

## Overview of national waste prevention programmes in Europe



# Bosnia and Herzegovina



2021

Photo: © Mario Cvitkovic from Pixabay



## General information

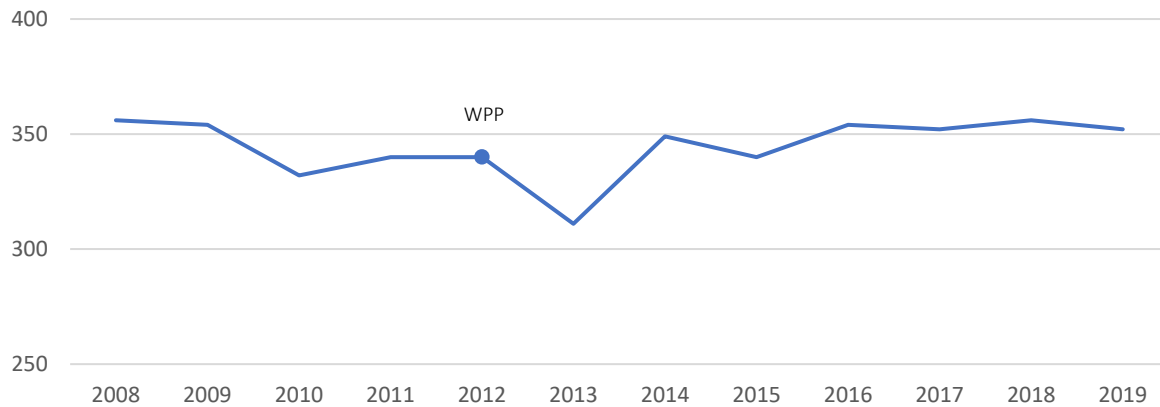
Name of the country/region	Bosnia and Herzegovina
Coverage of the waste prevention programme (national/regional)	National and regional (Republika Srpska and Brčko District)
Type of programme (stand alone or integrated into waste management plan)	Integrated into waste management plan
Title of programme and link to programme	Federal waste management plan 2012-2017 Waste management strategy of the Republic of Srpska for the period 2017-2026
Duration of programme	2012-2017 2017-2026
Language	
Development process of the programme/revision	
Budget envisaged for implementation of the project	No budget stated that particularly focuses on waste prevention

## Waste generation

The following figure illustrates the progress towards waste prevention in Bosnia and Herzegovina:

- The generation of municipal solid waste (MSW) per capita remained quite stable between 2008 and 2019 (see Figure 1). In 2008, 356 kg MSW was generated per capita, which followed a decreasing trend, reaching 311 kg in 2013. In the years after, however, waste generation returned to previous levels and was slightly above 350 kg per capita by 2019.

Figure 1: Municipal waste generation in Bosnia and Herzegovina (kg per capita), 2008-2019



Source: Eurostat Circular Economy Monitoring Framework.

## Waste prevention programme

### *Objectives and priorities*

1. Waste prevention objectives of the programme quantitative objectives (waste reduction) and qualitative objectives (reduction of hazardous substances/environmental impacts)	Bosnia and Herzegovina (BiH) has stated various qualitative objectives, such as: <ul style="list-style-type: none"><li>• increasing the amount of treated waste</li><li>• improving the coverage of waste disposal</li><li>• closing municipal landfills and gradually transferring to a regional disposal model</li><li>• combining separation and recycling targets with strengthening legal and institutional frameworks</li><li>• reducing the quantity and harmfulness of generated waste to reduce the risk to human health and the environment (Law on waste management (Official Gazette of the Republic of Srpska, No 111/13) and amendments to the Law on waste management (Official Gazette of the Republic of Srpska, No 106/159)</li><li>• rational and more efficient use of resources</li><li>• promoting and applying new technologies that ensure greater resource efficiency (World Bank and Swedish International Development Agency, 2018)</li></ul>
2. Sectors covered	<ul style="list-style-type: none"><li>• Not applicable</li></ul>
3. Priority waste types	<ul style="list-style-type: none"><li>• Food/organic</li><li>• Hazardous waste</li><li>• Waste electrical and electronic equipment/batteries</li><li>• Manufacturing waste</li></ul>
4. Target groups	<ul style="list-style-type: none"><li>• Not applicable</li></ul>

