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Kwaliteitsborging - wat vraagt, eist, en biedt “Brussel”?

Wouter van de Bund

Joint Research Centre
Institute for Environment and Sustainability




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Outline

- QA/QC requirements of the WFD
- QA/QC in chemical monitoring
- QA/QC in biological monitoring
- CEN and other standards




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QA/QC requirements in WFD

- Several references to the need to have data of sufficient quality that provides sufficient confidence and precision
 - For reference conditions and monitoring data
 - Selection of quality elements and appropriate taxonomic level
 - Number of sites and frequency of sampling
 - Use of CEN/ISO standards or methods providing data of equivalent quality and comparability
- Estimations of confidence and precision should be included in the RBMP




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Chemical monitoring - QA/QC guidance


- **Common part** (covering GW, SW and MW) concerning analytical issues, in particular
- analytical method's performance criteria, QA/QC, data comparability etc.
- The aim is to establish **legally-binding links** to the ISO 17025 standard (establishing a general framework regarding analytical method's performance) to WFD requirements in the form of a Commission Decision (adopted by Comitology).
- Date of expected finalisation: May 2007



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And what about biological monitoring?




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Some QA/QC related activities

- No specific activity at European level to date
- Intercalibration: provides some minimum quality criteria for data (and identifies gaps in comparability)
- Harmonisation activity: identification of relevant standards to be included in WFD Annex V
- Research projects have provided input for standardisation as well (STAR...)
- And what else for the future?
 - Minimum performance criteria?
 - Criteria for accreditation?



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What do we know about national monitoring networks ?

- Monitoring programmes should be operational on 22 December 2006 (Art 8 WFD)
- Reporting to the Commission on 22 March 2007
 - First time electronic reporting only via WISE
 - 22 & 23 March World Water Day
 - European Water Conference: <http://ec.europa.eu/environment/water>
 - Publication of first WFD implementation report
 - WISE launch <http://water.europa.eu/>
- Current sources of information on national monitoring networks:
 - Article 5 reports
 - Monitoring Networks and Classification Systems workshop (Brussels, April 2006)
 - ECOSTAT questionnaire on monitoring networks (Sept – Oct 2006)

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WFD Monitoring objectives

- General objective (Article 8)
 - "...in order to establish a **coherent and comprehensive overview of water status within each river basin district**"

RIVERS: Number of monitoring stations (surveillance and operational) per 1000 km²

Country	Number of monitoring stations per 1000 km ²
DK	23
UK	22
IE	19
DE	17
LT	16
BE	15
PL	11
SE	10
HU	9
SK	6
RO	5
AT	5
LV	3
ES	2
FI	1

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Surveillance monitoring

- Objectives surveillance monitoring (Annex V)
 - supplementing and validating the impact assessment procedure detailed in Annex II
 - the efficient and effective design of future monitoring programmes
 - the assessment of long-term changes in natural conditions
 - the assessment of long-term changes resulting from widespread anthropogenic activity

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Surveillance monitoring used to supplement risk assessment?

Number of River Surveillance monitoring stations (blue bars) and Number river water bodies for which risk assessment was not conclusive (yellow bars).

Country	Number of River Surveillance monitoring stations	Number river water bodies for which risk assessment was not conclusive
AT	100	200
BE	150	250
CZ	200	300
DE	300	400
ES	500	2584
FR	1500	800
IE	200	2400
LT	600	600
LV	100	100
PL	1100	1300
SK	200	100
UK	800	3570

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Selection of surveillance monitoring sites

- Surveillance monitoring shall be carried out of **sufficient surface water bodies to provide an assessment of the overall surface water status** within each catchment or subcatchments within the river basin district. Including:
 - the rate of water flow is significant within the river basin district
 - the volume of water present is significant within the river basin district
 - significant bodies of water cross a Member State boundary
 - sites under the Information Exchange Decision 77/795/EEC,
 - and at such other sites as are required to estimate the pollutant load which is transferred across Member State boundaries, and which is transferred into the marine environment.

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Coverage of surveillance monitoring

Percentage of river water bodies and Percentage of lake water bodies in surveillance monitoring.

