

Quality of Groundwater

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ABSTRACT: The presentation of the situation of groundwater quality in Europe is covered by the core set of indicators prepared by the European Environment Agency (EEA).

Groundwater quality is embedded in the wider area of freshwater quality and the focus is on nutrients.

The presentation covers the whole of Europe and 31 Member countries provide necessary data on an annual basis to enable the EEA to produce relevant, timely and targeted information meeting the needs of their clients.

Starting point for the production of information on the state and the development of the quality situation of groundwater is a policy question which was discussed in a broad forum and which had to be answered adequately: *Is nitrate concentration in groundwater decreasing?* The framework for the elaborated information comprises the link to the question, to the policy context and targets, to the graphical presentation, to the methodology of indicator calculation, the collection and treatment of data, the uncertainty of the methodology and the data as well as the annual assessments of the collected data.

The identified information need is the basis to derive requirements for data provided by the member countries. Primary starting point was the establishment of a network of contact points and partners within the member countries (EIONET). Key requirements on the data are their clear definition (format, size, methodology), their comparability and the knowledge of their confidence and precision (Data dictionary). These criteria are supported by data selection and collection guidance for the member countries which have been developed by the European Topic Centre on Water (ETC/WTR) and tested in a pilot study. Internet tools support the whole dataflow process from the raw data up to the indicator (data exchange modules). A data dictionary keeps the definitions of all requested data and guidance on how to select and prepare, accompanied by data exchange modules and data quality checking routines. The ETC/WTR is responsible for translating the collected groundwater quality data into information according to the indicator framework. In order to keep the whole process traceable the underlying data to the prepared indicators are published in Waterbase, a web database on the EEA web-site (<http://dataservice.eea.eu.int/dataservice/available2.asp?type=findtheme&theme=water>).

Such a transparent and well-defined process allows for the collection of comparable and reusable data with known precision leading to timely, targeted and reliable information meeting the needs of the relevant customers.

All future data collection should fit into one common data stream in a shared information system (WISE) that meets the needs of EU-level users required to provide EU-level assessments. In this sense further developments are expected to make best use of the development under the EIONET under future common roof of WISE.