

# **Implementation of the European Water Framework Directive in Baden-Württemberg: An example of ecological water development**

EURORAI, October 2009

***"Courtesy translation provided by the organisation"***



# EU Water Framework Directive of 2000...

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- governs the protection of groundwater and surface water,
- requires that by 2015 all EU states bring their waters to a good condition (structural, biological, physical, chemical),
- allows that the period for extending the 2015 deadline for achieving this goal can only be extended to 2027 at the latest.

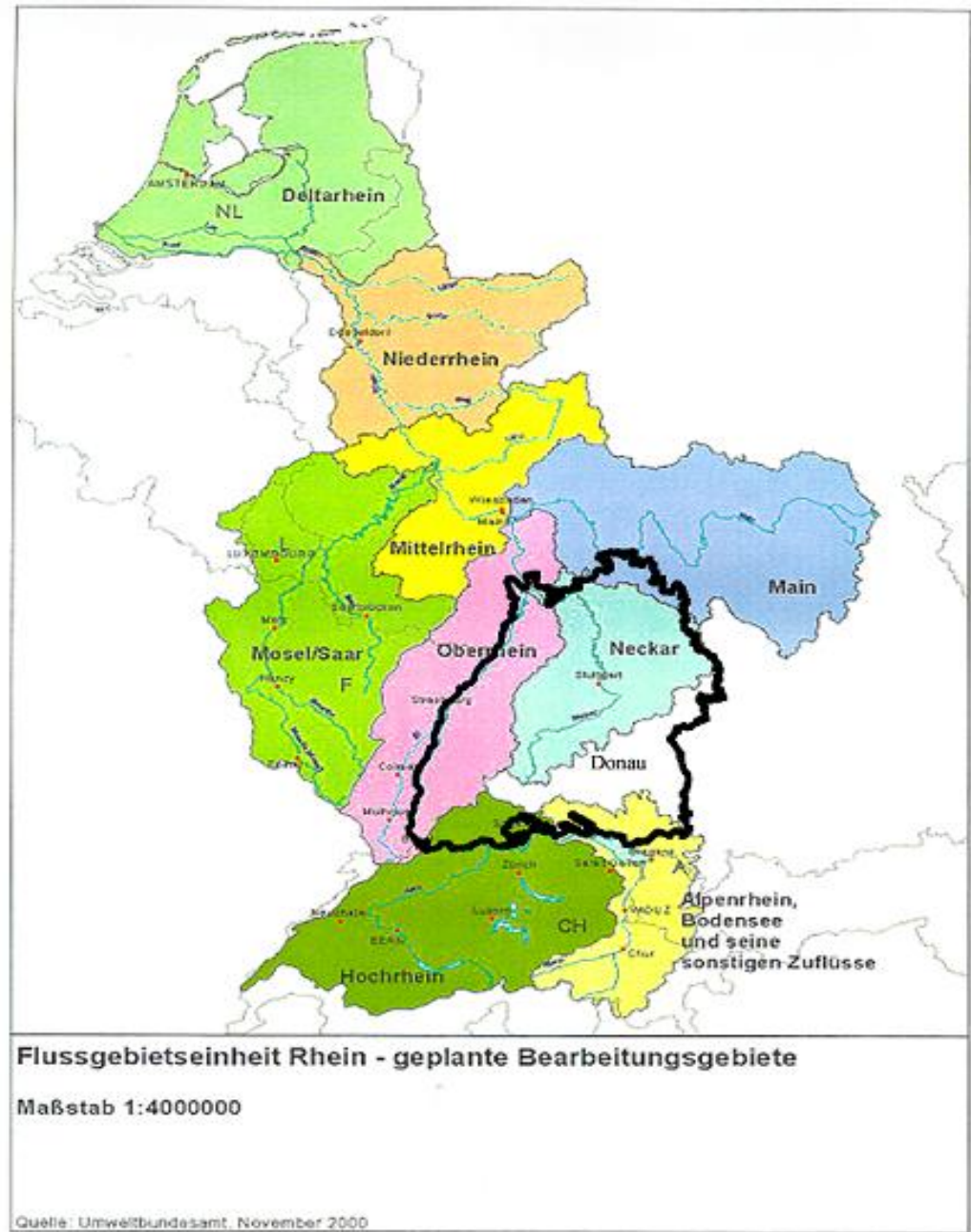
# Audit Commissioning

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- What does it cost the state of Baden-Württemberg to implement the Water Framework Directive?
- What cost-cutting opportunities are there?
- How can the funding be realised within the prescribed timeline?

## Work areas in Baden-Württemberg

- **Baden-Württemberg:**
  - ~ 11 million inhabitants
  - ~ 35,000 km<sup>2</sup> area
  - ~ 4,000 km of water
- **River basin districts:**
- **Rhine, Danube**
- **6 internationally coordinated working areas:**
- **Alpenrhein, Hochrhein, Oberrhein, Neckar, Main, Danube**



# Approaches to implementation

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- Wastewater technical facilities
- Agricultural measures
- **Hydromorphology:**
- **Hydroecological and structural projects**
- **➔ Focus on Baden-Württemberg (Topography)**

# Measures for flowing waters

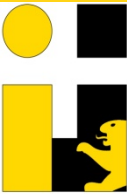
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- Restoration of passage through weirs, *inter alia*
  - Conflict with power generation
- Land acquisition to enable water development
  - Conflict with agriculture



