomy covers all sectors and systems that rely on biological resources (animals, plants, micro-organisms and derived biomass, including organic waste), their functions and principles. Bioeconomy is the renewable segment of circular economy. It can turn bio-waste, residues and discards into valuable resources and can cut food waste by 50% by 2030. European Bioeconomy Strategy paved the way for a more innovative, resource-efficient and competitive society that reconciles food security with the sustainable use of renewable resources for industrial purposes, while ensuring environmental protection.

The EU Ecolabel

The EU Ecolabel¹⁴ is a label of environmental excellence that is awarded to products and services meeting high environmental standards throughout their life-cycle: from raw material extraction, to production, distribution and disposal. The EU Ecolabel promotes the circular economy by encouraging producers to generate less waste and CO₂ during the manufacturing process. The EU Ecolabel criteria also encourages companies to develop products that are durable, easy to repair and recycle.

The EU Ecolabel criteria provide exigent guidelines for companies looking to lower their environmental impact and guarantee the efficiency of their environmental actions through third party controls. Furthermore, many companies turn to the EU Ecolabel criteria for guidance on eco-friendly best practices when developing their product lines.

Eco management and Audit Scheme (EMAS)

By implementing the **EMAS EU environmental certification scheme**¹⁵ companies and organisations are committing to monitor their process and improve resource efficiency. The EMAS scheme is incentivizing organisations to enhance their operations toward more circularity by implementing circular economy measures such as more circular procurement, product design, waste management etc.

The Green Public Procurement (GPP)

The GPP is a voluntary instrument defined in the Communication "Public procurement for a better environment"¹⁶ as "a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured." By using the GPP, public authorities can provide market and industry with incentives to develop green technologies and products. The EC has developed more than 20 common GPP criteria.

¹³ <https://op.europa.eu/en/publication-detail/-/publication/edace3e3-e189-11e8-b690-01aa75ed71a1/language-en/format-PDF/source-149755478>

¹⁴ <https://ec.europa.eu/environment/ecolabel/>

¹⁵ https://ec.europa.eu/environment/emas/index_en.htm

¹⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52008DC0400>

5. Overview of the Croatian CE policies - Croatian National Strategies relevant for CE

In this section of the report the wide range of Croatian national strategies which might have a potential for pushing circular economy approaches in Croatia are briefly presented. If in below summaries we do not explicitly mention that the concept of CE is covered/tackled in one or the other way it means that CE is not addressed.

In the Gap Analysis which will follow as the next chapter of this report these strategies will be compared with the key thematic areas of the EU's CE Action Plan.

Waste Management Strategy of the Republic of Croatia (OG 130/05)

The purpose of the Strategy is to establish a framework within which Croatia will have to reduce the amount of waste it produces and manage the waste generated sustainably. The strategy includes the assessment of the current situation, main waste-management objectives and measures, hazardous-waste management measures and guidelines for the recovery and disposal of waste. The Strategy also provides guidelines for the construction and demolition waste management system improvement. **The Ministry of Economy and Sustainable Development (MoESD)** is a central body responsible for preparation of waste management legislation, national waste management strategy and waste management plan, as well as coordination of co-operation among all involved institutions in waste management in Croatia.

Waste management plan (WMP) of the Republic of Croatia for the period 2017 - 2022 (OG 3/17)

The Waste Management Plan of the Republic of Croatia is a waste management planning document that is reflected at all levels, from national to local, and as a segment it occurs in other sectors (e.g. water management, , health, spatial planning, construction, etc.). It sets objectives and measures for establishment of waste management based on the Circular economy criteria. The Plan focusses on developing a recycling and recovery system to separate waste, reducing the total quantity of mixed municipal waste with applying measures such as establishing re-use centres, home composting, development of quality and categorising criteria for compost and digestants, enhancing separate collection of waste, financial incentives for separate waste collection, introducing a fee for landfilling, enhancing recycling, strengthening the market for waste intended for recycling, planning energy recovery. Further specific measures include the improvement of municipal and hazardous waste management systems, remediation of polluted sites, improvement of the waste management information system and supervision and administrative procedures in waste management.

The backbone of the Waste Management Plan consists of recycling yards and recycling centres with sorting and composting capabilities where waste can be prepared for recycling. The capacities and facilities of the waste management centres will reflect the goals of the plan, thus promoting innovative waste management practices and assume achievement of reduced waste quantities.

Waste Management Plan of the Republic of Croatia for the period 2017-2022 is aimed at prevention of municipal waste, prevention of biowaste with special emphasis on food waste, prevention of construction waste, prevention of waste paper and cardboard and preventing the generation of electrical and electronic (EE) waste.

To achieve the stated specific goals in the Waste Management Plan of the Republic of Croatia for the period 2017-2022 waste prevention measures have been identified. Achieving specific goals of waste prevention contributes to the achievement of general goals of waste management: separating economic growth from the increase in the amount of waste generated, conservation of natural resources, reduction of the total mass of waste disposed of in landfills, reducing emissions of pollutants into the environment and reducing hazards to human health and the environment.

Targets for waste management to be achieved by 2022 compared to 2015

No	Objective	N° of Objective	Description
1	Improve the municipal waste management system	Objective 1.1	Reduce the total amount of municipal waste generated by 5%
		Objective 1.2	Separately, collect 60% of the weight of municipal waste generated (primarily paper, glass, plastic, metal, bio waste, etc.)
		Objective 1.3	Separately, collect 40% of the weight of the generated bio-waste which is an integral part of municipal waste;
		Objective 1.4	Dispose of less than 25% of the weight of the municipal waste generated
2	Improve the system of management of specific waste categories	Objective 2.1	Separately collect 75% of the weight of the produced construction waste
		Objective 2.2	Establish system for sludge waste management from waste water treatment plant
		Objective 2.3	Improve the management of waste packaging;
		Objective 2.4	Establish a marine litter management system
		Objective 2.5	Establish an end-of-life management system for waste ships, wrecks and stream matters on the seabed
		Objective 2.6	Improve the management system for other specific waste categories
3	Improve the hazardous waste management system		
4	Remediate sites contaminated with waste		
5	Continuously carry out educative-informative activities		
6	Improve the information system in waste management		
7	Improve control of waste management		

8	Enhance administrative procedures in waste management
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Table 2: Waste management targets

Waste management plans on the municipality level: According to Article 21 of the Act on Sustainable Waste Management local self-government units and the City of Zagreb are obliged to adopt a waste management plan (WMP) for a period of six years with prior obtaining of consent to the proposal of the plan by the unit of regional self-government (in the case of City of Zagreb consent must be issued by Ministry) .

Municipality WMPs contains:

- measures for waste generation prevention and reduction
- measures for waste management according to best available technologies
- measures for the collection of mixed municipal waste and biodegradable municipal waste, as well as measures for the separate collection of waste paper, metal, glass and plastic, and bulky municipal waste;
- Measures for waste reuse/recycling/recovery
- construction plan for the facilities for storage, treatment and disposal of waste related to establishment of integral national network of waste facilities
- measures for remediation of waste hot spots and illegal landfills
- inspection and monitoring of waste management
- financial sources for implementation of certain measures
- deadlines for implementation of set measures

The Waste Prevention Plan 2017 - 2022 (as integral part of the Waste Management Plan)

The Waste Prevention Plan is an integral part of the Waste Management Plan and contains objectives and waste prevention measures that separate the link between economic growth and environmental impact related to waste generation, a description of existing waste prevention measures and assessment of the usefulness of appropriate waste prevention measures.

The Waste Prevention Plan sets following measures:

- **Encouraging the re-use of demolition material**
 - o The introduction of an incentive fee for the re-use of demolition materials.
 - o Defining the conditions that the demolition material must meet.
 - o Set up a central register of buildings.
- **Organisation for information — education campaigns on prevention of food waste**
- **Work to improve food waste collection and processing systems**
- **Promoting sustainable construction**
 - o Development of a Guide to Green and Sustainable Construction.
 - o Improvement of the existing or establishment of a new internet portal.

- o Inclusion of the topic of "green building" in professional exams
- **Establishment of a food donation system**
 - o Adoption of the Ordinance for the regulation of the food donation system.
 - o Launching a campaign with the theme of food donation.
 - o Launching initiatives for food donation in the Republic of Croatia.
- **Organisation of a communication campaign for citizens**
- **Encouraging prevention of waste plastic carrier bags**
 - o Introduction of a mandatory charge for lightweight plastic carrying bags.
 - o Introducing an obligation for sellers to inform consumers at the point of sale of plastic bags about the negative impact of excessive consumption of plastic bags on the environment, including places where consumers take plastic bags themselves (bags in rolls for fruit and vegetables, etc.).
- **Promotion of home composting**
 - o Organization of workshops for local self-government units on the topic of campaign preparation.
 - o Establishment of a program for co-financing home composters.
- **Promoting 'green' and sustainable public procurement**
 - o Development of a manual for the implementation of green and sustainable public procurement.
 - o Defining common criteria by procurement items that can be easily included in the bidding documents.
 - o Establishment of a database of "green" products.
 - o Education of public and corporate procurement providers focused on environmental specifications and those specifically related to waste prevention.
- **Encouraging the exchange and reuse of usable products**
 - o Development of guidelines for the establishment of reuse in the Republic of Croatia.
 - o Implementation of pilot projects to establish a reuse system.
 - o Implementation of communication campaigns through the media with the aim of raising citizens' awareness.
 - o Issuance of a Guide for the repair / rental / use of used electrical and electronic devices and equipment (white goods).
 - o Organization of events (in cooperation with the civil sector) for the collection, exchange and trade of second-hand products.
 - o Improvement of the existing or establishment of a new internet portal.
 - o Adaptation of the legislative framework.

- o Establishment of common areas (reuse and repair centres).
- o Establishment of cooperation with craftsmen and social institutions.
- o Involvement of vulnerable social groups in reuse activities.

Our first assessment is that even though waste prevention measures are covering whole life cycle of a product, and have a lot ambitious and relevant measures, waste prevention would need to be updated with newest waste prevention measures from the new EU Circular Economy Plan and newest relevant EU legislation. More deterrent measures are needed in order to achieve strong impact on waste prevention as top priority in waste management.

*Food Waste Prevention Plan 2019 - 2022 (OG 61/2019)*¹⁷

The plan aims to prevent and reduce the generation of food waste. The plan aims to bring together in one place all measures and activities that will contribute to the prevention of food waste in all phases of the food chain, from primary production, through processing, trade, and catering, institutional kitchens to households. The plan is the first such comprehensive document on this issue in the Republic of Croatia. The implementation of this Program will result in improving the legislative framework, drafting guides, establishing a system for preventing and reducing food waste, redirecting surpluses and reducing food waste, as well as exchanging information that will significantly understand the negative effects of food loss, non-utilization and waste citizens for responsible food handling. The Plan is accompanied by a detailed **Program for the implementation of the Plan for the prevention and reduction of food waste**¹⁸.

Strategy for Sustainable development of the Republic of Croatia (OG 30/09)

The strategy determines the current state and future steps in achieving sustainability, including more sustainable waste management and the establishment of a circular economy. The Strategy for Sustainable development in the long-term directs economic and social development and environmental protection. As the Strategy was adopted in 2009, the Strategy would need to be updated. Also, the Environmental Protection Act (OG 80/13, 153/13, 78/15, 12/18, 118/18) in its Art 51 prescribes that the Sustainable Development Strategy should be adopted every 10 years.

