



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

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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

- Report on River Basin Management Plans COM(2012)670
- + Commission Staff Working Document, European Overview on River Basin Management Plans, Volumes 1 and 2 SWD(2012) 379

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

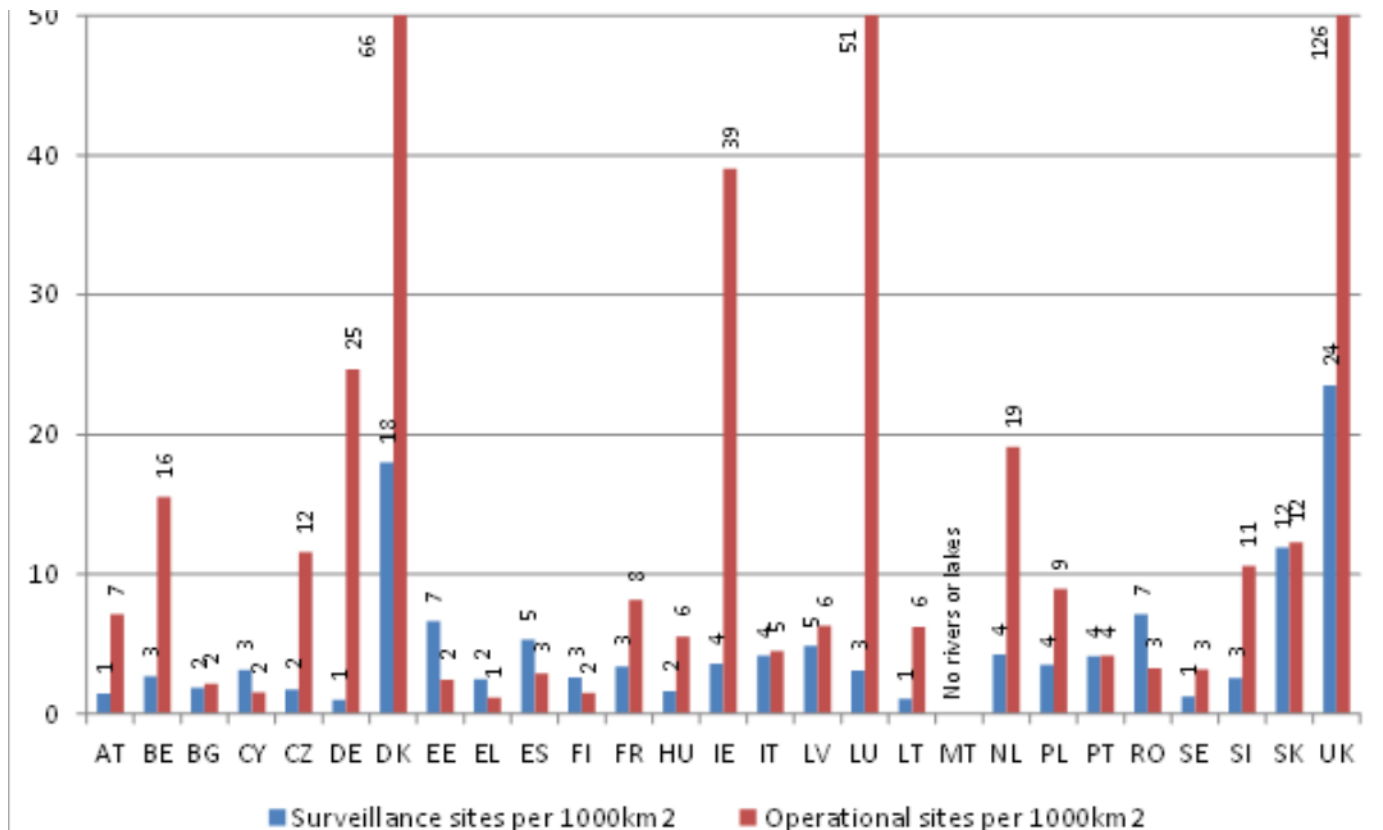
Rivers		Lakes		Transit. w.		Coastal w.		Groundwater		
Surv.	Op.	Surv.	Op.	Surv.	Op.	Surv.	Op.	Surv.	Op.	Quant.
16 214	56 381	2 829	4 750	2 395	2 631	2 585	2 838	25 814	19 716	29 639
67 178		7 528		4 528		3 156		34 134		29 639
Total Surface: 82 390								Total GW: 60 054		

Now more stations monitoring Biological than Physico-Chemical or Hydromorphological quality elements in surface waters

