

C-5: Water supply industry and population connected to water supply industry

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1) General description

1.1) *Brief definition*

This indicator presents the total volume of water supplied to the users by the water supply industry – taking into account water losses during transport – and the population connected to the water supply industry, as a total and as a share in the total population.

1.2) *Units of measurement*

The total volume of water supplied by the water supply industry is measured in million cubic metres per year; the share of the total population connected to the water supply industry is provided as a percentage.

1.3) *Context*

Relation to other indicators from the Guidelines - This indicator relates to indicators “C-2: Freshwater abstraction”, “C-3: Total water use”, and “C-7: Water losses”.

2) Relevance for environmental policy

2.1) *Purpose*

The indicator provides a measure of pressure on the environment and a measure of adopted response to reduce this pressure. In addition, this indicator provides a measure of impact on human health and in a broader sense a measure of quality of life.

2.2) *Issue*

The term “water supply industry” describes public or private bodies whose main functions are water collection, treatment and distribution activities for domestic and industrial needs. The availability of water for meeting basic human needs is a prerequisite for life, health and economic development. This indicator is important for defining the level of development of water economy services and the degree of water accessibility to cover the needs of the population. The indicator also helps to identify trends in water supply in a particular country.

2.3) International agreements and targets

a) Regional level

The Protocol on Water and Health to the ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes requires that the Parties take all appropriate measures to ensure the adequate supply of healthy drinking water.

b) Subregional level

The Environmental Strategy of countries of South-Eastern and Eastern Europe, Caucasus and Central Asia, adopted by the 2003 Ministerial Conference "Environment for Europe", requires the preparation and implementation of programmes for integrated water management.

In the European Union, the Water Framework Directive (Directive 2000/60/EC) obliges the Member States to promote the sustainable use of available water resources based on long-term protection and to ensure a balance between abstraction and recharge of water with the aim of achieving a "good water status" by 2015. Council Directive 98/83/EC on the quality of water intended for human consumption sets drinking water quality standards and obliges the Member States to take the measures necessary to ensure that water intended for human consumption is healthy and clean.

3) Methodology and guidelines

3.1) Data collection and calculations

Data can be obtained from operators of the water supply industry. The Gross volume of water supplied by the water supply industry is calculated by summarizing annual capacities of particular water supply systems. In addition, to calculate the net volume of water supplied by the water supply industry, water losses during the distribution should be subtracted from the gross volume.

Data on the population connected to the water supply industry can also be obtained from the water supply industry, and/or from census and other targeted surveys, e.g. households' surveys.

The percentage of population connected to the water supply industry can be calculated as follows:

Percentage of population connected to water supply industry = (total number of population connected to water supply industry / total number of population).

3.2) Internationally agreed methodologies and standards

The UNSD/UNEP Questionnaire on Environmental Statistics (Table W3); The UNCSO Methodology Sheets for Indicators of Sustainable Development (Proportion of population using improved water sources); The ECE/WHO Guidelines on the Setting of Targets, Evaluation of Progress and Reporting under the Protocol on Water and Health; International Recommendations for Water Statistics (IRWS), UNSD 2010.

4) Data sources and reporting

Data are collected based on statistical reporting by countries of South-Eastern and Eastern Europe, Caucasus and Central Asia. In many of the countries databases and fairly exhaustive time series exist at level of water cadastres. Countries provide data to the UNSD Environment Statistics Database.

5) References at the international level

- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption
- 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 (Water Framework Directive): http://ec.europa.eu/environment/water/water-framework/index_en.html
- Environmental Indicator Report 2012, EEA 2012
- European Commission – Water Policy: http://ec.europa.eu/environment/water/index_en.htm
- European Environment Agency (EEA): <http://www.eea.europa.eu/themes/water>
- Europe's Environment, The Fourth Assessment, EEA 2007
- Eurostat: <http://epp.eurostat.ec.europa.eu/portal/page/portal/sdi/indicators>
- Global water information system of the Food and Agriculture Organization (AQUASTAT): http://www.fao.org/ag/agl/aglw/aquastat/water_res/waterres_tab.htm

- Indicators of Sustainable Development: Guidelines and Methodologies, third edition, United Nations 2007: http://www.un.org/esa/sustdev/natlinfo/indicators/methodology_sheets.pdf
- International Recommendations for Water Statistics (IRWS): <http://unstats.un.org/unsd/envaccounting/irws/irwswebversion.pdf>
- Protocol on Water and Health to the ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes: <http://www.unece.org/fileadmin/DAM/env/documents/2000/wat/mp.wat.2000.1.e.pdf>
- The European Environment: State and Outlook 2010: Synthesis, EEA 2010
- The Protocol on Water and Health: Guidelines on the Setting of Targets, Evaluation of Progress and Reporting, ECE/WHO 2010: http://www.unece.org/env/water/publications/documents/guidelines_target_setting.pdf
- United Nations Statistics Division (UNSD): <http://unstats.un.org/unsd/environment/>
- United Nations Statistics Division (UNSD)/United Nations Environment Programme (UNEP) Questionnaire on Environment Statistics (2013): <http://unstats.un.org/unsd/environment/questionnaire2013.html>
- World Health Organization (WHO): <http://www.euro.who.int/en/home>
- World Meteorological Organization (WMO): www.wmo.ch.