## *Targets, indicators and monitoring*

---

1. Indicators proposed	<ul style="list-style-type: none"><li>• Not applicable</li></ul>
2. Quantitative targets	<ul style="list-style-type: none"><li>• No separation of organic waste is proposed up to 2025 in view of cost/operational aspects, and priority will be given to separation of packaging waste. However, pilot projects for composting might be developed based on organic waste collected from public green areas (World Bank and Swedish International Development Agency, 2018, p. 16)</li></ul> <p>A 'realistic' scenario for 2025 proposes the following:</p> <ul style="list-style-type: none"><li>• a collection rate of 100 % in urban areas and 60 % in rural areas</li><li>• separation at source of 35 % of recyclables and 20 % of organics (<i>ibid.</i>, p. 13)</li></ul>
3. Monitoring of programme	<ul style="list-style-type: none"><li>• Ensuring the implementation of the system through legal, institutional and economic framework (<i>ibid.</i>, p. 25)</li><li>• Ensuring systematic monitoring of parameters for assessment of the state of the environment (<i>ibid.</i>, p. 25)</li></ul>
4. Evaluation of the programme	<ul style="list-style-type: none"><li>• Not applicable</li></ul>

---

## Prevention measures

Prevention measures implemented in accordance with Article 9 of the Waste Framework Directive	Not applicable
---	----------------

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

Promote and support <a href="#">sustainable consumption</a> models	<ul style="list-style-type: none"> <li>• BiH Sustainable Development Goals portal: <a href="http://www.sdg.bhas.gov.ba">www.sdg.bhas.gov.ba</a></li> <li>• The Regulation on fees for plastic shoulder bags (Official Gazette of the Federation of BiH, No 9/14) prescribes the amount of the fee, calculation and payment for plastic bags, as well as who is obliged to calculate and pay the fees</li> <li>• The BIOFIT project (on the technical possibilities of retrofitting the bioenergy industry), funded by the EU Horizon 2020 programme, supports bioenergy use as an alternative to fossil fuel energy in Europe. BIOFIT aims to facilitate bioenergy retrofitting in five industries: first-generation biofuels, pulp and paper, fossil refineries, fossil fuel-powered and combined heat and power plants (Rutz et al., 2020)</li> <li>• BiH ESAP 2030+ project (BiH ESAP 2030+, 2020)</li> <li>• <b>Sustainable Development Goal (SDG) 12: Ensure sustainable consumption and production (BHAS thematic bulletin)</b></li> <li>• Bosnia and Herzegovina, Environmental Performance Reviews (UNECE, 2018)</li> <li>• Green Growth Knowledge (Green Growth Knowledge Platform, 2021)</li> </ul>
Encourage the design, manufacture and use of products that are <a href="#">resource-efficient</a> , <a href="#">durable</a> (including in terms of life span and absence of planned obsolescence), <a href="#">repairable</a> , <a href="#">reusable</a> and <a href="#">upgradeable</a>	<p>In Republika Srpska, the Decree on the management of packaging and packaging waste (Official Gazette of the Republika Srpska, No 58/18) encourages the prevention of packaging waste through conditions for packaging design (European Environment Agency, 2017)</p> <p>The <i>Rulebook on waste management of electronic and electrical equipment</i> (Official Gazette of the Federation of BiH, 87/12, 107/14, 79/16, 8/16 and 12/18) regulates the manner and procedure for notifying the placement of electrical and electronic (EE) products on the market and the establishment of a system for handover, collection and processing of waste electrical and electronic products and the operation of the system</p>
Target products containing <a href="#">critical raw materials</a> to prevent those materials becoming waste	The project ‘Invest RM: Multifactor model for investments in the raw material sector, case study Bosnia and Herzegovina’, in which raw materials analyses were conducted and an online accessible tool designed, containing country data and a verified critical raw materials database (Borojević Šoštarić et al., 2019)
Encourage the reuse of products and the setting up of systems promoting <a href="#">repair</a> and <a href="#">reuse activities</a> , including in particular for electrical and electronic	According to the UN Economic Commission for Europe (UNECE) Environmental Performance Review, SDG target 12.5 states ‘By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse’ (p. 180). The Ministry of the Environment and Tourism of the Federation of Bosnia and

