Findings from the 3rd WFD implementation report and major challenges for the next planning cycles

DG Environment
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Monitoring in the WFD

- Requirements in article 8 and Annex V of WFD: establish monitoring programmes for surface and groundwater in order to provide a coherent and comprehensive overview of water status within each RBD.

- **Selection** of quality elements/parameters should enable the detection of all significant pressures – complement the pressures and impact assessment.

- **Surveillance** monitoring: detect potential impacts of **all** pressures + **long term** natural changes and from widespread anthropogenic pressures.

- **Operational** monitoring: focus on the biological quality elements (BQE) most **sensitive** to identified pressures – classification + monitoring of progress in achieving objectives.

- **Amount** of monitoring: obtain a **reliable and robust assessment** of the status of all WB in the RBD.
Monitoring in the WFD

- Crucial step in the planning process
  - characterisation of the river basin district
  - monitoring and the assessment of status
  - objective setting
  - definition and implementation of programme of measures
  - monitoring and evaluation of the effectiveness of measures

→ respond to the identified pressures, reach good status

- Strength of the planning process, and adequacy / reliability of the RBMPs depends on good implementation of every intermediate step.

- Cost of monitoring much lower than cost of inappropriate decisions
The 3rd WFD implementation report


Key message: Clear gaps in monitoring:
- 15% of surface WB are in unknown ecological status
- 40% of surface WB are in unknown chemical status
- In some MS ecological and chemical water status is unknown for more than 50% of the WB.

→ Determined effort required to improve / expand monitoring (and assessment tools) to ensure a statistically robust and comprehensive picture of the status of the aquatic environment for further planning
Overview of monitoring networks in the EU

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<th>Rivers</th>
<th>Lakes</th>
<th>Transit. w.</th>
<th>Coastal w.</th>
<th>Groundwater</th>
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<td>16 214</td>
<td>56 381</td>
<td>2 829</td>
<td>4 750</td>
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<td>Lakes</td>
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Total Surface: 82 390
Total GW: 60 054

Now more stations monitoring Biological than Physico-Chemical or Hydromorphological quality elements in surface waters
Overview of monitoring networks in the EU

Considerable variations between Member States
- Differences in natural characteristics and pressures
- Differences in approaches in the design of monitoring programmes
Surface water surveillance monitoring

Wide variation in the percentage of SWB (in number) included
Partly explained by the different approaches in delineating SWB
Surface water surveillance monitoring

Only a few MS monitor for all BQE in all SWB
- monitoring methods not yet fully developed
- choice of BQE reflects the traditional use of indicators (macroinvertebrates in R, C and T, Phytoplankton in L)

Hydromorphological QE poorly monitored in L, C and T

→ Non-compliance - all QE should be included in surveillance monitoring

General Physico-chemical QE are quite well monitored
Coverage of potentially relevant specific pollutants (RBSPs) is uneven
Incomplete monitoring of priority substances (PS)
Surface water operational monitoring

Generally more WB included than in surveillance monitoring, but rather a low percentage of WB with significant pressures

→ Use of grouping & extrapolation of results
→ Possible impact on the level of confidence

- Wide differences in approaches to the selection of QE sensitive to pressures.
- Questionable that in some cases only a few BQE (sometimes none) are monitored even though several pressures are considered as significant.
- Not all priority substances (PS) always monitored, sometimes due to lack of adequately sensitive analytical methods.
- Atmospheric deposition of PS not always considered.
- Limited monitoring of PS in biota/sediment (despite three existing biota EQS and requirement for trend monitoring).
Groundwater monitoring

Significant differences in approach and densities

Also influenced by
- the size of the country
- the intensity and type of GW use
  (higher density where source of drinking water)
Monitoring the quantitative status of groundwater

Many MS include a high percentage of their GWB in quantitative monitoring (11MS including more than 80%), with differences linked with the delineation approach.

70% of monitored GWB have more than 1 monitoring site (large WB)
Monitoring the chemical status of groundwater

Many MS include a high percentage of their GWB in quantitative monitoring, with differences linked with the delineation approach.

Only a few MS include the full set of core parameters in all monitored GWB as required.

Much fewer WB are included in operational monitoring (only 6 included more than 60%), most generally less than the WB affected by significant pressures.
One key objective of operational chemical monitoring

Most MS report that trends of one or more pollutants had been assessed in some or all RBDs, but
- only a few RBMPs give explanations on how to detect significant trends
- Incomplete assessments because of the short monitoring time series available
Monitoring in International River Basin Districts

Significant gaps: Transboundary monitoring not established in around:

- 30% of the international RBDs with transboundary GW
- 20% of the international RBDs with transboundary rivers and lakes

No information in ~1/3 of the international RBDs
Conclusions of the report

- Constant progress in the development of monitoring programmes but
- Significant improvements are needed to fulfill WFD requirements and make a full and efficient use of monitoring in the planning process:
  - Significant differences between MS in the approach to the design of monitoring programmes (linked to differences in delineation approach and in stage of development of monitoring/assessment for QE and parameters)
  - Significant gaps surveillance monitoring (many required QE are not monitored) \( \rightarrow \) impacts of all relevant pressures may not be detected
  - Operational monitoring: limited selection of QE in multi-pressures contexts: risk of misclassification and inappropriate design of measures
  - Chemical status of SWB often largely unknown due to limited monitoring of priority substances
  - Groundwater monitoring not targeted to significant pressures and not able to detect significant trends
Challenges for the next cycle

Fill the identified gaps to improve the assessment
- Coverage of BQE/PS and water bodies
- Improve reliability of the assessment (measured and extrapolated results)
- Transboundary programmes

Better integrate monitoring in the planning process
- Characterisation / pressure analysis
- Measures definition and monitoring of their effectiveness
- Transparency to all stakeholders

Streamline with other Directive requirements (Marine, Nitrates, Birds and Habitats)
Thanks for your attention

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