*Industrial Strategy of the Republic of Croatia 2014 - 2020 (OG 126/2014)*¹⁹

The purpose of the strategy is - through the analysis of the state of the Croatian industry:

- to identify basic problems of the Croatian industry;
- to make suggestions for improving the business environment in order to create better conditions business for all actors within the industry;
- to identify those industrial activities that have the largest potential of further growth and development and a special set of measures to further facilitate and encourage their further growth and development.

¹⁷ https://narodne-novine.nn.hr/clanci/sluzbeni/2019_06_61_1169.html

¹⁸ https://poljoprivreda.gov.hr/UserDocsImages/dokumenti/hrana/doniranje_hrane/Program%20za%20provedbu%20Plana%20sprje%C4%8Davanje%20i%20smanjenje%20nastajanja%20otpada%20od%20hrane%20RH%202019.%20-%202022.pdf

¹⁹ <https://vlada.gov.hr/UserDocsImages/2016/Sjednice/2014/182%20sjednica%20Vlade/182%20-%201.pdf>

The concept of circular economy is not included in the industrial strategy. One of the operational measures is to encourage cooperation between industry, education, science and technology and to adapt the education and science system to new technologies and the green economy.

*National Development Strategy 2030 (OG 13/2021)*²⁰

This strategy is an umbrella document and a comprehensive act on strategic planning which should guide the development of society and the economy in the long run. **It promotes the green and digital transition to a cleaner and more accessible energy, by encouraging green and blue investments, by decarbonising buildings, and by developing a circular economy.** It states that production sectors that accept the postulates of a circular and decarbonised economy will be the basis for sustainable and competitive development. It encourages the development of the circular economy as one of the priorities in the implementation of public policies that will contribute to the development of a globally competitive, green and digital industry.

Among the defined priorities for the implementation of the policy in the field of sustainable environment are:

- **to increase the efficiency of municipal waste management;**
- **to prepare for the transition to a circular economy; and**
- **the development of a circular management of space and buildings.**

Financial support will be given to the development of clean technology-based and circular economy-oriented industries, especially those that contribute to the implementation of the waste management priority (waste prevention, preparation for re-use, recycling, recovery and re-use).

*“Smart Specialization Strategy 2016 - 2020” and related action plan 2016 - 2017*²¹

The Smart Specialization Strategy of the Republic of Croatia for the period from 2016 to 2020 is accompanied by the Action Plan for the implementation of the Smart Specialization Strategy of the Republic of Croatia for the period from 2016 to 2017. It contains goals and priority activities related to research, development and commercialization of innovations.

The document is dealing with strengthening research, technological development and innovation. One of the priority areas of the strategy relates to the area of "Energy and Sustainable Environment":

- (i) energy technologies, systems and equipment,
- (ii) technologies and equipment in the function of environmental protection.

*Strategy for innovation encouragement of the Republic of Croatia 2014 - 2020*²²

The strategy directs the development and systematic encouragement of innovations as fundamental values of economic participation, but also of society as a whole. It sets the strategic direction for the development of innovation and the innovation system. Strategy emphasizes the strengthening of the innovation potential of the economy, and the encouragement of cooperation and the flow of resources between the businesses, public and scientific-research sectors. Furthermore, the Strategy determines the manner of communication and models of cooperation between the public, scientific research and

²⁰ https://narodne-novine.nn.hr/clanci/sluzbeni/2021_02_13_230.html

²¹ https://www.obzor2020.hr/userfiles/obzor2020/pdfs/Strategija_pametne_specijalizacije_RH_2016_2020.pdf

²² <https://narodne-novine.nn.hr/clanci/sluzbeni/dodatni/434155.pdf>

business sectors for the development of new products, services, business processes and technology, and the manner of applying the results of scientific research in the economy and society as a whole.

*Energy development strategy of the Republic of Croatia until 2030 with a view to 2050 (OG 25/2020)*²³

The Strategy represents a step towards the realization of the vision of low-carbon energy and ensures the transition to a new period of energy policy which ensures affordable, secure and quality energy supply. The Strategy recognizes the importance of the circular economy in waste management as well as the potential for more intensive use of biomass and biogas in the energy sector.

It highlights **Bioeconomy** as a sector, which could generate the production of renewable biological resources and the conversion of those resources, together with waste streams, into value-added products such as food, feed, biological products and bioenergy.

The chapter "**Energy production in sustainable waste management**" states that waste management can produce energy and new raw materials, and that also through the application of advanced commercial technologies, waste can be used as a raw material for the production of advanced fuels (bioethanol, bio methanol, hydrogen, etc.). This can significantly contribute to the energy goals of the Republic of Croatia at the national and local level as states the strategy.

Waste from production processes is seen as a source of energy and materially usable waste, which the producer is obliged to manage in accordance with the principles of circular economy and bio-economy. This opens up numerous possibilities for energy (but also material) recovery of waste for the industrial sector, which can use its own waste as a source of energy (raw materials) for its production processes. Depending on the results of the future analysis of the need for **energy recovery of waste** for energy production, it shall be possible to use fuel produced from waste, namely at locations for which the analyses show environmental, economic and technical feasibility.

The Low Carbon Development Strategy of the Republic of Croatia until 2030, looking at 2050 (currently in the drafting phase)

According to the currently available draft, the strategy outlines the following vision: Industry and agriculture will be efficient and connected to all sectors of the economy, reducing the generation of waste materials in an integrated and circular economy. The low carbon strategy therefore wants to create synergies with the concept of developing new green jobs, and generally with a concept of circular economy where resources are used as a whole and waste generation is minimised;

Visions of the low carbon development of some sectors by 2050 are as follows:

- The establishment of a waste management system in line with the principles of the circular economy will contribute to resource efficiency with a lower negative impact on people and the environment;
- Building design, construction and renovation will be carried out according to the principles of circular management of space and buildings with coordinated use of resources with the needs and performance of buildings;
- Industry will promote the concept of a circular economy, including recycling and recovery of scrap materials in their own process and from other operators.

²³ https://narodne-novine.nn.hr/clanci/sluzbeni/2020_03_25_602.html

- the political will to engage policies and stakeholders to make “the bio economy happen” in the Croatian context.

Readiness for transformation of the existing “traditional” bio-economy stakeholders (farmers, sectors like food processing, timber processing, pharmaceuticals and chemicals, ...) needs to be ensured. Their products should no longer be based on non-renewable carbon but there should be a shift towards bio-plastics, biofuels, biochemicals, products of “traditional” stakeholders with a lower carbon footprint. The strategy is aware of the fact that for or the transition to bioeconomy, it is necessary to modify practices in agriculture, forestry and waste management sectors to balance supply and demand for biomass, including the establishment of bio logistical centres for biomass and bio refineries.

The strategy suggests that EU funds for the transition to the bioeconomy shall be used to contribute to the achievement of the goals.

National Action Plan for Green Public Procurement for the period from 2015 to 2017 (with view up to 2020)

The Action Plan²⁵ establishes a national framework for stronger involvement "Green" benchmarks in public procurement procedures in Croatia. It is primarily intended for public procurement actors under the Public Procurement Act procure. The purpose of the National Green Public Procurement Action Plan is to encourage the procurement of products through the public procurement system and services that have a smaller environmental footprint compared to similar products and services, i.e. defining the activities that will lead to it. The overall goal is to contribute to a cleaner and healthier environment, to stimulate the innovation and provide incentives to industry for the development of green products and services.

The Plan lists general Green Public Procurement Criteria as well as green public procurement benchmarks for priority groups of products and services. It mentions as priority measures: training and the establishment of a training programs for public procurement operators on green public procurement, promotion and information on green public procurement, the introduction of measures to promote green public procurement in strategic documents regional self-government (JLPS).

The document contains instructions on how to use energy efficiency indicators in public procurement and contains a guide for calculating the lifetime costs of products.

The aim of the National Action Plan for green public procurement is to include some of the criteria for green public procurement for 50% of public procurement procedures in Croatia by 2020. The strategic goal in 2030 is to have 75% of the implemented public procurement procedures for priority product groups with changed green public procurement criteria.

The focus is on the introduction of basic green standards in public procurement for priority groups of products and services: paper for printing and copying, motor vehicles, office and computer equipment, electricity, telecommunication services and mobile telephone services together with equipment, and cleaning services.

National Chemical Safety Strategy (OG 143/2008)

The aim of the National Chemical Safety Strategy is to identify, on the basis of the extensive analysis and assessment of the chemical safety situation, the main strategic lines and measures to establish a rational, dynamic and integrated chemical safety system fully in line with the legislation and practice

²⁵ <https://www.azu.hr/media/1154/nacionalni-akcijski-plan-za-zelenu-javnu-nabavu.pdf>

of the European Union. The aim of the Strategy is to identify through inter-agency cooperation a uniform development of all aspects of the protection of health and the environment from the adverse effects of chemicals, with appropriate upgrading of existing protection regimes, such as: General protection against hazardous chemicals, health protection against harmful chemicals in products for human use, environmental health of harmful chemicals in the environment, and construction of prevention, preparedness and response systems for accidents with chemicals.

National Agriculture Strategy until 2030 (in drafting phase)

The strategy supports the ambition of a European Green Deal aimed at transforming the European economy into a zero greenhouse gas emissions economy, plus the following sub goals:

- (i) further reduce greenhouse gas emissions from the agricultural sector and strengthen its capacity to adapt to climate change;
- (ii) mobilise the sector for the transition to a circular economy;
- (iii) exploit the opportunities of digital and biotechnology.

A broad approach to the agri-food sector adopted in this document respects the principles of the European Commission's 'Farm to Fork strategy. According to the plan once completed the strategy will include specific activities, investments and funding sources (EU and national) to develop selected value chains in the circular bioeconomy.

Sustainable tourism development strategy until 2030 (in drafting phase)

It will be an umbrella strategic document, which will define the vision of further development of tourism, taking into account the principles of sustainability, development needs and potentials. The current version of the strategy does not mention the concept of circular economy. As tourism is a key sector in Croatia this shortcoming should be addressed.

Conclusion:

In this section of the report a screening of all documents was performed in which circular economy aspects could or should play a role. Many of them do not reflect the philosophy of CE yet. The next chapter will focus on specific practical initiatives already taken or currently ongoing (EU Projects, initiatives of public bodies, initiatives of the business community).