<p>equipment, textiles and furniture, as well as packaging and construction materials and products</p>	<p>Herzegovina, the Ministry of Physical Planning, Civil Engineering and Ecology of Republika Srpska and the Government of Brčko District, in cooperation with other competent institutions, should scale up and promote the recovery of materials from waste through separate collection, reuse and recycling, and foster business development based on the circular economy principles (UNECE, 2018, p. 186)</p> <p>The main objective of the environmental approximation strategy of BiH is to ensure strategic planning of the implementation of the approximation process, which would provide conditions for improving environmental protection with the aim of achieving sustainable development (Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina, 2017)</p>
<p>Encourage, as appropriate and without prejudice to intellectual property rights, the <a href="#">availability of spare parts, instruction manuals, technical information</a>, or other instruments, equipment or software enabling the repair and reuse of products without compromising their quality and safety</p>	<p>A technical assistance project, financed by the Swedish International Development Agency (SIDA), called ‘Building long-term sustainability for integrated solid waste management in Bosnia and Herzegovina’</p> <p>Its objective is to enhance the technical, financial and managerial capacities of participating municipalities that are essential for running a sustainable waste management system in the long term (Borojević Šoštarić et al., 2019, p. 173)</p> <p>The document <i>Analysis of the system of extended liability of producers in Bosnia and Herzegovina for packaging, packaging waste and EE waste</i> gives a detailed analysis of the possibility of implementing the scheme managed by the public fund for packaging and EE waste in BiH (Korajcevic and Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina, 2021)</p>
<p><a href="#">Reduce waste generation</a> in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account <a href="#">best available techniques</a></p>	<p>In the project ‘InvestRM: Multifactor model for investments in the raw material sector, case study Bosnia and Herzegovina’, raw materials analyses were conducted, and comprised the following elements: (1) legal data, (2) social data, (3) economics data and (4) geological data (Borojević Šoštarić et al., 2019)</p>
<p><a href="#">Reduce the generation of food waste</a> in primary production, in processing and manufacturing, in retail and other distribution of food, in restaurants and food services as well as in households as a contribution to the UN Sustainable Development Goal to reduce by 50 % per capita global food waste at the retail and consumer levels and to reduce food losses along production and supply chains by 2030</p>	<p>A dedicated food waste session at Sarajevo Unlimited, the first regional forum on innovation, entrepreneurship and technology was held on 22 October 2019</p> <p>The UN Development Programme (UNDP) Accelerator Lab in BiH and the city of Sarajevo announced a call for proposals in November 2019, using the city’s Consul platform and invited all interested individuals and teams to nominate ideas for practical, applicable and innovative solutions that could address food waste problems. Challenge winners:</p> <ol style="list-style-type: none"> <li>1. Tanjir više — a mobile app to connect caterers and households reporting excess food (food donors) with food donation recipients, and to educate households to reduce the amount of food thrown away</li> <li>2. FudVej (FoodWay) — a conceptual set of activities aimed at achieving zero food waste in Sarajevo</li> <li>3. 7 Days — a food management system designed to put food items close to their expiry dates out for sale at a cheaper price, by</li> </ol>

