

# Overview of national waste prevention programmes in Europe



## Serbia



2021

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## General information

Name of the country/region	Serbia
Coverage of the waste prevention programme (national/regional)	Stand-alone programme
Type of programme (stand alone or integrated into waste management plan)	
Title of programme and link to programme	National waste prevention programme for the period 2020-2025
Duration of programme	2020-2025
Languages	Serbian, English
Development process of the programme/revision	The programme resulted from a joint project of the Serbian Ministry of Agriculture and Environmental Protection and the EU, the Environment Agency Austria, the Swedish Environmental Protection Agency, and the Ministry of Environment of Lithuania The project was financed through funds from the EU Instrument for Pre-Accession Assistance
Budget envisaged for implementation of the project	Information not available

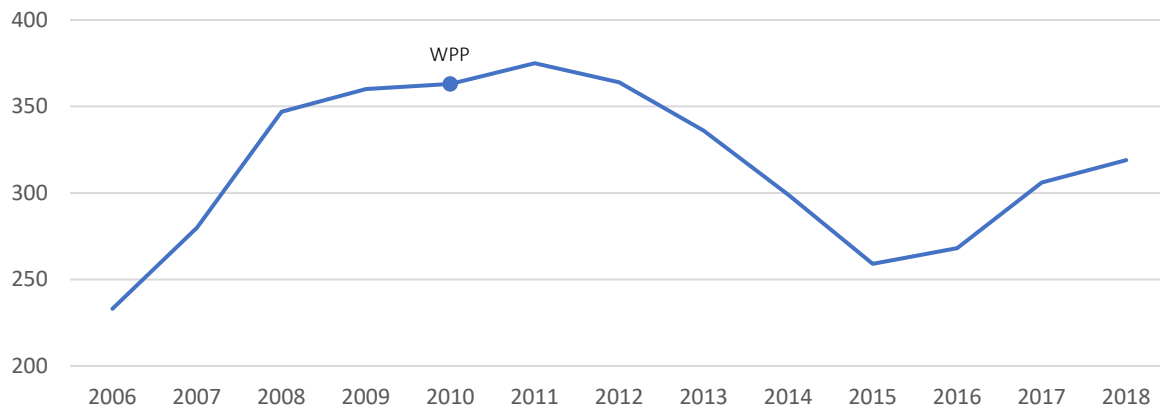
## Waste generation

The following figure illustrates the progress towards waste prevention in Serbia:

### *Municipal solid waste*

- Between 2006 and 2018 the generation of municipal solid waste (MSW) per capita in Serbia fluctuated (see Figure 1). It steadily increased until 2011, reaching a volume of 375 kg MSW per capita. Afterwards, a steady decline can be observed, potentially following the implementation of the waste prevention programme (WPP) in 2010. This negative trend ended in 2015 after which MSW generation per capita started increasing again, reaching 319 kg in 2018.

Figure 1: Municipal waste generation in Serbia (kg per capita), 2006-2018

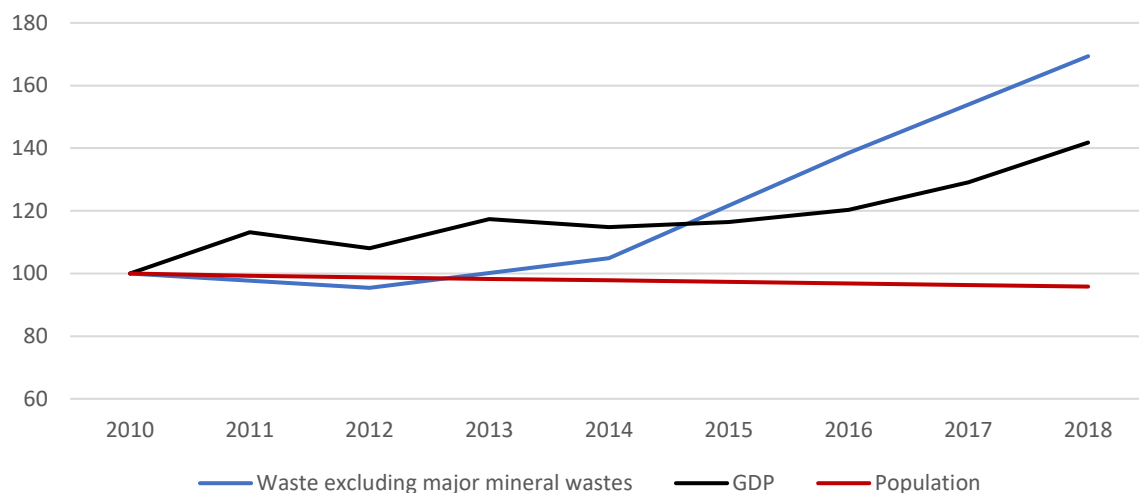


Source: Eurostat Circular Economy Monitoring Framework.

