

WATER USE AND PROTECTION AGAINST POLLUTION

LEGAL BASIS

Survey on water use and protection against pollution is conducted on the basis of Law on Official Statistics („Official Gazette of RS“, No. 104/2009).

METHODOLOGICAL BASIS

Objective and scope of the survey

The main objective of the survey is to collect information on the quantities of abstracted, used and wastewaters from industry. The survey provides the data on:

- Abstracted water quantities by supply sources: from self supply (with the indication of the name and location of the water source – basin) and from public water supply;
- Use of water by purpose: cooling, in power generation plants, production process, as well as sanitary waters and their use for other purposes;
- Total discharged wastewaters, including untreated waters, from which discharged cooling water, and treated waters treated by primary, secondary or tertiary treatment, discharged other types of water (rainwater, water from mining, etc.) as well as on location and type of abstraction;
- Characteristics of devices for wastewater treatment plants and their capacity;
- Reused waters by purpose: for cooling, for sanitary purposes, for transport of raw materials, for washing and washing and maintenance of devices and production sections;

Reporting units, statistical units

Reporting units for this survey are all business entities, classified according to Classification of Activities (CA 2010) in the sections: Mining and quarrying, Manufacturing and Electricity, gas, steam and air conditioning supply and divisions Waste collection, treatment and disposal activities; materials recovery and Remediation activities and other waste management services as well as local units from other sections, performing industrial activity.

Survey coverage

Coverage of the survey on water use and protection against pollution, covers business entities, which abstract, use and discharge wastewater on the whole territory of the Republic of Serbia. Starting from 1999 the Statistical Office of the Republic of Serbia has not at disposal and may not provide available certain data relative to AP Kosovo and Metohija and therefore these data are not included in the coverage for the Republic of Serbia (total).

Method, time and sources for data collection

Data collection is done by the reporting method, meaning that the reporting unit fills in the questionnaire VOD-1.

The reporting unit forwards the Annual survey on water use and protection against pollution to the relevant statistical authority not later than the deadline fixed in the annual plan.

Data sources refer to reporting unit's available documentation and records. If related records are non-existent for certain data, an expert will make an evaluation.

Obligation to protect individual data

The results of the survey are published as aggregates, considering the principle of individual data protection according to the Law on Official Statistics („Official Gazette of RS“, No 104/2009).

List and definitions of main items – indicators

Underground water relates to water stocks beneath the land surface.

Surface water refers to all running or stagnant waters on the surface of the Earth found in streams, rivers (watercourses), lakes, accumulations, etc, as well as in artificial waterways for the purpose of irrigation, creation of navigation canals, etc.

Own water abstraction source means any water abstraction by the user for its end-use consumption.

Water use refers to all the quantities of water supplied to the reporting units during the reference year for the purpose of undertaking their production activities.

Wastewaters are waters which are, after being used, transported to the treatment plant or let out in a water body (underground, surface waters). Atmospheric waters, flowing waters used in hydropower plants and cooling water are excluded.

Treated wastewaters are quantities of wastewaters treated during the reference year.

Primary treatment of wastewaters by physical and/or chemical procedure includes the collection of suspended particles, and other processes in which BOD is reduced by at least 20% before being discharged. It also covers the total suspended particles of incoming wastewaters reduced to by least 50%.

Secondary treatment of wastewaters includes biological treatment with secondary collection or by other by other processes, which result in COD reduction of at least 70% and COD reduction of at least 75%.

Tertiary treatment is the next wastewater treatment process after the secondary treatment of nitrogen and/or phosphorous and/or any other pollutant affecting the quality and specific use of water: organic pollution reduced up to at least 95% for BOD and 85% for COD, being: at least 70% nitrogen removal, at least 80% phosphorous removal and microbiological removal until a coliform density of 1000 in 100 ml is reached.

Reused waters are waters that were treated by wastewater treatments and were reused for: cooling, sanitary purposes, transport of raw materials, washing and maintenance of devices and production sections and for other purposes, and that were afterwards discharged into underground or surface watercourses or public sewerage systems. Wastewaters discharged in watercourses and re-abstracted, as well as used waters (used by other reporting unit) from the same watercourse are not to be taken as reused waters.

Effluent relates to technological wastewaters that are, as treated or untreated, discharged into public sewerage systems or surface waters, as well as wastewaters from public sewerage systems that are discharged into surface waters as treated or untreated.

Level of data representativeness (*territorial, CA*)

The data are representative for:

- territory of the Republic of Serbia up to the level of NSTU2;
- sections: Mining and quarrying, Manufacturing and Electricity, gas, steam and air conditioning supply and divisions Waste collection, treatment and disposal activities; materials recovery and Remediation activities and other waste management services.

Harmonization with international recommendations, standards and practice

The Survey has been harmonized according to requirements of „JQ OECD/ Eurostat“(JQ OECD/Eurostat – Inland water), questionnaire for Inland Water and questionnaire UNSD/UNEP – Environmental Statistics (UNSD/UNEP – Environmental statistics), in the section relative to water abstraction and use in industry, while the part concerning wastewaters has been only partially harmonized, in the part relating to quantities and sorts of wastewaters and treated waters.

DESCRIPTION OF THE SURVEY MANAGEMENT

Bodies in charge of the survey management

Preparations and conduction of this survey involves:

- Statistical Office of the Republic of Serbia: Group for Environmental Statistics in Belgrade, Statistical Department of AP Vojvodina and regional offices of the SORS and
- Secretariat for Administration – Statistical Sector, City of Belgrade

Obligation to provide data

The obligation to provide data is laid down in Article 26 and penalty provisions relative to the refusal of providing data or providing incomplete and false data in Article 52 of the Law on Official Statistics (“Official Gazette of RS”, No 104/2009).

Timetable of the main phases of the survey, including data publishing

Conducting the survey on water use and protection against pollution encompasses the activities that are realized in accordance with the Annual plan of official statistics, adopted by the Government of the Republic of Serbia.

- Distribution of the questionnaires to regional organizational units, Statistical Department of AP Vojvodina and Secretariat for Administration – Statistical Sector, City of Belgrade (February)
- Delivery of inputted and controlled material, (March)
- Logical and computer control, (June)
- Preliminary data, (June)
- Final data, (December).

SURVEY TOOLS

Questionnaire and instructions for filling the questionnaire

For conducting the survey on water use and protection against pollution, applied are the following survey tools:

- Questionnaire “Annual survey on water use and protection against pollution, VOD-1
- Instructions for filling the questionnaire.

Electronic form of the questionnaire is available on SORS website: www.stat.gov.rs

List of nomenclatures and classifications used in the survey

For the purpose of the survey the following is applied:

- Code list of rivers
- Classification of Activities (CA-2010, “Official gazette of RS”, No 54/10)
- Regulation on Nomenclature of Statistical territorial Units (“Official Gazette of RS”, No 109/09 and 46/10)

All documents are also available on SORS website: www.stat.gov.rs

List of publications in which the survey results are published

- Statistics Yearbook
- Statistical Pocket-book
- Eco-bulletin
- Statistical Release ZS50 – Water use and protection against pollution in the Republic of Serbia
- Website: www.stat.gov.rs

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