# ASSESSMENT OF DISPROPORTIONATE COSTS IN WATER MANAGEMENT IN THE LIGHT OF THE EU WFD

## World Water Congress

**Edinburgh**
**25 May 2015**


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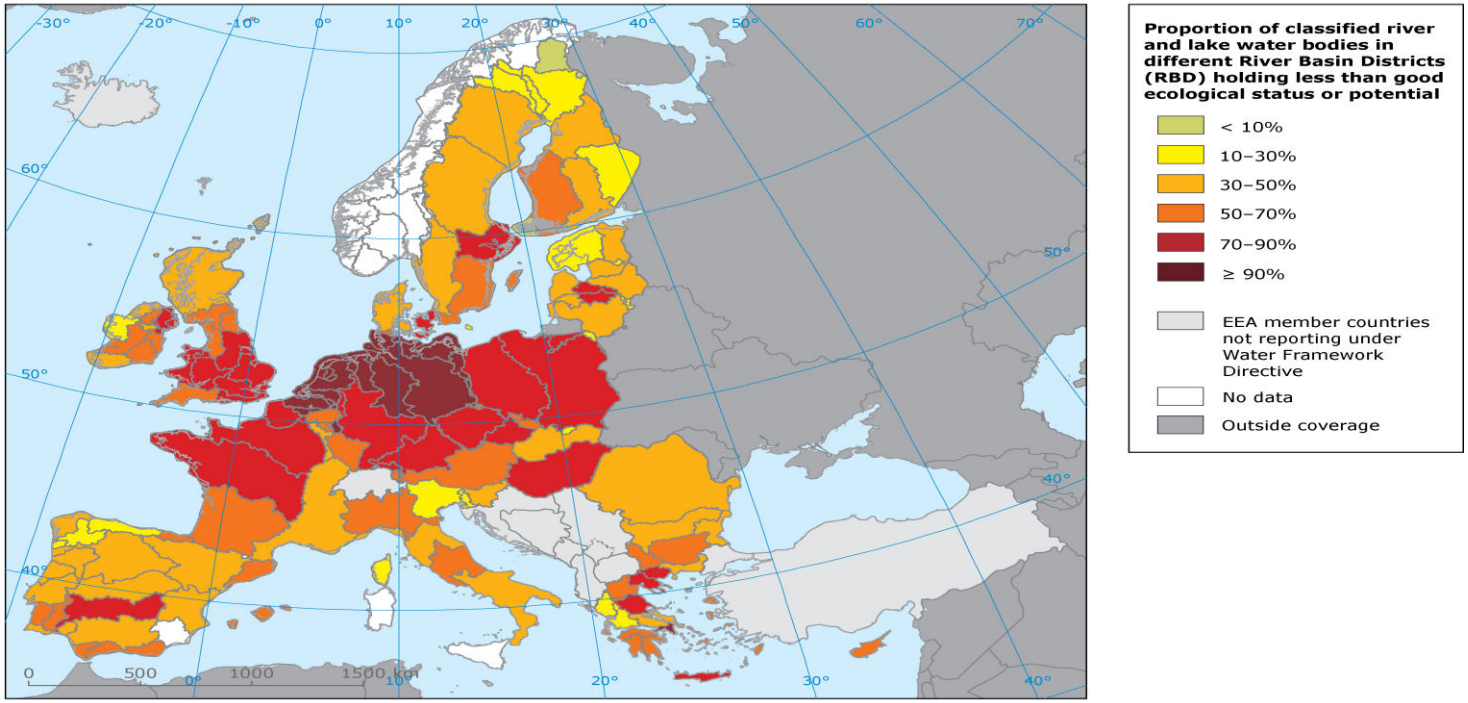
# The goal of the WFD