Remark:

- Croatian legislation related to waste management can be found in Annex 2
- Indicative list of future strategic planning documents related to the CE is in Annex 3

6. Ongoing projects, initiatives related to CE

Indicative list of initiatives, projects, research connected to the CE

Title	Content	Stakeholder
EU projects „Horizon 2020 – research, innovation and knowledge“		
CIRC-PACK project - towards circular economy in the plastic packaging value chain	The project aims at more sustainable, efficient, competitive, less fossil fuel dependence, integrated and interconnected plastic packaging value chain. To this end, three case studies will work on developing, testing and validating better system-wide economic and environmental outcomes by (i) decoupling the chain from fossil feedstocks, (ii) reducing the negative environmental impact of plastic packaging; and (iii) creating an effective after-use plastics economy	<ul style="list-style-type: none"> - MI-PLAST Ltd. - SAPONIA D.D. - The City of Rijeka
URBAN-WASTE Project	URBAN-WASTE supports policy makers in answering these challenges and in developing strategies which aim at reducing the amount of municipal waste production and at further support the re-use, recycle, collection and disposal of waste in tourist cities. While doing so, URBAN-WASTE will adopt and apply the urban metabolism approach to support the switch to a circular model where waste is considered as resource and reintegrated in the urban flow.	Dubrovnik – Neretva county
PPI4Waste project - Public Procurement of Innovation for Waste	PPI4Waste aims to achieve resource efficiency, sustainable waste management and sustainable consumption throughout Europe by increasing innovative public procurement through networking, capacity building, and dissemination; to	Zagreb City Holding

	create a critical mass of procurers purchasing eco-innovative waste solutions; to create new markets in the area of resource efficiency in the short and medium term. Leverage additional investment in research and innovation; to make a demonstrable contribution to public sector innovation and increased mobilisation of SMEs and industrial partners; to move from product purchase to service delivery	
EU LIFE Projects		
LIFE-ECOMETHYLAL	The project aims at implementing a highly profitable technology to produce methyl called Catalytic Hydro-Gasification with Plasma (CHGP) (owned by one of the partners) for the treatment of current non-recyclable plastic waste (NRPW): automotive, electric-electronic and packaging, according the waste hierarchy established by the EU policies.	MI-PLAST Ltd.
LIFE FREEDOM	Solving treatment of wastewater sewage sludge with new HTL technology to produce hydrocarbons, asphalts and fertilizers	Mondo Pulito Ltd.
LIFETURF	Transparent Global Model for Operating the Synthetic Turf Industry in a Sustainable and Circular Way	The city of Zadar
LIFE AskREACH	The project helps consumers and companies to apply the “Right to Know” about substances of very high concern in consumer goods.	Zelena Akcija NGO
AgroCycle	Sustainable techno-economic solutions for the agricultural value chain	Faculty of Mechanical Engineering and Naval Architecture, Zagreb
PULPACKTION	Project PULPACKTION will develop cellulose-based packaging solutions for the specific demands of the food and electronic packaging industries, reducing dependence on non-	MI-PLAST Ltd.

	renewable fossil fuel based plastics. This will be accomplished by the combination of improved cellulose pulps and bio-based polymers. The new package solutions will help reduce the waste streams by substituting plastics with an eco-friendly bio-based solution with similar properties as plastics.	
HYPERBIOCOAT	The idea of the project is to improve biodegradable packaging materials properties.	MI-PLAST Ltd.
REFUCOAT	The project seeks to develop fully biodegradable packaging for fresh food products	MI-PLAST Ltd.
Existing initiatives containing elements to promote CE		
The Waste Prevention Portal (link)	The portal provides key information about e.g. options, methods, measures, activities and results to prevent waste. As a part of the Portal, an application for voluntary collection of data on the implementation of waste prevention measures by local self-government units (municipalities and cities).	The Ministry of Economy and Sustainable Development
Green Public Procurement Portal (link)	The national green public procurement (GPP) web platform communicates GPP criteria's, publishes education materials, webinars, LCA tools and examples of good practice.	The Ministry of Economy and Sustainable Development
Guidelines for Reuse in the Republic of Croatia²⁶	The document provides guidance for the establishment of reuse system in Croatia. The Guidelines cover all stakeholders in the waste management system, with a view to promoting, educating and developing a reuse system in Croatia. The guidelines will provide an insight to all stakeholders in the basic models of collection of useful items, and incentives them to develop reuse projects. Finally, the guidelines provide direct advice and models	The Ministry of Economy and Sustainable Development

²⁶ https://www.fzoeu.hr/docs/smjernice_za_ponovnu_uporabu_v2.pdf

	for the establishment of reuse centres in Croatia.	
The National Eco-label sign	The “Environmental Friendly Label” is a voluntary environmental instrument used to label products, which, compared to similar products, have a less negative impact on the environment throughout its life cycle. The Environmental Friendly Label provides the consumer with complete, credible and scientifically based information on the environmental impact of the product. The register of products and services awarded by the Ministry of Economy and Sustainable Development to the EU Ecolabel and HR Environmentally Friendly sign can be found here https://mingor.gov.hr/nacionalni-registar-eu-ecolabel-proizvoda-i-usluga/8145	The Ministry of Economy and Sustainable Development
Social entrepreneurship and circular textiles	Collecting used clothes and textile waste which is used in the production process of new clothes.	Humana Nova Cakovec, social entrepreneurship company
Reusing Textile Waste	The core business of “Regeneracija” lies in recycling of textile waste from surrounding textile industries to produce insulation for construction and automotive industry, protective floor coverings, filtration, and furniture industry. The company collects 35% of household textile waste, 15% of industrial textile waste while 50% of textile waste is imported.	“Regeneracija” textile factory
WASATEX PROJECT - Water Saving Processes for Textile Production	The project aims to make water reusable in the industrial production cycle through wastewater treatment. The company currently uses only 5-10% of treated water in the production processes. The goal of the project is to recycle up to 70%	The textile factory of the Olimpias Textile in the City of Osijek

	of treated water. The project started in July 2014 and lasted till December 2016. The project was co-funded by the European Union within the CIP Eco-Innovation initiative.	
Geocycle gives second life to C&DW through cement manufacturing	The project developed technologies related to simultaneous recovery of energy and the recycling of mineral materials within one single industrial process: Cement manufacturing. This waste treatment solution allows 100% of the material input to be recovered or recycled in the production process without any additional residue and impact on health and cement quality.	LafargeHolcim under the Geocycle brand
Projects of the Institute for Environmental and Nature Protection within the Ministry of Economy and Sustainable Development		
Improvement of Data on Plastic Waste in Croatia	<p>The aim of the project is to improve data and statistics on plastic waste and to collect data on selected plastic products, in order to meet reporting obligations in accordance with three Directives of the European Parliament and the Council: Directive 94/62/EC on packaging and packaging waste, Directive (EU) 2015/720 of the European Parliament and of the Council of 29.4.2015 amending Directive N° 94/62/EC regarding the reduction of the consumption of lightweight plastic bags and Directive (EC) 2019/904 on the reduction of the environmental impact of certain plastic articles (SUP).</p> <p>Project activities will include analysis of available data and preparation of methodology and recommendations for collecting additional necessary data on plastic products and plastic waste, especially taking into account the new EU rules and guidelines for calculating recycling in order to meet the prescribed targets, as well as the need to establish a new system for monitoring the implementation of the SUP Directive.</p>	
Statistical survey on food waste	<p>The main goal of the research is to improve the system of monitoring food waste management and reporting to the bodies of the European Commission.</p> <p>Given that reporting to the EC bodies requires data on the amount of food waste for all phases of food supply as well as for the amount of food waste from households, the statistical survey on food waste in the Republic of Croatia will be conducted in two phases: the first</p>	

	phase includes determining the amount of food waste from the business sector while the second phase involves determining the amount of food waste from households.
Improving the system for collecting data on biowaste and food waste	The aim of the project was to improve the system of monitoring the management of biowaste and food waste and reporting to the bodies of the European Commission.
A plan for the development of a waste prevention system and the information and exchange of good practice	Project goal: contribution to the achievement of the goal of waste prevention. Project activities will contribute to the construction of systematic monitoring of the implementation of individual measures and activities to prevent waste generation defined by the Waste Management Plan of the Republic of Croatia and other measures and activities prescribed by Croatian legislation.
Improving the flow and quality of data on construction waste and waste from exploration and exploitation of mineral resources in the Republic of Croatia	The aim of the project is to improve the quality of data on construction waste and waste from exploration and exploitation of mineral resources.
Initiatives of the Croatian Chamber of Commerce	
The Waste Exchange (link)	“The Waste Exchange” is not yet functional. Once operational it is supposed to be the centre of supply and demand of all types of waste generated during production and become part of a digital chamber’s platform. The organization of “The Waste Exchange” would largely improve the waste management system, provide system stakeholders with transparent information on available secondary raw materials and improve the management of special categories of waste managed outside the system of the Fund for Environmental Protection and Energy Efficiency. The goal of the Waste Exchange would be primarily to connect the suppliers of secondary raw materials with the seekers of raw materials and at the same time ensure the technological criteria that a certain category of waste must meet as a prerequisite for being published on the exchange portal, as the quality of the secondary raw materials market largely depends on meeting the defined technological criteria and their application.
The project of digital catalogue of companies whose services are in service of environmental protection (link)	The catalogue of companies in the field of environmental protection is available from 17 May 2013 at the Croatian Chamber of Commerce. The catalogue includes an overview of basic data and production programs of over 60 companies whose activities are related to the field of environmental protection. The catalogue was developed with the goal of supporting the further development of this important economic sector, but also in order to enable companies engaged in this activity to present themselves in a representative way at home and abroad.

MORE-Monitoring Recycles for Europe	The project is focused on creating more sustainable plastic converting industry in Europe.
HGK_COR ACCELERATOR platform (link)	This is a platform which promotes partnership between the business sector, state institutions and the civil sector in achieving the goals of sustainable development in Croatia. It aims at <i>“strengthening understanding of the importance of sustainable development goals for building an economically prosperous, socially inclusive and environmentally sustainable society”</i> .
Advanced Waste Management practices in Croatia	
<ul style="list-style-type: none"> - The City of Rijeka established the Reuse Centre - The six leading municipalities in this field, the City of Prelog and surroundings, have signed the European “Zero Waste 2020” strategy. In signing the strategy they have committed to meet the ambitious goal of 70% separately collected. - City of Prelog is the most successful example for waste management in Croatia. It separates more than 50% of the municipal waste with the plan to increase it to 70% by 2020 	

Table 3: CE related actions

Conclusion:

The picture we can draw from this overview of projects and other initiatives is that a lot is going on already when it comes to concrete action. This is very positive and we think that this positive trend could even be strengthened and accelerated if also on a strategic level future Croatian National Strategies put a stronger emphasis on addressing CE aspects which can be expected in the upcoming round of updating many of these strategies.