Country	Percentage of river water bodies	Percentage of lake water bodies
Lithuania	40	100
Slovak Rep.	40	100
France	35	100
Romania	30	100
Poland	25	100
Finland	25	100
Belgium	20	100
Slovenia	15	100
Latvia	15	100
Spain	15	100
UK	15	100
Sweden	15	100
Czech Rep.	15	100
Hungary	15	100
Ireland	15	100
Austria	15	100

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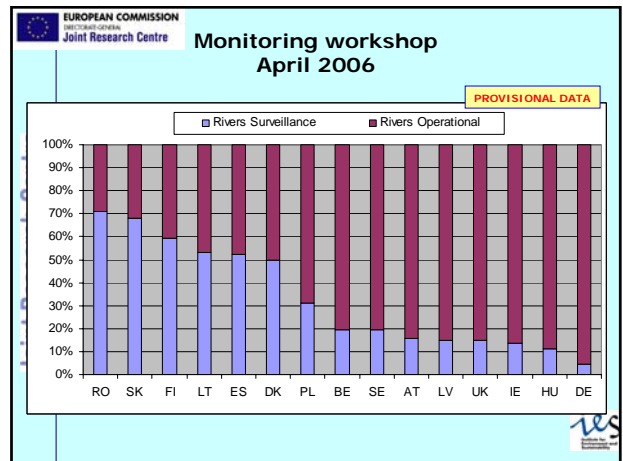
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Operational monitoring

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- Objectives operational monitoring (Annex V)
 - establish the status of those bodies identified as being at risk of failing to meet their environmental objectives, and
 - assess any changes in the status of such bodies resulting from the programmes of measures

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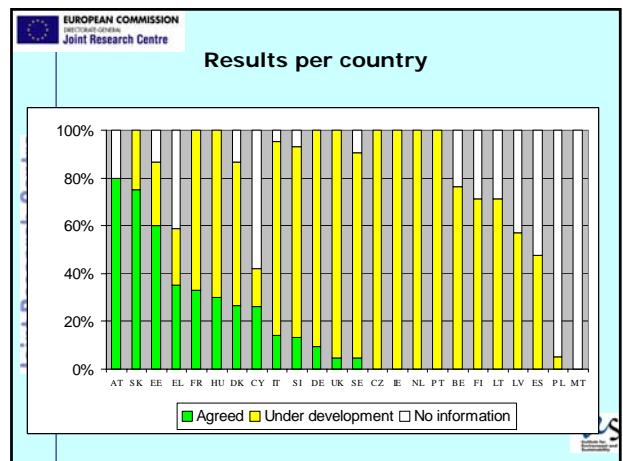
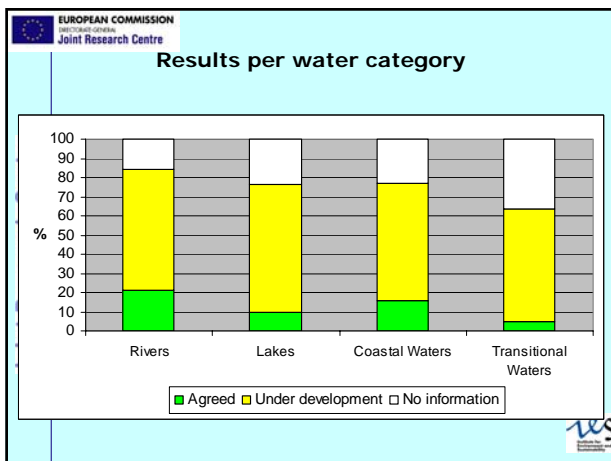
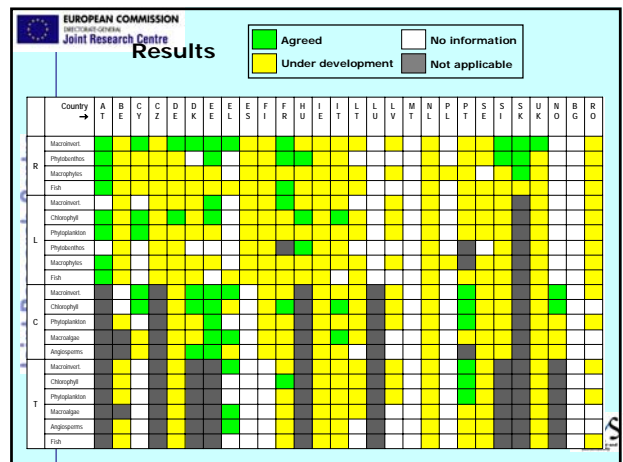
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ECOSTAT questionnaire