achieving "**good status**" for all waters by a set deadline

- 2015
- 2021
- 2027

# Current state of GES




Source: *European Environment Agency (2015)*

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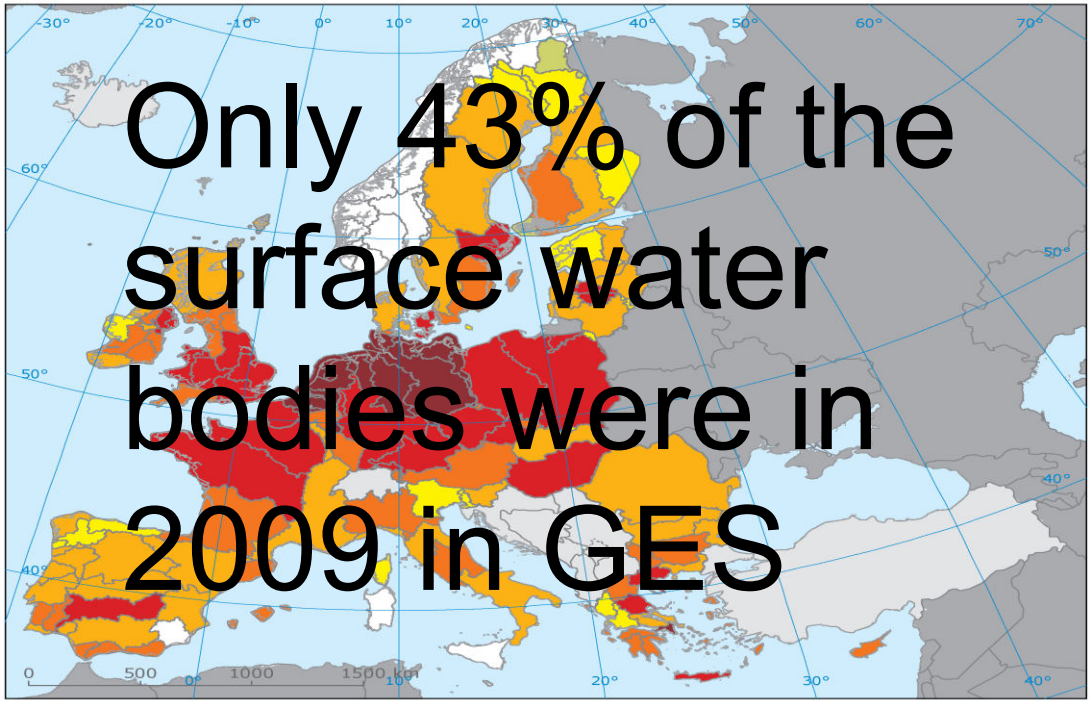


Source: *European Environment Agency (2015)*

# Burdens to achieve the „good status“

- lack of time to apply the measures
- technical feasibility
- natural conditions
- high cost of measure applications

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# Exemptions under the WFD:

