

## C-16: Polluted (non-treated) wastewaters

### Glossary, abbreviations and units of measurement

#### *Glossary:*

**BOD:** Biochemical oxygen demand – amount of dissolved oxygen required by organisms for the aerobic decomposition of organic matter present in water. This is measured at 20 degree Celsius for the period of five (BOD5) or 7 (BOD7) days.

**COD:** Chemical oxygen demand - the amount of oxygen consumed during the chemical oxidation of water contained in the organic and inorganic substances under the action of various oxidizing agents.

**Independent wastewater treatment:** Collection, preliminary treatment, treatment, infiltration or discharge of domestic wastewater from dwellings generally between 1 and 50 population equivalents, not connected to a wastewater collection system. An example is septic tanks. Excluded are systems with storage tanks from which the wastewater is transported periodically by trucks to a wastewater treatment plant.

**Other wastewater treatment:** Treatment of wastewater in any non-public treatment plant, i.e., industrial wastewater treatment plants (IWWP). Excluded from "other wastewater treatment" is the treatment in septic tanks.

**Population equivalent (1 p.e.):** The organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60 g of oxygen per day.

**Primary wastewater treatment:** Treatment of wastewater by a physical and/or chemical process involving settlement of suspended solids, or other process in which the biochemical oxygen demand (BOD5) of the incoming wastewater is reduced by at least 20% before discharge and the total suspended solids of the incoming wastewater are reduced by at least 50%. To avoid double counting, water subjected to more than one type of treatment should be reported under the highest level of treatment only.

**Secondary wastewater treatment:** Post-primary treatment of wastewater by a process generally involving biological or other treatment with a secondary settlement

or other process, resulting in a biochemical oxygen demand (BOD5) removal of at least 70%. To avoid double counting, water subjected to more than one type of treatment should be reported under the highest level of treatment only.

**Tertiary wastewater treatment:** Treatment (additional to secondary treatment) of nitrogen and/or phosphorous and/or any other pollutant affecting the quality or a specific use of water: microbiological pollution, colour etc. The different possible treatment efficiencies ('organic pollution removal' of at least 95% for BOD5, 85% for COD, 'nitrogen removal' of at least 70%, 'phosphorus removal' of at least 80% and 'microbiological removal') cannot be added and are exclusive. To avoid double counting, water subjected to more than one type of treatment should be reported under the highest level of treatment only.

**Urban wastewater treatment:** Urban wastewater treatment is all treatment of wastewater in urban wastewater treatment plants (UWWTP's). UWWTP's are usually operated by public authorities or by private companies working by order of public authorities. Includes wastewater delivered to treatment plants by trucks.

**Wastewater treatment:** Process to render wastewater fit to meet applicable environmental standards or other quality norms for recycling or reuse. Three broad types of treatment are distinguished. For purposes of calculating the total amount of treated wastewater, and in order to avoid double counting, volumes and loads reported should be shown only under the "highest" type of treatment to which it was subjected.

**Wastewater:** Water which is of no further immediate value to the purpose for which it was used or in the pursuit of which it was produced because of its quality, quantity or time of occurrence. However, wastewater from one user can be a potential supply to a user elsewhere. Cooling water is not considered to be wastewater.

***Abbreviations:***

AQUASTAT:	FAO's global information system on water and agriculture
ECE:	United Nations Economic Commission for Europe
EEA:	European Environment Agency
EU:	European Union
Eurostat:	European Union Statistical Office
FAO:	Food and Agriculture Organization of the United Nations
IRWS:	International Recommendations for Water Statistics

OECD: Organisation for Economic Co-operation and Development  
UNEP: United Nations Environment Programme  
UNSD: United Nations Statistics Division  
WHO: World Health Organization

***Units of measurement:***

m<sup>3</sup>: cubic metre