7. CE policy gap analysis for Croatia (Gap Assessment Matrix)

European Union: Strategies and programs	Croatia: corresponding Croatian strategic planning documents and legislation containing strategic goals	Assessments
Enhanced waste policy in support of waste prevention and circularity		
<ul style="list-style-type: none"> - avoiding waste altogether and transforming it into high-quality secondary resources that benefit from a well-functioning market for secondary raw materials - preventing waste, increasing recycled content, promoting safer and cleaner waste streams, and ensuring high-quality recycling - Single-use products will be phased out wherever possible and replaced by durable products for multiple use - Reuse of packaging: initiatives on reuse to substitute single-use packaging, tableware and cutlery by reusable products in food services, as well as targets for reducing packaging waste - waste reduction targets for specific streams as part of a broader set of measures on waste prevention - objective to significantly reduce total waste generation and halve the amount of residual (non-recycled) municipal waste by 2030 - setting an EU-wide, harmonised model for the separate collection of waste and labelling of products - assure the quality of the collected waste destined for use in products, and in particular as food contact material 	<p>The new Croatian Waste Management Act is transposing newest EU waste management directives as well as single use plastic Directive. Thus, Croatian waste management legislation introduces measures to prevent or reduce adverse effects of waste on human health and the environment by reducing waste in the generation and/or production, managing waste without using risk procedures on human health and the environment, using valuable properties as part of a circular economy, basic waste management requirements, waste management systems including waste management order, economic instruments and waste management and waste management activities, transboundary movements of waste in line with the relevant EU Directives.</p> <p>General objectives are to separate economic growth from the increase in waste; to protect natural resources; to reduce the amount of landfill waste; to reduce pollutant emissions into the environment and to reduce the hazard to human health and the environment.</p> <p>Measures to attain waste reduction or prevention target:</p> <ul style="list-style-type: none"> • planning or other economic instruments promoting the efficient use of raw materials and resources, • promoting R & D to obtain cleaner technologies and products, and promoting and applying the results of R & D, • developing effective and substantive indicators of environmental load associated with waste 	<p><u>Our first assessment:</u></p> <p>Our comment and first assessment is that even though waste prevention measures are covering whole life cycle of a product, and have a lot ambitious and relevant measures, waste prevention would need to be updated with newest waste prevention measures from the new EU Circular Economy Plan and newest relevant EU legislation. More deterrent measures are needed in order to achieve strong impact on waste prevention as top priority in waste management.</p> <p>General remark (concerning all sectors): In order to create a well-functioning market for secondary raw materials Croatia would need to put more effort in introducing requirements for recycled content in products, develop further EU-wide end-of-waste criteria for certain waste streams, as well as use of the restrictions on the use of substances of very high concern in articles</p> <p><u>Remark: It is planned to update the Waste Management Plan in line with newest EU Circular Economy Waste</u></p>

<p>- series of actions to minimise EU exports of waste and tackle illegal shipments</p>	<p>generation with a view to contributing to waste prevention at local, regional and national levels,</p> <ul style="list-style-type: none"> • promoting eco-design (the systematic integration of environmental aspects into product design with the aim of improving the environmental performance of the product throughout its life-cycle), • informing about waste prevention techniques with a view to facilitating the implementation of best available techniques in industry, • organising training courses for the competent authorities on the inclusion of waste prevention requirements in permit issuance procedures, • introducing waste prevention measures in installations that are exempt from obtaining an environmental permit under the act governing environmental protection; these measures may include waste prevention assessments or plans, • organising awareness-raising campaigns or providing financial support, decision-making advice, etc. • signing voluntary agreements, organising consumer/producer panels or sectoral negotiations in order to encourage the relevant business or industrial sectors to develop their own waste prevention plans or targets or replace products/packaging that generate excess waste, • promotion of verified environmental management systems (EMS) including EMAS and ISO 14001, • economic instruments such as incentives for cleaner purchases involving the purchase of products with less packaging, • organising awareness-raising campaigns and providing information to the general public or a specific set of consumers, • promoting eco-labels, • reaching an agreement with industry, through product studies such as those organised within the 	<p><u>policies and thus will include more advanced waste prevention measures.</u></p>
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	<p>framework of integrated product policies, or with retailers on the availability of waste prevention information and the availability of less environmental impact products;</p> <ul style="list-style-type: none"> • integrating environmental and waste prevention criteria in public and corporate procurement, <p>promoting the re-use and/or repair of relevant marketable products or their components, in particular educational, economic, logistic and other measures; The following measures are mentioned in the Waste Prevention Programme:</p> <ul style="list-style-type: none"> - prevention of municipal waste; - prevention of bio-waste; - prevention of electric and electronic waste; - prevention of paper and cardboard waste; - prevention of construction and demolition waste. <p>Sectors covered are agriculture; construction and infrastructure, sale, retail, transport; households; private service activities, hospitality and public services.</p>	
<p>Goals from the “Farm to Fork Strategy”:</p> <ul style="list-style-type: none"> - halving per capita food waste at retail and consumer levels by 2030 - the reuse and redistribution of surplus food 	<p>The Food Waste Prevention Plan 2019 - 2022 is a quite advanced strategic document which transposes well EU food reduction measures. The Plan improves the food donation system in Croatia by prescribing changes in legislation related to the food donation system, development of an IT system for connecting stakeholders in the food donation system, establishment of food banks, encouraging reduction of food waste, encouraging food sales directly from producers, promoting social responsibility food sector, concluding voluntary agreements with producers, processors and traders on the obligation to</p>	<p><u>Our first assessment:</u></p> <p>Even though measures are quite well elaborated it could use a bit more radical approach in order to prevent food waste such as moving towards a ban on throwing away surplus food</p>

	<p>reduce food waste, determining the amount of food waste since then, educational and media campaigns, providing financial support to projects that contribute to the prevention and reduction of food waste.</p>	
Sustainable product policy initiative: sustainable designing and circularity in production processes		
<p>improving product durability, reusability, upgradability and reparability,</p> <p>addressing the presence of hazardous chemicals in products, and increasing their energy and resource efficiency;</p> <p>increasing recycled content in products, while ensuring their performance and safety;</p> <p>enabling remanufacturing and high-quality recycling;</p> <p>reducing carbon and environmental footprints;</p> <p>restricting single-use and countering premature obsolescence;</p> <p>introducing a ban on the destruction of unsold durable goods;</p> <p>incentivising product-as-a-service or other models where producers keep the ownership of the product or the responsibility for its performance throughout its lifecycle;</p> <p>mobilising the potential of digitalisation of product information, including solutions such as digital passports, tagging and watermarks;</p>	<p>The Eco-design Directive is implemented through product-specific EU Regulations, directly applicable in all EU countries, thus Croatia is aligned with EU Eco-design requirements.</p> <p>The Industrial Strategy of the Republic of Croatia 2014 – 2020 aims to encourage cooperation between industry, education, science and technology and to adapt the education and science system to new technologies and the green economy. The concept of circular economy is not included in the Industrial Strategy yet.</p> <p>National Development Strategy 2030 is encouraging the development of the circular economy as one of the priorities in the implementation of public policies. It promotes the green and digital transition to a cleaner and more accessible energy, by encouraging green and blue investments, by decarbonising buildings, and by developing a circular economy.</p> <p>The strategy states that production sectors which follow the postulates of a circular and decarbonised economy will be the basis for sustainable and competitive development. The defined <u>priorities</u> for the implementation of the policy in the field of sustainable environment are to increase the efficiency of municipal waste management and to prepare for the transition to a circular economy and the development of circular management of space and buildings. <u>Financial support</u> will be provided to the development of clean technology-based and circular economy-oriented industries,</p>	<p><u>Our first assessment:</u></p> <p>The circular economy is not yet sufficiently recognized in abovementioned strategic documents, which might lead to a lack of investment in research, development and innovation related to the circular economy. When updating these strategies CE aspects should get more attention.</p> <p>A Bioeconomy Strategy for Croatia is missing but it is planned to be developed. The bioeconomy topic is covered in other strategic documents such as future Agriculture strategy and in the integrated national energy and climate plan 2021 - 2030.</p> <p>Croatia in its current legislation or policy documents does not target products containing critical raw materials to prevent that those materials become waste.</p>

<p>rewarding products based on their different sustainability performance, including by linking high performance levels to incentives.</p> <ul style="list-style-type: none"> - Circularity in production processes can deliver substantial material savings throughout value chains and production processes, generate extra value and unlock economic opportunities. In synergy with the objectives laid out in the Industrial Strategy, the Commission will enable greater circularity in industry by: <ul style="list-style-type: none"> - assessing options for further promoting circularity in industrial processes in the context of the review of the Industrial Emissions Directive, including the integration of circular economy practices in upcoming Best Available Techniques reference documents; - facilitating industrial symbiosis by developing an industry-led reporting and certification system and enabling the implementation of industrial symbiosis; - supporting the sustainable and circular bio-based sector through the implementation of the Bioeconomy Action Plan - promoting the use of digital technologies for tracking, tracing and mapping of resources; - promoting the uptake of green technologies through a system of solid verification by registering the - EU Environmental Technology Verification scheme as an EU certification mark. - The new SME Strategy will foster circular industrial collaboration among SMEs building on training, advice under the Enterprise Europe Network on 	<p>especially those that contribute to the implementation of the waste management priority (waste prevention, preparation for re-use, recycling, recovery and re-use).</p> <p>Industrial, specialization and innovation strategies does mention eco-innovations but it does not adequately mentions circular economy especially connected to sustainable product and circularity in production processes.</p>	
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<p>cluster collaboration, and on knowledge transfer via the European Resource Efficiency Knowledge Centre</p> <ul style="list-style-type: none"> - Driving the Circular Economy transition through research, innovation and digitalisation - Critical raw materials Initiative 		
Enhancing circularity in a toxic-free environment		
<ul style="list-style-type: none"> - development of high-quality sorting and removing contaminants from waste - minimise the presence of substances that pose problems to health or the environment in recycled materials and articles made thereof - track and manage information on substances identified as being of very high concern and other relevant substances, in particular those with chronic effects - improve the classification and management of hazardous waste so as to maintain clean recycling streams - Chemicals Strategy for Sustainability - address the interface between chemicals, products and waste legislation and strengthen synergies with the circular economy 	<p>Croatia has adequately transposed the EU REACH System and obligations related to it. National Chemical Safety Strategy contains measures to protect human health and the environment from dangerous chemicals.</p> <p>In Croatian policy and legislation there is room for improvement in order to accomplish full circularity in a toxic-free environment and to address all aspects of the new EU Chemicals Strategy for Sustainability in order to adequately address the interface between chemicals, products and waste legislation and to strengthen synergies with the circular economy.</p>	<p><u>Our first assessment:</u></p> <p>Croatia lacks more determined measures aiming at empowering consumers and public buyers and to enhance the participation of consumers and public buyers in the circular economy initiatives, e.g. local area/neighbourhood initiatives, web based tools to find new users for goods that otherwise would be thrown away, etc.</p>
Empowering consumers and public buyers		
<p>To enhance the participation of consumers in the circular economy it is important to inform consumers on the sustainability of products in order that consumers receive trustworthy and relevant information on products at the point of sale, including on their lifespan and on the availability of repair services, spare parts and repair manuals.</p>	<p>The consultant has identified no specific policy documents dedicated primarily to this topic. However, there are certain measures and campaigns addressing consumers related to waste prevention, such as mandatory charging of plastic bags, the Waste Prevention Portal, national Eco-label, GPP as well as campaigns related to separate waste collection.</p>	<p><u>Our first assessment:</u></p> <p>Even though there are certain measures and campaigns toward consumers related to waste prevention, such as mandatory charging of plastic bags the Waste Prevention Portal, national Eco-label, GPP as well as campaigns related to</p>