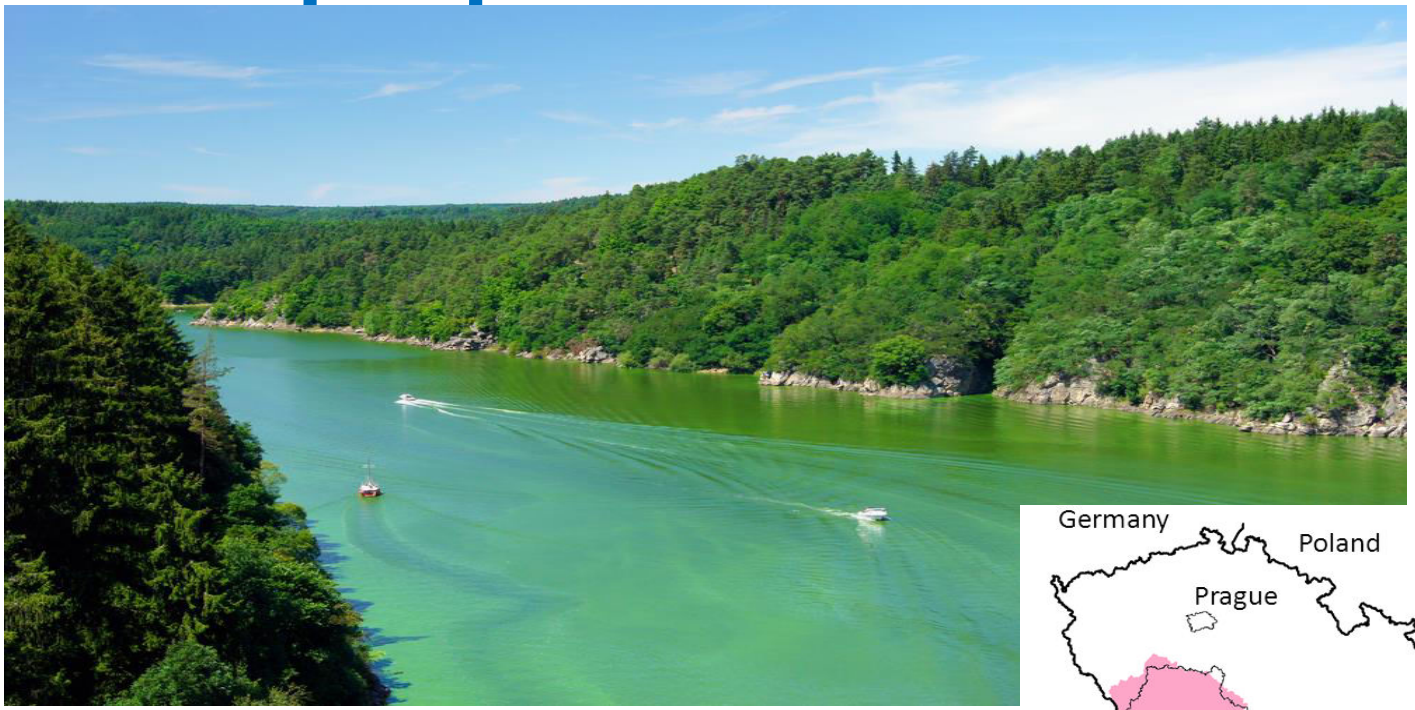
- technical feasibility
- disproportionate costs
- unfavourable natural conditions

# Burdens to achieve the „good status“

## Exemptions under the WFD:

- technical feasibility
- **disproportionate costs**
- unfavourable natural conditions

# Example: Orlik reservoir catchment - disproportionate costs?




**1/7 of area of the Czech Republic**

# Example: Orlik reservoir catchment - disproportionate costs?

# Approaches to proportionality abroad

Denmark

- Jensen et al. (2013)

Scotland

- Aresti (2008)

Germany

- Klauer et al. (2007)

# Approaches to proportionality abroad - Jensen et al. (2013)

1) definition of geographical scope of the analysis;
2) identification of status quo of water bodies;
3) estimate of benefits from achieving good status;
4) estimate of costs of achieving good status;
5) calculation of social profit;
6) sensitivity analysis;
7) final recommendations.

