# 2013 Freshwater Eionet Workshop - 19/20 September 2013, Copenhagen

## Session 2: Data quality and aggregation

## Document 2f: Water quantity data reporting and streamlining with Eurostat, indicators and water accounts by George Karavokiros, ETC/ICM

### Background

**Water quantity** related data are collected through the WISE-SoE#3 reporting annually, at various temporal and spatial scales, ranging from daily to annual and from point to regional (Sub-unit/RBD) and to Country level. The ETC/ICM supports MSs in providing high quality water quantity data in different ways:

* By providing a dedicated reporting tool which detects possible inconsistencies and warns the user in case of duplicate stations, wrong data types, extreme values, missing mandatory values etc.
* By applying extensive validation procedures on the whole dataset after the delivery of the report. These tests include statistical methods (extreme value and temporal consistency checks), logical rule violation tests, outlier detection, validation of the location of stations and visual screening of selected time series.
* By consulting MS in order to improve the data quality

The results of the validation tests implemented by ETC/ICM for each country are always communicated to the MSs through **validation questions**. MS are asked to review the findings and resubmit the correct data with their next reporting.

Various other databases related to water quantity currently exist at EU level as products of different data flows. Under the Water Framework Directive (WFD) River Basin Management Plans (RBMPs) Member States (MSs) are required to provide water abstraction data. EUROSTAT collects similar data through the Joint Questionnaire on Inland Waters (JQ IW) biennially at annual scale and Country level. Recently Eurostat also launched the Regional Environmental Questionnaire collecting data at regional scale. The recently developed Water Accounts (joint effort of the EEA supported by DG ENV) brought together various relevant datasets and further enhanced them through an ad-hoc data collection mainly focused on daily streamflow data, incorporating official MS web sources.

Based on the principle “report once, use many times” EEA and EUROSTAT have agreed for ETC/ICM to support EUROSTAT in **pre-filling** the OECD/EUROSTAT Joint Questionnaire (JQ2012), as well as the Regional Environmental Questionnaire (REQ2012), starting from the year 2012, with data related to water quantity and emissions to water, collected through the WISE-SoE dataflow. When EUROSTAT distributed then the questionnaires to the MS, these were pre-filled with the above mentioned data. MSs have checked and modified the pre-filled data and returned the questionnaire to EUROSTAT. The experience from this procedure will be presented at the EIONET Workshop Another benefit from the data exchange between EEA and EUROSTAT is the unique opportunity to **cross-check** data from both data flows reported in the past and flag out parameter values that differ in both datasets. This analysis will result to the formulation of validation questions to MSs in case incompatibilities have been encountered. Findings from this analysis will be discussed during the EIONET Workshop.

The overall goal of the water quantity reporting is to fuel the data for the development of relevant products: water accounts focused on the physical asset accounts and relevant indicators (i.e. on water exploitation, water balance, water scarcity, efficient use of water resources, etc.). To this extent, suggestions for necessary adjustments to support, streamline and sustain these products, bearing in mind the policy need to have EU water balances at the adequate spatiotemporal scale, are currently under elaboration within the EEA.

### Related documents

* Validation questions for the WISE SoE 2013 reporting
<http://forum.eionet.europa.eu/nrc-eionet-freshwater/library/wise-soe-reporting-2013/validation-questions>
* Validation questions for the WISE SoE 2012 reporting
<http://forum.eionet.europa.eu/nrc-eionet-freshwater/library/wise-soe-reporting-2012/validation-questions>

*Additionally, a report on the analysis of pre-filling the JQ2012 will be prepared before the beginning of the workshop.*

### Issues to be discussed

* Review of the data validation procedure and the role of ETC/ICM and MS.
* Reasons for inconsistencies in datasets and how to increase data quality.

### Questions to NRCs

1. Why are there differences between the SoE and JQ water quantity data?