### *Total waste*

- Serbia's waste generation (excluding major mineral wastes) slightly declined between 2010 and 2012 but then started to increase. After 2014, the growth rate of waste increased significantly. Similar to this trend, an increase in GDP can be observed after 2014, indicating a link between Serbia's economic growth and its generation of waste. As the population shows a steady decreasing trend throughout these years, no link between population and the growth rate of waste can be observed.

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



Source: Eurostat.

## Waste prevention programme

### *Objectives and priorities*

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|---|--|
| 1. Waste prevention objectives of the programme: quantitative objectives (waste reduction) and qualitative objectives (reduction of hazardous substances/environmental impacts) | <ul style="list-style-type: none"><li>• Modernisation of waste management by joining the transition towards a circular economy</li><li>• Conditions for introducing circular economy systems into waste and wastewater management are improved at national and municipal levels (p. 193)</li></ul> |
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- National waste management strategy (NWMS)  
Develop a sustainable waste management system to reduce environmental pollution and spatial degradation (NWMS, Chapter 6.1). The objectives of the waste management system are to:
- reduce the quantities of waste being generated
  - reduce the quantities of waste being sent to landfill, with a primary selection of useful waste
  - reduce the proportion of biodegradable waste disposed of in municipal waste
  - reduce the negative impact of waste disposal on the environment, climate and human health
- Manage generated waste based on sustainable development principles (NWMS, Chapter 7.2)
- Strategic objectives for hazardous waste
- Harmonisation of national regulations in the field of waste management with EU legislation
  - Establishment of an integrated management system for hazardous waste in Serbia
  - Creation of a management system for special waste streams with hazardous components, such as used batteries and accumulators, waste oil, end-of-life vehicles (ELVs), waste from electrical and electronic equipment (i.e. WEEE)
  - Development of a system for reducing industrial hazardous waste by implementing help desks and instruments for advice on cost reduction, material savings and recycling opportunities in industrial processes
  - Promotion of material reuse for hazardous waste and use of hazardous waste as an alternative source of energy to conform with the waste hierarchy principle
  - Allocation of hazardous waste landfilling capacities; rehabilitation of existing dumps with hazardous waste that present the highest risk to the environment; elimination of ‘black spots’ that have been historically contaminated by hazardous waste (Nistorescu, 2017)
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	Chapter 4.1. of the Serbian WPP explains that the objectives of the programme are based on Article 9 of the Waste Framework Directive (2008/98/EC, as amended by Directive (EU) 2018/851). The general goals are to break the link between economic growth and the environmental impacts associated with the generation of waste with the intention of improving resource efficiency and reducing pollution
2. Sectors covered	<ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Manufacturing</li> <li>• Sale, retail and transport</li> <li>• Households</li> <li>• Private service activities, hospitality</li> <li>• Public services</li> </ul>
3. Priority waste types	<ul style="list-style-type: none"> <li>• Food/organic</li> <li>• Hazardous waste</li> <li>• Packaging</li> <li>• WEEE</li> <li>• Industrial waste</li> </ul>
4. Target groups	Institutions, businesses, civil society (community groups, non-governmental organisations (NGOs), charities) and waste holders