Overview of monitoring networks in the EU

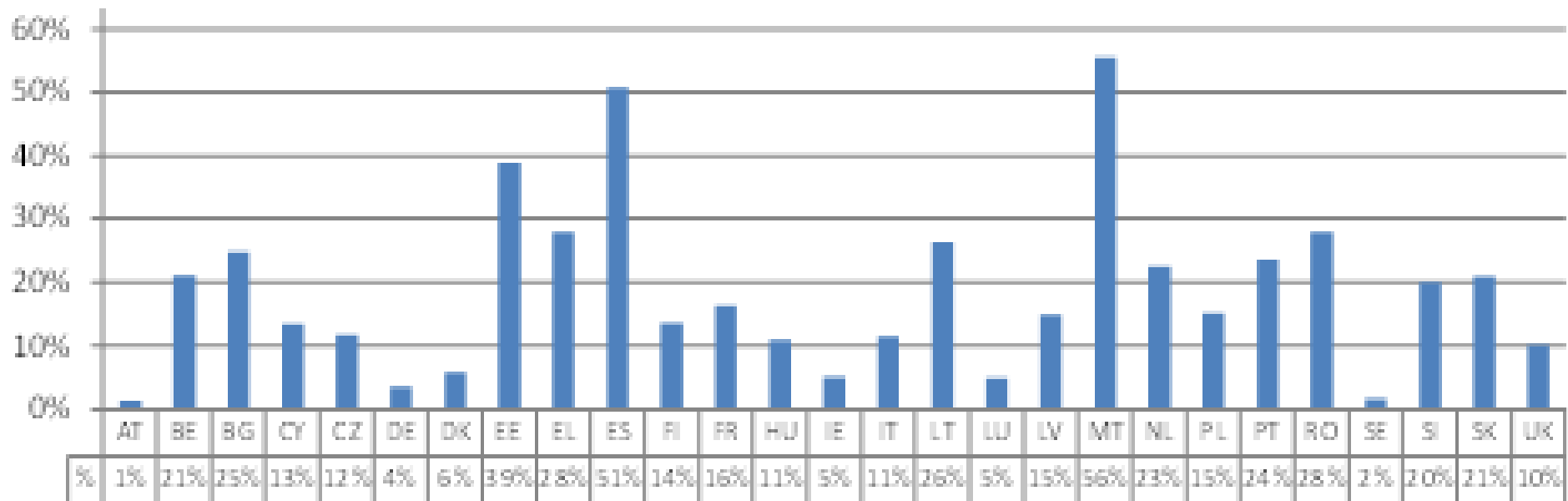
Considerable variations between Member States

- 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.

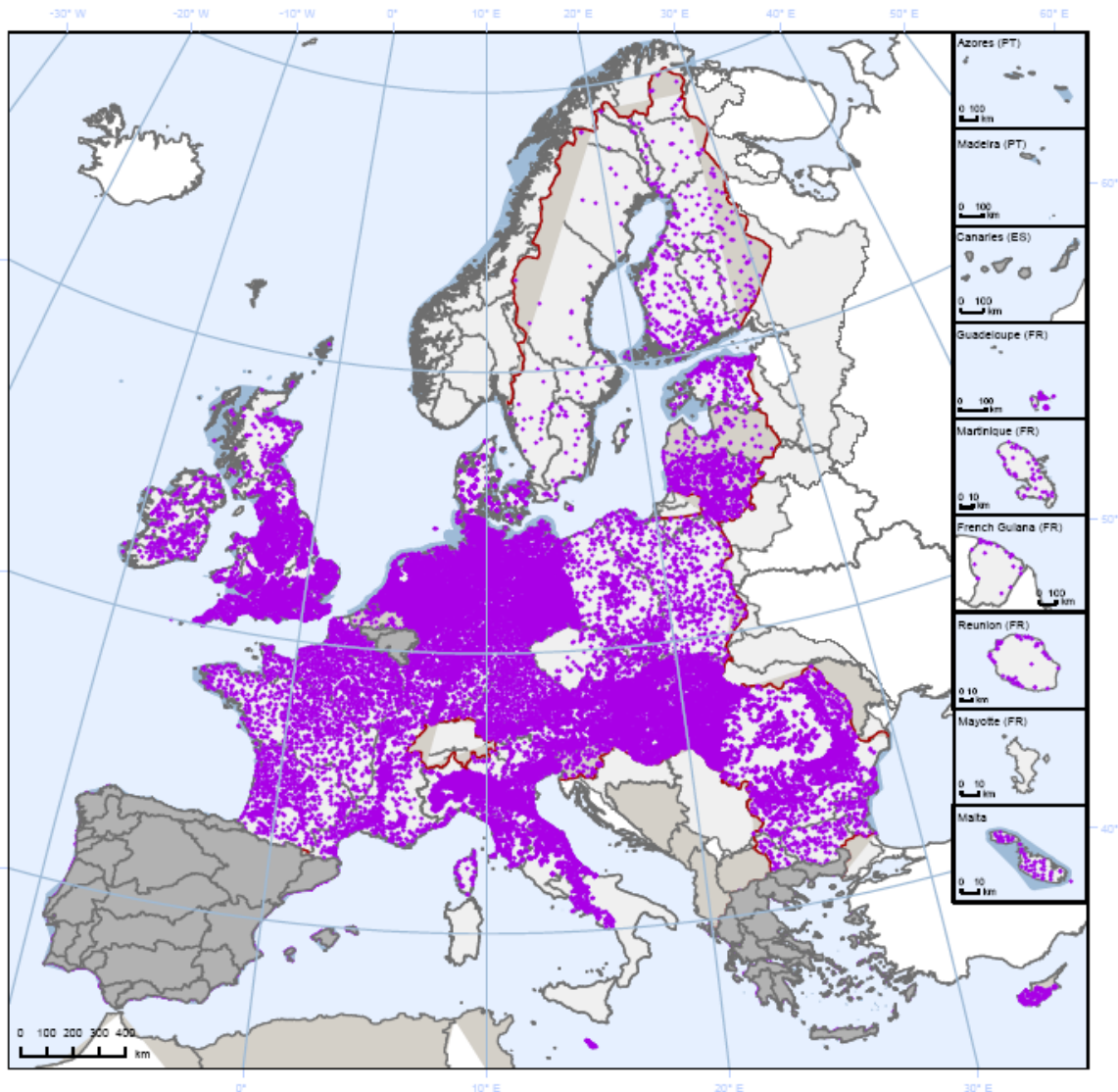
- Not all priority substances (PS) always monitored, sometimes due to lack of adequately sensitive analytical methods.
- Atmospheric deposition of PS not always considered.
- Limited monitoring of PS in biota/sediment (despite three existing biota EQS and requirement for trend monitoring).