<ul style="list-style-type: none"> - further strengthening consumer protection against green washing and premature obsolescence - establishing a new 'right to repair' and consider new horizontal material rights for consumers for instance as regards availability of spare parts or access to repair and, in the case of ICT and electronics, access to upgrading services 		<p>separate waste collection, Croatia lacks more determined measures. Such measure should deal with empowering consumers and public buyers to enhance the participation of consumers and public buyers in the circular economy initiatives, e.g. local area/neighbourhood initiatives, web based tools to find new users for goods that otherwise would be thrown away, etc.</p>
<p>The EU Ecolabel</p> <p>EU policies are requiring to include more systematically durability, recyclability and recycled content in the EU Ecolabel criteria.</p>	<p>The national Croatian ecolabel “Environmental Friendly Label” has been established in addition to the EU Ecolabel which is applicable in all EU MS. National Croatian ecolabel “Environmental Friendly Label” criteria include the possibility of recycling after the end of the product life cycle as well as environmental impacts during pre-production. The national ecolabel does not include durability and recycled content in products. Furthermore reparability criteria is missing in order to highlight products that contribute to more circularity.</p>	<p><u>Our first assessment:</u></p> <p>The national ecolabel criteria include the possibility of recycling after the end of the product life cycle as well as environmental impacts during pre-production. The national ecolabel does not include durability and recycled content in products, also reparability criteria is missing in order to highlight products that contribute to more circularity.</p>
<p>Green Public Procurement to become more circular</p> <p>In order to ensure that all products placed on the EU market become increasingly sustainable and stand the test of circularity</p>	<p>The National Action Plan for Green Public Procurement covers priority groups of products and services: printing and copying paper, motor vehicles, electricity, cleaning services, telecommunications services and mobile telephony services together with devices, and office and information equipment (IT equipment). The green criteria covers aspect of circularity such as usage of recycled paper, replacement of parts, packaging made of recycled material, easily disassembled devices and availability of spare parts depending on the type of product and service.</p>	<p><u>Our first assessment:</u></p> <p>The Plan is missing more holistic consideration of environmental impacts and waste creation across the whole life-cycle of goods and services. The Plan is missing circularity procurement measures such as supplier take-back system, reparability of products, external reuse/sale of products, internal reuse of products, recyclable materials, recycled content, resource efficiency etc. In</p>

		addition, the number of products that the national GPP is covering is relatively narrow. As the GPP scheme is voluntary, it is not often applied by public administration.
Circularity as a prerequisite for climate neutrality		
In order to achieve climate neutrality, the synergies between circularity and reduction of greenhouse gas emissions need to be stepped up. The CEAP is promoting strengthening the role of circularity in future revisions of the National Energy and Climate Plans and, where appropriate, in other climate policies.	<p>Energy development strategy of the Republic of Croatia until 2030 with a view to 2050 highlights bio economy as a sector which could generate renewable biological resources, it deals with energy production in sustainable waste management, waste from production processes, and energy recovery of waste.</p> <p>The Low Carbon Development Strategy of The Republic Of Croatia Until 2030, looking At 2050 (at the draft phase) include Circular economy development as part of the concept of low-carbon economy with a number of low carbon development measures.</p> <p>Integrated national energy and climate plan 2021 - 2030 adopt measures related to the circular economy in order to achieve climate related goals, such as development of the circular management of buildings and buildings, establishment of a Programme for the calculation and reduction of carbon footprint of business operators.</p>	<p><u>Our first assessment:</u></p> <p>Climate and energy related strategies are including Circular Economy as a measure to fight climate change and as a potential source of energy.</p>
	<p>The Sustainable Tourism Development Strategy until 2030 (in drafting phase)</p> <p>The current version of the Sustainable Tourism Development Strategy Until 2030 does not mention the concept of circular economy. As tourism is a key sector in Croatia introducing the concept of Circular Economy to the current strategy draft</p>	

	could influence other sectors and push the whole Croatian Economy towards the path of more circularity.	
<p>Conclusion:</p> <p>Current Croatian strategic documents do not adequately tackle Circular Economy topics yet. As Croatia entered the EU in 2013 it adopted its main strategic documents at the time of accession of prior to accession. Circular Economy has become a main policy topic in EU only later, namely when the EU adopted the first CE Action Plan in 2015. Currently there is a new cycle of drafting strategic documents and therefore a good opportunity to adequately include main CE policies at the national strategic level. This has already being done in the draft of the new Agriculture Strategy until 2030 and the Energy development strategy of the Republic of Croatia until 2030 with a view to 2050. As concerns waste management according to our assessment Croatia needs to do more in order to further develop and modify the institutional framework for the waste management system to function in accordance with market principles and the principles of CE.</p> <p>Although the prospects for establishing a circular economy in Croatia are promising, strategic integration and sectoral activities are often insufficient. The CE philosophy requires the cooperation and coordination of all relevant sectors and stakeholders, both public and private, in order to achieve more circularity in the Croatian economy. An integrated Circular Economy Strategy developed with broad stakeholder engagement could substantially support and promote CE approaches in Croatia.</p>		

Table 4: CE policy gap analysis for Croatia

Remark on the connection of this report with the Task 3 report of the project:

As mentioned earlier the second Circular Economy Action Plan of the EU (CEAP II) focuses on the sectors that use the most resources and where the potential for circularity is high.

The focus sectors of the CEAP II are:

- **electronics and ICT** – a 'Circular Electronics Initiative' to have longer product lifetimes, and improve the collection and treatment of waste
- **batteries and vehicles** – new regulatory framework for batteries for enhancing the sustainability and boosting the circular potential of batteries
- **packaging** – new mandatory requirements on what is allowed on the EU market, including the reduction of (over)packaging
- **plastics** – new mandatory requirements for recycled content and special attention on micro plastics as well as bio based and biodegradable plastics
- **textiles** – a new EU Strategy for Textiles to strengthen competitiveness and innovation in the sector and boost the EU market for textile reuse
- **Food, water and nutrients** – measures to increase the sustainability of food distribution and consumption, water reuse in agriculture, view to ensuring more sustainable application of nutrients and stimulating the markets for recovered nutrients. The EC will consider reviewing directives on wastewater treatment and sewage sludge and will assess natural means of nutrient removal such as algae.
- **Construction and buildings** - promote circularity principles throughout the lifecycle of buildings by measures such as increasing material efficiency, addressing the sustainability performance of construction products, promoting measures to improve the durability and adaptability of built assets in line with the circular economy principles for buildings design 36 and developing digital logbooks for buildings; promoting initiatives to reduce soil sealing, rehabilitate abandoned or contaminated brownfields and increase the safe, sustainable and circular use of excavated soils.

More detailed analysis of the individual sectors will be provided in the Task 3 report.

8. Summary of findings (executive summary)

- **Enhanced waste policy in support of waste prevention and circularity is put in place.**
 - The New Waste Management Act introduces measures to reduce and prevent waste in production, managing waste without using risk procedures on human health and the environment, (re)using valuable properties as part of a circular economy.
 - Waste management system and economic instruments are set in line with the waste management hierarchy.
- **Status of waste prevention measures**
 - Already implemented waste prevention measures are covering whole life cycle of a product, and have a lot ambition and relevance.
 - However, waste prevention concepts would need to be updated in line with newest waste prevention measures from the new EU Circular Economy Plan and newest relevant EU legislation. More deterrent measures are needed in order to achieve strong impact on waste prevention as top priority in waste management.
 - Food Waste Prevention Plan: set measures are quite advanced, but it **could use a bit more radical approach** in order to prevent food waste such as **ban on throwing surplus food**.
 - **In order to create a well-functioning market for secondary raw materials** Croatia would need to put more effort in:
 - introducing requirements for recycled content in products,
 - develop further end-of-waste criteria for certain waste streams (this measure should best be set EU-wide),
 - use of the restrictions on the use of substances of very high concern in articles
 - Outlook towards planned measures: The Waste Management Plan **is planned to be updated in line with newest EU Circular Economy Waste policies** and will thus bring more advanced waste prevention measures.
- **Sustainable product policy: sustainable designing and circularity in production processes**
 - Croatia is aligned with EU Eco-design requirements
 - **Industrial, specialization and innovation strategies** do mention eco-innovations but do not adequately highlight circular economy
 - As Circular economy is not sufficiently recognized in industrial, specialization and innovation strategic documents there might be a **lack of investment in research, development and innovation** related to the circular economy.
 - Croatia is not targeting products containing **critical raw materials** to prevent that those materials become waste.
 - Outlook towards planned measures: **A Bioeconomy Strategy** for Croatia is missing but it is planned to be developed.
- **Enhancing circularity in a toxic-free environment**
 - Croatia has adequately transposed the EU REACH Directive and obligations related to it.

- There is room for improvement in order to accomplish full circularity in a toxic-free environment and to address **all aspects of the new EU Chemicals Strategy for Sustainability** in order to adequately address the interface between chemicals, products and waste legislation and strengthen synergies with the circular economy.
- **Empowering consumers and public buyers**
 - There are certain measures and campaigns toward consumers related to waste prevention, but Croatia lacks measures that are more determined.
 - Future measure should deal with empowering consumers and public buyers to enhance the participation of consumers and public buyers in the circular economy initiatives.
- **The National Ecolabel**
 - The national Ecolabel does **not include durability and recycled content in products**, also **reparability criteria is missing** in order to highlight products that contribute to more circularity.
- **Croatian Green Public Procurement** is missing advanced circularity procurement measures.
 - The number of products that the national GPP is covering is narrow.
 - As the GPP is voluntary it is not often being used by the public administration.
- **Circularity as a prerequisite for climate neutrality**
 - Circular economy development is proposed to be developed within the low-carbon economy
 - Climate plans and strategies adopts measures related to the circular economy in order to achieve climate related goals
- **Overall conclusion**
 - Current Croatian strategic documents do not adequately tackle Circular Economy topics yet.
 - Currently there is a new cycle of drafting strategic documents and therefore a good opportunity to adequately include main CE policies at the national strategic level.
 - Good examples:
 - the new Agriculture Strategy until 2030
 - the Energy development strategy of the Republic of Croatia until 2030 with a view to 2050.
 - As concerns waste management according to our assessment Croatia needs to do more in order to develop an institutional framework for the waste management system to function in accordance with market principles and the principles of CE.
 - Although the prospects for establishing a circular economy in Croatia are promising, strategic integration and sectoral activities are insufficient.

- There is a lack of a **cohesion national strategy for the promotion of the Circular Economy**, which requires the cooperation and coordination of all relevant sectors and stakeholders, both public and private, in order to achieve the circularity of the Croatian economy.

ANNEXES:

[Annex 1 EU requirements to establish the Circular Economy](#)

[Annex 2 Croatian legislation related to waste management](#)

[Annex 3 Indicative list of future strategic planning documents related to the CE](#)

[Annex 4 Institutional framework in Croatia](#)

[Annex 5 Public Private Partnerships in the Waste Management Sector](#)

Annex 1: EU requirements to establish the Circular Economy

Recycling rate of municipal waste (%)	EU targets: 50% - 2020 55% - 2025 60% - 2030 65% - 2035
----------------------------------------------	----------------------------------------------------------------------------

Year	Requirement
2020	countries are not supposed to burn or landfill separately collected waste
2021	Implementation of Single Use Plastic Directive
2022	Countries to submit first report on food waste generation
2023	new food waste reduction target
2023	countries to introduce minimum requirements for EPR
2023	obligatory separate collection of bio-waste
2025	obligatory separate collection of Textiles, hazardous waste
2025	Separate collection target for plastic bottles <ul style="list-style-type: none"> - 2025 – 77% - 2029 – 90%
2024	<ul style="list-style-type: none"> • new target for preparation for reuse and recycling of commercial and non-hazardous industrial waste/textiles/bio-waste and construction waste • New target for reuse of household waste • New waste reduction targets
2025	Plastic bottles to contain at least: <ul style="list-style-type: none"> - 2025 - 25% of recycled content - 2030 - 30% of recycled content
2027	Countries can report bio-waste as recycling only if it comes from separately collected waste
2035	Countries to put a 10% cap on landfill

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Annex 2: Croatian Waste Management legislation

The main act regulating waste management issues is the Act on Sustainable Waste Management (N° 94/13, 73/17, 14/19, 98/19).

