

Session 1: Content quality – Review of SoE data

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Aim of content related review of SoE data flows is to

- Ensure EEA assessments to be carried out during 2016 – 2018;
- Ensure a stable and well defined reporting of “high priority” parameters for EEA uses;
- Improve integrated assessments with Water Framework Directive and other Water Directives;
- Reduce reporting burdens for Member States.



EEAs state of water assessments

- Produce objective, reliable and comparable information;
- Judge the effectiveness of policy and the needs for policy development;
- This includes state of water assessments, water indicators etc.

State of waters	How is it? (Nutrients, pesticides, heavy metals, ecological quality.....) How much is there? (Runoff, availability, water stress.....)
Time trends	Getting better or worse? Within or outside agreed limits? Responding to measures or to other factors?
Pressures on the environment - what is causing the problem?	Water abstraction and use Water pollution Threats by sectors (Human – domestic; Industrial; Agricultural) Climate change and natural factors
State of action on policies	Which measures are taken on national/regional level? Are they working towards targets?

Article 18 of the WFD

‘The EU Commission shall publish a report on the implementation of this Directive at the latest 12 years after the date of entry into force of this Directive (two years after the Member States have delivered the RBMPs).

The report shall among others include the following:

- a review of progress in the implementation of the Directive;
- a review of the status of surface water and groundwater in the Community undertaken in coordination with the European Environment Agency.’



