

Poštovani,

In release **Amount of waste generated from industry in 2016** (number 133, from 28 July 2018), there was a mistake in the published data that was due to the change of data by the reporting unit. Therefore, we publish a new release in which the data is corrected and you can use it.

For easier reference, the corrected data is shaken.

We apologize for the mistake we made.

Thanks for understanding.

## Amount of waste generated from industry 2016

The release comprises selected statistical data on the amount of waste generated and treated from industry in 2016. Waste from industry covers following sectors: B (Mining and quarrying); C (Manufacturing); D (Electricity, gas, steam and air-conditioning supply) and E (Water supply, sewerage, waste management and remediation).

In 2016 industry sectors generated 683 704.7 tons of waste, of that 360 116.7 tons of non-hazardous waste and 323 588.0 tons of hazardous waste.

Of the total 683 704.7 tons of waste generated in industry, mining and quarrying sector has generated 337 584.8 tons, i.e. 49.4%; manufacturing sector 36 476.3 tons, i.e. 5.3%; sector of electricity, gas, steam and air-conditioning supply 304 380.0 tons, i.e. 44.5% and sector of water supply, sewerage, waste management and remediation 5 263.6 tons, i.e. 0.8%.

By sectors relation between hazardous and non-hazardous waste was moving: mining and quarrying sector (95.3% hazardous waste, 4.7% non-hazardous waste), manufacturing sector (96.3% of non-hazardous waste, 3.7% of hazardous waste), sector of electricity, gas, steam and air-conditioning supply (non-hazardous waste almost 100%) and sector of water supply, sewerage, waste management and remediation (Non-hazardous waste 98.8%, hazardous 1.2%).

Of the total generated and stored waste in the amount of 696 167.3 tons in 2016, companies in the industry have internal disposed 91.2%, internal removed 3.3% of waste, temporarily stored 2.6% of waste, 2.2% delivered to other companies in Montenegro and exported 0.7%.

In internal treatment the most common operation is backfilling with 82.3%, incineration for energy purposes with 8.3%, followed by recycling with 7.4%, while other methods account for 2.0%. In 2016, companies in the industry sector internal disposed 634 810.2 tons of waste, with the most abundant D1 deposit into or onto land with 50.9%.

Industrial enterprises in Montenegro in 2016 are directly exported 4 720.3 tons of waste, of which 50.7% is waste from wood processing, 22.2% paper and paper and cardboard packaging, 20.8% metallic wastes and 6.3% anodes and other waste.

**Table 1. Industrial waste generated by sectors, 2016**

	Mining and quarrying	Manufacturing	Electricity, gas, steam and air-conditioning supply	Water supply, sewerage, waste management and remediation	Total
Non-hazardous waste	15 769.5	35 129.2	304 018.8	5 199.2	360 116.7
Hazardous waste	321 815.3	1 347.1	361.2	64.4	323 588.0
<b>TOTAL</b>	<b>337 584.8</b>	<b>36 476.3</b>	<b>304 380.0</b>	<b>5 263.6</b>	<b>683 704.7</b>

**Table 2. Industrial waste generated by Rulebook on waste catalogue, 2016**

		tons		
Types of waste per groups		Non-hazardous	Hazardous	Total
01	Wastes resulting from exploration, mining, quarrying, physical and chemical treatment of minerals	5 488.5	321 765.0	327 253.5
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	1 806.1	-	1 806.1
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard	6 911.4	-	6 911.4
04	Wastes from the leather, fur and textile industries	4.0	0.0	4.0
07	Wastes from organic chemical processes	34.0	-	34.0
08	Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), sealants and printing inks	0.1	0.2	0.3
10	Wastes from thermal processes	316 486.8	1 168.3	317 655.1
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics	749.9	0.1	750.0
13	Oil wastes and wastes of liquid fuels (except edible oils, 05 and 12)	-	285.8	285.8
14	Waste organic solvents, refrigerants and propellants (except 07 and 08)	-	1.1	1.1
15	Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified	1 554.2	6.4	1 560.6
16	Wastes not otherwise specified in the list	5 466.0	318.3	5 784.3
17	Construction and demolition wastes (including excavated soil from contaminated sites)	14 505.2	-	14 505.2
18	Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)	7.2	-	7.2
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use	2 999.3	41.2	3 040.5
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions	4 104.0	1.6	4 105.6
<b>TOTAL</b>		<b>360 116.7</b>	<b>323 588.0</b>	<b>683 704.7</b>

