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## **QUALITY REPORT 2018**

### **Survey on generated waste in industry**

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## **1. Introduction – Basic information about the survey**

### **1.1 Purpose, goal and subject of the survey**

The aim of Survey on generated waste in industry is to provide information on the type and quantity of waste that is generated, processed and disposed by companies (enterprises) from the industry sectors (B, C, D and E).

### **1.2 Legal basis**

The Law on Official Statistics and Official Statistical System ("Official Gazette of Montenegro" No 18/12) defines provisions for collection, processing, and dissemination of data. The Law provides to the Statistical Office clear and wide legal powers to collect and access the data necessary for the implementation of Programme and Annual Plan. The Law gives a priority to the use of administrative data and right of access to individual data that are a result of survey of other official statistical producers. As an annex to legal provisions, Statistical Office has signed several memoranda on cooperation with administrative data providers. During the developing of instruments for survey were used Regulation 2150/2002 of the European parliament and of the council of 25 November 2002 and Regulation 849/2010 amending Regulation (EC) No 2150/2002 of the European Parliament and of the Council on waste statistics of 27 September 2010.

### **1.3 Statistical units**

The observation units are companies (enterprises) with 10 or more employees, whose basic activity is defined in sectors B - Mining and quarrying, 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 Classification of Activities 2010, as well as parts of companies that perform industrial production.

### **1.4 Coverage and scope of survey**

#### **1.4.1 Sectors**

B Mining and quarrying; C Manufacturing; D Electricity, gas, steam and air-conditioning supply and E Water supply, sewerage, waste management and remediation.

#### **1.4.2 Statistical population**

Companies (enterprises) with 10 or more employees, whose basic activity is defined in sectors B - Mining and quarrying, 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 Classification of Activities 2010, as well as parts of companies that perform industrial production.

### **1.5 Reference geographical area**

Montenegro

### **1.6 Concepts and definitions**

Waste is any substance or object which the holder discards or intends to or is required to discard according to Law on waste management ("Official Gazette of Montenegro" No 064/11 from 29.12.2011, 039/16 from 29.06.2016).

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

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

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, ecotoxicity, 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.

## 1.7 Classification

NACE Rev 2

Rulebook on waste classification and waste catalogue ("Official Gazette of Montenegro" No 59/13 from 26.12.2013) European List of Waste - LoW Statistical classification of waste:

<http://www.monstat.org/eng/page.php?id=473&pageid=104>

## 1.8 Frequency of data collection

Data are collected annually.

## 1.9 Frequency of data dissemination

Data dissemination frequency is annual. Data are submitted to Eurostat every second year. Deadline for submission of data to Eurostat is 30 June of the current year.

## 1.10 Methodology

Not available.

## 1.11 Base period

Not relevant.

## 1.12 Unit of measure

kg, t

## 1.13 Data source

Data are collected from companies with 10 or more employees registered in the Statistical Business Register in sectors B - Mining and quarrying, C - Manufacturing, D - Electricity, gas, steam and air-conditioning supply and E - Water supply, sewerage, waste management and remediation ie. areas 05-39 of Classification of Activities 2010, as well as parts of companies that perform industrial production.

## 1.14 Method of data collection

Data collection is carried out by the interviewers, writing data on printed questionnaires.

## 2. Relevance - data users

### 2.1 User needs

International users:

1. Eurostat;
2. World Bank;
3. UN organizations;
4. International Monetary Fund.

National users:

1. Ministries and other public administration bodies;
2. Local government and other local government bodies;
3. Central bank;
4. non-governmental organizations;
5. students;
6. researchers;
7. media.

### 2.2 User satisfaction

The Statistical Office has adopted the Quality Management Strategy, the Guidebook to the Implementation of the Quality Management Strategy, as well as the Plan for the Implementation of the Quality Policy. In order to measure the degree to which fulfills obligations towards users and within the new quality policy, the

Statistical Office conducted User satisfaction survey. Data collection was carried out through a web survey, in the period from 1 September to 20 October, 2017. The results of the survey are available on the Statistical Office website, link: <http://www.monstat.org/userfiles/file/KVALITET/Izvjestaj%20o%20zadovoljstvu%20korisnika%20eng.pdf>

### **3. Accuracy and reliability**

#### **3.1 Accuracy – overall remark**

Survey on generated waste in industry includes enterprises with 10 and more employees and data are obtained by the survey method, so they are subject to the usual types of errors - mistakes in processing and non-response. In order to prevent the occurrence of errors, appropriate actions are taken to identify and eliminate potential sources of error.

