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## **Circular Economy Country Specific Report**

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*Montenegro*

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## 1. Introduction

### Circular Economy in the European policy context

In March 2020, the European Green Deal offered a new Circular Economy Action Plan focusing on the sustainable use of resources, in particular in the textile industry and construction.<sup>1</sup>

This Circular Economy Action Plan provides a future-oriented agenda for achieving a cleaner and more competitive Europe in co-creation with economic actors, consumers, citizens and civil society organisations. It aims at accelerating the transformational change required by the European Green Deal, while building on circular economy actions implemented since 2015. This plan will ensure that the regulatory framework is streamlined and made fit for a sustainable future, that the new opportunities from the transition are maximised, while minimising burdens on people and businesses.

The plan presents a set of interrelated initiatives to establish a strong and coherent product policy framework that will make sustainable products, services and business models the norm and transform consumption patterns so that no waste is produced in the first place.

This product policy framework will be progressively rolled out, while key product value chains will be addressed as a matter of priority. Further measures will be put in place to reduce waste and ensure that the EU has a well-functioning internal market for high quality secondary raw materials. The capacity of the EU to take responsibility for its waste will be also strengthened.

Europe will not achieve a transformative change by acting alone. The EU will continue to lead the way to a circular economy at the global level 7 and use its influence, expertise and financial resources to implement the 2030 Sustainable Development Goals. This plan aims also at ensuring that circular economy works for people, regions and cities, fully contributes to climate neutrality and harnesses the potential of research, innovation and digitalisation. It foresees the further development of a sound monitoring framework contributing to measuring well-being beyond GDP.

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<sup>1</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020DC0098&from=EN>

## Circular Economy in Montenegro

The concept of circular economy is quite new in Montenegro. The first analysis regarding circular economy in Montenegro was conducted in 2014 by the **UNDP (United Nation Development Programme)** in the document: *Resource efficiency and sustainable human development*.<sup>2</sup> According to the above-mentioned document, an analysis of national policies concludes that the concept of a circular economy is far from being implemented in Montenegro, and that the efficient use of resources has not been directly integrated into Montenegrin policies and regulations. However, this document also identifies some positive developments: Issues such as stimulation of innovations and productivity, mitigation of the impacts of economic growth, sustainable management of natural resources and governance improvements are integrated into the **National Sustainable Development Strategy (NSDS) 2007 – 2012**.<sup>3</sup>

The National Strategy for Sustainable Development by 2030, which fully transposed the UN Agenda 2030, recognized the importance of the transition to a circular economy. One of the main goals of this Strategic document is: **“Improve waste management applying the circular economy-based approaches”** as priority number one. In order to achieve this goal it is necessary to apply the following measures:

- Encourage activities aimed at the reduction of waste generated in the territory of Montenegro,
- Apply primary selection of waste as efficiently as possible, as a prerequisite for the achievement of clearly defined goals in the area of re-use and recycling of discarded materials (which implies considerable investments into the separate collection systems in the coming period, followed by appropriate awareness raising programs);
- Establish efficient waste selection and recycling (collection, separation, treatment, re-use of recyclables, as well as a system for prevention of waste – include incentives for the delivery of recycling activities, stimulate secondary raw materials market and demand for recyclables);
- Develop a system for management of special waste streams (e.g. used batteries and accumulators, used tires, end-of-life vehicles, waste electric and electronic equipment, packaging waste, construction and demolition waste), biodegradable waste, sewerage sludge, veterinary waste, animal by-products, medical waste, industrial waste;
- Circular economy approaches should be gradually introduced into the waste management system (shift from “landfill system” to circular waste management system), applying measures for the encouragement of resource-efficient use of raw materials in production, enabling reduction of waste generation, especially of hazardous waste generation and use of waste as alternative fuel, applying the approaches based on recognition of economic and environmental importance of waste, establishing macro analysis and sector material flow analyses – MFA, and introducing related circular economy indicators);
- Improve the application of penalties in waste management, and raise awareness about the importance and advantages of sustainable waste management (ecological knowledge, ecological behaviour, ecological situation valuation).<sup>4</sup>

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<sup>2</sup> UNDP\_Resource efficiency and sustainable development 2014

<sup>3</sup> National Sustainable Development Strategy 2007 – 2012

<sup>4</sup> National strategy for sustainable development by 2030

The beginning of industrialization and transition towards market-based economy brought an unsustainable model of economic growth to Montenegro, which is similar to many other developing countries “**take, produce, consume and discard**”; it is a linear model resulting from the assumption that quantities of materials extracted from nature are inexhaustible.