**Table 3. Industrial waste generated by Statistical classification of waste, 2016**

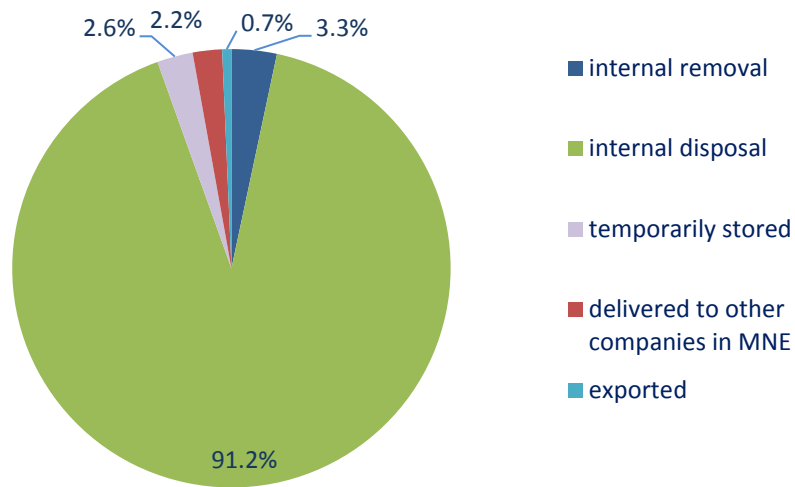
Description - Type of waste EWC/Stat Version 4		Character of the waste <sup>1</sup>	tons			
			Mining and quarrying	Manufacturing	Electricity, gas, steam and air- conditioning supply	Water supply, sewerage, waste management and remediation
01.1	Spent solvents	1	-	1.1	-	-
01.2	Acid, alkaline or salt wastes	1	-	358.2	-	0.2
01.3	Used oils	1	37.8	117.4	30.0	18.8
01.4, 02, 03.1	Chemical wastes	1	3.1	9.5	80.2	0.5
01.4, 02, 03.1	Chemical wastes	0	-	3 353.5	-	1.1
03.2	Industrial effluent sludges	1	-	0.6	-	33.5
03.2	Industrial effluent sludges	0	-	2 606.4	-	-
06.1	Metallic waste, ferrous	0	509.7	73.9	46.8	-
06.2	Metallic waste, non-ferrous	0	0.3	556.7	18.7	-
06.3	Metal wastes, mixed ferrous and non-ferrous	0	-	2 621.3	3.9	30.3
07.1	Glass waste	0	-	236.1	-	0.3
07.2	Paper and cardboard wastes	0	2.0	1 437.1	-	6.9
07.3	Rubber wastes	0	17.5	38.3	-	36.6
07.4	Plastic wastes	0	-	72.7	-	4.1
07.5	Wood wastes	0	-	6 878.9	-	1.7
07.6	Textile wastes	0	-	9.2	-	0.0
07.7	Waste containing PCB	1	-	1.0	-	0.7
08 (excluding 08.1, 08.41)	Discarded equipment (excluding Discarded vehicles and batteries and accumulators wastes)	0	0.0	75.8	78.9	0.4
08 (excluding 08.1, 08.41)	Discarded equipment (excluding Discarded vehicles and batteries and accumulators wastes)	1	1.1	1.8	136.6	1.7
08.1	Discarded vehicles	0	-	-	-	3.6
08.1	Discarded vehicles	1	-	-	104.9	-
08.41	Batteries and accumulators wastes	0	0.9	4.7	-	0.1
08.41	Batteries and accumulators wastes	1	8.3	2.2	2.5	8.4
09.1	Animal and mixed food waste	0	0.5	296.7	-	0.7
09.2	Vegetal wastes	0	-	776.7	-	-
09.3	Slurry and manure	0	-	466.0	-	-
10.1	Household and similar wastes	0	-	-	-	0.2
10.2	Mixed and undifferentiated materials	0	1.6	3 383.5	49.5	293.2
10.3	Sorting residues	0	-	1.3	-	-
10.3	Sorting residues	1	-	-	7.0	0.6
11	Common sludges	0	-	20.6	-	3 668.1
12.1	Mineral waste from construction and demolition	0	1.7	32.7	-	304.9
12.2, 12.3, 12.5	Other mineral wastes	0	2 470.7	6 050.7	-	37.0
12.2, 12.3, 12.5	Other mineral wastes	1	321 765.0	45.2	-	0.0
12.4	Combustion wastes	0	14.6	6 035.1	303 821.0	-
12.4	Combustion wastes	1	-	810.1	-	-
12.6	Soils	0	-	101.3	-	306.0
12.7	Dredging spoils	0	12 750.0	-	-	504.0
<b>Total</b>			<b>337 584.8</b>	<b>36 476.3</b>	<b>304 380.0</b>	<b>5 263.6</b>

