



METHODOLOGICAL EXPLANATION

WASTE SLOVENIA

This methodological explanation relates to the data release:

- Waste, Slovenia, annually (First Release)

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1 PURPOSE

The purpose of publishing the data on waste is to show the data on the quantities of:

- Municipal waste generated in households and production and service activities
- Other waste generated in production and service activities
- Waste collected by specialized waste collectors
- Type of handling waste (recovery, disposal) that was taken over by the specialized waste processors
- Waste disposed on landfill sites
- Imported and exported waste

Key statistics are data on the quantities of waste generated by type of waste and the origin of their generation, as well as information on waste management (collection, treatment, disposal, import, export, other waste).

2 LEGAL BASIS

- [Annual Programme of Statistical Surveys \(LPSR\)](#) (only in Slovene)
- [National Statistics Act](#) (OJ RS, No. 45/95 and 9/01)
- Regulation on Waste (OJ RS, No. 37/15 and 69/15)
- Regulation on the Landfill Sites of Waste (OJ RS, No. 10/14, 54/15, 36/16 and 37/18)
- Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council (CELEX 32014D0955)
- Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics (CELEX: 32002R2150).
- Commission Regulation (EU) No 849/2010 of 27 September 2010 amending Regulation (EC) No 2150/2002 of the European Parliament and of the Council on waste statistics (CELEX: 32010R0849)

Data are internationally comparable (with Eurostat data) and contribute to the production of European statistics.

3 UNIT DESCRIBED BY THE PUBLISHED DATA

The unit described by the published data is waste according to:

- Source of waste generation (production and service activities, households, import)
- Location of waste generation (cohesion and statistical regions, municipalities)
- The waste types (hazardous, non-hazardous, classified according to the European List of Wastes - LOW, according to the statistical classification of waste - EWC-Stat)
- Type of waste treatment (export, recovery, disposal, waste storage, other)
- Type of landfill sites
- Specific indicators (quantities per capita, shares)

The amount of waste (i.e. units described by the published data) is expressed in tons (t), individual indicators in kilograms (kg) per capita and shares (%).

4 SELECTION OF OBSERVATION UNITS

Observed units within the annual survey **Waste Collection** (ODP-zbiranje survey) are all business entities (full capture) to which the municipality has granted the right to implement the mandatory municipal public utility service of municipal waste collection, and all business entities (full capture) entered into the records of waste collectors at the Agency of the Republic Slovenia for the Environment (ARSO) register. The survey covers about 320 units.

Observed units within the annual survey **Waste Recovery/Disposal** (ODP-obdelava survey) are all business entities (full capture) entered into the records of the waste processors at ARSO for recovering or disposing of waste acquired from other waste holders and/or having an environmental permit for the recovery and/or disposal of waste, including landfill operators (municipal landfills, industrial landfills and hazardous waste landfills). The survey covers about 550 units.

Observed units within the annual survey **Waste Generation** (ODP-nastajanje survey) are taken from the Waste Collection (ODP-zbiranje survey) and Waste Recovery/Disposal (ODP-obdelava survey) surveys and supplemented with data (such as temporary storage of waste and waste export) from an administrative source (IS-Odpadki, ARSO – ODP-nastajanje survey). The survey covers about 14,000 units.

5 SOURCES AND METHODS OF DATA COLLECTION

The publication is the result of several separate annual surveys with which the Statistical Office of the Republic of Slovenia (SURS) monitors waste generation and waste treatment in Slovenia on the basis of data from an administrative source (information system IS-Odpadki, ARSO).

Reporting units report their data through the information system IS-Odpadki (an administrative source), which is administered by ARSO.

6 DEFINITIONS

Waste is a material or object from one of the groups of waste specified in the List of Waste (Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council), which the owner discards or intends or is required to discard. To protect the environment or other public benefits, waste must be collected, submitted for processing or disposal, transported, recovered or disposed of in a prescribed manner.

Hazardous waste is waste which displays one or more of the hazardous properties listed in annex of Commission Regulation (EU) No. 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98 / EC of the European Parliament and of the Council on waste and repealing certain directives.