# Approaches to proportionality abroad - Aresti (2008)

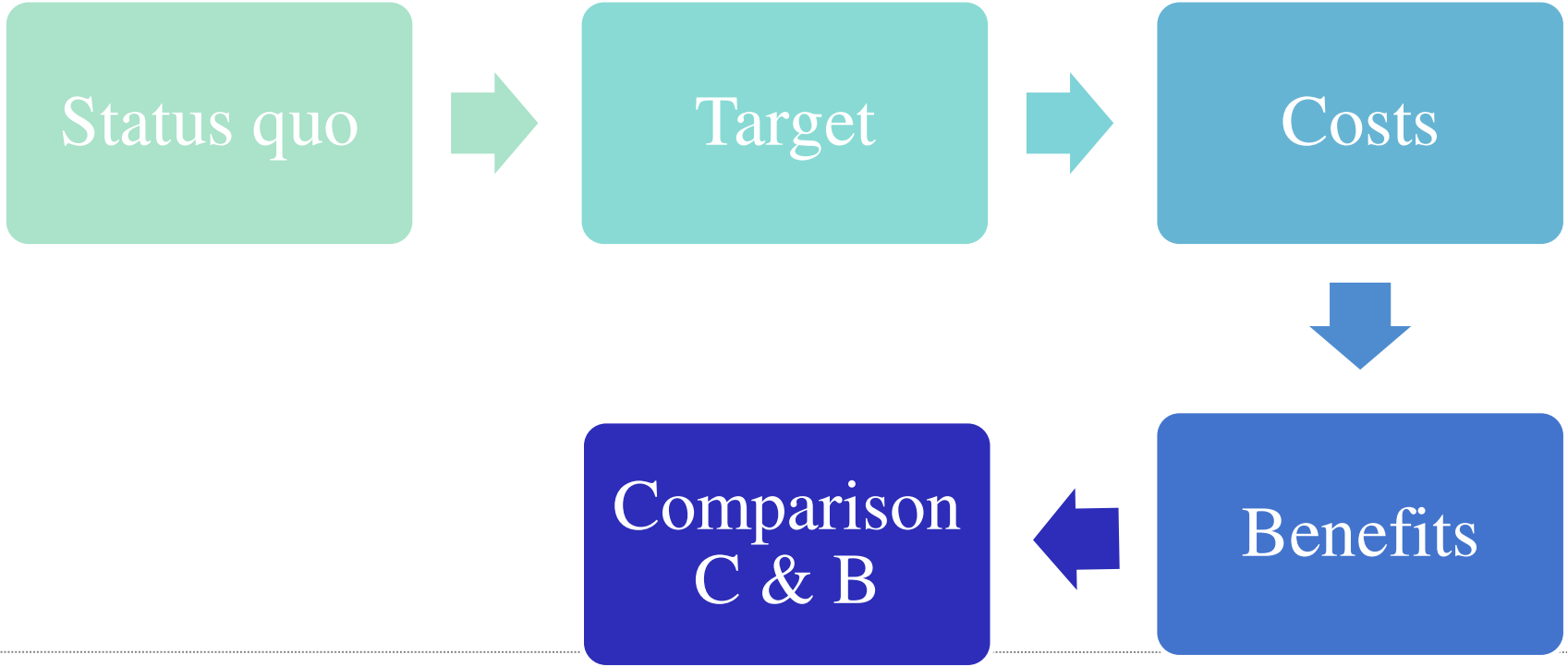
1) cost-effectiveness analysis (CEA) and expression of abatement cost curves;
2) estimate of feasibility and affordability;
3) estimate of benefits and expression of revenue curves;
4) comparison of costs and benefits (CBA).

# Approaches to proportionality abroad - **Klauer et al. (2007)**

- rules and criteria for assessing proportionality
  - an eliminative process

- usage of CBA for measures suspected of disproportionality

# Design of methodology conforming to WFD requirements



# Spatial scale

Exemption - **at the level of a water body**

- for one pollutant or group of pollutants (indicators) it can be resolved using “certain measures” at once

# Spatial scale

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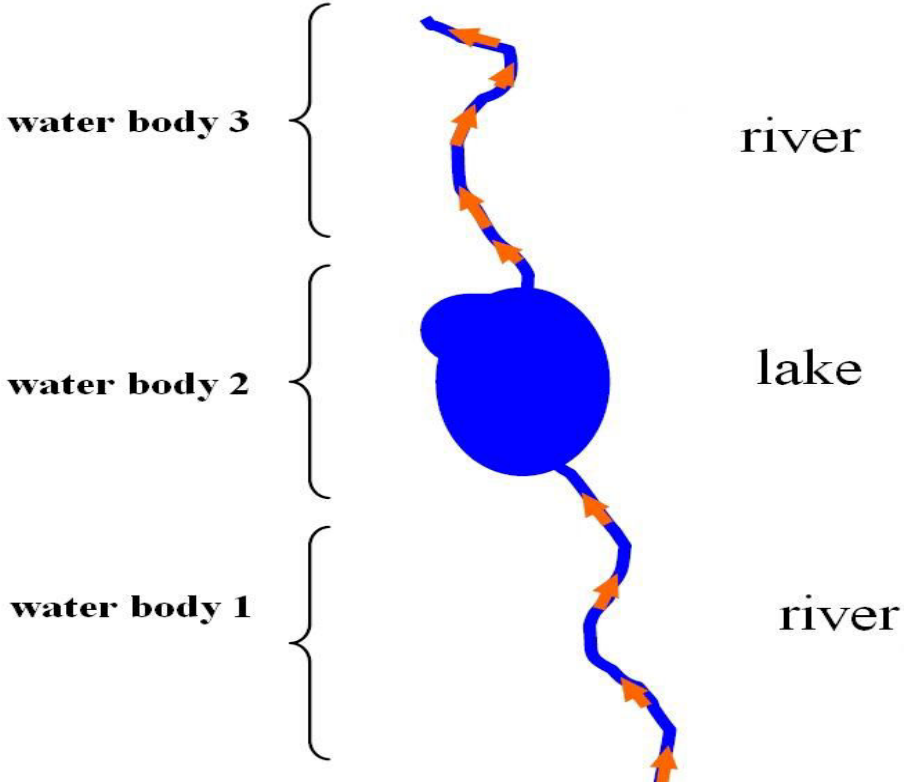