<sup>1</sup> 1 - hazardous waste; 0 - non-hazardous waste

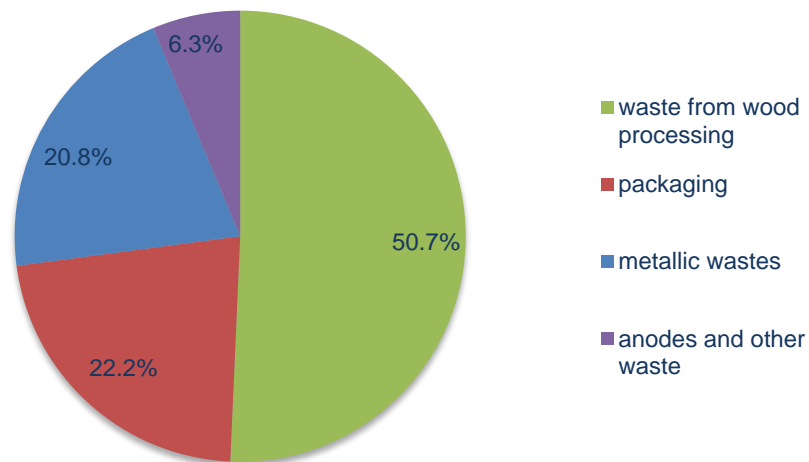
**Table 4. Treatment of waste in industrial companies, 2016**

	Internal treatment	Temporary storage	Delivered to another companies in Montenegro	Exported from Montenegro	Total
Non-hazardous waste	335 707.1	17 371.4	13 977.8	4 720.0	371 776.3
Hazardous waste	322 325.3	1 006.2	1 059.2	0.3	324 391.0
<b>TOTAL</b>	<b>658 032.4</b>	<b>18 377.6</b>	<b>15 037.0</b>	<b>4 720.3</b>	<b>696 167.3</b>