According to the 2013 Report on the implementation of the Ministry of Sustainable Development and Tourism, estimated quantities of generated waste amounted to 243,941 tons, and in the period between 1990 and 2011, emissions of gases from waste had been reduced by only 20%. Taking into account that linear economic growth model turned out to be unsustainable and that competition for use of scarce raw materials has become ever stronger, **transition to circular zero waste economy** has become one of the prerequisites for sustainable development and increased resource efficiency.

Besides the National Strategy for Sustainable Development by 2030, the concept of circular economy is recognized in the proposal of the Law on Waste Management (Official Gazette of Montenegro, 64/2011). In the new proposal of the draft **Law on waste management** the amended directives which are in a circular economy package are partially transposed spatially in terms of percentage of recycling rate. The development of the new Law on Waste Management was planned for the end of 2018 (new deadline is end of 2020), but the Law has not been prepared and adopted yet. The new Law on Waste Management will transpose amendments directives, which are part of the Circular Economy package.

The Government of Montenegro, the Chamber of Economy of Montenegro, UNDP in Montenegro and Circular Change have already started work to develop a Roadmap on circular economy for Montenegro.

## 2. Monitoring progress

Monitoring of the transition and achieving more sustainable resources in the economic cycle in the country is a challenging task, especially in relation to availability of and accessibility to relevant, verifiable data, as well as the indicators needed to measure progress.

### Legislation: general overview and main aspects

No	Name	Relevance	EU levers (examples)	National legislation
<b>Production and consumption</b>				
1	<i>Self-sufficiency for raw materials</i>	Circular economy should help to address the supply risks for raw materials, in particular critical raw materials.	Raw Materials Initiative; Resource Efficiency Roadmap	

2	Green public procurement	Public procurement accounts for a large share of consumption and can drive circular economy.	Public Procurement Strategy; EU support schemes and voluntary criteria for green public procurement	<ul style="list-style-type: none"> <li>• Law on Public Procurements (2017)</li> <li>• Strategy for the Development of a Public Procurement System in Montenegro for the period 2016-2020</li> <li>• Annual report 2017 – Realization measures from the Action Plan of the Strategy for the Development of a Public Procurement System</li> </ul>
3a-c	Waste generation	In a circular economy, waste generation is minimised.	Waste Framework Directive; directives on specific waste streams; Strategy on Plastics	<ul style="list-style-type: none"> <li>• UNDP Resource efficiency and sustainable human development.</li> <li>• National Sustainable Strategy 2007 - 2012</li> <li>• National Strategy for Sustainable Development by 2030</li> <li>• Waste Management Strategy by 2030</li> <li>• National Waste Management Plan (2015-2020)</li> <li>• Local waste management plans</li> <li>• National Strategy for Approximation in Montenegro for the period 2016-2020</li> <li>• Law on Waste Management 2016</li> <li>• Report on the Implementation National Waste Management Plan 2017</li> </ul>
4	Food waste	Discarding food has negative environmental, climate and economic impacts.	General Food Law Regulation; Waste Framework Directive; various initiatives (e.g. Platform on Food Losses and Food Waste)	<ul style="list-style-type: none"> <li>• Law on Waste Management 2016</li> <li>• National Waste Management Plan (2015-2020)</li> <li>• National Strategy for Sustainable Development by 2030</li> </ul>
<b>Waste management</b>				
5a-b	Overall recycling rates	Increasing recycling is part of the transition to a circular economy.	Waste Framework Directive	<ul style="list-style-type: none"> <li>• National Strategy for Sustainable Development by 2030</li> <li>• Waste Management Strategy by 2030</li> </ul>