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- Status of development of national biological monitoring systems
- Information collected in September-October 2006
- Questions:
 - are you planning to collect data for each of these biological quality elements through the WFD monitoring programmes (surveillance and/or operational)?
 - If this is the case, please provide the name/title of the assessment method that you intend to use, a short description and the status of development of the method (agreed/under development)

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Conclusions

- MS should develop monitoring methods for all quality elements to assess the status of water bodies (irrespective of whether the classes have been intercalibrated or not!)
- Hesitant picture
- Most of biological methods “under development”
 - May reflect very different stages
 - Some of them reflect MS are waiting for the outcome of intercalibration (but intercalibration only set class boundaries)
- Important gaps in transitional waters

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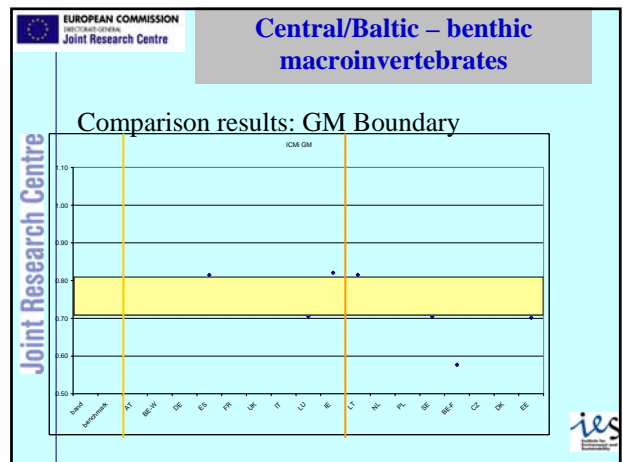
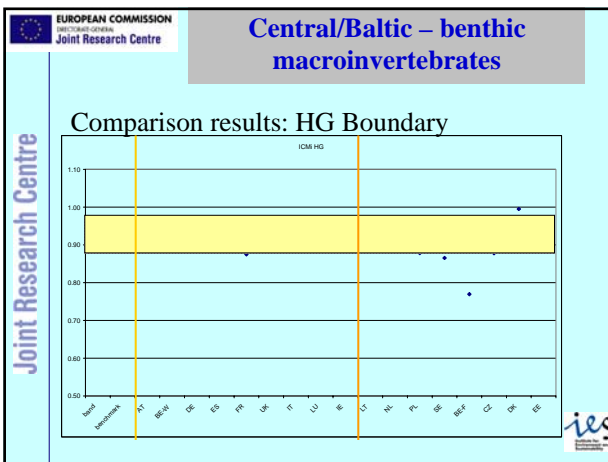
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Intercalibration

**WFD, Annex V, Article 1.4.1:
Comparability of biological monitoring results**

(iii) (...) The value for the boundary between the classes of high and good status, and the value for the boundary between good and moderate status shall be established through the intercalibration exercise (...)

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Need to use standard methods

**WFD, Annex V 1.3.6:
Standards for monitoring of quality elements**

Methods used for the monitoring of type parameters shall conform to the international standards listed below or such other national or international standards which will ensure the provision of data of an equivalent scientific quality and comparability

Article 20 of the WFD explicitly mentions that technical adaptations to section 1.3.6 of Annex V can be done in accordance to the procedure laid down in Article 21

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Standard methods current status

- Only a few standard methods are currently listed in the Annex V 1.3.6 of the WFD
- There is lack of comparability of the national biological sampling and analytical methods as highlighted in the Intercalibration process and in WFD-related research projects assembling data sets from different sources

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Summary

- WFD requires 'confidence and precision'
- Member States have a lot of freedom how to implement this (but common approach at national level recommended)
- Large differences in how MS implement monitoring programmes
- CEN or national standards of equivalent scientific quality
- Information exchange through ECOSTAT working group
- Comparability of status classes through intercalibration