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)



Groundwater monitoring stations in River Basin Districts

- Groundwater monitoring stations
- International River Basin Districts (outside the EU)
- EU extent
- EU Member States that have not reported River Basin Management Plans
- Country borders
- National River Basin Districts (within the EU)
- Coastal waters

Map produced by WRc plc
on behalf of the
European Commission©,
DG Environment, 2012



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

Trends in pollutant concentrations in groundwater

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

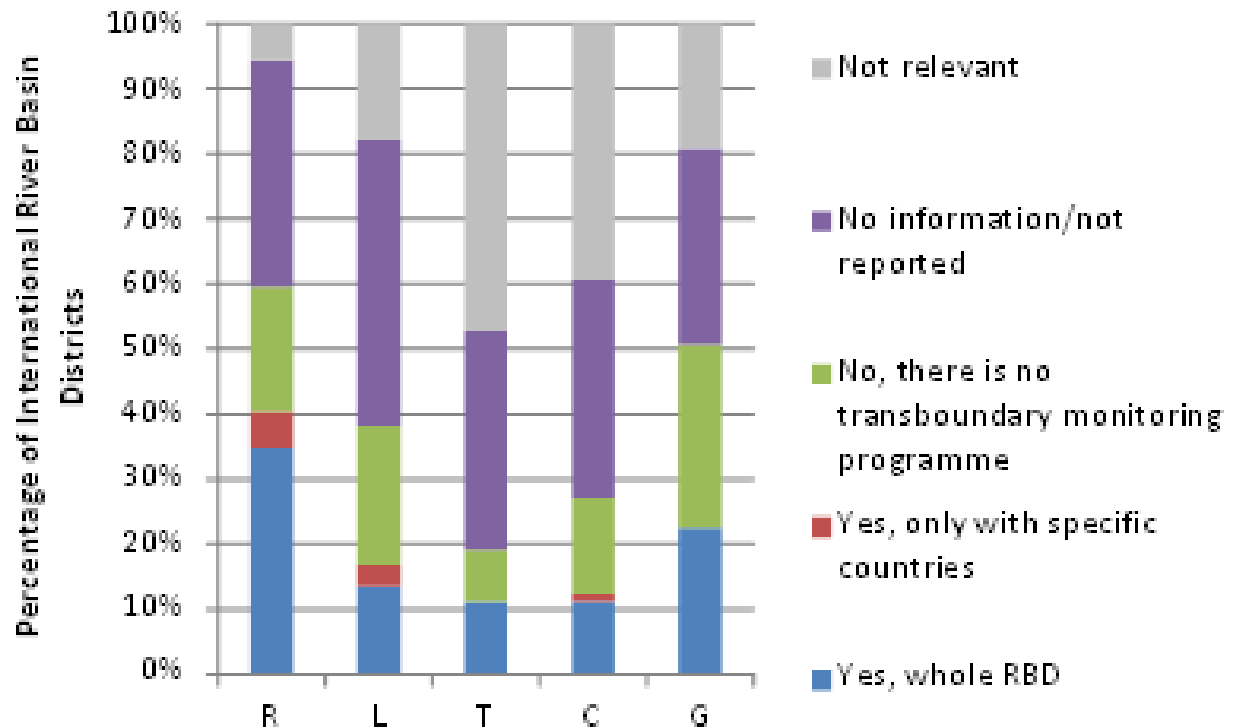
- only a few RBMPs give explanations on how to detect significant trends
- Incomplete assessments because of the short monitoring time series available

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) → 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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