6a-f	Recycling rates for specific waste streams	This reflects the progress in recycling key waste streams.	Waste Framework Directive; Landfill Directive; directives on specific waste streams	<ul style="list-style-type: none"> <li>• National Waste Management Plan (2015-2020)</li> <li>• Law on Waste Management (2016)</li> <li>• Regulation on the method and procedure for the application of battery and accumulators in the market, establishment of the termination collection and determination (2010)</li> <li>• Regional and local waste management plans</li> <li>• Rulebook on landfills</li> <li>• Report on the implementation of National Waste Management Plan</li> <li>• Rulebook on the methodology for establishing the price for communal services</li> </ul>
<b>Secondary raw materials</b>				
7a-b	Contribution of recycled materials to raw materials demand	In a circular economy, secondary raw materials are commonly used to make new products.	Waste Framework Directive; Eco-design Directive; EU Ecolabel; REACH; initiative on the interface between chemicals, products and waste policies; Strategy on Plastics; quality standards for secondary raw materials	<ul style="list-style-type: none"> <li>• Waste Management Strategy (2008-2020)</li> <li>• National Strategy for Clean Development Mechanism (2007)</li> <li>• Set of Rulebooks on eco labelling (food, chemicals, textile, wood, detergents, tourists accommodation)</li> <li>• Decree on the procedure for establishing a system of collection and treatment of the waste packaging (OGM, 42/12)</li> <li>• Decree on the method and procedure for establishing the system for acceptance, collection and treatment of waste batteries and accumulators and operation of the system (OGM, 39/12).</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>• <i>Import, export and transit of hazardous waste in Montenegro is performed according to the Basel Convention on the Control of Transboundary Movement of Hazardous Waste and its storage.</i></li> </ul>
8	Trade in recyclable raw materials	Trade in recyclables reflects the importance of the internal market and global participation in circular economy.	Internal Market policy; Waste Shipment Regulation; Trade policy	
<b>Competitiveness and innovation</b>				

9a-c	Private investments, jobs and gross value added	This reflects the contribution of the circular economy to the creation of jobs and growth.	Investment Plan for Europe; Structural and Investment Funds; InnovFin; Circular Economy Finance Support Platform; Sustainable Finance Strategy; Green Employment Initiative; New Skills Agenda for Europe; Internal Market policy	<ul style="list-style-type: none"> <li>• Horizon 2020</li> <li>• Strategy for the development of Micro, Small and Medium enterprises in Montenegro 2018 – 2022</li> </ul>
10	Patents	Innovative technologies related to the circular economy boost the EU's global competitiveness.	Horizon 2020	INVO Project – setting up the scientific technology park – ongoing

## Quality of Data

Quality data generation (and availability) is a prerequisite for designing evidence-based strategies and for further monitoring of the progress in any sector, including the developments in the sectors that are fundamental for circular economy (aspects of circularity of resources in the production and consumption, from waste management, secondary raw materials, stimulation of circularity of resources in competitiveness and innovation initiatives).

Data on **municipal waste** are unreliable and inconsistent. Data on industrial wastes are of low quality. The scope for measuring performance against key targets is limited as the data are absent or unreliable, and the basis for forward projections is relatively weak. These data-related shortcomings are recognised in the National Plan for waste management 2015 - 2020.<sup>5</sup>

For instance, concerning waste management, even though there are legal provisions (Rulebook on the manner of keeping records of waste and the content of a form on waste transport (Official Gazette of Montenegro, 50/12);) the data is inconsistent.

For example: according to the MONSTAT (Statistical Office of Montenegro) the total amount of the collected communal waste for 2017 is **292.762t**,<sup>6</sup> according to the Ministry for Sustainable Development and Tourism the total amount of the collected communal waste in 2017 is **254.523t**.<sup>7</sup> This means that there is no standardized methodology between relevant institutions for collecting data regarding waste

<sup>5</sup> A comprehensive assessment of the current waste management situation in South East Europe and future perspectives for the sector including options for regional co-operation in recycling of electric and electronic waste

<sup>6</sup> <https://www.monstat.org/userfiles/file/otpad/2017/Saopstenje%20Komunalni%20otpad%202017.pdf>

<sup>7</sup> Izvještaj o sprovođenju Državnog plana upravljanja otpadom 2015 – 2020 za 2017, oktobar 2018

management. Without a defined methodology for data collection about waste management between relevant institutions, there is no efficient way for waste management and transition from linear to circular economy.

