

Waste prevention country profile

# North Macedonia

February 2025



© Joel Cavaliero, Well with Nature (EPA)



European Environment Agency



## Country profile: North Macedonia

### General information

Name of the country/ region	North Macedonia
Geographical coverage of the waste prevention programme (national/ regional)	National
Type of programme (stand alone or integrated into waste management plan or into the circular economy strategy)	Standalone waste prevention program
Title of programme and link to programme	Plan to prevent waste generation Republic of North Macedonia (2022 – 2028)  <a href="https://www.moepp.gov.mk/wp-content/uploads/2014/12/%D0%9F%D0%A1%D0%97%D0%9E-2022-2028.pdf">https://www.moepp.gov.mk/wp-content/uploads/2014/12/%D0%9F%D0%A1%D0%97%D0%9E-2022-2028.pdf</a>
Duration of programme	2022-2028
Language	Macedonian
Contact person in the country/region	N/A
Development process of the programme/ revision	This is the first waste prevention program in North Macedonia
Foreseen budget for implementation of the programme	N/A

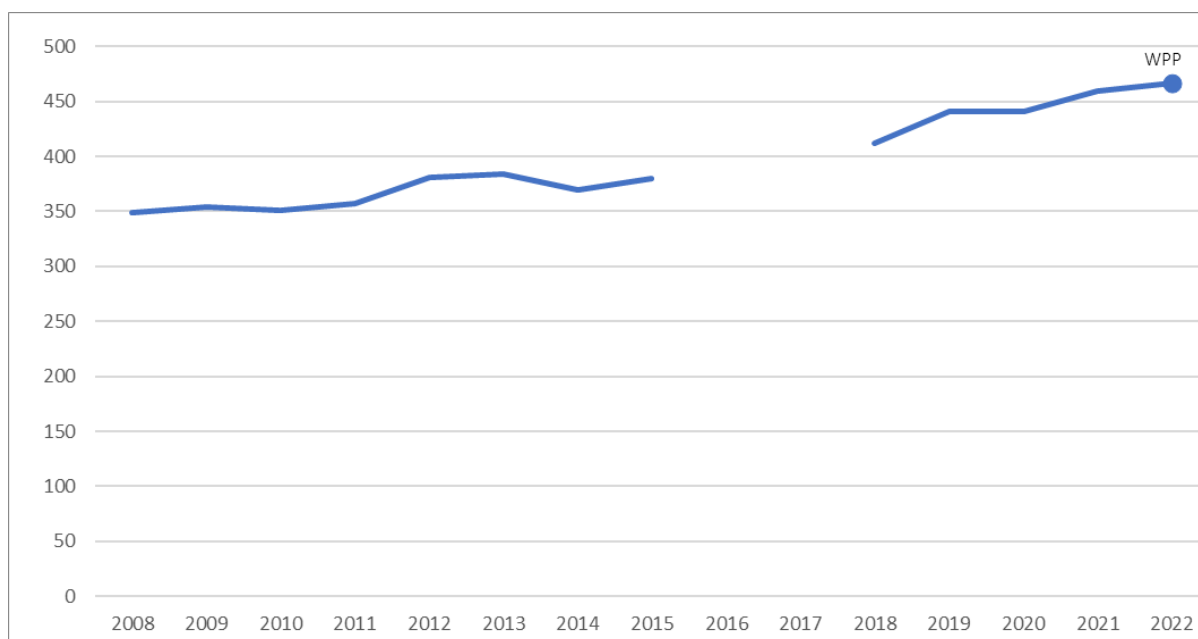
## WASTE GENERATION

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

### Municipal solid waste (MSW)

Municipal waste has steadily increased from 349 kg in 2008 to 467 kg in 2022, which is lower than the EU average of 513 kg<sup>1</sup> in the same year (Figure 1). Data in 2016 and 2017 were not available on Eurostat but was supplemented by national level data<sup>2</sup>. North Macedonia introduced its first Waste Prevention Program in 2022. The effects of its implementation are expected to become evident only over the long term.