More detailed provisions can be found in a number of ordinances on specific waste streams or certain waste management issues, adopted on the basis of Waste Act.

The law prescribes measures to prevent or reduce the harmful effects of waste on human health and the environment by reducing the amount of waste generated and/or production and regulates waste management without the use of risky procedures for human health and the environment, using valuable waste properties. The provisions of this Act determine the principles of the Croatian waste management system, including the waste management hierarchy, principles, goals and manner of waste management, strategic and program documents in waste management, competencies and obligations in waste management, locations and facilities for waste management, waste management activities, transboundary movement of waste, waste management information system and administrative and inspection supervision of waste management.

Remark: A new Law on Sustainable Waste Management is currently being drafted and in the phase of public discussion.

In April 2021, the Croatian Government sent a new Proposal for a Waste Management Act to the Parliament for adoption.

Key suggested provisions in the planned new law are:

The Act in accordance with European directives, sets new, higher separation and recycling targets for waste — 65 instead of 50 per cent and a new lower waste disposal targets — only 10%.

The Croatian waste management plan for the period 2017 - 2022 will be aligned with this Act within one year of its entry into force. The Counties and the City of Zagreb will be obliged to draw up the regional waste management plans.

Waste management centres and the treatment of hazardous waste through the process of incineration and disposal are of particular interest to the Republic of Croatia, as laid down in the Act, and these activities will be dealt with in concessions to companies established by the Government, local authorities or the City of Zagreb.

The current draft prohibits the placing on the market of certain single-use plastic products. The placing on the market of lightweight plastic carrier bags is prohibited from 1 January 2022. Very lightweight plastic carrier bags shall be used exclusively for hygienic reasons or exclusively used as primary packaging for loose food, where this helps to prevent food waste. A Register of Extended Accountability of Manufacturers of plastic packages (implementing Extended Producer Responsibility - EPR) will be established.

Regarding EPR in general the draft imposes obligations on manufacturers of products under extended responsibility and the way in which extended producer responsibility schemes are organised. Specific waste categories shall be identified for which specific management and/or special compensation conditions are laid down.

Also, economic instruments are being laid down for waste management (aid and incentive, landfill charges, landfill charges and landfill charges, reimbursement of waste management in extended producer responsibility). The draft also regulates establishment and the operation of reuse centres.

Ordinance on waste management (N° 81/20)

The Ordinance on waste management sets out priorities for infrastructure planning, including support for separate collection and composting. It prescribes conditions for waste management, duties of subjects responsible for waste management, method of operation of the recycling yard as well as recovery procedures, method of performing recovery and the type and amount of waste for which it is not necessary to obtain a waste management permit.

Decree on Municipal Waste Management, (N° 50/17, 84/19), Constitutional Court Decision, N° 14/20, N 31/21.

The decree prescribes the content of the decision on the manner of providing public service, the manner of municipal waste management in connection with the public service of collection of mixed municipal waste and biodegradable municipal waste and separate collection of waste paper, metal, glass, plastic, textiles, problematic waste and bulky waste, spatial distribution of recycling yards, method of calculating the limit amount of mixed municipal waste for certain periods, method and conditions of determining and calculating the fee for construction of municipal waste management facilities and method of calculating the incentive fee for reducing the amount of mixed municipal waste.

Ordinance on the waste catalogue, N° 90/15

The Ordinance prescribes the Catalogue of Waste, the categorization for transboundary movement of waste and the threshold below which certain waste that is considered insignificant.

Ordinance on thermal treatment of waste, N° 75/16

The Ordinance prescribes the manner and conditions of operation, conditions for starting and stopping the operation of incineration and co-incineration plants, the method of incoming waste control, the method of air, soil and water protection and the method of managing residual waste in incineration and co-incineration plants and special conditions for other procedures of thermal treatment of waste.

Ordinance on by-products and revocation of waste status, N° 117/14

The Ordinance prescribes the content of applications for entry in the Register for the abolition of waste status and the Register of by-products, special criteria for the abolition of waste status, including limit values of pollutants and harmful effects of substances or objects on the environment, special criteria for determining by-products. For determining “end of waste” and the Register of by-products, the content and manner of keeping the Register for determining “end of waste” and the Register of by-products and the manner and conditions of implementation of European Union regulations determining the criteria for abolishing the status of certain types of waste.

Decree on unit fees, correction coefficients and more detailed criteria and benchmarks for determining fees for environmental pollution by waste, N° 71/04

The ordinance prescribes the amounts of unit fees, correction coefficients and more detailed criteria and criteria for determining fees for environmental pollution by waste for: non-hazardous industrial waste, hazardous waste.

National Croatian legislation on specific waste streams

Waste policy area	Reference to national legislation
<p>BIO-DEGRADABLE MUNICIPAL WASTE (BMW)</p>	<p>Ordinance on the methods and conditions for the landfill of waste, categories and operational requirements for waste landfills, (N° 114/15, 103/18, 56/19)</p> <p>This Ordinance prescribes the categories of landfills, procedures and other conditions for waste disposal, procedures and other conditions for acceptance of waste into underground landfills, emission limit values for waste disposal and conditions and measures related to planning, construction, operation and closure of landfills and the treatment after their closure.</p>
<p>PACKAGING</p>	<p>Ordinance on packaging and packaging waste, N° 88/15, 78/16, 116/17, 14/202 , 144/2020</p> <p>The Ordinance prescribes procedures and objectives in the management of packaging waste, conditions for the management of packaging and packaging waste, requirements regarding the collection, storage and processing of packaging waste, requirements in production, placing on the market and use of packaging, manner and conditions of labelling, record keeping and delivery reports, obligations and manner of fulfilling the obligations of producers of products packaged in packaging, obligations and manner of obligatory conduct of the holder of packaging waste, content of the program for performing the service of packaging waste collection, and other issues related to packaging and packaging waste.</p> <p>Decree on packaging waste management, (OG 97/15, 7/20, 140/20)</p> <p>The Decree prescribes the manner of fulfilling the obligations to achieve the prescribed objectives related to the management of packaging waste, the method of calculating and the amount of the fee for the management of packaging waste, the amount of the return fee and the method of calculating the costs for return fee.</p> <p>Decision on the areas of collection of non-hazardous packaging waste, N° 88/15</p> <p>The decision determines the area of collection of non-hazardous packaging waste.</p>
<p>CONSTRUCTION & DEMOLITION WASTE</p>	<p>Ordinance on construction and asbestos-containing waste, N° 69/16</p> <p>The ordinance prescribes the goal of the construction waste management system, obligations of the construction product manufacturer, method of marking the construction product and packaging, construction waste management conditions, construction waste records obligations and the goal of the asbestos-containing waste management system, obligations of the asbestos-containing product manufacturer, management procedures asbestos-containing waste, requirements for the storage and transport of asbestos-containing waste, conditions for asbestos waste management and obligations to keep records of asbestos-containing waste</p>
<p>MINING WASTE</p>	<p>Ordinance on waste management from the mining industry, N° 22/19</p>

	<p>The Ordinance prescribes the classification of facilities for waste management from the mining industry, general conditions for waste management from the mining industry, prevention of major accidents and informing the public, form of applications and permits for waste management from the mining industry, method of returning waste from the mining industry. Furthermore it regulates the method of construction and management of the mining waste management plants, procedure of closing the mining waste management plant and procedure in the post-closure phase, measures to prevent water, air and soil pollution from the consequences of the mining waste management plant, conditions for person responsible for waste management from the mining industry, inspection, waste characterization, manner and form of record keeping and reporting.</p>
<p>END-OF-LIFE VEHICLES</p>	<p>Ordinance on end-of-life vehicle management, N° 125/15, 90/16 , 60/18, 72/18 , 81/20</p> <p>The Ordinance prescribes the procedures and objectives in the management of waste vehicles, the manner of their treatment, requirements regarding the collection, storage and transport, including marking and equipping of vehicles, requirements regarding the treatment of waste vehicles and waste generated by treatment and related measurement procedures. Furthermore it regulates the performing of waste vehicle collection service, obligation to report and submit data, keeping records and submitting reports, obligations and manner of fulfilling obligations of vehicle manufacturers, requirements regarding vehicles placed on the market, manner of obligatory actions of vehicle manufacturers, owners, collectors and processors of waste vehicles.</p> <p>Decree on end-of-life vehicle management, N° 112/15</p> <p>The Decree prescribes the manner of fulfilling the obligation to achieve the prescribed goal in relation to the management of waste vehicles and the manner of calculating the amount of the fee for the management of waste vehicles.</p>
<p>END-OF-LIFE TYRES</p>	<p>Ordinance on the management of waste tires, N° 113/16</p> <p>The ordinance prescribes the procedures and goals of waste tire management, conditions of waste tire management, types of waste tires that must be collected separately, method of waste tire treatment, requirements regarding collection and storage of waste tires, content of the program for performing waste tire collection services, record keeping obligations , obligations and manner of fulfilment of obligations of producers of tires and products containing tires, list of tires and products for which registration in the Register of Management of Special Waste Categories is obligatory, manner of obligatory actions of tire producers and owners of waste tires and other issues related to tires and waste tires preventing the formation and disposal of waste tires in landfills, or encouraging their collection, reuse, recycling and other procedures for their recovery.</p>
<p>MEDICAL WASTE</p>	<p>Ordinance on medical waste management, N° 50/15 , 56/19</p>

