

Wastewater generation & treatment: the questionnaires and water accounting tables

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ABSTRACT: The relevant questionnaires for gathering data at national level are the Joint Eurostat/OECD Questionnaire on the State of the Environment (JQ on Inland Waters) and the UNSD/UNEP Questionnaire on Environment Statistics (Section Water). These questionnaires do not intend to collect all detailed data needed for water accounts, but collect valuable input especially for the physical accounts.

The main differences between these two questionnaires are the level of aggregation of some information, the number and type of variables requested as well as some differences of definitions.

The Eurostat/OECD-Joint Questionnaire tables on waste water generation, treatment and discharge are an integral part of a water-balance scheme. Information on waste water generation and discharge is to be provided in terms of water quantity and pollutant loads, aggregated for different NACE branches and diffuse sources. The variables regarding waste water collection and treatment facilities are population connected to collecting systems, number, organic design capacity and the use of different types of waste water treatment plants. The classification of waste water treatment plants is closely related to the definitions used in the European Urban Waste Water Treatment Directive.

In the UNSD/UNEP questionnaire information on waste water generation is collected in terms of waste water quantity for different activities according to ISIC. Pollutant loads and discharged quantities of waste water are not part of the questionnaire. Information is collected on waste water quantity treated in the different types of waste water treatment plants, as well as population connected to waste water collecting systems, population connected to waste water treatment and number and hydraulic design capacity of waste water treatment plants.

For Water Accounting which focuses on physical flows of water in to and out of the economy, Eurostat has developed “Water account standard tables”. The purpose of these tables is to collect data on water flows between the economic activities (NACE), the accounting of changes of stocks in terms of water quantity and pollutant loads as well as demonstration of monetary flows related to water supply, water use and waste water collection and treatment. The definitions used in these tables are the same as for the Eurostat/OECD-Joint Questionnaire on Inland Waters (with the exception of “abstractions from groundwater”).

The Water Asset Accounts of UNSD are in a similar relationship to the UNSD/UNEP water questionnaire as the “Water account standard tables” to the Eurostat/OECD JQ on Inland Waters. Data is collected in terms of water quantity.

Conclusion: The Eurostat/OECD Joint Questionnaire on Inland Waters is one of the most important sources for information about waste water generation and waste water treatment in OECD countries. The questionnaire is compatible with definitions and terms used in European legislation. This questionnaire is more detailed and comprehensive than the UNSD/UNEP Questionnaire, but results in a lot of data gaps in the responses from answering countries.

The UNEP/UNSD Questionnaire on water is much simpler in structure and has a reduced and simplified set of variables. One of the major needs for improvement seems to be the review of some definitions (e.g. waste water, treatment techniques, unit for sludge, etc.) as well as a critical check of the comparability of the existing variables with those of the Eurostat / OECD Joint Questionnaire on Inland waters, in order to make information world-wide comparable.

There is the need to harmonise the definitions used in both questionnaires and their accompanying water accounts tables. Since other international institutions as FAO also collect information on produced waste water, treated waste water and waste water treatment technologies there is not only the need to harmonise definitions but also to develop a complementary reporting system which leads to consistent information and, as a side-effect, reduces reporting burden of national administrations. It might be a long way to achieve this but this IWG-ENV Seminar in Vienna could be one important step into the right direction.