



# **Economic Assessment for Implementing Flood Risk Management – case study of Lower Saxony – lessons learned from WFD**

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## Why lessons-learned from WFD?

- Economic assessment in the sense of the use of economic instruments, methods and mechanisms plays a significant role in the diverse areas of flood risk management (FRM) such as
  - decision making,
  - vulnerability and risk assessment,
  - the appraisal and prioritisation of measures as well as
  - the financing of FRM measures.
- Experience and lessons-learned from the implementation of the Water Framework Directive (WFD) might be of assistance for an effective management of flood risks.
- Why are lessons-learned and experiences of WFD transferable?
  - Implementation of WFD includes findings on possible approaches of a comprehensive understanding of economic assessment with the focus on existing FRM structures in order to support the FRM.
- Furthermore it is intended to provide ideas for a possible evolvement of the “Floods and Economics” approach to assure an efficient FRM in the line of the Floods Directive.



## WFD and economic assessment: Case study on cost-effectiveness in Lower-Saxony

- Several explicit economic requirements with the WFD in order to support the achievement of the Directive's objectives.
- Focus of the study: the requirement of **cost-effective measures**

### Case study:

- Background: a first expert based selection of measures led to a prioritization of about 700 measures that present the programmatic approach up to 2015  
→ Search for new methodological grounds to ensure cost-effectiveness

### Structure of the study:

1. Performance of conventional cost-effectiveness-analysis in line with the guidance documents and economic literature
  - Selection of two measures (for surface waters)
  - Performance of „conventional“ cost-effectiveness-analysis for each single measure
2. Identification and analysis of existing institutions (structures and processes) that lead to selection and prioritization of measures:
  - In order to seek further mechanisms that ensure the efficient achievement of the Directive's objectives
  - To assure the use of existing institutions and identification of potentials for optimization
  - Use of organisational efficiency as a meta criteria