**Figure 1 Municipal waste generation in North Macedonia (kg per capita), 2008-2022**



**Source:** Eurostat [ENV\_WASMUN].

**Note:** There is a break in series in 2009, estimates for: 2008, 2010, 2020-2022

<sup>1</sup> Based on data collected from Eurostat in November 2024.

<sup>2</sup> ([https://www.stat.gov.mk/pdf/2022/9.1.22.02\\_mk.pdf](https://www.stat.gov.mk/pdf/2022/9.1.22.02_mk.pdf))

### Total Waste (excluding major mineral waste)

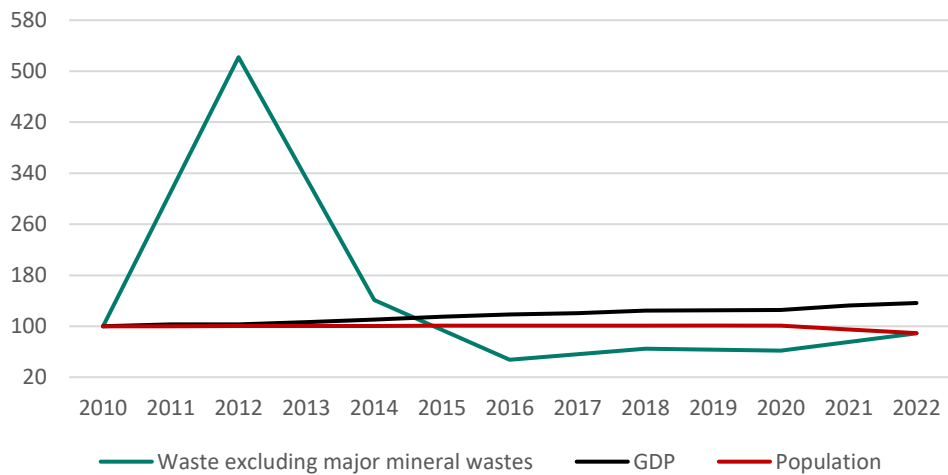
Total waste generation (excluding major mineral waste) peaked in 2012 at 7.6 Mt, largely due to a significant increase in sludges, which accounted for over 6 Mt (Figure 2). After a sharp decline of more than 70% in 2014, it continued to decrease, reaching a low of 0.7 Mt in 2016. Since then, waste generation steadily increased, reaching 1.3 Mt in 2022.

Between 2014 and 2020, recyclable waste was the largest fraction of total waste. By 2022, recyclable and mineral wastes from waste treatment, along with stabilized wastes, became the dominant fractions.

North Macedonia's economy grew by nearly 40% between 2010 and 2022. However, given that the population stagnated until 2021 and then declined by 10% in 2022 compared to 2010, waste generation does not appear to be directly linked to population changes.

Due to strong variations in waste generation, it is not possible to draw conclusions about decoupling waste generation (excluding major mineral waste) from economic growth.

**Figure 2 Generation of waste (excluding major mineral wastes), population and economic development, 2010-2022**



**Source:** Eurostat [ENV\_WASGEN, NAMA\_10\_PC, DEMO\_GIND]

**Note:** Waste generation data for odd years are interpolated.

# WASTE PREVENTION PROGRAMME

## Objectives and priorities

---

1. Waste prevention objectives of the Programme - quantitative objectives (waste reduction) - qualitative objectives (reduction of hazardous substances/ environmental impacts)	The waste prevention programme lists the following high level goals: <ul style="list-style-type: none"><li>• Reduced consumption of materials, water and energy that cause the creation of larger amounts of waste, so that the habits and behaviour of businesses, households and the public sector will change</li><li>• Develop a collection and recycling system that determines the value of collected materials and can be recycled into current local economic activities</li><li>• Reducing the amount of residual waste that needs to be deposited, by removing recyclable materials and organic waste from the purchased waste</li><li>• Sorting the remaining waste to extract additional materials that can still be recycled</li><li>• Increased competitiveness and low business costs through implementation of programs that stimulate resource efficiency and create a "circular economy"</li><li>• Support sustainable development and employment in the "green" economy, including new jobs in reuse, recycling and manufacturing</li><li>• Reduced generation of hazardous waste through development of more efficient industrial and commercial practices along with the use of safer alternatives that are less harmful to the environment</li><li>• Reduction and management of the amount of hazardous substances in products through the development of new business practices and the effective application of regulations</li><li>• Informing and influencing evidence-based decision-making through the collection, processing and publication of high-quality data on all aspects of management and prevention of waste generation</li><li>• Increasing awareness of the importance of waste prevention among citizens, businesses and the public sector in order to create positive behavioral changes.</li></ul>
2. Sectors covered	• N/A
3. Priority waste types	<ul style="list-style-type: none"><li>• Paper</li><li>• Plastic bags</li><li>• Packaging</li><li>• Plastic including bottles</li><li>• Metal including drink cans</li><li>• Textiles</li><li>• Oils</li><li>• Glass</li><li>• Electric products</li></ul>

