

# Municipal waste management



# Montenegro



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<b>Country</b>	<b>Montenegro</b>
<b>General facts</b>	
<ul style="list-style-type: none"> <li>• Surface area 1 381 km<sup>2</sup>; population 625 266; population density (inhabitants/square km) 46.6; total gross domestic product (GDP) USD 10.61 billion; GDP per capita: USD 17 000; degree of urbanisation 64 % of total population, annual rate of urbanisation 0.34 %. Economy (% of GDP): agriculture 8.3 %; industry 21.2 %; services 70.5 %. The currency is the euro; the capital is Podgorica, which has a population of 187 085.</li> </ul>	
<b>Status quo</b>	
<p>Although Montenegro has undergone significant changes in recent years, and the infrastructure for municipal solid waste (MSW) has been improved, the waste management system continues to lack financial resources as well as data delivery.</p>	
<b>Legal framework</b>	
<ul style="list-style-type: none"> <li>• 2004 National Policy on Waste Management</li> <li>• 2005 National Waste Management Strategy</li> <li>• A review of the audit needs of the Strategic Master Plan for Waste Management in Montenegro in late 2011 recommended that waste management activities be organised in the period up to 2030, so that the strategic master plan is aligned with the relevant EU regulations</li> <li>• 2008 Waste Management Plan 2008-2012</li> <li>• 2011 Law on Waste Management (Official Gazette of Montenegro, no 64/11) with a set of 27 bylaws from 2013</li> <li>• 2016 amendments to the Law on Waste Management</li> <li>• The National Waste Management Plan in Montenegro for the period 2015-2020 was adopted</li> </ul> <p>A new Law on Waste Management is being prepared</p>	
<b>Objectives</b>	
<ul style="list-style-type: none"> <li>• Define national and local waste management plans for legal persons generating more than 200 kg of hazardous waste or 20 tonnes of non-hazardous waste</li> <li>• Minimise solid and liquid waste, to ensure sustainable development by efficient use of resources</li> <li>• Minimise the environmental impact of waste management, to ensure that waste is minimised, handled, recovered or disposed of without endangering human health and without using processes or methods that could harm the environment</li> <li>• Remediate former dumpsites and other contaminated sites, to ensure that sites are registered, evaluated and prioritised, and define and implement remedial measures to avoid further contamination</li> <li>• Determine the main orientation of waste management for medium-term national development</li> <li>• Implement EU strategic plans through adoption of EU waste-related directives</li> <li>• Determine priorities among waste management options</li> <li>• Establish an integrated waste management system based on increasing quantities of collected waste, minimising quantities of disposed waste and introducing recycling</li> <li>• Remediating and closing the existing dumpsites</li> <li>• Remediating 'black points', i.e. locations with large quantities of disposed waste</li> <li>• Developing and establishing inter-municipal (regional) sanitary landfills, including treatment of waste before its final disposal</li> </ul>	

<b>Specific targets</b>
<ul style="list-style-type: none"> <li>• By 2020: 50 % recovery of MSW, 70 % recovery of construction and demolition waste</li> </ul>
<b>Waste management</b>
<ul style="list-style-type: none"> <li>• Generation of municipal solid waste 2013: 288 341 tonnes (household waste 191 382 tonnes, commercial/industrial/institutional waste 63 794 tonnes, tourism waste 18 458 tonnes, green waste from public areas 14 707 tonnes)</li> <li>• Each citizen of Montenegro produces about 0.86 kg a day, while tourists produce 1.86 kg of waste. The data were assessed on the basis of the analysis of the Strategic Master Plan for Waste Management at the republic level and during work at the Lovanja and Livade dumps</li> <li>• 2013 waste generation per capita: 460 kg</li> <li>• Composition 2013: organic waste 33.8 %, plastics/PET 18.4 %, paper and cardboard 13.7 %, glass 9.0 %, textiles 3.0 %, metals 2.9 %, wood 2.7 %, hazardous 0.7 %, other 15.8 %</li> <li>• MSW collection covered 76 % of the population in 2013, mainly provided by public companies/municipalities (2014: 78-80 %)</li> <li>• 2013: 286 378 tonnes collected</li> <li>• 2012 industrial waste generation: non-hazardous waste 453 791 tonnes; hazardous waste 3 819 tonnes</li> <li>• 2012 manufacturing waste generation: non-hazardous waste 101 790 tonnes, hazardous waste 3 505 tonnes</li> <li>• In the period 2009-2012 the amount of municipal waste generated was reduced by 39 % while GDP increased by 3.5 %</li> <li>• Hazardous waste is exported</li> </ul>
<b>Recycling</b>
<ul style="list-style-type: none"> <li>• Currently processed amounts do not reach the designed capacity and output of recyclables</li> <li>• There is a material recovery facility in Livade with a designed capacity of 90 000 tonnes/year, but with a current input of 16 000 tonnes/year</li> <li>• Output of separated recyclables in 2012: 1 427 tonnes/year</li> <li>• This facility also operates an end-of-life vehicle recycling line with a capacity of 15 cars/day, but only 3-4 cars are received daily for recycling</li> <li>• There is a material recovery facility in Meljine with a designed capacity of 50 tonnes/day, sorting waste collected in containers for separate collection — 2012 throughput: 1 032 tonnes/year</li> <li>• There is a material recovery facility at Lovanje with a designed capacity of 40 tonnes/day and an average annual input of 18 350 tonnes; during summer season it peaks at 100 tonnes/day</li> </ul>
<b>Landfilling</b>
<ul style="list-style-type: none"> <li>• Seven EU compliant and controlled sanitary landfills</li> <li>• Waste is disposed to controlled landfills in the southern part of the central region and in the coastal region</li> <li>• Waste is disposed in regional dumpsites in the mountain region and the northern part of the central region</li> <li>• Livade landfill: input of 65 000 tonnes/year average. In the Strategic Master Plan for Waste Management at the national level, the Livada depot in Podgorica was designated for landfill of regional MSW for the capital of Podgorica, the municipality of Cetinje and the municipality of Danilovgrad</li> <li>• Možura landfill: input of 60 000 tonnes/year average. There is a regional sanitary landfill for MSW at Možura serving the municipalities of Bar and Ulcinj</li> </ul>