	<p>The Ordinance regulates the methods and procedures of waste management arising from the provision of care, protection and preservation of human and/or animal health, research activities and the provision of various services which might come into contact with blood and/or secretions of humans and/or animals.</p>
<p>WASTE BATTERIES AND ACCUMULATORS</p>	<p>Ordinance on batteries and accumulators and waste batteries and accumulators, N° 111/15</p> <p>The ordinance set out the provisions for the management of waste batteries and accumulators including financing and minimising their environmental impact. It prescribes procedures and objectives of waste batteries and accumulators' management, conditions of waste batteries and accumulators management, requirements regarding separate collection and treatment of waste batteries and accumulators, content of the program for performing waste portable batteries and accumulators collection service, records and delivery obligations. reports, requirements regarding batteries and accumulators that are a product, manner and conditions of marking batteries and accumulators and packaging, obligations and manner of fulfilling obligations of product producers, types of products for which registration in the Special Waste Management Register is mandatory and waste owners, and other issues related to the management of waste batteries and accumulators.</p> <p>Decree on the management of waste batteries and accumulators, N° 105/15, 57/20</p> <p>The Decree prescribes the manner of fulfilling the obligation to achieve the prescribed goal related to the management of waste portable batteries and accumulators, as well as the manner of calculating and the amount of the fee for the management of waste batteries and accumulators.</p>
<p>WASTE OILS</p>	<p>Ordinance on waste oil management, N° 124/06, 121/08, 31/09, 156/09, 91/11 , 45/12 , 86/13</p> <p>The Ordinance prescribes the manner of waste oil management, taxpayers, types and amounts of fees paid by tax payers, method and deadlines for calculation and payment of fees, the amount of fees paid to authorized persons for waste oil collection.</p>
<p>WEEE</p>	<p>Ordinance on the management of waste electrical and electronic equipment, N° 42/14, 48/14, 107/1, 139/14, 11/2019, 7/20</p> <p>The Ordinance prescribes the obligations and responsibilities of producers of electrical and electronic equipment and devices, the manner of marking, the manner of managing electrical and electronic waste, the types and amounts of fees paid by taxpayers, the manner and deadlines of calculation and payment of fees, the amount of fees paid to authorized persons. , treatment and recovery of electrical and electronic waste and other issues related to electrical and electronic waste management.</p> <p>Ordinance on the restriction of the use of certain hazardous substances in electrical electronic equipment, N° 20/2020</p>

	<p>The Ordinance lays down rules on the restriction of the use of hazardous substances in electrical and electronic equipment, including the recovery and disposal of waste EEE in an environmentally sound manner.</p> <p>Part of its supervision is in the hand of Sanitary Inspection</p>
WASTE TEXTILES AND WASTE FOOTWEAR	<p>Ordinance on the management of waste textiles and waste footwear, N° 99/15</p> <p>The Ordinance prescribes waste textile and waste footwear management procedures, waste textile and waste footwear management conditions, types of waste textiles and waste footwear, requirements regarding the collection of waste textiles and waste footwear, record keeping obligations, obligations and manner of fulfilling textile and footwear producers' obligations. Compulsory conduct of the holder of waste textiles and waste footwear and other issues related to textiles and footwear and waste textiles and waste footwear for the purpose of establishing a system of separate collection of waste textiles and waste footwear.</p>
WASTEWATER TREATMENT SLUDGE	<p>Ordinance on the management of sludge from waste water treatment plants when sludge is used in agriculture, N° 38/08</p> <p>The Ordinance prescribes the method of sludge management from wastewater treatment plants when sludge is used in agriculture.</p>
WASTE FROM THE TITANIUM DIOXIDE INDUSTRY	<p>Ordinance on waste management from titanium dioxide production, N° 117/14</p> <p>The Ordinance prescribes measures for the protection of the environment and human health from the harmful effects of waste management from titanium dioxide production.</p>
PCB	<p>Ordinance on the management of polychlorinated biphenyls and polychlorinated terphenyls, N° 103/14</p> <p>The Ordinance prescribes prohibitions and restrictions as well as any other mandatory procedure for the disposal of polychlorinated biphenyls and polychlorinated terphenyls.</p>
PERSISTENT ORGANIC POLLUTANTS	<p>Act implementing Regulation (EU) 2019/1021 on persistent organic pollutants, N° 54/220</p> <p>The law determines the competent authorities and the tasks of the competent authorities for the implementation of the EU Regulation 2019/1021 on persistent organic pollutants.</p>
BULKY WASTE	<p>Instruction on bulky waste, N° 79/15</p> <p>The instruction prescribes a list of types of objects and substances that are considered large (bulky) municipal waste.</p>
FOOD WASTE	<p>Law on Agriculture, N° 118/18, 42/20, 127/20</p> <p>The law provides the basis for the establishment of a food and feed donation system with the aim of preventing the destruction of large quantities of food, environmental protection and assistance to the socially endangered and persons affected by natural disasters and natural disasters. At the same time, the conditions that food must meet in order to be donated are prescribed, namely its health safety and health safety,</p>

	<p>as well as the responsibilities of food business entities participating in the food donation chain.</p> <p>Ordinance on the conditions, criteria and methods of donating food and animal feed, N° 119/2015</p> <p>The ordinance prescribes detailed rules for the donation of food and feed, the conditions that must be met by the intermediary in the food donation chain and the content and manner of keeping the Register of intermediaries in food donation.</p>
<p>SHIP RECYCLING</p>	<p>Law on the implementation of Regulation (EU) N° Regulation (EC) N° 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling and amending Regulation (EC) N° 1013/2006 and Directive 2009/16, N° 96/19</p> <p>The Act ensures the implementation of Regulation (EU) N° Regulation (EC) N° 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling and amending Regulation (EC) N° 1013/2006 and Directive 2009/16/EC.</p>

Other relevant legislation

<p>ENVIRONMENTAL PROTECTION</p>	<p>Environmental Protection Act, N° 80/13, 153/13, 78/15, 12/18, 118/18 The Act prescribes principles of environmental protection within the concept of sustainable development, protection of environmental components and environmental protection from the effects of stress, environmental protection entities, documents of sustainable development and environmental protection, environmental protection instruments, environmental monitoring, environmental information system, ensuring access to environmental information, public participation in environmental matters, ensuring the right of access to justice, liability for environmental damage, financing and instruments of general environmental policy, administrative and inspection supervision, and other related issues.</p> <p>Ordinance on the register of environmental pollution, N° 87/2015 Ordinance prescribes the mandatory content and manner of keeping the register of environmental pollution data transfer and disposal of pollutants and waste into the environment.</p>
<p>Chemicals</p>	<p>Chemicals Act (OG 18/2013) This Act lays down the conditions to be fulfilled by legal and natural persons for the pursuit of manufacturing, marketing and use of chemicals and conditions for the exercise of services or intermediary services, which do not come into direct contact with chemicals for the purposes of protecting human life or health and protecting the environment from the adverse effects of chemicals.</p> <p>Act implementing Regulation (EC) N° 1907/2006 (REACH) concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (Official Gazette of the Republic of Croatia, 53/2008 and 18/2013).</p>
<p>EMAS</p>	<p>Regulation on the voluntary participation of organizations in the system of environmental management and independent assessment (EMAS), N° 77/14 The Regulation regulates the procedure for submitting an application for registration, the amount of the fee and the deadlines for registration in the EMAS environmental management and evaluation system.</p>
<p>ECOLABEL</p>	<p>Ordinance on the European Union Eco-label - EU Ecolabel, N° 110/14 The Ordinance regulates the procedure and manner of awarding the EU ecolabel.</p> <p>Ordinance On The Sign Of Environmental Protection "Friend Of The Environment" (OG 91/2016) The Ordinance regulates the procedure and manner of awarding the Croatian eco-label "Friend of the Environment".</p>
<p>ECO-DESIGN</p>	<p>Ordinance On Determination of Requirements for Eco-Design of Energy-Related Products (OG 50/2015) The Ordinance establishes a framework for setting European Union requirements for the eco-design of energy-related products in order to ensure the free movement of these products in the internal market.</p>

<p>GREEN PUBLIC PROCUREMENT (GPP)</p>	<p>Law on Public Procurement (OG 120/16) The law gives contracting authorities in the Republic of Croatia the possibility to request a certificate of conformity of goods, works or services of an economic operator with environmental management standards (eg EMAS, ISO 14000). This PPL also provides the possibility of including the so-called "Environmental criteria" in the technical specifications of the tender documentation for products and services and provides the opportunity to select the most economically advantageous tender in which the environmental characteristics of products and services are assessed.</p> <p>National action plan for green public procurement for the period from 2015 to 2017 with a view to 2020 The purpose of the National Action Plan is to encourage the procurement of products through the public procurement system in the Republic of Croatia and services that have a smaller environmental footprint compared to similar products and services, i.e. the purpose of the National Action Plan is to encourage the procurement of products through the public procurement system in the Republic of Croatia and services that have a smaller environmental footprint compared to similar products and services</p>
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Annex 3: Indicative list of future strategic planning documents related to the CE

N°	Title of the Strategic Planning Act	Holder of the Strategic Planning Act
1.	The national plan for the development of the business of the Republic of Croatia for the period 2021 - 2030	Ministry of Economy and Sustainable Development
2.	National plan for the digital transformation of the economy for the period 2021 – 2027	Ministry of Economy and Sustainable Development
3.	National Plan for Fostering Innovation of the Republic of Croatia for the period 2021 – 2029	Ministry of Economy and Sustainable Development
4.	Waste management plan of the Republic of Croatia for the period 2023 – 2028	Ministry of Economy and Sustainable Development
5.	Croatia’s 2040 Strategy for Adaptation to Climate Change, looking at 2070	Ministry of Economy and Sustainable Development
6.	Smart Specialisation Strategy 2021 - 2029	Ministry of Economy and Sustainable Development, Ministry of Science and Education
7.	Low carbon development strategy for the Republic of Croatia until 2030, looking at 2050 and the 2021 - 2025 implementation action plan	Ministry of Economy and Sustainable Development
8.	Energy Strategy of the Republic of Croatia up to 2030, looking at 2050	Ministry of Economy and Sustainable Development
9.	Programme for developing green infrastructure in urban areas for the period 2021 - 2030	Ministry of the Spatial Planning, Construction and State Assets
10.	The programme for the development of the circular management of buildings and buildings for the period 2021 - 2030	Ministry of the Spatial Planning, Construction and State Assets
11.	Agricultural strategy 2020 - 2030	Ministry of Agriculture
12.	Bioeconomy Strategy	Ministry of Agriculture
13.	Competitiveness and Cohesion Operational Programme 2021 - 2027	Ministry of Regional Development and EU Funds
14.	National Regional Development Plan 2021 - 2027	Ministry of Regional Development and EU Funds
15.	The 2030 Sustainable Tourism Development Strategy	Ministry of Tourism and Sport

Table 5: Strategic Planning Acts

Annex 4 Institutional framework in Croatia

Circular Economy is a cross cutting subject which goes far beyond both single policies such as industrial policy or waste management. Therefore in this chapter the range of relevant Ministries and other bodies is presented. Upon request of the World Bank at the end of this chapter also the “Public Private Procurement” (Public Private Partnership) institutional framework is presented.

Brief summary of most important institutions:

The Ministry of Economy and Sustainable Development (MoESD) is a central body responsible for preparation of waste management legislation, national waste management strategy and waste management plan, as well as coordination of co-operation among all involved institutions in waste management in Croatia.

The former Croatian Environment Agency (CEA), at present day part of the MoESD, is responsible for the collection and consolidation of waste data, developing and maintaining the Waste Management Information System, enabling and facilitating access to information on waste to decision-makers and general public, developing reports on the status of the waste sector.

local self-government units, (LRSUs) and the City of Zagreb adopt their waste management plans, implement measures of municipal waste management, and with coordination from the county, ensure the implementation of prescribed measures for separate waste collection.

The control over the implementation of the legal regulations and prevention of uncontrolled environmental pollution, including Waste Act and by-laws, is conducted by the Environmental Protection Inspection at the State Inspectorate Body.

Croatian Environmental Protection and Energy Efficiency Fund (CEPEEF) is a state non-budget fund, established in order to ensure additional resources for financing projects, programmes and similar undertakings in the field of preservation, sustainable use, protection and improvement of the environment.

