



## METHODOLOGICAL EXPLANATION

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# WASTE RECOVERY/DISPOSAL

This methodological explanation relates to the data releases:

- Waste, Slovenija, annually (First Release)



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## 1 PURPOSE

The purpose of publishing data on waste treatment is to show data on recovered and disposed quantities of waste including the import and export of waste.

Data from the ODP-obdelava survey are also used for the preparation of data within the ODP-nastajanje survey.

## 2 LEGAL FRAMEWORK

- [Annual Programme of Statistical Surveys \(LPSR\) \(only in Slovene\)](#)
- [National Statistics Act \(OJ RS, No. 45/95 and 9/01\)](#)
- [Regulation \(EC\) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics](#), CELEX No. 02002R2150-20050614
- Decree on Waste Regulation (Official Gazette of RS, Nos. [37/15](#), [69/15](#), [129/20](#), [44/22](#)- ZVO-2, [77/22](#)).

## 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, internal waste, import)
- Location of waste generation (cohesion and statistical regions, municipalities)
- The waste type (hazardous, non-hazardous), classified according to the European List of Waste - LOW and the European Waste classification - EWC-Stat)
- Type of waste treatment (export, waste storage, other treatment)
- Type of landfill site

## 4 SELECTION OF OBSERVATION UNIT

The units observed within the annual Waste Recovery/Disposal (ODP-obdelava) survey are business entities that, within the scope of their activity, collect waste from other business entities for the purpose of further recovery or disposal and are entered in the records of waste processors at the Slovenian Environment Agency (ARSO) for recovering or disposing of waste from other waste holders or have an environmental permit for the recovery and/or disposal of waste, including landfill operators (municipal landfill sites, industrial landfill sites and hazardous waste landfill sites) and also contractors for mechanical biological treatment of mixed municipal waste (MBO facility managers).

This survey includes also business entities that carry out recovery (with the exception of internal recycling, which is exempt from reporting) or the disposal of their own waste resulting from their activity.

The coverage is full. The survey includes about 600 units.

## 5 SOURCES AND METHODS OF DATA COLLECTION

Data are collected annually.

SURS collects data from an administrative source - IS-Waste application managed by the Slovenian Environment Agency (ARSO).

The IS-Odpadki application is intended for electronic support in the recording of shipments of waste with record sheets and is used also for the annual reporting on waste and its management.

## 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](#), [69/15](#), [129/20](#), [44/22](#) - ZVO-2, [77/22](#)). 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](#), [69/15](#), [129/20](#), [44/22](#) - ZVO-2, [77/22](#)) 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](#), [69/15](#), [129/20](#), [44/22](#) - ZVO-2, [77/22](#)) 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.

**Mechanical-biological treatment of waste** is the treatment of waste prior to its disposal at a landfill with a combination of mechanical and biological treatment operations. The purpose of mechanical waste management processes is to extract specific substances from waste that are unsuitable for further biological treatment and to improve the biodegradability of the remaining waste by increasing its suitability for biodegradation and homogeneity. The purpose of biological waste management processes is to decompose organic matter in waste by aerobic and anaerobic methods with subsequent aerobic treatment. Mechanical-biological treatment of waste results in a significant reduction of biodegradable substances in waste, the volume of waste, the water content of it, the ability to generate landfill gases, and significantly improves the properties

of the leachate and the stability of the deposited waste.

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](#), [69/15](#), [129/20](#), [44/22](#) - ZVO-2, [77/22](#)) 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](#), [69/15](#), [129/20](#), [44/22](#) - ZVO-2, [77/22](#)), 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.

**Landfilling** is any recovery operation in which suitable non-hazardous waste is used for the purpose of obtaining land in excavation areas or for engineering purposes in landscaping.

**Other waste recovery** includes other final waste recovery operations such as landfilling and the use of waste to cover landfills.

**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](#), [69/15](#), [129/20](#), [44/22](#) - ZVO-2, [77/22](#)), 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.

**Other waste disposal** covers other final waste disposal operations such as permanent storage of 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>
- 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>
- 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>
- 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

#### DATA EDITING

Data were edited by using appropriate systematic and individual corrections.

Upon take-over, the data are subjected to systematic control and certain systematic corrections in the first phase. This is followed by more extensive

control of the data within which corrections are made at the individual level. More extensive data control also compares the time data with the data from the previous year and the comparison with the data from the register of record sheets (IS-Odpadki, ARSO). A record sheet is a document by which the holder of the waste and the person who takes over the waste confirm the delivery and acceptance of the shipment of waste.

In the final analysis, the data are compared for a longer time series by individual variables; any major deviations (differences) are further checked.