<ul style="list-style-type: none"> <li>• Number of uncontrolled sites in operation: 155</li> </ul>
Incineration
There are no plants that burn waste
<b>Other problems</b>
<ul style="list-style-type: none"> <li>• Dependence on foreign donors for investment in infrastructure</li> <li>• Low level of cooperation among municipalities</li> <li>• Lack of public involvement in waste separation</li> <li>• Weak domestic market for recyclables, so most secondary raw materials need to be exported, decreasing the profits from their sale</li> <li>• Lack of political will and low levels of coordination</li> <li>• Failure to enforce legislation</li> <li>• Lack of active engagement by stakeholders in taking up their tasks and responsibilities</li> </ul>
<b>Initiatives taken to improve municipal waste management</b>
<ul style="list-style-type: none"> <li>• 2008 pilot project 'Separate waste collection'</li> <li>• IPA 2009 Procurement of equipment and vehicles for public utility companies</li> <li>• 2013 programme 'Every can counts'</li> <li>• 2012 Regional landfill for Bar and Ulcinj</li> <li>• 2014 Montenegro industrial waste management and clean-up project</li> </ul>
<b>Possible future trends</b>
<p>Achieving the highest level of selective collection of waste and organising non-sanitary landfills</p> <p>When it comes to municipal waste, the focus should be on primary selection, bringing it closer to the population, to raise the awareness of the public about the necessity of taking such action and all the benefits that it brings</p>
<b>Sources</b>
<p>CIA, 2017, 'The World Factbook — Montenegro, Central Intelligence Agency (<a href="https://www.cia.gov/library/publications/the-world-factbook/geos/mj.html">https://www.cia.gov/library/publications/the-world-factbook/geos/mj.html</a>) accessed 27 September 2017.</p> <p>EEA, 2015, <i>Montenegro country briefing — The European environment — state and outlook 2015</i>, European Environment Agency (<a href="https://www.eea.europa.eu/soer-2015/countries/montenegro">https://www.eea.europa.eu/soer-2015/countries/montenegro</a>) accessed 6 September 2017.</p> <p>European Commission, 2014, <i>Enlargement strategy and main challenges 2014-15. Montenegro progress report</i> (<a href="http://ec.europa.eu/enlargement/pdf/key_documents/2014/20141008-montenegro-progress-report_en.pdf">http://ec.europa.eu/enlargement/pdf/key_documents/2014/20141008-montenegro-progress-report_en.pdf</a>) accessed 27 September 2017.</p> <p>Ministry of Sustainable Development and Tourism, <i>Waste Management Plan 2015-2020</i> (<a href="http://www.mrt.gov.me/ministarstvo">www.mrt.gov.me/ministarstvo</a>).</p> <p>Monstat, Montenegrin Statistical Office (<a href="https://www.monstat.org">https://www.monstat.org</a>).</p> <p>UNECE, 2015, <i>Environmental performance reviews — Montenegro. Third review</i>, United Nations Economic Commission for Europe (<a href="https://www.unece.org/fileadmin/DAM/env/epr/epr_studies/ECE_CEP_173.pdf">https://www.unece.org/fileadmin/DAM/env/epr/epr_studies/ECE_CEP_173.pdf</a>) accessed 21 November 2017.</p>