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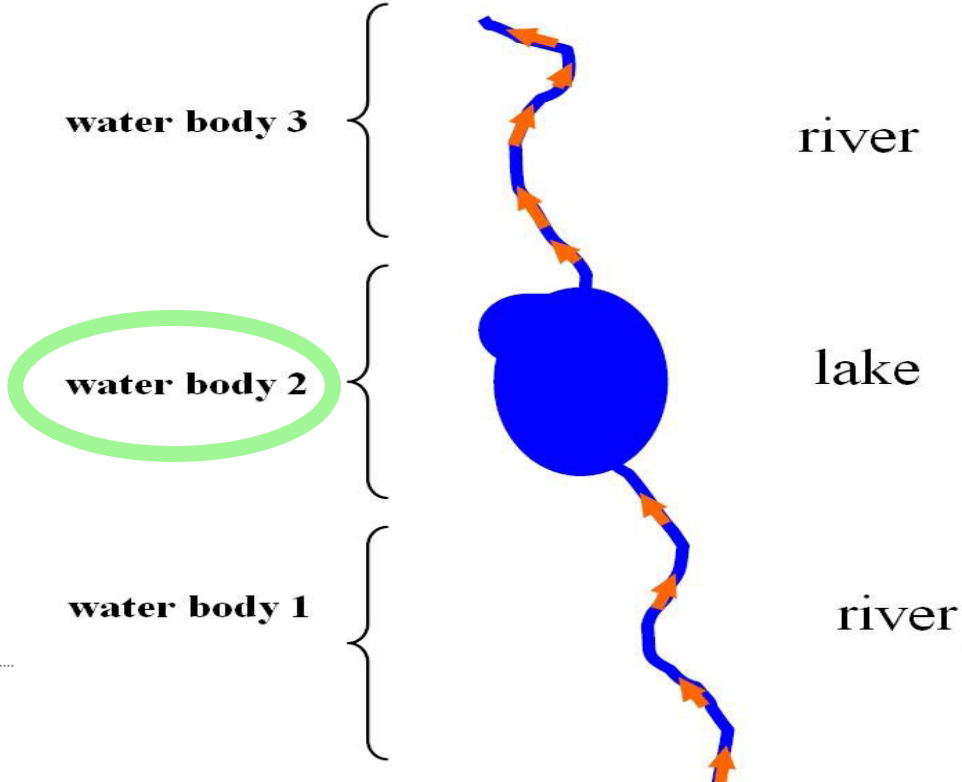


