

Testing a methodology to estimate wastewater generation and water pollution loads from the industry sector

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ABSTRACT: The Eurostat/OECD Joint Questionnaire on the State of Environment asks for data on wastewater generation and pollution loads (BOD, suspended solids, N-tot, P-tot) in discharged wastewater, by economic categories. In Estonia, data are available for enterprises licensed to discharge wastewater directly to the environment. For others, practically no information on the quantities and loads existed.

Therefore a project was developed:

1. to test existing methods of estimating wastewater volumes and pollutant loads, based on economic statistics and the results of monitoring selected industries; and
2. to demonstrate the feasibility of using existing economic statistics for the purposes of estimation of water statistics.

In 2001, an industry survey was conducted by the Statistical Office to identify water consumption and wastewater generation in this category of enterprises.

Estimates were made of wastewater generated by industry at the NACE/ISIC 2-digit level, based on water consumption data and statistical databases (industrial production statistics, environmental expenditure statistics).

These were combined with data on water management, from the Estonian Environment Information Centre, to estimate pollutant loads. The estimation of pollution (P, N, BOD, suspended solids) of industrial wastewater was performed at two stages in the flow: at the point of generation and where wastewater is discharged to the environment.

A steering group comprising the Water Department of the Estonian Environmental Ministry, and the Estonian Environment Information Centre ensured that existing knowledge was used and that stakeholders' views were taken into account, and contributed to the quality of the results.