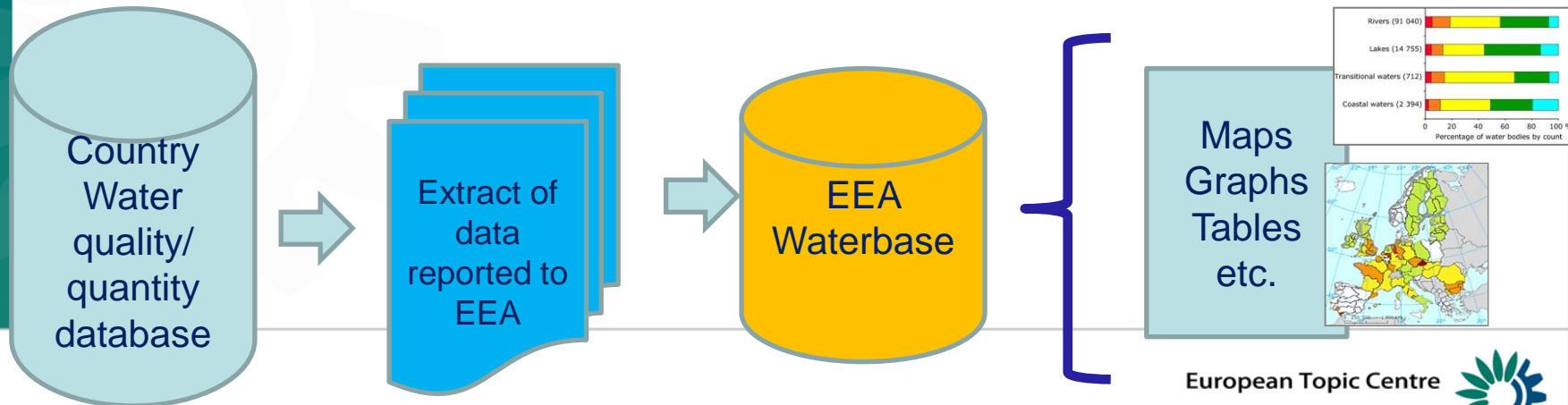
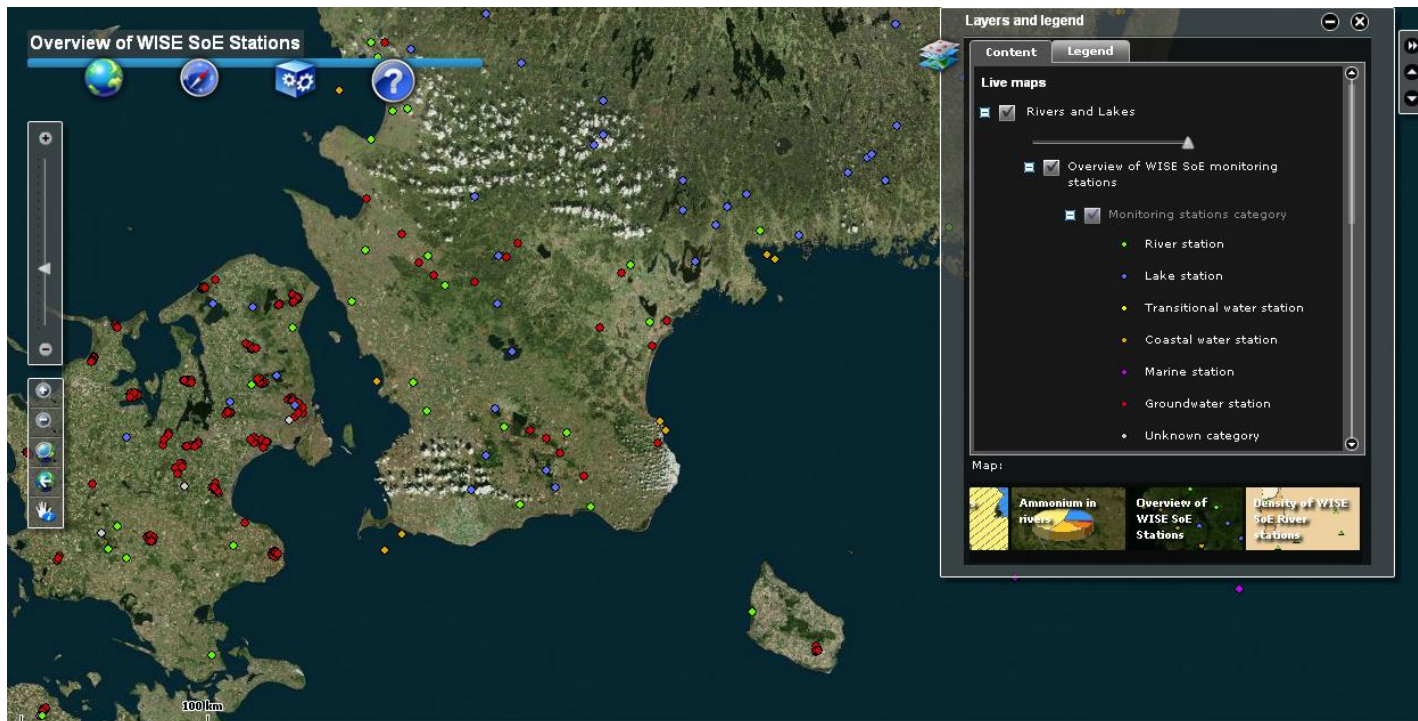
EEA water assessments based on data and information from national and RBD activities

Up to now countries have been reporting data via different channels such as:

- 1) EEA **priority data flows WISE-SoE - Waterbases**,
 - 2) Obligatory reporting in relation to EU Directives including WFD; and
 - 3) Via the OECD/Eurostat Joint Questionnaire on the State of the Environment.
- These data are stored in databases and communicated via WISE.
 - The quality of the EEA's assessments relies on the quality of the member states' data delivery.



Water quality and quantity based on national information



Next "big" EEA assessment of state of Europe's waters 2016-2018

Many issues such as ..

