



NFP/Eionet group meeting
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Source: Natural Systems and Vulnerability
Subject: Complementing and enhancing the water quantity data flow to support water assets accounts

FOR ACTION

NFPs are asked to further support the processing of water balances with the most reliable data as source of “water assets accounts” being implemented across the EEA activities. Since rainfall and river discharge are the two “hard pillars” of the assessment, their spatial and time resolution should be as representative as possible to minimise the amount of extrapolated values. This is why the EEA aims at collecting the widest possible daily river flow data at gauging stations level.

Rational

Europe 2020 Strategy puts a strong emphasis on resource efficiency; this requires some refocusing of the work in the water area, in particular redirecting and reinforcing the topic of water efficiency.

This is reflected accordingly in EEA AMP 2011 where we stress the development of ***water accounts at the centre of the assessments of water quantity***.

This is in line with and required by the work of the European Commission in preparing the “Blueprint to safeguard Europe’s waters” for 2012, which will be accompanied by an extended EEA report on the “State of Europe’s water” (see separate document on Thematic assessment reports 2012)

Principle requirements

The above rational requires comparable water data at the European level covering the whole EEA area. In detail regular water / ecosystem accounting at the sub-basin level is supposed to address inter alia, droughts, scarcities, and to provide the relevant “water indexes” and “water indicators” for the regular progress reporting envisaged by the Commission. The following aspects need therefore to be addressed:

- **Resolution at river stretch** to be in line with the spatial approach for water bodies taken by the WFD.
- **Appropriate disaggregation** at the monthly level to enable trends analysis of efficient use of water resources in relation to conflicting demands related to different aspects around, inter alia, renewable energies but also increasing impacts of climate change.

State of the art and needs

During the implementation of the water balances and the related quality assessments¹ carried out by the EEA under the UN-SEEA methodology, the EEA faces different challenges regarding data availability and resolution:

1. Climatic data that were not accessible less than a decade ago are now free at daily resolution and acceptable spatial disaggregation (down to 5*5km);
2. Surface water data (daily discharge and disaggregated water composition) range from fully available on some Web sites to not accessible at all and very few countries have reported daily stream flow data during the 2010 WISE SoE data request (see Annex 1). These data are urgently needed as primary basis for the accounting;
3. Water usage data (surface and groundwater abstraction data) have very different characteristics and availability status; also, countries have reported mostly annual aggregates instead of monthly data during the 2010 WISE SoE data request. Such data can be surrogated thanks to modelling (e.g. urban abstraction from population density, water uses for irrigation, energy uses, etc.) but when not reported it may lead to biases in the accounting results. These data are needed with second priority.

The currently most jeopardizing issue is the obtaining of disaggregated river discharge data and river quality disaggregated data. The obtaining of such data is not an issue only for the EEA but for JRC as well when they compute nutrient balances and loads to the sea. As a result, many resources are spent by different organisations but end up with non-comparable and incomplete data sets in most cases.

Way forward

NFPs are asked to further support the processing of water balances with the most reliable data as source of “water assets accounts” being implemented across the EEA activities. Since rainfall and river discharge are the two “hard pillars” of the assessment, their spatial and time resolution should be as representative as possible to minimise the amount of extrapolated values. This is why the EEA aims at collecting the widest possible information at gauging stations level with daily stream flow data from at least the last 15 years.

First goal: Create a single and comprehensive layer of the gauging stations and long time series of daily stream flow data operated across the whole EEA area and referenced under WISE-Ecrins.

Request to NFP/NRC: provide documented datasets of the monitoring networks of gauging stations based on a simple template provided by ETC/ICM (preferred option, including monthly abstraction data if available), OR provide the link and grant access to the Website in English language (non-preferred option, since time consuming and QA difficult) OR provide the contact of the person(s) in charge of stream flow data.

Second goal: Formal agreement by the countries that data obtained by the EEA via the templates and from the official country Websites can be used by complementing and enhancing the water quantity data flow established with the ETC ICM and the

¹ Water quality accounting, as defined in the UN System of economic and environment accounts – Water module (SEEA-W), has still some experimental aspects and is carried out by countries where the fully disaggregated baseline quality data is available via Web servers or equivalent.

water quantity input tool (WISE DREAMS). However, such agreement on web access is acknowledged as additional provision in the country scoring (smiley)

Request to NFP/NRC: provide an official response.

Third goal: Clarify the country policy as regards to the provision of disaggregated data on river discharge / water composition. The disaggregated river flow data will only be published at the EEA website in aggregated form as processed data (not the original data). The currently recorded categories of data provision by countries are:

1. Access fully open to all publics (example: Portugal website²),
2. Access fully open to public under permission or recording (password) (example: France Hydro database)
3. Access possibly open, but Website if existing, not identified or not national (example: Germany, Bavaria);
4. Access impossible, countries' policy is not to provide data except for limited / aggregated data sets.
5. Special case: data provided to Global Runoff Data Centre (GRDC), for research purposes, but not accessible otherwise.

Request to NFP/NRC: inform on or confirm your country's policy and when falling in any of the above categories, specify if relevant the way to submit text files following the ETC/ICM template or the access to the web sites or the services (e.g. "send a letter / mail to Mrs / M X at xxx@yyy, with the list of stations") or specify if GRDC data might be provided to the EEA³.

The short term objective is to create a systematic data flow that will minimize any need for extra resources, assuming that extracting a dataset into an excel or csv-file is a standard work on the country side.

Fourth goal: Setting up return of experience

Request to NFP/NRC: which type of return of experience (modelled data, data combined for assessments, etc.) you would like to exchange with / receive from the EEA?

² References are not any judgement whatsoever and not a limiting list either

³ Such similar official statement had been provided by letter of the EEA Management Board members to the EEA director regarding the availability and use of Marine Convention data for EEA assessments.

Annex1: Statistics on stream flow stations reported under the 2010 WISE SoE data request on water quantity

- 19 countries have reported stream flow data so far, namely: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, Ireland, Latvia, Lithuania, Macedonia (FYR), Republic of Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey.
 - 6 of which did not have valid station coordinates (non projected) and thus not included in the map below. Spain is also not included, because it has reported in its own format and the ETC/ICM had to compile and import the data in a later phase.
 - that makes 612 stream flow stations in total
 - 567 of which have (at least some) discharge data
 - all in all 1000 discharge time series have been reported (some countries report up to three time series per station for different time scales) of which:
 - 431 are daily time series
 - 289 are monthly time series
 - 280 are annual time series
 - Most data refer to the year 2009.
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