Detailed institutional overview:

Responsible Croatian institutions	Role
Governmental institutions	
Ministry of Economy and Sustainable Development (MoESD)	The MoESD prescribes waste management measures. It is responsible for formulating national policy on waste management as well as for coordinating related ministries who have the portfolio on related matters in the implementation of waste management policy. It determines strategic directions, develops programs and plans for sustainable development of society on the principle of green and circular economy, including waste management and environmental impact assessment activities; work related to climate change mitigation and adaptation; tasks related to water management and administrative and other tasks in the field of energy. The Ministry is the coordination point for sustainable development issues at the national level and the

	<p>coordinator of multilateral environmental agreements and global issues of sustainable development at the international level.</p> <p>The Ministry is responsible for deciding on applications for permits for waste management related to hazardous waste and for thermal treatment of waste, decides on the application for approval to enter into a contract with the EPEEF to provide treatment of certain special categories of waste keeping a register of waste management activities and a register of waste importers and exporters and a register of laboratories, by-products and revocation of waste status, decides on the application for export or import of waste.</p> <p>Relevant directorates:</p> <p>Directorate for Environmental Impact Assessment and Sustainable Waste Management, Sector for Sustainable Waste Management: develops and implements policies and activities in the field of waste management.</p> <p>Directorate for Industry, Entrepreneurship and Crafts: promotes and encourages circular economy policies and resource efficiency.</p> <p>Energy Directorate: maintains the prescribed Register of Renewable Energy Sources and Cogeneration and Eligible Producers; prepares programs and measures for the production and use of biofuels for transport purposes</p> <p>Directorate of Water Management and Marine Protection: implements policies for the protection of the sea and water from waste pollution.</p> <p>Institute for Environmental Protection and Nature (ex Croatian Agency for Environment and Nature), Sector for Environment: provides expert data from its area of work related to the circular economy and efficient use of resources.</p> <p>It is responsible for the establishment, development, management and coordination of unified Environmental Protection Information System in the State. Part of that information system makes Waste Management Information System, consisted of different waste databases like databases Register of Waste Management Activities, the Electronic Register on Waste Generation and Flow etc.</p> <p>Also the scope of the work of the Institute is the preparation of documents and national reports related to environmental protection (including waste management) and sustainable development according to the requirements from national legislation. It ensures conditions for access to environmental information.</p> <p>Furthermore, as part of the MoESD, it is the central information body of the State for the coordination of reporting and reporting to the EC on the implementation of certain environmental protection legislation including those</p>
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	related to the waste management, and carries out the coordination of reporting and reporting.
The Ministry of Health	The Ministry is competent for the implementation of the REACH Directive in Croatia in order to limit the level of toxicity in products.
The Ministry of Physical Planning, Construction and State Assets	The ministry is competent for circular economy of buildings and space.
The Ministry of Maritime Affairs, Transport and Infrastructure	The Ministry is competent for the governance of ship waste in ports.
The Ministry of Agriculture	The Ministry of Agriculture is overseeing the development of agriculture and fisheries in Croatia. It is competent for the conditions, criteria and methods of donating food and animal feed.
The State Inspectorate (SI)	The State Inspectorate is a central administrative inspection body. It conducts supervision (inspection) of implementing waste management measures. The Sector for Environmental Supervision, Nature Protection and Water Law Supervision, within the State Inspectorate, performs inspection and other professional tasks related to the application and implementation of laws and other regulations in the field of environmental protection, air protection, climate change and ozone protection, sustainable waste management, light pollution, nature protection, transboundary movement and wildlife trade.
The Environmental Protection and Energy Efficiency Fund (EPEEF)	<p>The EPEEF is implementing body for waste management measures. it is established for the purpose of financing of the preparation, implementation and development of programmes and projects and similar activities in the field of waste management, circular economy and energy efficiency and use of renewable energy sources.</p> <p>It implements economic instruments in waste management, such as waste disposal fee, fee for reducing the quantity of mixed municipal waste, management fee for special waste categories, refundable fee. It manages fees pursuant to the Act on Sustainable Waste Management, such as fees for packaging and packaging waste, waste tyres, EE waste, end-of-life vehicles, waste lubricants oils etc. It is responsible for calculating and collecting the prescribed fees, keeping the Register of management of special waste categories, financing and co-financing projects in the field of waste management, managing the system of collection and treatment of certain special categories of waste.</p>
Croatian Energy Regulatory Agency (CERA)	CERA's activities, powers and responsibilities are laid down in the Act on the Regulation of Energy Activities (Official Gazette, N° 120/12), the Energy Act (Official Gazette, N°

	120/12, 14/14, 102/15). It regulates energy activities and promotes: efficient and rational use of energy, entrepreneurship in the energy sector, investments in the energy sector, environmental protection. HERA grants the status of a privileged producer of electricity which includes energy from biofuels, waste.
Croatian Bank for Reconstruction and Development (CBRD)	CBRD raise awareness among private and public entities about investments in clean and fair transmission energy, green investments and the circular economy through education, conferences and other public events.
Municipalities and Regional Levels	<p>The Sustainable Waste Management Act (OG 94/13, 73/17, 14/19, 98/19) states that local self-government units are obliged to ensure the conditions and implementation of prescribed waste management measures in their area. A large number of local self-government units have established their own utility companies that were established specifically for waste management in their area.</p> <p>Publicly owned companies by the local and regional government perform the services of collection, i.e. treatment of a certain special category of waste, providing public service of collection of mixed municipal waste and biodegradable waste. Together with counties, they manage the work of Waste management centres, sorting plant and recycling yards.</p> <p>The Municipal Order Service of the local self-government unit is responsible for the implementation of measures to prevent the improper dumping of waste into the environment and for the management of such discarded waste.</p>
Non-governmental institutions	
Croatian Chamber of Economy (CCE)	<p>Croatian Chamber of Economy (CCE) is a professional association of business subjects. It encourages and supports affirmative action related to circular economy in order to raise social awareness of a sustainable natural environment among its members in economic sectors.</p> <p>CCE has an active role in Fostering circular economy and Eco innovation. CCE monitors the development of policies related to the circular economy and in the 2018 - 2019 period it undertook numerous projects and activities promoting the principles of the circular economy and sustainable business models. Through developing new digital solutions, services of CCE were made available through digital platform to all members.</p> <p><u>CCE should implement following measures from the Waste Management Plan:</u></p> <ul style="list-style-type: none"> • Strengthening the market for recycling waste

	<ul style="list-style-type: none"> - Development of technological requirements which must meet certain types of waste in order to be eligible for recycling - Publication of information on the technical requirements to be met by certain types of waste to be eligible for recycling - Establishment of waste supply and demand systems ('waste exchange') <p>Inclusion of construction and demolition waste in the exchange of waste.</p>
The Croatian Chamber of Trades and Crafts (CCTC)	The Croatian Chamber of Trades and Crafts is an independent professional business organization of tradesmen and craftsmen. It promotes the competitiveness of crafts which include production and repair activities.
The Croatian Employers' Association (CEA)	CEA is a voluntary, non-profit and independent employers' association that represents, promotes and advocates for the interests of its members. The association is a member of the European Chemical Industry Association (ECEG), which represents the European chemical and pharmaceutical industry and the plastics and rubber industry.
Plastics and Rubber Industry Association	Plastics and Rubber Industry Association mission is to increase the competitiveness of domestic plastic and rubber production.
"Public Private Procurement" (Public Private Partnership) institutional Framework	
<p>The Ministry of the Economy and Sustainable Development (MoESD) is responsible for assessing, approving and monitoring the implementation of PPP projects, keeping the Register of Public Private Partnership Agreements, and transferring knowledge and implementing the best international practice in the field of public-private partnership. The MoESD approves the proposals for PPP projects on the basis of the criteria provided by the PPP regulations. In the process of assessing and approving PPP proposals, in addition to the MoESD, the Ministry of Finance has a key role to play as a body that gives prior consent to the PPP project proposals regarding their compliance with the budget projections and plans, and fiscal risks and constraints imposed by specific regulations.</p> <p>The Public Private Partnership Act does not regulate the procedure for selecting a private partner, but refers to the application of public procurement rules. Therefore, the Directorate for Trade and Public Procurement Policy of the Ministry of Economy and Sustainable Development also holds a significant role in the field of public-private partnership.</p> <p>The State Commission for the Supervision of Public Procurement Procedures is responsible for dealing with appeals in public procurement procedures, concessions and selection of private partners in public-private partnership projects.</p> <p>The period of concluding the PPP contract may not be shorter than 3 or longer than 40 years or longer in accordance with a special law. The basic rights and obligations of a public partnership are the setting of service standards, the payment of fees and the supervision of delivered services.</p> <p>The Waste Management Plan of the Croatia for 2017 - 2022 prescribes the possibility to invest in waste management from private sources by using PPP and concession contracts in cases of all types</p>	

of waste treatment, private investments in WMCs, private investments in primary separation and waste collection, as well as facilities for collecting and waste recycling.

Table 6: Overview about the Croatian institutions

Annex 5 Public Private Partnerships in the Waste Management Sector

“Public Private Procurement” (Public Private Partnership) institutional Framework

The Ministry of the Economy and Sustainable Development (MESD) is responsible for assessing, approving and monitoring the implementation of PPP projects, keeping the Register of Public Private Partnership Agreements, and transferring knowledge and implementing the best international practice in the field of public-private partnership. The MESD approves the proposals for PPP projects on the basis of the criteria provided by the PPP regulations. In the process of assessing and approving PPP proposals, in addition to the MESD, the Ministry of Finance has a key role to play as a body that gives prior consent to the PPP project proposals regarding their compliance with the budget projections and plans, and fiscal risks and constraints imposed by specific regulations.

The Public Private Partnership Act does not regulate the procedure for selecting a private partner, but refers to the application of public procurement rules. Therefore, **the Directorate for Trade and Public Procurement Policy** of the Ministry of Economy and Sustainable Development also holds a significant role in the field of public-private partnership.

The State Commission for the Supervision of Public Procurement Procedures is responsible for dealing with appeals in public procurement procedures, concessions and selection of private partners in public-private partnership projects.

The period of concluding the PPP contract may not be shorter than 3 or longer than 40 years or longer in accordance with a special law. The basic rights and obligations of a public partnership are the setting of service standards, the payment of fees and the supervision of delivered services.

The Waste Management Plan of the Croatia for 2017 - 2022 prescribes the possibility to invest in waste management from private sources by using PPP and concession contracts in cases of all types of waste treatment, investments in WMCs, as well as private investments in primary separation and waste collection.

Public Private Partnership legislation framework

The Public Private Partnership (PPP) area in Croatia is regulated by the Public Private Partnership Act (OG 78/12, 152/14, 114/18) and the implementing acts. The Law on Concessions (OG 69/17, 107/20) is also relevant in view of the fact that certain types of concession may include the characteristics of PPP and the Public Procurement Act (OG 120/16), in particular as regards the implementation of the selection procedure for the private partner.

Implementing acts:

- Public-private Partnership Regulation on the implementation of public-private partnership projects (OG 88/2012, 15/2015);
- Rules on the organisation and maintenance of the Register of Public Private Partnership Agreements (OG 16/2013);
- Ordinance on PPP projects of small value (OG 23/2015).

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