---

- 
- Food

---

4. Target groups

National government, local government, businesses, educational sector, NGOs, citizens/consumers

---

## Targets, indicators and monitoring

1.	Indicators used to monitor progress	<ul style="list-style-type: none"> <li>- The number of environmental campaigns and events to raise public awareness</li> <li>- Percentage of the population to which such events and campaigns reach</li> <li>- Sale of products with an ecological label</li> <li>- Percentage of the population that is aware and involved in waste prevention activities</li> <li>- Amount of total generated waste as expressed GDP/GVA (kg/€)</li> <li>- The number of organizations that are actively involved in activities to prevent waste generation</li> <li>- Othe</li> </ul>
<p>In the waste prevention plan, the measures are termed and numbered as “policies”. The policy numbers are included in the table below.</p>		
<p>In addition, the WPP mentions the “application of Extended Producer Responsibility (EPR) policies for all waste streams in order for manufacturers to think about the life cycle of their products from the design phase, right through to the end of the product's life, which follows its use.”</p>		
<ul style="list-style-type: none"> <li>- rs (listed in Appendix B of the waste prevention programme)</li> </ul>		
2.	Quantitative targets	<p>The waste prevention program states that it should be read along with the North Macedonia Waste Management Plan 2021-2031. This plan refers to EU level targets such as those in the Waste Framework Directive and Circular Economy Action Plan.</p>
<p>Other targets include:</p> <ul style="list-style-type: none"> <li>- Municipal waste recycling: 25% by 2025, 45% by 2035 and 65% by 2045</li> <li>- Reduction in biological waste sent to landfill (compared to 1995): 25% by 2026, 50% by 2031 and 65% by 2034</li> <li>- Collection of municipal solid waste: 90% of households by 2020, 100% of households by 2024</li> <li>- Separate collection of metal, plastic, glass, paper and cardboard: 65% of households by 2030</li> <li>- Campaigns for including the public on separate collection and delivery of waste, etc: 4 campaigns by 2030</li> </ul>		
<p>Other collection targets</p>		
3.	Monitoring mechanism of the programme	<p>The WPP states that progress in realizing the goals of the Waste Prevention Plan will be reported on an annual basis based on an agreed set of indicators.</p>
4.	Evaluation of the programme	N/A

## Prevention measures

Implemented prevention measures according to Article 9	In the waste prevention plan, the measures are termed and numbered as “policies”. The policy numbers are included in the table below.
	In addition, the WPP mentions the “application of Extended Producer Responsibility (EPR) policies for all waste streams in order for manufacturers to think about the life cycle of their products from the design phase, right through to the end of the product's life, which follows its use.”