Municipal waste is waste from households and similar waste from trading, manufacturing, business services and other activities and also from the public sector.

Separately collected fractions are waste from a subgroup of "Separately collected fractions" and separately collected packaging waste that is municipal waste from a subgroup of "Packaging", including separately collected packaging waste from municipal waste from the List of Waste (Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council).

List of Waste (LoW) is a list of hazardous and non-hazardous waste defined by Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council. Waste is classified into groups according to its origin. In addition to the name, each waste has a six-digit number. If the waste is hazardous, the number is followed by an asterisk. The generator of waste is responsible for the classification of waste into the appropriate group.

Waste producer is anyone whose activities produce waste (original producer) and/or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste.

Waste collector is a legal entity or an individual entrepreneur that performs the activity of waste collection in accordance with the Regulation on Waste (OJ RS, No. 37/15 and 69/15). A collector can start collecting waste after obtaining the decision of entry into the record of waste collectors from the Slovenian Ministry of the Environment and Spatial Planning (MOP) – ARSO.

Waste processor is a legal entity or an individual entrepreneur that performs the activity of waste recovery in accordance with the Regulation on Waste (OJ RS, No. 37/15 and 69/15) and has the environmental permit for waste recovery from the Ministry of the Environment and Spatial Planning - Slovenian Environment Agency.

Waste disposer is legal entity or an individual entrepreneur that performs the activity of waste disposal in accordance with the Regulation on Waste (OJ RS, No. 37/15 and 69/15) and has the environmental permit for waste disposal from the Slovenian Ministry of the Environment and Spatial Planning – Slovenian Environment Agency.

Waste management covers collection, transport, recovery and disposal of waste, including supervision of such operations and after-care of disposal sites, and of a dealer or broker.

Waste collection is waste assuming, including its previous storage for purposes of transport, to a waste treatment facility.

Separate waste collection is a collection, where the waste streams are separated according to the type and nature of the waste to facilitate a specific type of waste treatment.

Waste treatment includes recovery or disposal operations, including preparation for recovery or disposal. A waste treatment contractor may commence with waste treatment activities after obtaining an environmental permit for waste treatment from the Slovenian Ministry of the Environment and Spatial Planning – Slovenian Environment Agency.

The **preparation for recovery or disposal** includes processes R12 and R13 from Annex 2 and processes D8, D9, D13, D14, D15 from Annex 3 of the Regulation on Waste (OJ RS, No. 37/15 and 69/15) and it means preparing the waste for recovery or disposal.

Waste recovery is a procedure the main result of which is that waste is usefully applied in the facility in which it has been processed, or in other economic activities in a way that it replaces other materials which would otherwise be used to fulfil a particular function, or is prepared to meet this function. The list of recovery procedures is set out in Annex 2 to the Regulation on Waste (OJ RS, No. 37/15 and 69/15), but this does not exclude other possible recovery procedures. In the environmental permit for waste recovery code (R) is determined, according to which the processor recovers the waste.

Recycling is any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Waste disposal is a procedure which is not recovery, even if it is a secondary consequence of the reclamation of substances or energy. The list of disposal procedures is set out in Annex 3 to the Regulation on Waste (OJ RS, No. 37/15 and 69/15), but this does not exclude other possible disposal procedures. In the environmental permit for waste disposal code (D) is determined, according to which the disposer disposes the waste.

Landfill is a waste disposal site for the deposit of the waste onto or into land (i.e. underground), including internal waste disposal sites (i.e. landfill where a producer of waste is carrying out its own waste disposal at the place of production), and a permanent site (i.e. more than one year) which is used for temporary storage of waste, but excluding:

- Facilities where waste is unloaded in order to permit its preparation for further transport for recovery, treatment or disposal elsewhere
- Storage of waste prior to recovery or treatment for a period less than three years as a general rule
- Storage of waste prior to disposal for a period less than one year

Submission of waste is waste submission for further waste management with the record sheet.

Leaving waste is waste submission for further waste management without the record sheet, when this is permitted under a special regulation governing the management of certain types of waste.

