



The Selection of the Most Cost- Effective Combination of Measures

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The Two Main Criteria of the Selection Process

**The selection of the most cost-effective
combination of measures has to take place
both under ecological and economic criteria.**



The Two Main Qualities of Measures

- Ecological effectiveness**
- Economic effectiveness**



The Measures in the Planning Cycle

- ❑ **Judgements about the most cost-effective combination of measures as part of the Economic Analysis (Annex III)**
- ❑ **Program of measures as part of the River Basin Management Plan (Art. 11, 13, Annex VII)**

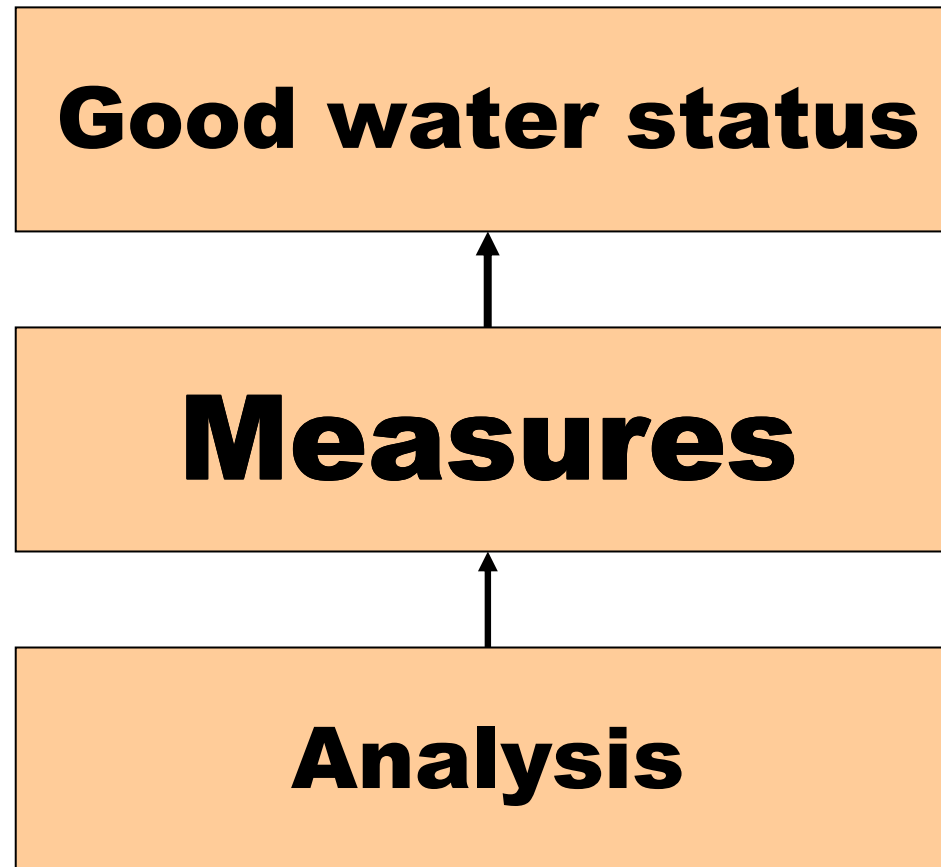


The Program of Measures

- The most difficult part of the WFD planning cycle**
- Effects stakeholders directly, therefore conflict prone**
- Intensive information and consultation imperative to reduce conflicts and optimize results**



Function of Measures





Types of Measures

Basic measures –

**minimum requirements to
be complied with, which
practically means all EU
legislation**

Supplementary measures

–

**designed and implemented
in addition to the basic
measures**



Restrictions

- Basic measures have to be implemented even if they are not cost-effective > Municipal Waste Water Directive**
- There is a choice only for supplementary measures**



Terminology

- **Measures: concrete technical project with rather local impact, e. g. construction of a waste water treatment plant**
- **Instruments: administrative, economic or informative measures**
- **Both terms are used in the WFD and both are measures in the sense of Art. 11 and Annex VI.**



Some possible Measures

- Construction or upgrading of waste water treatment plants**
- Reduction of nutrient and pesticide discharges by creation of riparian buffer strips**
- Introducing „Good Agricultural Practice“ in pest management**
- ...**



Some possible Instruments

- Supporting ecological agriculture**
- Improving cooperation between agriculture and water suppliers**
- Introducing environmental charges on**
 - **water abstraction**
 - **disposal of waste water**
 - **mineral nitrogen fertilisers**
 - ...
- ...



Selecting Combination of Measures

- **Initial characterisation/pressures**
- **Selection of effective measures**
- **Description of their interaction**
- **Calculation of costs**
- **Determination of combination of m.**
- **Coordination with plans in other sub-basins**

→ Programme of measures



Starting Point: Pressures

Chemical press.:

- **Nutrients**
- **Pesticides**
- **BOD,COD**
- **Priority substances, e. g. pharmaceut., heavy metals**

Hydromorphol. pressures:

- **Water abstract.**
- **Flow control**
- **Other morphol. changes**



Programs of Measures

can either relate to

a river basin district

or

cover the whole territory of a Member State.

(Art. 11, 1)



Coordination with other Measures

Measures acc. WFD should be coordinated with measures in other policies such as agriculture, energy and navigation.



Conclusions

- ❑ **Selecting the most cost-effective combination of measures is a challenge for all Member States**
- ❑ **Many questions still open:**
 - > **Definition of costs**
 - > **Effect analysis**
 - > **Interaction with other measures**
- > **WFD's answer: Cyclic approach – trial and error!**



German Handbook

„Basic principles for selecting the most cost-effective combinations of measures for inclusion in the programme of measures as described in Art. 11 of the Water Framework Directive“

can be downloaded from

www.umweltbundesamt.de/wasser/themen/oekonom.htm

in German & English