- Overall freshwater quality;
- Water pollution and quality;
- Water and health;
- Water resources focus on water scarcity and drought;
- Floods and water related disasters;
- Climate change impacts on water and water adaptation measures;
- Hydromorphological /structural activities.

plus WFD related assessments:

- Progress from 1st to 2nd RBMP
 - improvement in status;
 - reduction in pressures;
 - effect of measures;
- Focused 2018 report on WFD implementation (Art. 18)
- Update and improvement of status and pressure information;
- Better integration of WISE-WFD; other Directives and WISE-SoE information;



Link between data/information and water assessments

WFD 2016
Reporting

WISE-SoE
data flows

Other sources
e.g. modelling,
information
compilation



Are data requests fit
for purpose?
What is missing?
What can be cut?
What has to be
coordinated
between flows?

Issues to be covered

- Overall freshwater quality
- Water pollution and quality
- Water and health
- Water scarcity and drought
- Floods and water related disasters
- Climate change impacts on water and water adaptation measures
- Hydromorphological /structural activities
plus
- WFD related assessments



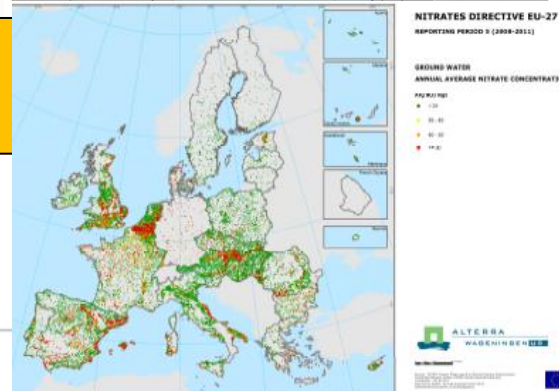
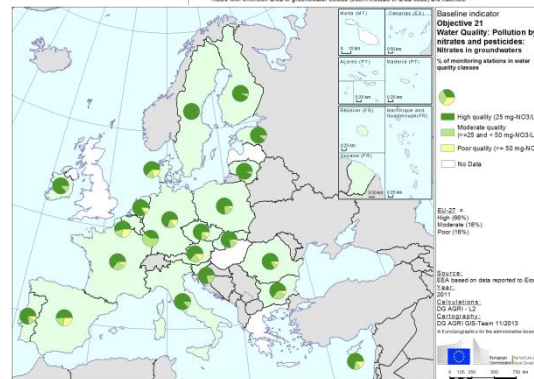
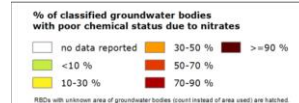
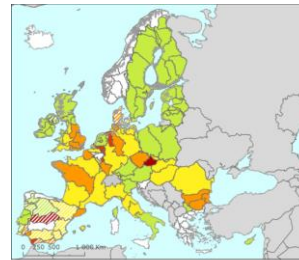
Example: Diffuse pollution - Nitrate in groundwater

WFD 2016
 Poor GW chemical status due to nitrate

WISE-SoE
 Nitrate in groundwater

Nitrate Directive
 Nitrate in groundwater

Modelling & supporting inf.



- Percentage of groundwater bodies not achieving good chemical status due to nitrate
- Is the proportion of GW bodies having poor chemical status due to nitrate decreasing?
- Significant pressure causing poor chemical status due to nitrate

- Nitrate in groundwater
- Trend in groundwater nitrogen

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- Trend in groundwater nitrogen

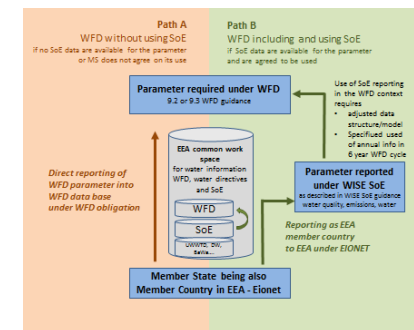
Reporting flows related to nitrate in groundwater