## *Targets, indicators and monitoring*

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1. Indicators proposed	<p>No indicators have been adopted to measure waste prevention. However, Chapter 6.2. of the WPP describes two types of waste prevention indicators, differentiating between indicators that refer to direct impacts on waste generation/prevention and those referring to proxy/indirect impacts (p. 33)</p> <p>Direct indicators regarding generation of different waste streams and categories show the difference in waste generation between a baseline year and a reference year. They indicate if total waste amounts have increased, decreased or have been stable over time and hence if waste prevention has been achieved. Proxy or indirect indicators regarding economic or social parameters give an indication of the status of implementation of waste prevention measures and hence indirectly of the progress made in achieving waste prevention</p>
2. Quantitative targets	<p>The WPP does not contain quantitative targets</p>
3. Monitoring of programme	<p>In accordance with Article 11a of the Law on waste management, the programme is to be enacted by the government for a 6-year period and, if necessary, revised at 3-year intervals</p> <p>For tracking the progress towards waste prevention, information on waste prevention indicators will be collected and published on the website of the Ministry of Environmental Protection by 30 June annually so that it is accessible to the public</p>
4. Evaluation of the programme	<p>The evaluation of the programme shall be conducted in a way that enables:</p> <ul style="list-style-type: none"><li>• the progress on objectives to be tracked</li><li>• the effectiveness of the implemented measures to be assessed (to reconfirm successful measures in the programme and exclude those measures that proved to be less effective than others or ineffective)</li><li>• new measures to be proposed to take into account progress achieved and emerging new priorities</li></ul>

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## Prevention measures

Prevention measures implemented in accordance with Article 9 of the Waste Framework Directive	The Serbian WPP focuses on planned measures in accordance with Article 9 of the Waste Framework Directive
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### Planned prevention measures

Table 1 is based on an analysis of the national WPP. The measures listed have been structured by the EEA/European Topic Centre on Waste and Materials in a Green Economy in accordance with Article 9 of the Waste Framework Directive, which obliges Member States to take action on a variety of aspects concerning waste prevention. The page numbers indicated refer to the original WPP.

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

Promote and support <b>sustainable consumption</b> models	The Ministry of Economy is responsible for organising an international conference on the best examples of applying sustainable production and consumption business models. Serbian authorities also are supposed to organise a national competition and awards ceremony for innovative sustainable business models (pp. 19, 25)
Encourage the design, manufacture and use of products that are <b>resource-efficient</b> , <b>durable</b> (including in terms of life span and absence of planned obsolescence), <b>repairable</b> , <b>reusable</b> and <b>upgradeable</b>	The WPP suggests: <ul style="list-style-type: none"> <li>• making an agreement with universities on the introduction of academic programmes and research on design and manufacture of cleaner products (p. 10)</li> <li>• organising a conference to disseminate research results in the area of achieving cleaner products</li> <li>• organising a trainers workshop on eco-design expertise</li> <li>• organising training for small and medium-sized enterprises (SMEs) on eco-design for packaging and electrical and electronic equipment</li> <li>• preparing a study to evaluate existing eco-labels in Serbia</li> <li>• organising an information campaign to raise awareness about credible eco-labels</li> <li>• preparing a study on the status of green public procurement and identification of product groups with the highest potential for waste prevention</li> <li>• preparing environmental criteria for public procurement for product groups with the highest potential for waste prevention (pp. 25, 26)</li> </ul>
Target products containing <b>critical raw materials</b> to prevent those materials becoming waste	The Ministry of Economy will prepare a study on products containing critical raw materials as defined in the Commission Communication <i>The 2017 list of critical raw materials for the EU</i> and other raw materials considered as important for Serbia and is



	<p>obliged to prepare a study on identifying measures to reduce the consumption of products containing critical raw materials, taking economic and technological feasibility and environmental and health benefits into account (p. 26)</p>
<p>Encourage the reuse of products and the setting up of systems promoting <b>repair and reuse activities</b>, including in particular for electrical and electronic equipment, textiles and furniture, as well as packaging and construction materials and products</p>	<p>Reuse is to be supported by:</p> <ul style="list-style-type: none"> <li>• preparing a study on the evaluation of the feasibility of leveraging VAT for repair services and reused products</li> <li>• organising workshops for NGOs and municipalities about the organisation of repair cafes</li> <li>• spreading public awareness through a campaign about the importance of reuse and repair and providing information on existing repair services</li> <li>• establishing internet platforms promoting reuse (e.g. one-stop shop providing information on second-hand shops, repair centres, flea markets, portal for product swapping)</li> </ul> <p>The Ministry of Labour, Employment, Veteran and Social Affairs is to evaluate the possibilities of promoting the employment of socially disadvantaged people in the repair sector and developing a common agenda concerning the employment of socially disadvantaged people and provision of training for repairing of electrical and electronic equipment for socially disadvantaged people</p> <p>The local self-government units are to establish space for the collection of electrical and electronic equipment, textiles and furniture that might be suitable for preparation for reuse, reuse and repair when planning and building civic amenity sites (pp.16-17, 27-28)</p>
<p>Encourage, as appropriate and without prejudice to intellectual property rights, the <b>availability of spare parts, instruction manuals, technical information</b>, or other instruments, equipment or software enabling the repair and reuse of products without compromising their quality and safety</p>	<p>The Ministry of Environmental Protection is to prepare manuals and guidelines for the preparation for reuse and handling of end-of-life products collected at civic amenity sites (p. 27)</p>
<p><b>Reduce waste generation</b> in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account <b>best available techniques</b></p>	<p>The WPP describes the need:</p> <ul style="list-style-type: none"> <li>• to establish a grant scheme to compensate the costs for SMEs of certification and registration</li> <li>• to organise information seminars on environmental management systems, including the EU Eco-Management and Audit Scheme and ISO 14001</li> </ul>