The most important point related to the transition from linear to circular economy is establishing communal infrastructure for waste disposal.

In terms of landfill infrastructure, there are two sanitary landfills in the country designed in compliance with, or close to, EU standards. A further four are in various stages of design / seeking financial support.<sup>8</sup>

According to the **Report on the Implementation of the National Waste Management Plan in 2017**, from the total amount of generated waste:

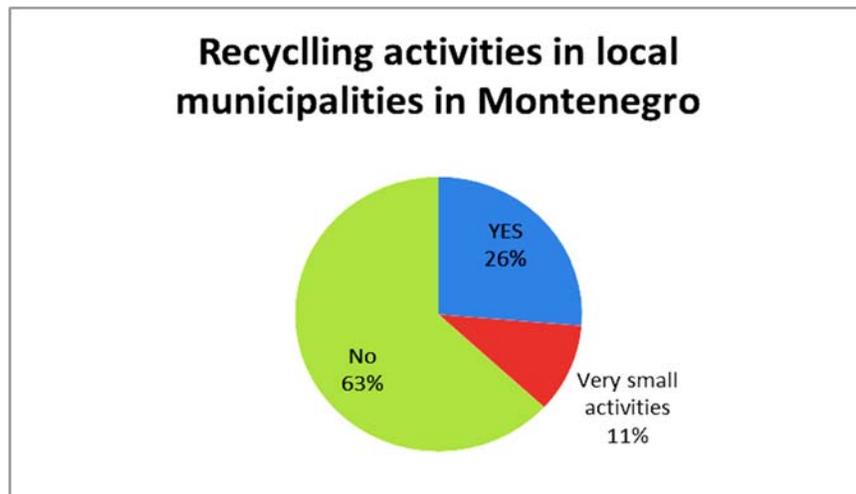
- 154,973 tons of municipal waste **were deposited at landfills (about 61%),**
- 50,147 tons of municipal **waste is temporarily stored (about 20%),**
- 4.416 tons of primary and secondary selection for reuse and recycling is separated;
- recyclable fractions, separately collected 21,987 tons of bulky and biodegradable waste. According to that, it can be concluded that about **10% of the total amount of municipal waste is reused or recycled;**

This unsatisfactory situation reflects inadequate infrastructure, especially in the North and the northern part of the Central regions, as well as a lack of proper enforcement in those areas where sanitary landfills already exist.

NGO Green Home has prepared an **Analysis of waste management in Montenegro**. For the purpose of analysis, it has used local and national waste management plans and annual reports on its implementation. In total it has analysed **19 local managements plans and reports on their implementation** where it should be applicable. Three municipalites (Plav, Nikšić and Budva) were not part of the Analysis because there were no plans available on their web sites even though Green Home asked for them according to the **Request for free access of information**. In five municipalities (Podgorica, Herceg Novi, Bar, Kotor and Tivat) activities related to the waste separation and recycling were conducted. Two municipalities, Kolašin and Mojkovac, recorded very few activities regarding waste seperation and recycling. In the rest of municipalities (in total 12) there is no amount of separate waste to be recycled.