Reporting flow	Policy relevance	Temporal coverage	Trend assessments	Spatial coverage	Spatial assessments	Country comparison	Linked to pressure	Linked to measures
WISE-WFD RBMPs	Objective of having all groundwater bodies in good chemical status	Every six year 1 st and 2 nd RBMPs	*	EU MS +Norway All groundwater bodies	***	**	**	**
WISE-SOE Groundwater	Assessment of state of groundwater	Annually, time series 1992-2012	***	EEA member countries 24 200 stations	**	**	*	*
Nitrate Directive	Aims to reduce water pollution caused by nitrates from agricultural sources	Three years periods e.g. 2008-2011	*	EU Member States 33 500 stations	**	**	**	**

- How do we ensure that the three reporting flows can contribute to the 2016/18 assessment?
- Do we need to adjust the WISE-SOE GW dataflow?
- Supporting information (e.g. Nitrogen balances – measures to reduce diffuse pollution).

New WFD reporting guidance

- Introduction: “WFD reporting needs to be seen in conjunction with other reporting obligations under other directives such as UWWTD, ..., and also under the EEA SoE data flows.”
- Chapter Monitoring: Better streamlining SoE stations with WFD water bodies – *improve the means for integrated assessments*
- Information required for “Inputs of pollutants ..” and “Water abstractions” can be provided by reporting of SoE Emissions and Water Quantity – *reduce the reporting burden for MS*



Use of SoE data in WFD assessments

Products from WFD reporting according to new reporting guidance (among others):

- Overview on the **significant pressures and impacts** on water bodies;
 - **Status assessments** (of ecological, chemical and quantitative status of water bodies)
 - **Trends** of relevant determinands;
 - **Significant inputs of pollutants** from diffuse and point sources and trends in total inputs;
 - **Water exploitation index (WEI), water scarcity.**
- **Annual reporting from SoE can substantially contribute to WFD assessments**

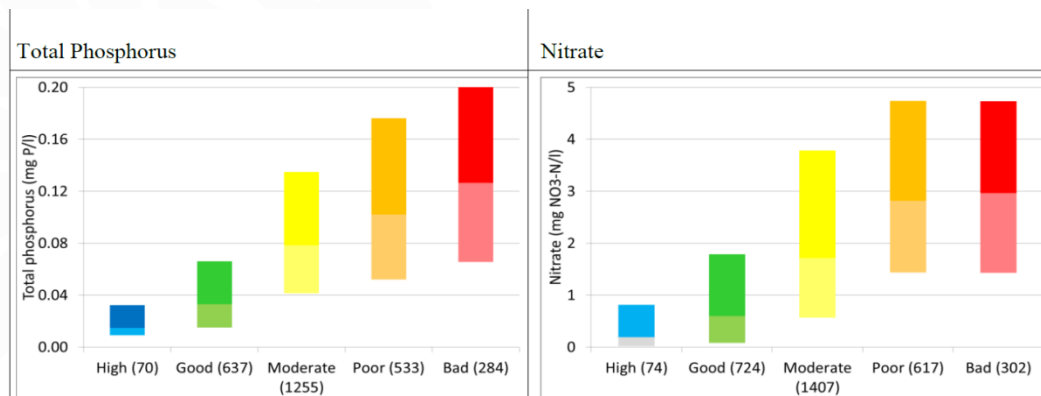


Use of SoE data in WFD assessments

Example: SoE nutrients, organic matter and biology in rivers, lakes

- SoE time series fill the gaps between WFD reporting;
- Use of determinands as indicators for status of different QEs;
- Check of improvement of EQRs within the status classes;
- Are the status and pressures results reported in the WFD reasonable given the past and present water quality?

Combining water quality results with information on eco stat/ Potential



➤ **Check of SoE reporting streams for main value in WFD assessments and possible adjustments**



Proposed changes to SoE reporting

- Adjustments due to WFD reporting guidance necessary esp. in reporting on SoE Emissions and SoE Water Quantity (*information in presentations on emissions and water quantity*);
- Water body codes for the water body in which the monitoring station lies should be reported in consistency with WFD reporting – essential for coupling of reporting streams;
- Simplified structures of SoE-reporting
 - Better linkage of Reporting Sheets with Data Dictionaries;
 - Details of data request to be provided in the Data Dictionary (“key document”); is information in Guidance Document and Reporting Sheets useful for reporting?