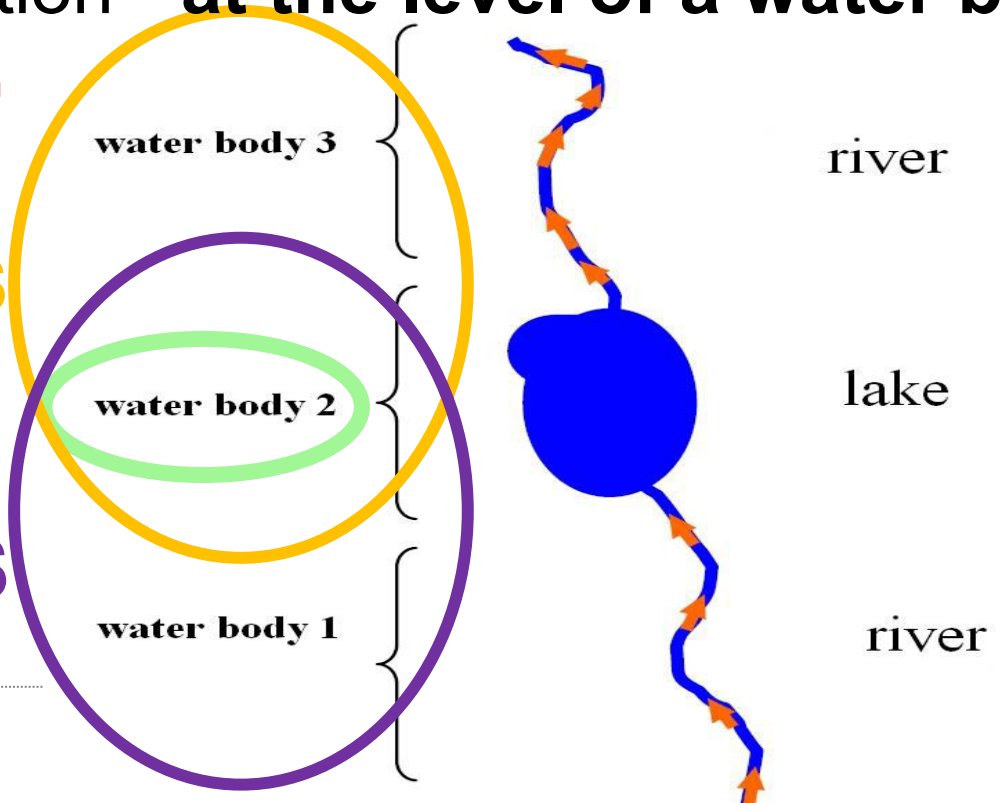
# Spatial scale

Exemption - **at the level of a water body**

**BUT**

**BENEFITS**

**COSTS**



# Benefit Assessment

- qualitative and quantitative assessment

  low, negligible and difficult-to-appraise benefits (and also costs) can be excluded from monetization

- primary valuation vs. benefit transfer

# Benefit Assessment

Benefit categories:

I. recreational and aesthetic benefits;
II. savings of costs of water treatment (benefits for water and sewage utility companies);
III. benefits to other ecosystem services.

# Comparison of costs and benefits

Steps:

1) C & B in purely quantitative dimension
2) analysis of the influence of other C & B (in non-monetary terms)

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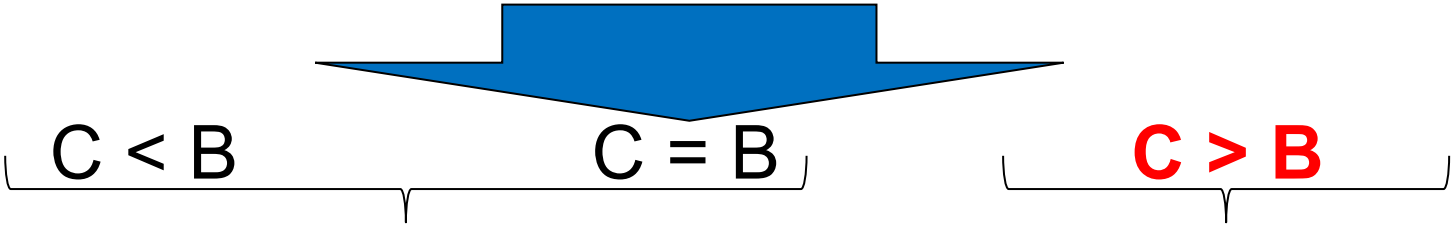

# Example of Cost and Benefit comparison – Case of Orlik

| SCENARIO | Optimistic | Realistic | Pessimistic |
|---|---|---|---|
| Total benefits (CZK billion) | 3,97 | 2,00 | 1,07 |
| Total costs (CZK billion) | 13,66 | 15,25 | 17,16 |
| Benefits – costs | -9,69 | -13,25 | -16,09 |

Source: *Vojáček et al. (2014)*

# Conclusion

- EU member states try to apply a pragmatic approach
- development of national methodologies can improve the situation
- major methodological complications persist
- lack of relevant data and experience for carrying out adequate analyses

# References


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