	<p>setting up dedicated sales departments in supermarkets and connecting such sales points via an online platform (UNDP Bosnia and Herzegovina, 2020)</p>
<p>Encourage <b>food donation</b> and other redistribution for human consumption, prioritising human use over animal feed and reprocessing into non-food products</p>	<p>Project ‘CENER21’ the general objective of which is to contribute to reducing food waste generated in restaurants, hotels and catering services in Canton Sarajevo (Center for Energy, Environment and Resources (CENER), 2018).</p>
<p>Promote the <b>reduction of the content of hazardous substances</b> in materials and products, without prejudice to harmonised legal requirements concerning those materials and products laid down at EU level, and ensure that any supplier of an article as defined in point 33 of Article 3 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council provides the information pursuant to Article 33(1) of that regulation to the European Chemicals Agency as from 5 January 2021</p>	<p>According to the UNECE Environmental Performance Review, SDG target 12.4 states ‘By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment’ (p. 180). The Governments of the Federation of Bosnia and Herzegovina, Republika Srpska and Brčko District should apply international best practices in order to improve medical waste management (UNECE, 2018, p.184).</p> <p>The Ministry of Health and Social Welfare of the Republic of Srpska published the text of the newly enacted Law on chemicals (Official Gazette of Republic of Srpska No 21/2018). The new act replaces the existing Law on chemicals from 2009 — see the statistics agency’s methodology document <i>Chemicals and waste in Agenda 2030</i> (Korajčević et al., 2020).</p> <p>The project, ‘Environmentally sound management of persistent organic pollutants (POPs) in industrial land hazardous waste sectors in BiH’</p>
<p><b>Reduce</b> the generation of <b>waste</b>, in particular waste <b>that is not suitable for preparing for reuse or recycling</b></p>	<p>In the Republic of Srpska, the Decree on the management of packaging and packaging waste (Official Gazette of the Republika Srpska, No 58/18) encourages the prevention of packaging waste through conditions for packaging production and usage (European Environment Agency, 2017)</p>
<p><b>Identify</b> products that are <b>the main sources of littering</b>, notably in natural and marine environments, and <b>take appropriate measures to prevent and reduce litter</b> from such products; where Member States decide to implement this obligation through market restrictions, they should ensure that such restrictions are proportionate and non-discriminatory</p>	<p>The GIZ-funded project ‘Integrated waste management and marine litter prevention in the Western Balkans’ aims to conserve natural and economic resources. At the regional level, the project also seeks to establish a common understanding of the issue of marine litter and associated action plans (GIZ, 2018).</p>
<p><b>Aim to halt the generation of marine litter</b> as a contribution towards the UN Sustainable Development Goal to prevent and significantly reduce marine pollution of all kinds</p>	<p>In the framework of the UN Environment Programme/Mediterranean action plan (MAP) (2015), marine litter assessment in the Mediterranean (‘List of case studies for Ecological Objective 10 (Marine Litter)’), DeFishGear coordinated and harmonised pilot surveys to assess marine litter on the surface and the sea floor of the Adriatic and Ionian coasts in</p>



	BiH (Mediterranean Action Plan and United Nations Environment Programme, no date)
Develop and support <a href="#">information campaigns to raise awareness</a> about waste prevention and littering	<p>The government should:</p> <ul style="list-style-type: none"> <li>• raise public understanding and awareness of sustainable waste management to facilitate further progress on the development of regional landfills, prohibition of illegal dumping of waste, separation of waste and minimising the generation of waste in households</li> <li>• distribute information widely on waste generation and management, relevant policy documents, and the development and establishment of legislation (UNECE, 2018, p. 185)</li> <li>• With the Aarhus Centres in Bosnia and Herzegovina (Šulc, 2020), prepare the fourth national report for BiH on the implementation of the Aarhus Convention</li> </ul>
Additional implemented prevention measures, not covered by Article 9 of the Waste Framework Directive	Not applicable

## **Food waste prevention**

### *Food waste generation*

On average, estimates suggest that 2.8 kg of food is wasted per household every week. This amounts to over 145 kg of food waste per household each year and to 16 million tonnes of food waste at the national level (Djekic et al., 2019; HelgiLibrary, 2021).

### *Measures to prevent food waste*

The Sofia Declaration on a Green Plan for the Western Balkans agreed on a commitment to implement activities in the fields of energy, climate, the circular economy and sustainable food production.