SoE Reporting sheet on nutrients, organic matter, biology in rivers, lakes

- No major changes proposed;
- Update/shortening of list of determinands: Some determinands could be removed due to low reporting, not used in indicators, reports or data analyzes ...

Relevant determinands:

Total ammonium	CSI 19, EEA report1*
BOD5	CSI 19, EEA report1
BOD7	CSI 19, EEA report1
Nitrate	CSI 20, EEA report1
Total oxidised nitrogen	CSI 20
Orthophosphates	CSI 20
Total phosphorus	CSI 20, EEA report1

- But do we need e.g.:
 - Temperature?
 - pH?
 - Secchi depths?
 -

*EEA Report 1: European Waters - assessment of status and pressures

- Would information on fish in rivers be helpful for integrated assessments?

SoE reporting sheet on hazardous substances in rivers and lakes; groundwater quality

Proposed changes in reporting due to integrated assessment with WFD

- Listing of “WFD pollutants” (chemical substances, determinands) used by MS for the status assessment (chemical and ecological)
 - Inclusion of same determinands under SoE
 - Create a common dataset of SoE “preferred” and “WFD pollutants” under SoE
- National EQS values (rivers, lakes) and threshold values (groundwater) established by MS for specific pollutants (not in EQS Directive) to be reported within SoE reporting on a regular basis.

SoE reporting sheet on hazardous substances in rivers and lakes; groundwater quality

Some examples for integrated WFD/SoE assessments:

- WBs in poor status: what is the time series of a concentration at the station, is there a trend;
- GW quality at individual stations for pollutants that have been used for GW chemical status assessment;
- Ratio /percentage of stations exceeding/not exceeding the threshold values within the GWB, RBD/country.



SoE reporting sheet on hazardous substances in rivers and lakes; groundwater quality

Proposed changes due to use of data experiences from analyses:

- Reporting of LOQ obligatory
- Reporting of disaggregated data (in accordance with 2007/2009 reporting sheet)
 - SEIS principle for making use of already existing monitoring data in DG ENV's JRC's data collection for Priority Substances review
 - To be published as disaggregated sample data in WISE Waterbase;
 - To be available to Commission services in disaggregated form and published in Waterbase (annual average concentrations per station & annual summary statistics)
 - Contribute to further data sharing with IPCheM and large EU FP7 projects, e.g., SOLUTIONS

Proposed changes in data publication in Waterbase:

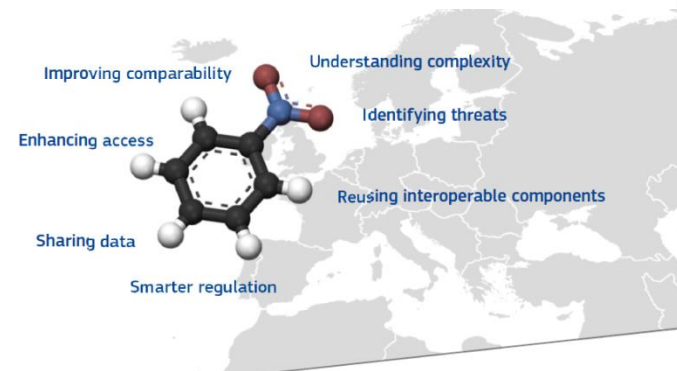
- GW data published as annual average at station instead of water body (this assumes disaggregated reporting of nutrients)

Information Platform for Chemical Monitoring IPChem

- Single online access point for searching retrieving chemical monitoring data
- Led by DG Environment
- Data to be structured under 4 modules:



- EEA managing modules on environmental monitoring & human biomonitoring data
- Currently under development



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