For more, see the general methodological explanations [Statistical data editing](#).

## **WEIGHTING**

Weighting was not performed.

## **SEASONAL ADJUSTMENT**

Seasonal adjustment was not performed.

## **7.3 INDICES**

Indices are not published.

## **7.4 PRECISION**

The survey is not conducted on the basis of a random sample.

## **7.5 OTHER EXPLANATIONS**

Data on landfilled amounts of municipal waste by statistical regions and municipalities are statistically processed and recalculated per the entire population of Slovenia due to incomplete distribution by municipalities in the administrative source.

The 'backfilling' recovery process has been shown separately since 2011. He was previously involved in the 'waste recycling' recovery process.

## **8 PUBLISHING**

- SiStat Database: [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«.
- Electronic Release (Environment, Waste): "Food waste, Slovenia, annually"



- Electronic Release (Environment, Waste): "Infrastructure for waste management, Slovenia, biennial"
- Electronic Release (Environment, Waste): "Waste indicators, Slovenia, annually"
- [Statobook](#)
- [Food among Waste](#)
- [Sustainable Development Indicators](#)
- [A Teaspoon of Data on Food](#)
- [Green Growth Indicators](#)
- [Environment, Energy and Transport in Figures](#)
- [From tree to forest, from forest to wood](#)
- European Statistical Office (EUROSTAT)

## 9 REVISION OF THE DATA

### 9.1 PUBLISHING OF PRELIMINARY AND FINAL DATA

Provisional data are not disseminated. Only final data are published.

### 9.2 FACTORS INFLUENCING COMPARABILITY OVER TIME

From 1995, when the data collection on waste treatment began, to 2002, when a comprehensive revision of the surveys on waste statistics was carried out, we cannot speak of a time series of data. Changes in the legislation and the use of different waste classification lists from survey to survey have changed the methodology of data capture. During this period, the data on waste were collected every three years, i.e. for 1995, 1998 and 2001.

A more extensive revision was carried out on all surveys of waste statistics in 2002, with a radical break in the time series. The reasons for the break were:

- [Regulation \(EC\) No 2150/2002](#) on waste statistics was adopted in 2002, which set out additional, more specific requirements for conducting waste surveys, and a single waste classification list was amended and defined,
- an agreement on joint implementation of waste surveys was concluded between SURS and ARSO.

For the first time, the data from the Waste Recovery/Disposal survey for reference year 2011 also included data on the amount of domestic waste recovered or disposed of internally, while these data were previously included in the waste generation survey.

In 2014, reporting units started reporting data for reference year 2013 through the IS-Waste (ARSO) application.

In 2017, SURS switched from 5 surveys (ODP, ODP-Z, ODP-P, KO-Z and KO-U) to 3 surveys (ODP-nastajanje, ODP-zbiranje, which combines ODP-Z and KO-Z, and ODP-obdelava, which combines ODP-P and KO-U) and thus unified

with the administrative resource (IS-Waste, ARSO).

From reference year 2018 on, data from the ODP-obdelava survey are also used to prepare data on the amount of waste generated in production and service activities (ODP-nastajanje survey).

Data on waste are presented on the basis of the SKD (2008) from 2008 onwards and are not fully comparable with the data presented according to the SKD (2002).

The data on the amounts of backfilled and recycled waste have been adjusted for 2022 on the basis of upgraded report. The amounts of waste processed into materials usable for backfilling are included in the backfilling amounts of waste only. In previous years, part of this amount was also included in the recycled amounts of waste. For this reason, the total amount of treated waste by final treatment did not change compared to previous years, only the distribution between recycling and backfilling changed.

Since 2017, also the amount of waste used for construction at landfill is monitored. This quantity is included in the covering on landfill sites data. By 2020, the covering on landfill sites was classified as waste recovery, and from 2021, in accordance with the Commission's recommendations, it is classified as waste disposal.

## 10 OTHER METHODOLOGICAL MATERIALS

Methodological materials on SURS's website are available at <https://www.stat.si/statweb/en/Methods/QuestionnairesMethodologicalExplanationsQualityReports>.

- Questionnaire:
  - SURS does not collect data for this survey by using a questionnaire.
- Quality report for the survey:
  - Waste Recovery / Disposal (ODP-obdelava)

Theme: Environment, SubTheme: Waste

- Methodological explanations:
  - Food Waste

Theme: Environment, Subtheme: Waste

- Reference Metadata in Euro SDMX Metadata Structure: (ESMS): Quality Report on Waste Statistics, Reference year 2016, SLOVENIA, Regulation 2150/2002/EC on waste statistics