The UNDP Accelerator Lab in BiH and the city of Sarajevo announced a call for proposals in November 2019, using the city's Consul platform and invited all interested individuals and teams to nominate ideas for practical, applicable and innovative solutions that could address food waste problems. The winners of the challenge were the following:

- 1) *Tanjir više* — a mobile app that connects caterers and households with food donation recipients and educates households to reduce the amount of food thrown away.
- 2) *FudVej (FoodWay)* — a conceptual set of activities aimed at achieving zero food waste in Sarajevo.
- 3) *7 Days* — a food management system that puts food items close to their expiry dates out for sale at a cheaper price, by setting up dedicated sales departments in supermarkets and connecting such sales points to an online platform (UNDP Bosnia and Herzegovina, 2020).

## **Reuse of products**

### *Data*

Not applicable.

### *Measures to support reuse*

The Law on waste management encourages and provides the basic conditions for the prevention of production, recycling and processing of waste for reuse; the extraction of secondary raw materials and possibly of energy thereof; and safe disposal (Article 2).

The Law on environmental protection introduced the obligation to provide basic measures for treating waste for reuse.

The federal waste management strategy sets quantitative targets that refer to increases in recycling and reuse for special waste categories (strategic goal 7.2).

The social enterprise RREUSE aligns different social networks specialising in reuse, repair and recycling and has built up a wide network of reuse centres. For the BiH network, the initiative is the slogan 'Let's do it'.

The Organization for Security and Co-operation in Europe Mission to Bosnia and Herzegovina 'Green Pledge' undertakes the promotion of sustainability practices including the reduce, reuse and recycle principle. This particularly includes ensuring the reuse and recycling of Mission furniture and other assets whenever possible (Organisation for Security and Co-operation in Europe, 2020).

## **Best practice examples**

As part of the European Week for Waste Reduction (EWWR), BiH has implemented several ecological projects and measures to promote the reduction the amount of waste generated and the possibility of its reuse. Projects included the donation of waste disposal bins to eight Sarajevo schools, implemented by the Ekopak organisation in 2013. The separate waste disposal bins had a dual role: raising awareness and separating waste at the point of disposal (Ekopak, 2013). Further actions in the framework of EWWR in 2015 included a round table discussion on the issue of a circular economy in the Sarajevo Canton for representatives of authorities, municipalities, directors of construction companies and relevant institutions registered to manage special types of waste.

In 2019, the Ekopak organisation together with Ekotim distributed information materials and bags to the citizens of Sarajevo to highlight the problem of excessive waste generation and the need for greater support for separate waste collection and recycling systems (Ekopak, 2019).

A project on preventing marine litter commenced in 2018 and involves local and national actors in the waste and recycling industry in Albania, Montenegro and BiH. The focus of implementation is on regional cooperation and the exchange of knowledge between national institutions, municipalities and companies. The project promotes a regulatory framework for reducing and banning single-use plastic items (GIZ, 2018).

## Links to the circular economy

Waste prevention is an integral part of the comprehensive transformation towards a circular economy. It reduces not only the input of natural resources into the economy but also the efforts required to collect and recycle waste.

Approaches to improving circularity are often linked to successful waste prevention. The following table shows which circular strategies are explicitly integrated into the BiH waste prevention programme, the official Gazette of the Republika Srpska, No 58/18, the municipal solid waste management sector review strategic directions and investment planning up to 2025, and further research.

Topic	Addressed in the programme	Comments
Eco-design	Yes	Addressed in the official Gazette of the Republika Srpska, No 58/18
Repair, refurbishment and remanufacture	No	
Recycling	Yes	For example, by setting recycling targets for 2025
Economic incentives and finance	Yes	Cost changes in the tariff calculation and collection system lead to incentives for private companies to conclude public-private partnerships and to invest
Circular business models	No	
Eco-innovation	Yes	For example, support for the Tanjir više app; stimulating innovations at Sarajevo Unlimited (first regional forum on innovation, entrepreneurship and technology)
Governance, skills and knowledge	Yes	By the ‘Municipal Inspectorates for Municipal Order’ and the plan to establish a forum to exchange knowledge in the future