#### **3.2 Sampling error**

Sampling error cannot be calculated because the survey was not conducted on the basis of a random sample.

*Indicators of sampling error (A1)*

Not relevant.

#### **3.3 Non-sampling error**

Non-sampling errors include: coverage error, error of measurement, response error and processing error.

##### **3.3.1 Coverage error**

Not available.

*Indicators of coverage error (A2)*

Not available.

##### **3.3.2 Error of measurement**

A measurement error is attempted to avoid with training the interviewers and controllers. Eventual measurement errors are corrected based on logic-numeric controls, comparison of data with previous years, other survey and contacting of reporting units in order to check the data.

##### **3.3.3 Non-response error**

Not available.

*Unit non-response rate (A3)*

Not available.

*Item non response rate*

Not available.

##### **3.3.4 Processing error**

Not available.

*Imputation rate*

Not available.

#### **3.4 Seasonal adjustment**

Not relevant.

## 3.5 Data revision

### 3.5.1 Data revision policy

Statistical Office has adopted the revision policy and it is available on the website:

<http://www.monstat.org/eng/page.php?id=1411&pageid=3>

### 3.5.2 Data revision practice

Not available.

### 3.5.3 Data revision - average size

Not available.

## 4. Timeliness and punctuality

### 4.1 Timeliness

According to the Annual Plan of Official Statistics and Statistical Release Calendar, the deadline for the publication of the Release Amount of waste generated from industry is July 26 of the current year. Data relate to the previous year.

*Time lag of the first results*

Not relevant.

*Time lag of the final results*

Time lag of the final results is the number of months from the last day of the reference period to the day of publication of complete and final results. It is expressed as number of days or months since the last date of the reference period until the date of dissemination of final results (in the form  $T + n$ , where  $n$  is a number of days or months).  $T1 = d_{finl} - d_{refp} = 7$  ( $T+7$ ).

### 4.2 Punctuality

Data are published according to 2019 Statistical Release Calendar of Statistical Office

## 5. Availability and clarity

### 5.1 Release calendar

The Law on Official Statistics and Official Statistical System (*"Official Gazette of Montenegro" No 18/12*) stipulates that official statistical producers prepare, update, and publish Statistical Release Calendar. It is published on the website of Statistical Office not later than 20 December for the next year, for all official statistical producers that includes date of releasing statistical data. Any change in date of releasing in the Calendar is published in advance in accordance with the Procedure on Unplanned Revisions.

### 5.2 Release calendar access

<http://www.monstat.org/eng/page.php?id=12&pageid=12>

### 5.4 Releases

Release Amount of waste generated from industry is available on the official website at the following link:

<http://www.monstat.org/eng/page.php?id=1336&pageid=64>.

### 5.5 Publication

Not available.

### 5.6 Online database

Not available.

### 5.7 Availability of microdata

The Law on Official Statistics and Official Statistical System (*"Official Gazette of Montenegro" No 18/12*) regulates rules under which external users can obtain an access to individual data for needs of research.

Article 58 defines types of scientific and research organizations that can obtain such data. Providing individual data without identifier is possible only upon a written request of scientific and research institutions, with purpose of performing scientific and research activities as well as international statistical organizations and statistical producers from other countries. Research entity signs the agreement with Statistical Office, and it signs the statement on respecting the confidentiality principle. Official statistical producers keeps a separate records on users and purpose of using the statistical data given to these users.

### **5.9 Metadata occupancy**

Not available.

## **6. Comparability**

### **6.1 Comparability - geographical**

The survey is in line with international standards and data are comparable with the EU countries.

### **6.2 Comparability over time**

Data are completely comparable. In order to obtain comparable data in accordance with international standards, i.e. Regulation on Waste Statistics 2150/2002, for the period from 2011 to 2015, the data on industrial waste were recalculated.

#### *Time comparability indicator*

The length of comparable time series is calculated by the following formula:  $CC1 = J_{last} - J_{first} + 1$   $J_{last}$  - number of the last reference period with disseminated statistics;  $J_{first}$  - number of the first reference period with comparable statistics. According to the above formula, the length of the comparable time series for this survey is 6 years.