7 EXPLANATIONS

7.1 CLASSIFICATIONS

In the context of the data publication the following classifications are used:

- List of Waste (LoW). It is defined by Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council:
<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014D0955>
- The European Statistical Classification of Waste (EWC-Stat). Published within Annex 1 of Commission Regulation (EU) No 849/2010 of 27 September 2010 amending Regulation (EC) No 2150/2002 of the European Parliament and of the Council on waste statistics:
<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010R0849>
- Waste recovery operations (Operations R). Set out in Annex 2 of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives:
<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098&qid=1475136465792>
- Waste disposal operations (Operations D). Set out in Annex 1 of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives:
<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098&qid=1475136465792>
- Standard Classification of Activities (NACE Rev. 2). It is published on the SURS website (Methods and Classification - Classifications and code lists - Economic classification):
<https://www.stat.si/StatWeb/en/Methods/Classifications>
- Nomenclature of Territorial Units for Statistics (NUTS). It is published on the SURS website (Methods and Classification - Classifications and code lists - Territorial code list):
<https://www.stat.si/StatWeb/en/Methods/Classifications>

7.2 DATA PROCESSING

WEIGHTING

In surveys that form waste statistics, weighting is not used, because full capture of the units observed is applied.

STATISTICAL DATA EDITING

The statistical data from all three waste surveys (ODP-nastajanje survey, ODP-zbiranje survey, ODP-obdelava survey) are collected from an administrative source (IS-Odpadki, ARSO), statistically processed and published by SURS.

The data were statistically edited using appropriate systematic corrections, supplemented by individual corrections. Upon getting the data from the administrative source (IS-Odpadki, ARSO), the data are subjected to systematic control and certain systematic adjustments. This is followed by more extensive control of the data within which corrections are made at the individual level. More extensive data control compares the data on observed year with the data from the previous year and with the data from the record sheets database (IS-Odpadki, ARSO). A record sheet is a document, with which both waste holder and waste collector confirm waste shipment submission and takeover. Within the final analysis the data are compared for a longer time series by individual variables; any major discrepancies are further investigated.

More about the statistical data editing and tools used can be found in the general methodological explanations [Statistical data editing](#).

7.3 OTHER EXPLANATIONS

Some totals do not add up due to rounding.

8 PUBLISHING

Data are published:

Annually:

- SiStat Database: Environment and Natural Resources - Environment - Waste. The data are published in the form of an absolute value and are broken down by: LOW (European List of Waste), EWC-Stat (statistical list of wastes), NACE Rev. 2, NUTS
- First Release (Environment, Waste): "Waste, Slovenia, annually "
- Special publication on memorial days
- Statøbook
- European Statistical Office (Eurostat), the European Environment Agency (EEA)

Occasionally:

- Publications (Food among Waste, A Teaspoon of Data on Food; Green Growth Indicators; Environment, Energy and Transport in Figures; Tree, Forest, Wood; Sustainable Development Indicators for Slovenia)
- STAGE application

9 REVISION OF THE DATA

9.1 PUBLISHING OF PRELIMINARY AND FINAL DATA

Only final data are published.

9.2 BREAKS IN TIME SERIES

From 2012 on, due to changes in the methodology, the data on generated municipal waste were supplemented with the data on the quantities of municipal waste collected by other waste collectors. From 2013 on, the data on generated municipal waste were upgraded with the quantities of exported municipal waste and temporary stored municipal waste generated in production and service activities.

From 2013 on, due to changes in the methodology, the data on the quantities of waste generated from production and service activities exclude the data on the quantities of municipal waste generated in the production and service activities. The quantities of municipal waste generated in the production and service activities are added to the quantities of all municipal waste generated.

These methodological changes have led to changes in the presentation of data regarding the origin of the waste, but did not lead to breaks in time series, which is why all points in time, based on the total quantities of waste, are comparable.

A comprehensive revision of all waste surveys was carried out at SURS in 2017. On the basis of the requirements of the new Decree on Waste (OJ RS, No. 37/15 and 69/15), questionnaires were supplemented with the aim of following the entire waste stream from their generation to final treatment. For this purpose ARSO supplemented the information system IS-Odpadki, which became the basic source of data on waste and, except for the ODP survey, the only way of collecting waste data.

