

Workshop

“Tools and guidance for assessing resource and environmental cost in the WFD”

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Scale, data, levels of disaggregating
issues in the WFD



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Structure of the presentation

- Scale issue relevance
- Data availability
- Time scale relevance
- Level of disaggregating



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Scale issues (1)

Questions

At which scale we should calculate the costs?

Which costs? financial, economic, environmental and even social costs?

For whom ?

What is the most appropriate level of scale to link information from the Economic Analyses with data from the river basin characterisation (Art 5 Reports)



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Scale issues (2)

Scale issues influence the **costs and benefits** at water body level

The identification of the geographical scale is relevant to assess which information and expertise is available.

Statistical extrapolation or interpolation techniques can be used to estimate key variables at the desired scale.

The scale is important to see which information and results are to be reported for effective information and consultation of the public

The scale for reporting to the EU: the river basin district, with the analysis being presented for key spatial and socio-economic/water uses aggregates.



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Scale issues (3)

In addition to the River Basin Management Plans developed for each district, more detailed plans can be produced for specific sectors, issues or water types (*Article 13*), and to focus **on specific aggregation levels lower than the river basin.**

Such detailed plans may be identified for the analysis of pressures, impacts and significant water management issues.

Scale issues – and the difference that might exist between the scale of the **assessment of cost-disproportionality** (that might be performed at aggregated scale/river basin district scale) and the scale of the **justification of time/objective exemption** (that is at the water body scale)!!!!



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How to consider the scale and the data disaggregation in the characterization of the river basin

Economic analysis of water uses

1. **Assessment at the scale** of significant water uses as identified by Annex II => **assess economic indicators at the same scale**
2. Further disaggregation is possible

Trend analysis and baseline development

1. Assessment of trends in key drivers/variables at a scale consistent with the economic analysis of water uses

Assessment of cost-recovery

1. Identify the scale at which water services take place => assessment of cost-recovery at that scale
2. Identify uses that are damaging the environment and cause specific water services to other uses => compare the water use/services linked to damage caused by water uses at the same scale



Scale issue relevance for assessing the gap/risk of noncompliance

Costs of basic measures

- Assess total costs of basic measures at the river basin scale

Likely costs and qualitative impact of potential measures

- Assess tentative costs per type of measures considered
- Assess the impact of potential measures at the scale of the likely-affected water use(s)



Scale issue relevance in the cost effectiveness analysis (1)

Costs of measures

For each individual measure proposed – assess costs at the spatial or disaggregation scale at which the measure will apply

Effectiveness of measures

Assess the effectiveness of measures at the scale at which the concerned environmental issues take place – this depends on the pressures and impacts concerned and the type of measure considered (at which scale is the measure applied, and which part of pressures will be affected) => compute one effectiveness indicator for each measure

Cost-effectiveness analysis

1. Cost-effectiveness analysis undertaken at the river basin scale => identify cost-effective programme and total costs
2. If cost-effectiveness undertaken separately for different environmental issues and sub-basins, ensure a logical step-wise approach (from upstream to downstream, from general environmental issues to local environmental issues) and constant feedback loops between analyses
3. Further levels of disaggregation are possible in the analysis linked to the assessment of significant water uses and the potential measures investigated



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Scale issue relevance in the cost effectiveness analysis (2)

Cost-effectiveness analysis

1. Cost-effectiveness analysis undertaken at the river basin scale => identify cost-effective program of measures and total costs
2. Further levels of disaggregation are possible in the analysis linked to the assessment of significant water uses and the potential measures investigated



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Data availability issues

Availability of data

Different information on technical and economic questions is available on different scale level. It is necessary to find an appropriate level of scale to link information from the Economic Analyses with data from the biophysical characterisation

Data collection and handling

Countries collect different set of data
Data are available with different authorities
Data are registered in different formats

Recommendations

A working mechanisms to handle and exchange data on a river basin level and in the transboundary context is essential to enable an analysis of a whole river basin



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Time scale issue

The time scale of a measure is important for:

- the initial selection of measures
- its cost estimation
- the whole duration, until its efficiency is reached, on short-term, medium-term and long-term scenarios

When selecting the most cost-effective combinations of measures, a trade-off processes should be implemented between the following assumptions:

- (A) Probability of target achievement by 2021, 2027, ...
- (B) Ecological effectiveness of the measure/policy instrument
- (C) Time scale until effectiveness of the combination
- (D) Direct costs
- (E) Indirect economic costs



Levels of disaggregating

Important for assessing the costs!!

Information required for calculating the cost recovery needs to be aggregated at the river basin scale.

This information included data on pollution, water uses, financial costs and existing prices.

Environmental and resource costs may relate to the sub-basin or entire river basin, considering the downstream effect if a pollution is created in the upstream part of a river basin has negative impact.

Assessing these costs requires a good assessment of the scale at which environmental impact of existing water services and uses take place.

Costs can then be calculated for each water service at the scale of the river basin

The assessment of the contributions to these costs of key water uses combines both water uses and related services aimed at removing environmental damages caused by these uses.

The WFD requests a minimum disaggregation into agriculture, households and industry.

According to local circumstances and key water uses identified in the analysis of pressures and impacts, this disaggregation may be further refined.



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