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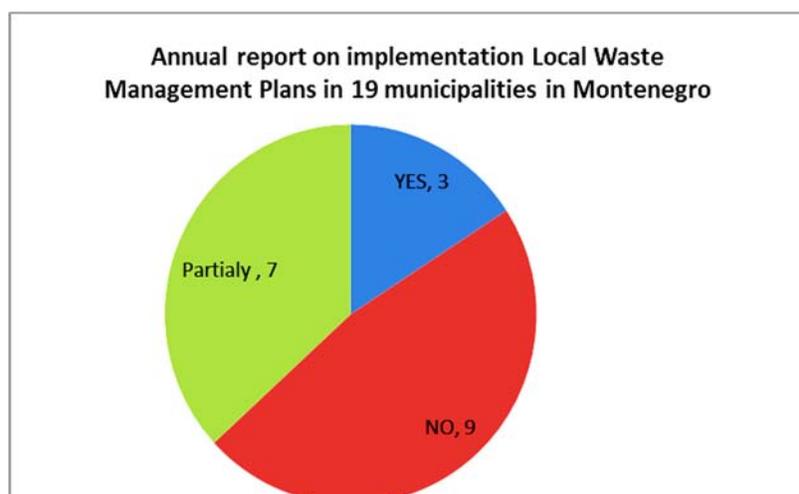
<sup>8</sup> These proposed landfills will be developed in Niksic (located in Budos), Herceg Novi (located in Duboki Do), Bijelo Polje (located in Celinska Kosa), and Berane (located in Vasov Do).



The reason behind this situation is related to lack of infrastructure and insufficient coverage of rural areas with communal services and infrastructure.

Two local government units - municipalities (Nikšić and Kotor) **have not established municipal waste management** in accordance with regulations.

According to the Law on Waste Management, municipalities are obliged to prepare an **Annual Report on the Implementation of Local Waste Management Plans**. According to the Analysis, **three municipalities** in total (Podgorica, Cetinje, Tivat) prepared annual reports according to the Law. **Nine municipalities have not prepared a report** and **seven other municipalities prepared a report but it does not include all necessary data** prescribed by the *Rulebook on the detailed content and manner of submission of annual reports on the implementation of waste management plans*.



According to the waste management analysis in Montenegro there are **373 unordered landfills** which include **temporary dumpsites** as well, although the deadline for their closure has expired.

In the municipality of Berane, a medical waste treatment facility was installed to collect medical waste from the territory of municipalities: Kolašin, Mojkovac, Bijelo Polje, Pljevlja, Berane, Rožaje, Andrijevica and Plav and in the City of Podgorica.<sup>9</sup>

### Circular Economy initiatives in Montenegro

In the recent years, there have been some initiatives and actions, which promote the concept of circularity of resources (materials, goods, and services) in the economy cycle, even though many were not explicitly named as “circular economy” activities.

- ***Bike-sharing***

Bike sharing is a service in which bicycles are made available for shared use to individuals on a short-term basis for a price or free. The capital city Podgorica has developed the business plan for this service and according to the business plan, it will cost 300.000EUR.<sup>10</sup>

- ***Reduction of communal waste and raising awareness of recycling***

Currently there are several on-going initiatives (International Coastal Day, Let’s do it Montenegro). The main aim of these campaigns is to support citizens to proactively participate in finding solutions to issues related to environmental protection, especially waste disposal.

- ***Smart city - Podgorica***

The capital city Podgorica, in cooperation with Siemens company, developed a Study entitled: “Development of energy efficient infrastructure” which is the first step towards developing Podgorica into a “smart city”. This study has been conducted within the global programme *Business to Society* which is funded by Siemens company.<sup>11</sup>

- ***Initiative: “Svaka limenka se računa” - Every can is counted***

The program "Every can is counted" is a partnership between can manufacturers, beverage manufacturers, the recycling industry and environmental organizations, who know how important cans are and want to encourage you to recycle more. The campaign "Every can is counted", launched in England, is also being reported in Ireland, Austria, Hungary, Romania, France, Scotland and Greece, and in 2013 it was conducted for the first time in Montenegro.<sup>12</sup>

- ***Collecting EE (electrical – electronic) waste in Montenegro***

The NGO 'Green Heart', in cooperation with Hemosan company, launched the action: collecting the EE waste. In 2015, under this initiative, a total of 150t of the EE waste was collected, stored and exported. Also, this NGO launched the first ecological – energy portal: [reciklirajte.me](http://reciklirajte.me).<sup>13</sup>

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<sup>9</sup> Analysis – Chapter 27, Environment and Climate protection, Coalition 27

<sup>10</sup> <http://www.vijesti.me/bike-sharing-sistem-u-podgorici-uskoro-20-elektricnih-i-80-konvencionalnih-bicikala-za-iznajmljivanje-991653>

