



## METHODOLOGICAL EXPLANATION

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# EXPLOITATION OF WATER IN INDUSTRY

This methodological explanation relates to the data releases:

- Exploitation of Water in Industry, Slovenia, annually (First Release)



September 2024

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## 1 PURPOSE

The purpose of the data release is to monitor exploitation of water resources for the industry needs. The published data present: the quantity of abstracted water, used water and wastewater in different industrial activities (mining and quarrying; manufacturing; electricity, gas and steam supply; water supply, waste management and remediation activities (by NACE Rev. 2)).

## 2 LEGAL FRAMEWORK

- [Annual Programme of Statistical Surveys \(LPSR\) \(only in Slovene\)](#)
- [National Statistics Act \(OJ RS, No. 45/95 and 9/01\)](#)
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (CELEX number 32000L0060)

## 3 UNIT DESCRIBED BY THE PUBLISHED DATA

The published data describe different units: abstracted water, used water and wastewater. Each of the units is described by various characteristics:

- abstracted water: section of activity and type of supply,
- used water: purpose of use, type of water, section of activity,
- wastewater: place of discharge, type of water, section of activity.

## 4 SELECTION OF OBSERVATION UNIT

Observation units are parts of business entities (units) which are according to the Standard Classification of Activities 2008 (NACE Rev. 2) classified into sections Mining and quarrying (B), Manufacturing (C), Electricity, gas steam and air conditioning supply (D), and Water supply, sewerage, waste management and remediation activities (E).

The survey Exploitation of water in industry includes with the method of threshold business entities that are according to NACE Rev. 2 classified into B, C, D and E activities, have at least 20 employees and in the reference year used at least 1,000 m<sup>3</sup> of water.

Also parts of business entities with fewer than 20 employees are included if they were in the observed year among larger users of water for industrial purposes.

Each year, in line with the mentioned criteria about 900 reporting units are included in the survey.

## 5 SOURCES AND METHODS OF DATA COLLECTION

Data are collected annually.

Data on exploitation of water in industry are collected annually with an online questionnaire Exploitation of water in industry (VOD-UVI). The questionnaire is answered by the units that in the reference period used 1,000 m<sup>3</sup> of water or more. The unit that used less water than the mentioned value in the observed year, immediately selects the answer that used less than 1,000 m<sup>3</sup> of water and then automatically continues in the notes section.

Data for the survey are not obtained from administrative sources.

## 6 DEFINITIONS

**Groundwater of larger aquifers** includes pumping stations at aquifers with granular porosity, springs/wells, groundwater pumping stations of aquifers with fissure porosity, carst/fissure porosity or mixed porosity.

**Springs of groundwater** that do not include a surface water inflow are carst sources, sources at contacts of more permeable layers with less permeable or non-permeable layers, and springs with a gravitational water inflow.

**Springs of groundwater with surface water inflow** are springs of groundwater into which surface water flows.

**Running waters** are rivers and streams.

**Stagnant waters** are natural lakes and artificial lakes.

**Natural lakes** are glacier lakes, periodic lakes and river lakes.

**Artificial lakes** are reservoirs, ponds, submerged gravel pits and puddles.

**Water from own water intake** is that amount of water that is pumped by the enterprise from its own water intake. This means that the enterprise has its own water intake for pumping water that it needs for sanitary purposes, for the technological process and for other uses.

The amount of water supplied by the business entity to other business entities is subtracted and the amount of water obtained by the business entity from other business entities is added.

**Water from hydroelectric power plants** is that amount of water that power plants use for driving their turbines.

**Water received from the public network** is that amount of water that the enterprise takes over from the public water supply network. The amount of water supplied by the business entity to other business entities is subtracted and the amount of water obtained by the business entity from other business entities is added.

**The public water supply network** is a system of structures under the unified supervision that supplies drinking water to users. Users can use the water for sanitary purposes, for the technological process or for any other purpose.