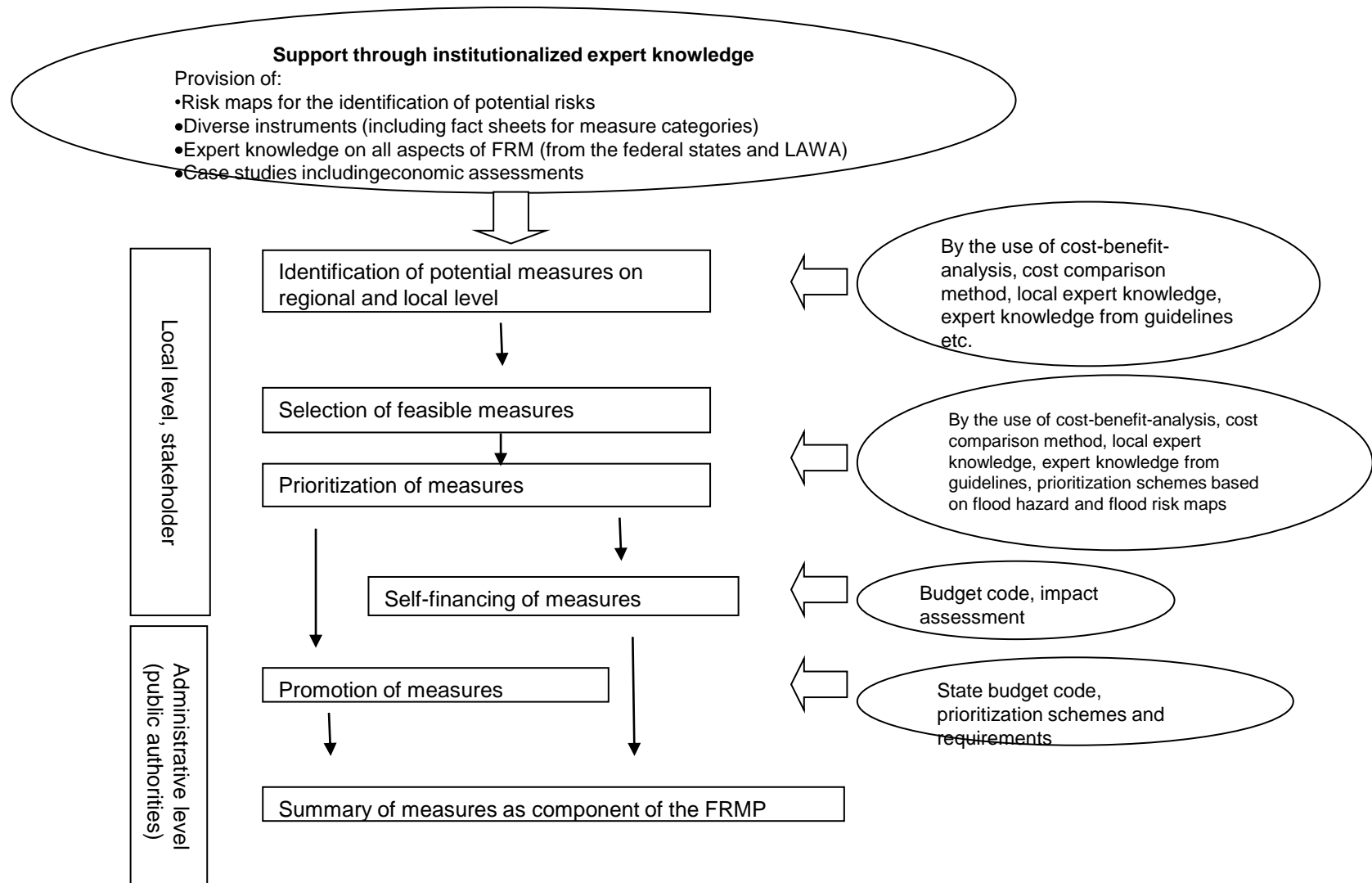


## Lessons-learned from WFD's economic assessment

- First of all: Not all obligations and potentials have been fulfilled yet, but further work and research is necessary → no golden standard has been identified so far.
  - But: Economic assessment with its whole range of instruments, methods and mechanisms can be considered as a powerful and useful tool to support achievement of WFD goals **if** applied in the right and adequate way.
  - Due to tight timelines it is necessary to focus on the application of established and well-proven methods. There is a need for near-term applicable solutions that facilitate the implementation statewide with respect to existing structures and procedures. The need for further research has to be handled separately.
  - It is necessary to combine existing structures and procedures with the economic requirements of the WFD and adequate solutions that are practical applicable. Water management structures and procedures are characterized by a multilayer system with decentralized as well as centralized traits to secure goal-oriented and high standard solution for water management.
- The Directive's requirements offer a chance to take a look at existing structures and procedures in order to enhance efficiency!



# Economic assessment as part of the current German FRM





## Conclusions and ideas for further proceeding

- It is useful to approach the requirement for economic assessments in a broader context - the constitution of institutions, structures, procedures and the mechanisms that influence their actions play an important role to support and ensure an efficient outcome of FRM.
- There is a wide and well-proven range of existing tools and methodologies that can be rather easily applied to single and location-dependent situations. But we have to think in wider economic (management) terms in order to achieve the objectives, whether the ones from WFD or the objectives of the Floods Directive.
- Above all existing systems of FRM should be analysed for possible mechanisms that can assure an efficient FRM. It might be more efficient to optimize these structures and procedures than to establish new mechanisms or introduce new regulations.
- Due to tight timelines the focus of economic assessment should be on near-term applicable solutions that facilitate the implementation statewide with respect to existing structures and procedures.
- Behind economic assessment stands a well-established science with a long tradition in support of management optimization. So cooperation with and support from existing specialized institutions is rather promising.
- Where lacks of data and methods can be identified, further research has to be initiated and tracked intensively for practicable transfer. But the research activities should be handled separate from the fulfilling of the requirements with the practical implementation (e.g. flood risk management plans).



## Suggestions for the further process

- Encouragement of further exchange of analysis of existing systems of FRM and lessons-learned between member states
  - Esp. an intensified exchange of experience with the practical application of methods, no (more) theoretical guidelines,
- Identification of lacks of data and knowledge based on member states experiences (esp. transnational questions),
- Strengthen cooperation with existing specialized institutions that already provided guidelines and other information on basics for economic assessment as well as water related economic assessment and therewith support the use of synergies.