<sup>11</sup> <http://podgorica.me/2018/06/15/predstavljena-studija-smart-city-podgorica-razvoj-energetski-efikasne-infrastrukture-i-servisa/>

<sup>12</sup> <http://www.svakalimenkaseracuna.me/o-nama>

<sup>13</sup> <http://www.vijesti.me/vijesti/drzava-se-ne-plasi-opasnog-otpada-980688>

- **MojeBiciklo**

MojeBiciklo service includes registration of bicycles and simple verification via the QR code, which enables protection of bicycles from theft and resale, as well as buyers of used bicycles with an insight into the correctness of bicycle ownership. Also, in this way, the purchase of bicycles from legal sellers is encouraged and the local economy is encouraged in the long run. The MojeBiciklo service is free for all users.

### 3. Findings

Using the approach and logic of the EU proposed Monitoring framework and indicators,<sup>14</sup> the assessment of the current state is grouped under the following stages and aspects of circular economy: (1) production and consumption, (2) waste management, (3) secondary raw materials and (4) competitiveness and innovation. This follows the logic and structure of the EU circular economy action plan in broad terms.

#### Production and consumption

*Limited progress can be observed towards more circular trends in production and consumption, in terms of waste generation.*

**The indicator on self-sufficiency is related to measuring the extent to which the country is dependant on the supply of raw materials. In that respect, Montenegro belongs to the group of raw materials dependant countries.**

According to the last press releases of the Statistical Office of Montenegro in the period January – December 2018<sup>15</sup> the data show that the export of goods amounted to 400.1 million euros, and imports amounted to 2 553,6billion euros.

In the structure of exports according to the Standard International Trade Classification (SITC), the products classified by material amounted to 107.2 million euros (of which: Non-ferrous metals - 74 million euros, Iron and steel – 18.9 million euros and others).

In the structure of imports, according to MONSTAT, the most represented are Machines and transport devices (sector 7) in the amount of 638.1million euros (out of which: Road vehicles – 187.2 million euros, Electrical machines, apparatuses and devices – 124.3 million euros and other)

Conclusion: having in mind this data, Montenegro **is an import dependant country.**

In terms of **energy**, according to the Energy balance for 2018,<sup>16</sup> the **realized production in 2018 was 3743,8GWh per year, the realized consumption was 3473,9GWh**, while for the mentioned year the total import was **752,5GWh**. Taking into account the above, it can be concluded that **Montenegro is energy-stable**, however, given that the biggest percentage of electricity comes from hydropower plants, there may be fewer or greater deviations from what is planned by the energy balance, and in that sense, there may be fluctuations in imports and exports electric energy (due to hydrological conditions).

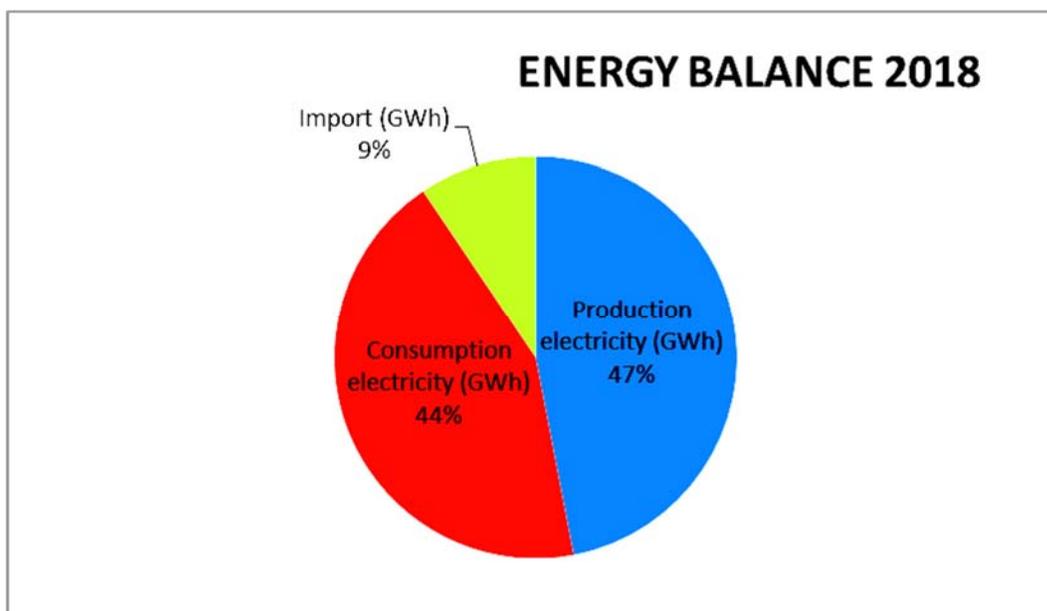
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<sup>14</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1516265440535&uri=COM:2018:29:FIN>