**Used water** is water used in the technological process with or without recirculation or reused water which after the use can be released into the sewage system, ground or watercourse but can also be reused as recirculation water or as reused water. In this case it is used in a number of production processes (cooling, steam and hot water production, etc.).

**Water used for production and cooling** is that amount of water which is consumed during the technological process and is thus eliminated from circulation: e.g. water lost through evaporation or water that becomes part of the product (food preservation, production of alcoholic and non-alcoholic beverages, etc.). Such water is thus raw material that comes in direct contact with the final product and is no longer available.

**Water for sanitary purposes** is water used for drinking, for personal hygiene of workers, for cleaning production facilities and worker canteens.

**Water for other purposes** is water used for washing vehicles, cleaning yards and watering green areas as well as water discharged as overflow.

**Fresh water** is water drawn from water resources in its natural state or water processed by the usual methods of coagulation, filtration, disinfection, etc. It is used as technological water or as drinking water.

**Technological water** is used for production and other purposes and does not have to meet the agreed standards for cleanliness of drinking water. The enterprise obtains this water from its own water intake, from the public water supply network or from others.

**Drinking water** meet standards with the Rules on drinking water. This water is mostly obtained from the public water supply network.

**Water in recirculation** is the annual quantity of water turned over in the recirculation system.

**Added fresh water** is water with which the enterprise substitutes water loss due to system operation.

**Reused water** is water that has already been used in the technological process and without which it would be necessary to use additional quantities of fresh water.

**Run-off rain water** is rainwater and other run-off rain water.

**Water from mines** is water used for washing out in mines.

**Wastewater** can be:

**untreated** or

**treated in industrial water treatment plants** (mechanical, chemical, biological, mechanical and chemical, mechanical and biological, chemical, biological or mechanical-chemical-biological).

**Place of discharge:** wastewater originating in industrial enterprises can be discharged into:

the **ground** (underground facilities for collecting wastewater, own fields for deposit, natural basins),

the **public sewage system**,

**surface waters** such as watercourses, artificial reservoirs, lakes and the sea.

## 7 EXPLANATIONS

### 7.1 CLASSIFICATIONS

The data are published according to NACE Rev. 2. You can read more about it [here](#).

Some data on the amount of abstracted water, used water and wastewater are also published at the level of the cohesion regions according to the [classification of territorial units for statistics in the European Union \(NUTS\)](#).

### 7.2 DATA PROCESSING

#### DATA EDITING

Data were edited by using appropriate systematic and individual corrections.

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

#### WEIGHTING

With weighting adjustment we want to achieve representativeness of the sample, so that the weighted data give us as good population estimates as possible. The process of weighting depends on the sampling design, the unit non-response rate and available auxiliary variables used for calibration. The final weight is the product of the sampling weight, the non-response weight and the calibration factor.

## **SEASONAL ADJUSTMENT**

Seasonal adjustment is not applicable.

## **7.3 INDICES**

Indices are not published.

## **7.4 PRECISION**

The precision is not calculated.

## **7.5 OTHER EXPLANATIONS**

Data that are statistically protected to respect the confidentiality of reporting units are replaced with the letter »z«.

## **8 PUBLISHING**

- SiStat Database: Environment – Water – [Exploitation of water in industry](#). Published data are absolute and on the level of Slovenia (NACE Rev. 2) and NUTS2.
- First Release (Environment, Water): »Exploitation of water in industry«.
- [Statobook](#)
- EUROSTAT (Statistical Office of the European Union)
- The Organisation for Economic Co-operation and Development (OECD)
- European Environment Agency (EEA)

## **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**

There were no breaks in the time series, all time points are comparable.

## 10 OTHER METHODOLOGICAL MATERIALS

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

- Questionnaire:
  - Exploitation of water in industry (VOD-UVI)

Theme: Environment, sub-theme: Water

- Quality report for the survey:
  - Exploitation of water in industry (VOD-UVI)

Theme: Environment, SubTheme: Water