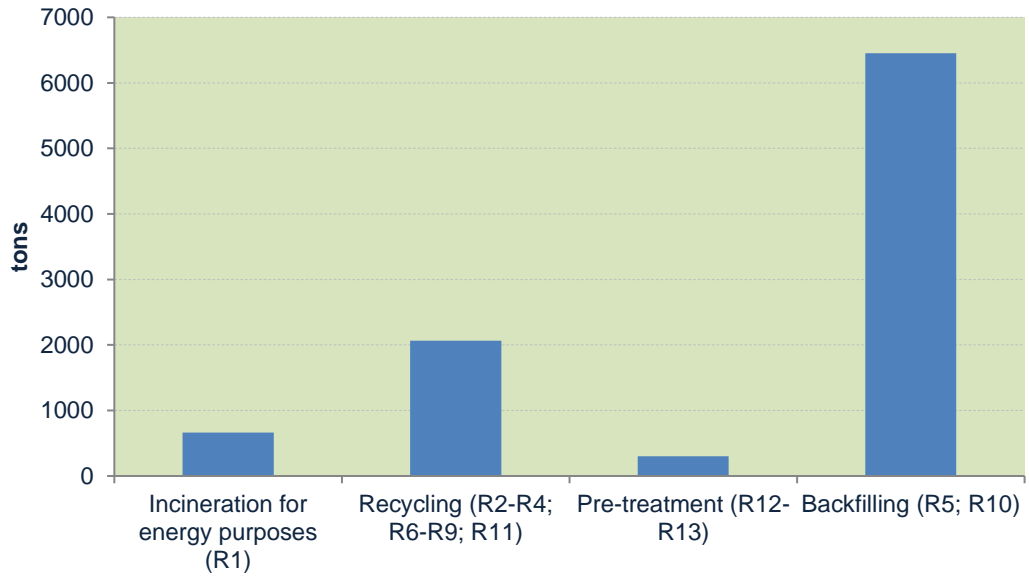
**Graph 1. Management of industrial waste, 2016**



**Graph 2. Export of industrial waste, 2016**



**Graph 3. Treatment procedures of industrial waste, 2016**



## METHODOLOGICAL NOTES

The data on industrial waste in 2016 were collected by statistical surveys on waste generated in the industry. Reporting method is used for data collection, and the geographical aspects covered are business entities that carry out its production activities in the whole territory of Montenegro. The report includes all businesses with 10 or more employees whose primary activity is defined in the sectors: B- Mining and quarrying sector, C-Manufacturing, D- Electricity, gas, steam and air-conditioning supply, and E- Water supply, sewerage, waste management and remediation i.e. areas 05-39 of the Classification of Activities 2010.

Data on industrial waste for 2016 were processed using statistical methods of imputation and weighting, in order to obtain greater coverage and international comparable data.

For the data collection is used of *Rulebook on waste catalogue and waste classification* (Official Gazette of Montenegro 64/11) which is compliant the European List of Wastes (LOW), and contains more than 800 types of waste systematized according to their characteristics and place of origin in 20 groups. Of these 20 groups, the most is based on activities in which waste is generated, while some groups are based on materials and processes.

**The Waste Catalogue (LoW)** is a list of waste according to the properties and place of origin, classified in groups, subgroups and types of waste from industries whose operations generate waste.

**Statistical Waste Catalogue EWC-Stat** is a list of waste according to material. It is classified on 51 types of waste and divided into hazardous and non-hazardous waste. International reporting is done according to EWC-Stat.

**Waste** is any substance or object which the holder has discarded or intends to discard or is obliged to discard in accordance with the law.

**The original waste producer** is any person whose activities produce waste.

**The holder of waste** is the producer of waste or any legal or natural person that owns waste

**Industrial waste** is waste generated in production processes in industry and crafts, and differs from municipal waste in their composition and characteristics.

**Hazardous waste** is waste containing elements or compounds having one or more of the following hazardous properties: explosiveness, reactivity, flammability, irritability, harmful, toxic, infectious, carcinogenic, corrosiveness, mutagenicity, teratogenicity, eco-toxicity, the property of abrasion and the property of release of toxic gases by chemical or biological reaction and sensitivity / irritability, as well as waste from which, after a delay, other matter may arise that has any of the hazardous properties.

**Non-hazardous waste** is waste whose composition and properties do not have any of the characteristics of hazardous waste.

**Waste treatment** is the procedure for processing of and/or disposal of waste, including preparation prior to treatment and/or disposal.

**Backfilling** means a recovery operation where waste is used in excavated areas (such as underground mines, gravel pits) for the purpose of slope reclamation or safety or for engineering purposes in landscaping and where the waste is substituting other non-waste materials which would have had to be used for the purpose.

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