<sup>15</sup> <https://monstat.org/userfiles/file/spoljna%20trgovina/2019/Spoljnotrgovinska%20robna%20razmjena%20Crne%20Gore%20jan-dec%202018.pdf>

<sup>16</sup>

[http://www.epcg.com/sites/epcg.com/files/multimedia/gallery/files/2014/04/energetski\\_bilans\\_za\\_2018.\\_godinu.pdf](http://www.epcg.com/sites/epcg.com/files/multimedia/gallery/files/2014/04/energetski_bilans_za_2018._godinu.pdf)



**Public procurements** in Montenegro amounted to 10.38% of GDP in 2015.<sup>17</sup> Although the *Law on Public Procurements* stipulates possibilities to apply criteria related to environmental protection and energy efficiency (“green procurements”), this option is insufficiently used in practice.

In Montenegro, “**green public procurement**” is not widely used in a way to provide that aside from the prices of products and services, procurements take into account the costs of negative impacts of consumption and production on the environment and social aspects. In that context it is significant to emphasize that integration of energy efficiency requirements into the processes of public procurement is missing. There is no awareness, preparedness, nor legal and technical knowledge and skills of the officials in charge of the application of the criteria relevant for green public procurement during the implementation of tenders for the procurement of products and services without negative social and environmental impacts.<sup>18</sup>

## Waste Management

According to the data of the Statistical Office of Montenegro - MONSTAT the total amount of **generated municipal waste** in Montenegro in 2018 was **330,839 tones**.

Each inhabitant of Montenegro produces an average of 531.7 kg per year, or 1.46 kg of municipal waste per day. Compared to 2017, the total amount of collected municipal waste increased **by 2,1%**<sup>19</sup>. In total 292, 762 t was collected.

<sup>17</sup> Public procurements participated with 9.46% in GDP in 2014, Ministry of Finance, May 2016;

<sup>18</sup> National Strategy for Sustainable Development 2030

<sup>19</sup> State Statistical Office, News Release No, 99 from 03.06.2019.

According to the Statistical Office of Montenegro - MONSTAT, the total percentage of the separate fraction is 20%, from which: 12.3% green waste, 7,6 % separate collected fractions and packaging waste 0,1%.

According to the last report on the implementation of the National Management Plan for Waste Management 2015 – 2020 for 2017, landfill disposals amounted in total to 154,973t (61%); temporarily storage in total 50.147t (20%) and for only the recycling amount in total 26 403t (10%) (recyclable fractions, EE waste and green waste). This means that the dominant way in the management of collected municipal and other types of non-hazardous waste is the disposal, i.e., landfilling of the waste at legal and illegal landfills and recycling rate is 10%.

**There is no explicit data about the recycling rate of the packaging waste.** Pursuant to the draft proposal on Law on Waste Management Article 56, it is provided that:

An enterprise that manages an organized collection and treatment system for waste packaging must take measures to ensure recycling by December 31, 2030, at least 55% of the total weight of the packaging placed on the market in order to achieve at least the next recycling ratio of individual components:

- 1) 60% of the weight of glass;
- 2) 60% of the weight of paper and paperboard;
- 3) 50% of the weight of metal;
- 4) 22.5% of the weight of plastic;
- 5) 15% of the wood mass.