The waste prevention programme includes the following measures that are proposed to avoid waste generation (Chapter 1.5):

Table 1: Specific waste prevention measures structured according to Art 9 WFD

Promote and support <b>sustainable consumption</b> models	<ul style="list-style-type: none"> <li>• <b>Policy 20:</b> The government will extend the use of green public procurement criteria to all procurement in order to incorporate the principles of waste prevention and the circular economy into all its activities.</li> <li>• <b>Policy 21:</b> The government will incorporate green criteria into the planning system and into the construction of facilities it owns. Setting goals for reuse and recycling of inert waste will also be considered.</li> <li>• <b>Policy 23:</b> The government will consider the introduction of advice and financing mechanisms for local businesses to help them move towards a circular economy business model.</li> <li>• <b>Policy 24:</b> The Government will incorporate the principles of reduced waste generation (including the principles of "Zero Waste" and "Circular Economy") into its economic development plans and business support programs.</li> </ul>
Encourage the design, manufacturing and use of products that are <b>resource-efficient, durable</b> (including in terms of life span and absence of planned obsolescence), <b>reparable, re-usable</b> and <b>upgradable</b> .	To develop policies for eco-design in the construction sector, together with new policies for the treatment and management of construction noise.
Target products containing <b>critical raw materials</b> to prevent that those materials become waste.	<ul style="list-style-type: none"> <li>• <b>Policy 8:</b> The government will set targets for the preparation for reuse of collected furniture and waste electrical and electronic equipment.</li> </ul>
Encourage the re-use of products and the setting up of systems promoting <b>repair and re-use activities</b> , including in particular for electrical and electronic equipment, textiles	<ul style="list-style-type: none"> <li>• <b>Policy 8:</b> The government will set targets for the preparation for reuse of collected furniture and waste electrical and electronic equipment.</li> </ul>



<p>and furniture, as well as packaging and construction materials and products.</p>	<ul style="list-style-type: none"> <li>• <b>Policy 9:</b> The government will work with local government to increase the donation of items that can be reused, wherever possible, through recycling centers.</li> <li>• <b>Policy 11:</b> The government will strive to reuse the furniture and office materials with which its facilities are equipped and in the future will apply modular design to its facilities for longer use of the facilities.</li> <li>• <b>Policy 14:</b> The government will prioritize high-quality, dry, recyclable materials that are suitable for local processors in order to help business innovation for reuse and manufacturing.</li> <li>• <b>Policy 22:</b> The government will carry out a strategic review of the capacities of businesses to prepare them for reuse and recycling.</li> </ul>
<p>Encourage, as appropriate and without prejudice to intellectual property rights , the availability of spare parts, instruction manuals, technical information, or other instruments, equipment or software enabling the repair and re-use of products without compromising their quality and safety.</p>	
<p>Reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques.</p>	<ul style="list-style-type: none"> <li>• <b>Policy 25:</b> The government will encourage the development of local markets for materials where processing capacity does not exist or is insufficient.</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 United Nations Sustainable Development Goal to reduce by 50 % per capita global food waste at the retail and consumer levels and to reduce food losses along production and supply chains by 2030.</p>	<ul style="list-style-type: none"> <li>• <b>Policy 3:</b> The government will support the home composting system.</li> <li>• <b>Policy 6:</b> The government will support measures and activities to prevent food waste from businesses and households.</li> <li>• <b>Policy 15:</b> The government will use a series of mechanisms to prioritize the prevention of the use of food waste.</li> </ul>
<p>Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and the reprocessing into non-food products.</p>	<ul style="list-style-type: none"> <li>• <b>Policy 16:</b> For this remaining food waste, the Government will increase the percentage of food surplus collected, which will further be collected and distributed.</li> <li>• <b>Policy 26:</b> The government will support businesses in redistributing surplus food that is edible.</li> <li>• Consider introducing a legal mechanism to introduce tax incentives for producers and distributors who donate unsold leftover food to the social network for support and assistance.</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 Union 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><b>Reduce</b> the generation of <b>waste</b>, in particular waste <b>that is not suitable for preparing for re-use or recycling</b>.</p>	<ul style="list-style-type: none"> <li>• <b>Policy 18:</b> The government will not conclude contracts that would result in increased amounts of residual waste, which would undermine the capacity to realize its goals for preventing the creation of waste.</li> <li>• <b>Policy 19:</b> The Government will develop and implement mechanisms to track waste that is a residue of production as well as recycling activities from the moment of collection to the final destination, to ensure transparency and guarantee that the materials will be managed in a way that would be met the goals of preventing waste generation.</li> <li>• <b>Policy 20:</b> The government will extend the use of green public procurement criteria to all procurement in order to incorporate the principles of waste prevention and the circular economy into all its activities.</li> </ul>
<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 shall ensure that such restrictions are proportionate and non-discriminatory.</p>	<ul style="list-style-type: none"> <li>• <b>Policy 10:</b> The government will ensure the disposal of single-use items at all public events it organizes and will encourage bail systems to reduce littering.</li> </ul>
<p><b>Aim to halt the generation of marine litter</b> as a contribution towards the United Nations Sustainable Development Goal to prevent and significantly reduce marine pollution of all kinds.</p>	
<p>Develop and support <b>information campaigns to raise awareness</b> about waste prevention and littering.</p>	<ul style="list-style-type: none"> <li>• <b>Policy 1:</b> The government will provide resources for the campaign, distribute it among citizens and inform them about the benefits of waste prevention, efficient use of recycling facilities and reuse opportunities, through waste collection and recycling centers. The concepts of "Zero waste" and "Circular economy" will be explained as mechanisms for preventing the creation of waste.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Policy 2:</b> The government will include waste reduction education in educational programs and policies (including the concepts of "Zero waste" and "Circular economy").</li> <li>• <b>Policy 4:</b> The Government will involve the communities in the implementation and distribution of this Plan through a process of continuous activities and engagement, offering support to representatives of various sectors in society.</li> <li>• <b>Policy 5:</b> Government will encourage local businesses to promote behavioral change to prevent waste</li> </ul>
--	---