	<ul style="list-style-type: none"> <li>• to translate and publish Best Available Technique (BAT) reference documents (BREFs) in the Serbian language</li> <li>• to organise training for competent authorities on BATs</li> <li>• to develop a standard for demolition of old buildings and preparation for reuse of the demolition material</li> <li>• to organise information seminars on practical application of a standard for demolition of old buildings and preparation for reuse of the demolition material (pp. 28-29)</li> </ul>
<p>Reduce the generation of food waste in primary production, in processing and manufacturing, in retail and other distribution of food, in restaurants and food services as well as in households as a contribution to the UN Sustainable Development Goal to reduce by 50 % per capita global food waste at the retail and consumer levels and to reduce food losses along production and supply chains by 2030</p>	<p>The WPP aims:</p> <ul style="list-style-type: none"> <li>• to prepare guidelines for ‘green catering’ targeting canteens, restaurants, etc., in line with the existing legislation on food hygiene</li> <li>• to organise training for workers in the food preparation industry targeting food waste prevention</li> <li>• to prepare criteria for the selection of ‘sustainable caterers’ for the organisation of public events</li> <li>• to identify and prepare a list of sustainable caterers, restaurants and event organisers meeting the criteria</li> <li>• to raise awareness among public procurers on selection of sustainable caterers by means of seminars and workshops</li> <li>• to organise public awareness campaigns about the environmental and economic significance of food waste</li> <li>• to organise information campaigns and awareness-raising initiatives targeting children and pupils in schools by means of targeted workshop and participation in EU activities such as the European Week for Waste Reduction</li> <li>• to adapt regulations on food hygiene to make a distinction between ‘best before date’ and ‘expiry date’ (pp. 18, 29)</li> </ul>
<p>Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and reprocessing into non-food products</p>	<ul style="list-style-type: none"> <li>• Develop a regulation on food donations suitable for human consumption to increase the number of food categories that are suitable for food donations, such as meat, milk, bread</li> <li>• Undertake a study to evaluate the feasibility of leveraging taxes on food donations and subsidies for food donation organisations</li> <li>• Hold workshops on food donations for practitioners in the food industry, retail and food service sectors (e.g. hotels, restaurants and cafes) (pp. 18, 29).</li> </ul>

<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>The WPP suggests:</p> <ul style="list-style-type: none"> <li>• including product groups defined in the Restriction of Hazardous Substances Directive on packaging and packaging waste and electrical and electronic equipment in market surveillance programmes</li> <li>• preparing guidelines for the competent authority on market surveillance of packaging, batteries and electrical and electronic equipment, as regards content of hazardous substances</li> <li>• preparing guidelines on substitution of hazardous materials in products and processes</li> <li>• organising training for SMEs on reducing the content of or substituting hazardous substances in materials and products (pp. 30-31)</li> </ul>
<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>Not specifically addressed in the WPP</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>	<ul style="list-style-type: none"> <li>• Undertake a study for identifying the items that are most commonly littered in the environment</li> <li>• Transpose Directive (EU) 2015/720 of the European Parliament and of the Council of 29 April 2015 amending Directive 94/62/EC as regards reducing the consumption of light-weight plastic carrier bags into Serbian legislation</li> <li>• Organise campaigns to clean up riverbanks and beaches</li> <li>• Support information campaigns to raise awareness on the negative impact of littering on the environment (particularly the aquatic environment), economy and health (p. 32)</li> </ul>
<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>See above</p>
<p>Develop and support <b>information campaigns to raise awareness</b> about waste prevention and littering</p>	<p>A wider participation of Serbian organisations in future European Week for Waste Reduction events should be encouraged (p. 15)</p>