An enterprise that manages collection and treatment of packaging waste must undertake measures to ensure recycling by December 31, 2035 at least 65% of the total weight of the packaging placed on the market in order to achieve at least the next recycling ratio of individual components:

- 1) 70% of the weight of glass;
- 2) 75% of the weight of paper and paperboard;
- 3) 70% of the weight of iron metals and 50% of aluminum;
- 4) 50% of the weight of plastic;
- 5) 25% of the wood mass.<sup>20</sup>

Although they pose a serious threat to human health and environment, there are no precise data on specific types of waste in Montenegro, It is rarely recycled and most end up in landfills or burned. Among special types of waste, we can mention electrical and electronic products (EE), waste vehicles, tires, batteries and accumulators, waste oils, packaging, construction waste, asbestos waste, sewage sludge, medical and veterinary waste.

Precise data on quantities and types of waste do not exist, but projections in the State Waste Management Plan indicate that it is taking on alarming proportions.

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<sup>20</sup> Draft on Law on waste management – Should be adopted by the end of 2018.

In the context of waste management within circular economy, ***'Modern Waste Goals and Paths – Germany's expertise for an advanced circular economy' paper was developed by German experts.*** According to this document every country has to go through the following five phases when it comes to waste management and moving towards circular economy:

- Phase 1 – Extensive uncontrolled dumping
- Phase 2 – Reliable collection and better landfill sites
- Phase 3 – Separate collection and sorting
- Phase 4 – Expanding the recycling industry
- Phase 5 – Circular economy – waste as a resource

**Phases 3 – 5 constitute the transition from waste disposal to a circular economy**

If we replicate this scheme in Montenegro, based on the analysis conducted on local waste management plans, the situation is the following:

Center Nikšić – 76,873

Phase 1 - Extensive uncontrolled dumping

Phase 1 - Center Bijelo Polje – 169,014  
Extensive uncontrolled dumping

Center Podgorica – 225,613  
Phase 2  
Phase 3



Center Bar 149,531  
Phase 2 – Reliable collection and better landfill sites  
Phase 3 – Separate collection and sorting

### a. Secondary raw materials

The contribution of recycled materials to satisfying the demand for raw materials is still small to negligible. In Montenegro, there are recycling facilities for plastic, paper and vehicles. But, having in mind that the industry in MNE is not at the same technological level with EU countries, recycled materials are exported. However, the country lacks recycling facilities for glass, batteries, and electrical and electronic equipment.

### Competitiveness and innovation

Concerning innovation, the European Innovation Scoreboard<sup>21</sup> does not include Montenegro. As a rule, countries can be included only if data are available for at least 20 indicators. According to available data, Montenegro does not fulfil the conditions.

#### 4. Concluding notes

- Montenegro has not yet made the transfer from linear to circular economy.
- The concept of circular economy usually is identified with green economy;
- In terms of waste management as a part of circular economy, Montenegro is having trouble with the implementation of local management plans and unreliable data on communal waste.
- Barriers to the use of technical materials, including minerals, in the context of introducing circular economy concepts, are numerous.
- Mitigation of pollution or innovation is not encouraged, whereas lack of political and other measures for internalization of external costs is evident.
- Inter- sectoral and cooperation among separate chains of value is insufficient, potentially more efficient models of production and consumption are not well-accepted by producers and consumers.
- Lack of investments into renewal and maintenance of the existing infrastructure, into innovations and technologies is present (stuck with the use of existing technologies), as well as insufficient waste separation and recycling.

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<sup>21</sup> European Innovation Scoreboard 2018

## 5. References / Bibliography

A comprehensive assessment of the current waste management situation in South East Europe and future perspectives for the sector including options for regional co-operation in recycling of electric and electrical waste

Analysis – Chapter 27, Environment and Climate protection, Coalition 27

Draft on Law on waste management – Should be adopted by the end of 2018.

European Innovation Scoreboard 2018

Ministry for tourism and sustainable development - Information sent to Green Home by e – mail.

National strategy for sustainable development 2030

Public procurements participated with 9.46% in GDP in 2014, Ministry of Finance, May 2016;

State Statistical Office, News Release No, 9.1.18.01 from 20.04.2018

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