## FOOD WASTE PREVENTION

### Food waste generation

The association for a clean environment 'Let's do it Macedonia' has estimated that food waste makes up more than 10 % of the solid waste generated in the country, i.e. 100 000 tonnes of edible food, mostly coming from agricultural surpluses (Let's do it Macedonia, 2018). According to a 2020 survey of households, most households throw away less than 2 % of the food they purchase. The most wasted food groups are milk and dairy products and fruit and vegetables (Bogevska et al., 2020).

### Measures to prevent food waste

'Let's do it Macedonia' has created a web platform connecting businesses with NGOs, to redistribute surplus food. The organisation has also promoted and supported the establishment of the first food surplus donation law in North Macedonia (Let's do it Macedonia, 2018).

## REUSE OF PRODUCTS

### Data

North Macedonia has not reported any data for reuse of textiles, furniture, electrical and electronic equipment and construction and building materials according to Commission Implementing Decision (EU) 2021/19 for the year 2021 by the reporting deadline (EEA, 2024)

### Measures to support reuse

N/A in addition to the information based on Article 9

## Best practice examples

### *Eliminating the use of single use plastics*

The government of North Macedonia and the state institutions announced that as of 2020, they will no longer procure plastic products and single-use packaging. According to the Ministry of Environment, this means the ministries and other institutions replacing public procurement of items in plastic bottles with items in glass ones, that plastic cups, straws and other single-use plastic goods will no longer be procured, and staples, e.g. sugar, will be procured in bulk. A rulebook on managing plastic packaging bags placed on the market was adopted in 2021 <https://www.moep.gov.mk/wp-content/uploads/2018/12/pravilnik-za-kesi.pdf>.

## Links to circular economy

Waste prevention is an integral part of the comprehensive transformation towards a circular economy. It reduces the input of natural resources into the economy as well as the necessary efforts to collect and recycle waste.

Approaches for improving circularity are often highly interlinked with successful waste prevention. The following table shows which circular strategies are explicitly integrated into the North Macedonia's waste prevention programme.

Topic	Addressed in the programme	Comments
Eco-design	Yes	Mentioned for the construction sector
Repair, refurbishment and remanufacture	N/A	
Recycling	Yes	The WPP includes the following measure: "Policy 7: The Government will review ongoing recycling and recycling initiatives to help increase recycling rates in the country."
Economic incentives and finance	Yes	For example, the WPP mentions that the government will consider the introduction of a tax incentive for businesses to donate unused food
Circular business models	Yes	The WPP mentions supporting businesses to move towards circular business models
Eco-innovation	N/A	
Governance, skills and knowledge	Yes	Education and awareness-building are mentioned throughout the WPP