Additional implemented prevention measures, not covered by Article 9 of the Waste Framework Directive

The programme did not develop any additional waste prevention measures

## **Food waste prevention**

### *Food waste generation*

It is estimated that around 770 000 tonnes of food are wasted or lost in Serbia each year. This amounts to 110 kg of food waste per person per year and is about 80 kg below the EU average; however, exact data on food waste in Serbia do not exist (Bogdanovic, 2019).

### *Measures to prevent food waste*

The Banka Hrane (Food Bank) is a large-scale organisation that, since 2006, has been linking donors and recipients of surplus food in Serbia. Its main role is to serve as a link between food donors, social institutions and associations (p. 18). Some retailers have adopted 'discount labels' (e.g. 30 %, 50 % off) on food products close to their expiry date.

In Serbia, the city of Belgrade implemented the 1-year pilot project 'The Food Shifters: A voluntary scheme for sustainable food waste management' in July 2019, launched by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Germany. In partnership with the United Nations Development Programme Serbia and the city of Belgrade, the waste project establishes a voluntary scheme for food waste from the main food waste generators in the city of Belgrade (retailers, restaurants, hotels, catering businesses and public institutions such as hospitals and kindergartens). Foods that are still enjoyable are redistributed through a digital platform and an app enabling easy access to food.

In March 2020, the 'Bio-waste Management Challenge Call' was launched in partnership with the Ministry of Environmental Protection and with the support of the Swedish International Development Cooperation Agency (Sida). The challenge promotes innovative projects and business solutions for climate-smart management of biodegradable waste. The winners have the opportunity to meet the potential beneficiaries, such as cities and municipalities. The project brings to the market innovative technical solutions and business models that contribute to the reduction, reuse and recycling of bio-waste in Serbia.

## **Reuse of products**

### *Data*

Not available.

### *Measures to support reuse*

Reuse and repair of products has a long tradition in Serbia and is widely applied in the following cases:

- electrical and electronic equipment/home appliances
- textiles, including clothes (740 companies were registered as companies dealing with the resale of imported and second-hand clothes in 2017)
- reusable glass bottles used by breweries, producers of mineral water and some other beverages
- wooden pallets, plastic crates, furniture, books, music or sports equipment, construction materials (bricks, tiles), medical devices, rethreaded tyres, used vehicles, car spare parts fit for reuse.

## **Best practice examples**

### *The cadastre of mining waste*

In 2020, the decree on mining waste management, funded up to 90 % by the EU, was implemented in Serbia. This will support the public authorities to analyse the possibilities of rehabilitation, remediation and recultivation of mining waste facilities that are critical with regard to pollution or a risk to human health (Spasić, 2020).

### *Further implementation of the Industrial Emissions Directive (IED) in Serbia*

The IED Serbia project represents the extension and continuation of the already completed project on integrated pollution prevention and control (IPPC) farms with the purpose of supporting operators and Serbian competent authorities (relevant ministries, local self-governments and other institutions) in developing a comprehensive legal and technical framework to set up a sustainable pathway that will lead Serbia to adopt and implement the IPPC Directive for the intensive rearing of poultry and pigs. The funds for the project have been provided by Sida, with extensive support from the Embassy of Sweden in Belgrade. The project was finally implemented in April 2017. A special focus was put on reducing the environmental impacts of food production chain operators by specifically considering measures related to energy and resource use.

## Links to the circular economy

Topic	Addressed in the programme	Comments
Eco-design	Yes	Eco-design is encouraged through various ideas such as trainers workshops on eco-design expertise or training for SMEs on eco-design for packaging and electrical and electronic equipment
Repair, refurbishment and remanufacture	Yes	Reuse is supported through various measures including workshops for NGOs and municipalities organising repair cafes
Recycling	No	
Economic incentives and finance	No	
Circular business models	Yes	Serbian authorities are also supposed to organise a national competition and awards ceremony for innovative sustainable business models (pp.19, 25)
Eco-innovation	No	
Governance, skills and knowledge	Yes	Skills and knowledge will be gained through the workshops and activities on repair, eco-design and circular business models