In the framework of the ODP survey, the methodology for capturing the observed units changed in 2017, when the total number of units exceeding one of the reporting thresholds determined by the mentioned Decree on Waste was exceeded in the observed year. As a basis for preparing the list of observed units in the framework of the ODP survey, data from the record sheets were used.

Data on the amount of waste generated for 2016 were thus obtained on the basis of the requirements of the new Decree on Waste (OJ RS, No. 37/15 and 69/15). Therefore, for some items (types of waste, generation by activity and by statistical regions) data for 2016 are not comparable with data from previous years. Data on the amount of generated construction and demolition waste collected in the framework of the ODP survey were incomplete and were therefore prepared on the basis of reports on the collection and treatment (recovery/disposal) of waste.

Data from the surveys ODP-zbiranje and ODP-obdelava and partly also data (on temporary storage and export of waste directly by the original waste generators) from an administrative source (IS-Odpadki, ARSO) were used to prepare data on the amount of waste generated in production and service activities (ODP-nastajanje survey) for 2018. The regional distribution of waste generation was prepared on the

basis of the location from where the submission of waste for further treatment by the original waste generator was made or on the basis of the location of the headquarters of the registered waste treatment company which submitted waste for further treatment.

The amount of waste generated in 2018 increased due to the increased quantities of construction and demolition waste in all activities and in all statistical regions. The fluctuation in quantities of municipal waste in some municipalities in 2018 is, compared to previous years, the result of stored and untreated quantities of waste from previous years.

Data broken down by the new NACE Rev. 2 are available from 2008 onwards. Older data broken down by the old NACE Rev. 1.1 are not updated and also not completely comparable with data broken down by the new NACE Rev. 2.

Methodological explanation on revision of statistical data is available on <http://www.stat.si/dokument/5299/RevisionOfStatisticalDataMEgeneral.pdf>.

10 OTHER METHODOLOGICAL MATERIALS

- Standard quality reports for the surveys (only in Slovene):
 - Collected Municipal Waste (KO-Z survey)
 - Amount of Waste Brought to Landfill Sites (KO-U survey)
 - Waste Generation in Production and Service Activities (ODP survey)
 - Collection of waste from production and service activities and waste recovery / disposal (ODP-Z and ODP-P surveys). Before 2015 the standard quality reports for ODP-P and ODP-Z surveys were prepared separately:
 - Waste Recovery/Disposal (ODP-P survey)
 - Waste Collected from Production and Service Activities (ODP-Z survey)

theme: Environment, sub-theme: Waste.

<http://www.stat.si/StatWeb/glavnavigacija/metode-in-klasifikacije/porocila-o-kakovosti>

- Annual quality reports for the surveys:
 - Waste Collection (ODP-zbiranje survey). Prior to 2018, the annual ODP-zbiranje survey report was prepared separately for each survey:
 - Collected Municipal Waste (KO-Z survey)
 - Waste Collected from Production and Service Activities (ODP-Z survey)
 - Waste Generation (ODP-nastajanje survey)
 - Waste Recovery/Disposal (ODP-obdelava survey). Prior to 2018, the annual ODP-obdelava survey report was prepared separately for each survey:
 - Waste Recovery/Disposal (ODP-P survey)
 - Amount of Waste Brought to Landfill Sites (KO-U survey)

theme: Environment, sub-theme: Waste.

<http://www.stat.si/StatWeb/en/mainnavigation/methods-and-classifications/quality-reports>

- Information system IS-Odpadki (ARSO) for reporting data within the ODP-nastajanje, ODP-zbiranje, ODP-obdelava surveys.
<http://okolje.arso.gov.si/odpadki/>
- Eurostat 2013: Manual on Waste Statistics, A handbook for data collection on waste generation and treatment.
<http://ec.europa.eu/eurostat/documents/3859598/5926045/KS-RA-13-015-EN.PDF/055ad62c-347b-4315-9faa-0a1ebcb1313e>