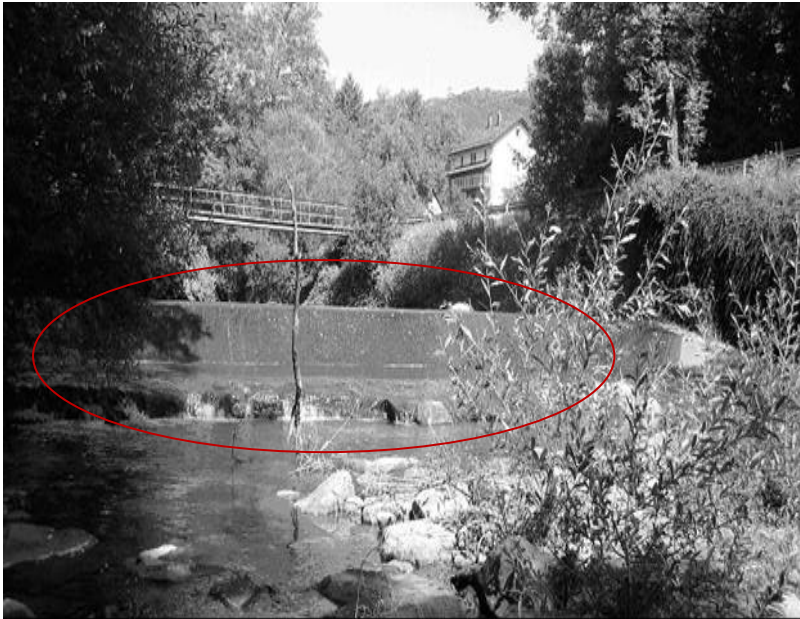




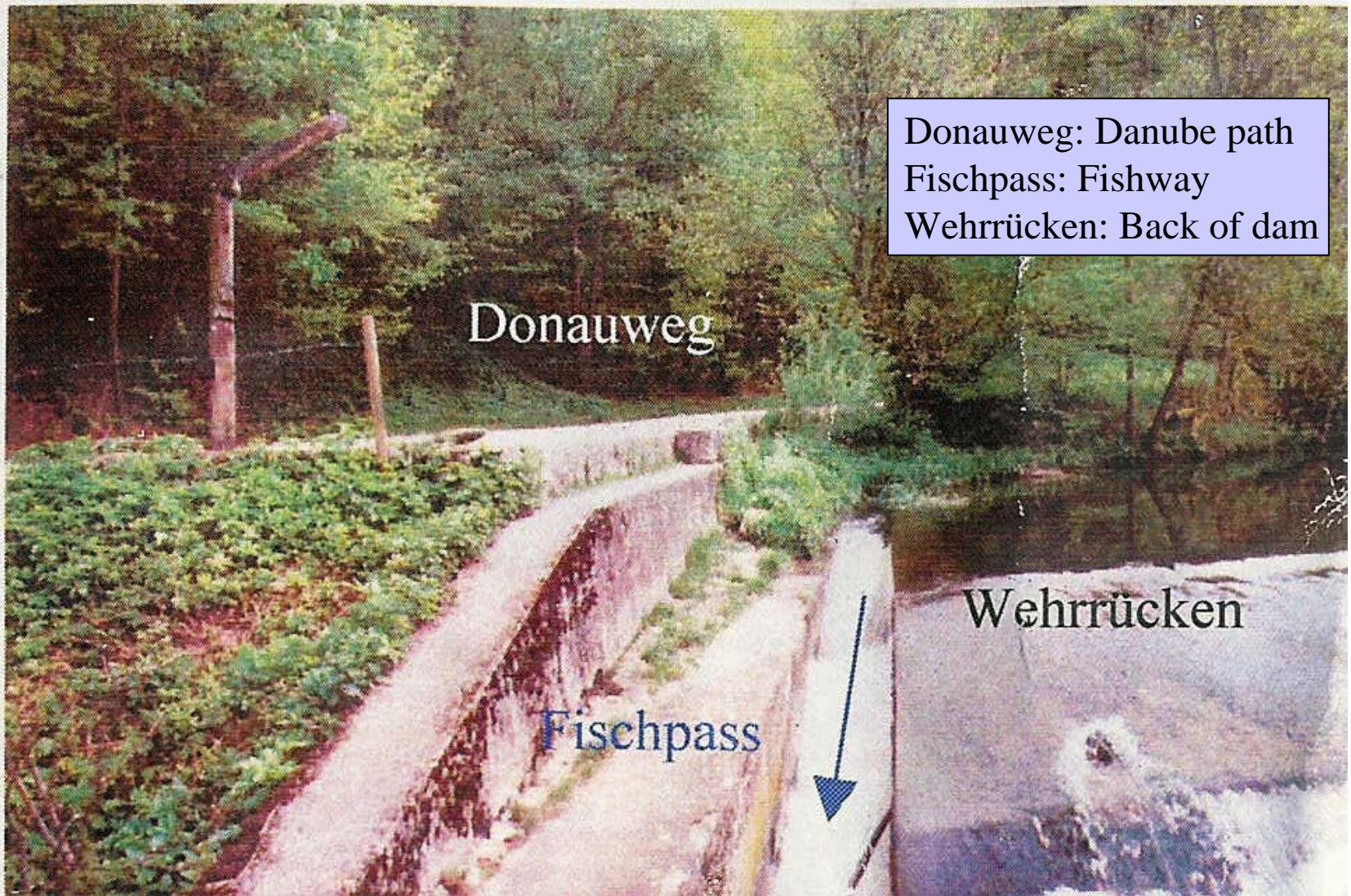




# Removal of a concrete weir







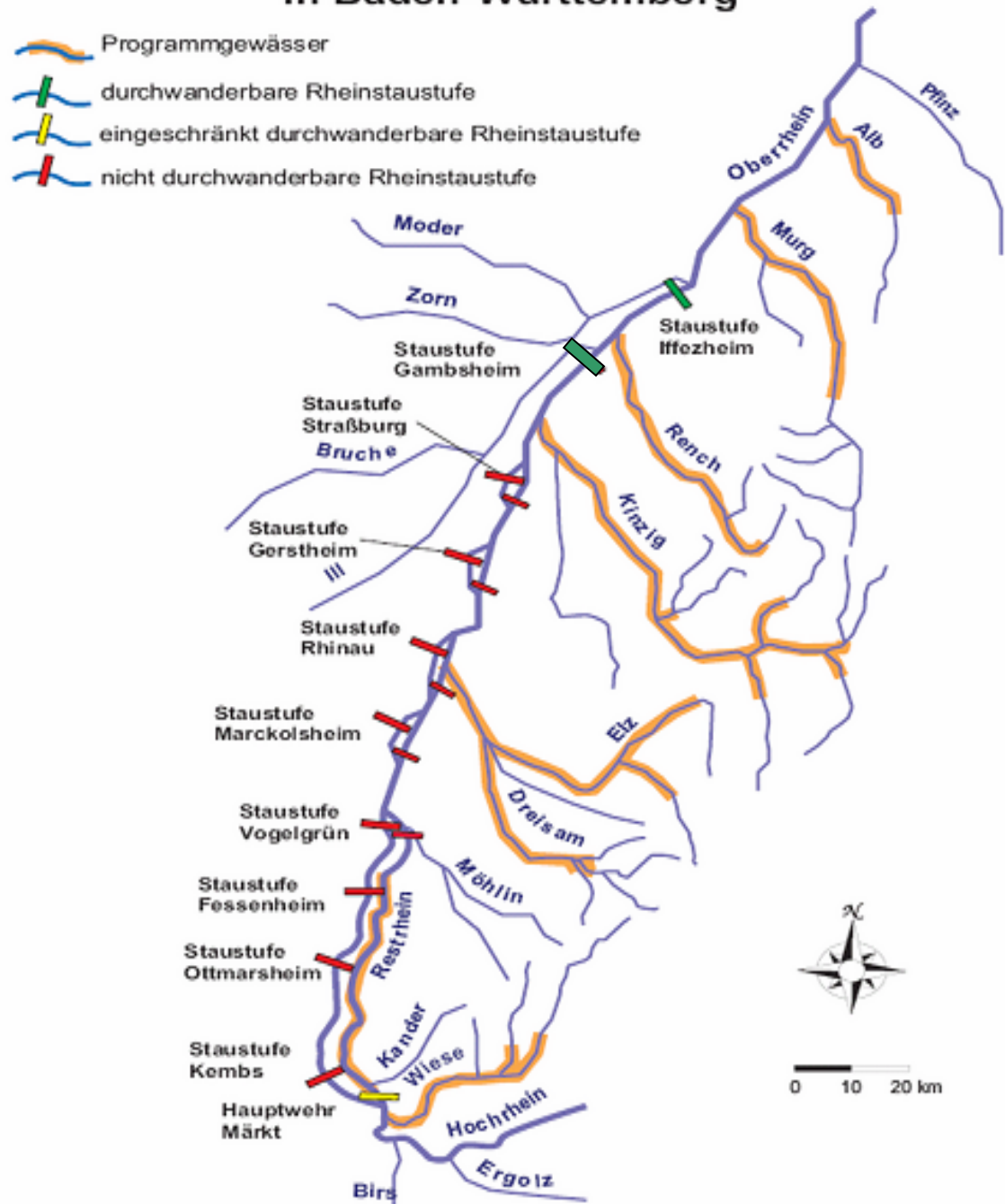


# Programmgewässer der Lachswiederansiedlung in Baden-Württemberg

## Problematik

→ Staustufen

→ Hohe Investitionen



# Gambsheim fish ladder





## Identification of investment requirements

- Expenditure for already implemented measures taken for buildings and kilometres
- Checking whether the quality targets are feasible with the investment (“cost-benefit ratio”)
- Extrapolation of state-wide investment needs  
(Premise: Only two-thirds of the measure avenues will be redesigned)

# State investment requirements...

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- ...for ecological and structural measures: 300 million euros
  - until 2012/2015: 76 million euros per year
  - until 2021: 31 million euros per year
  - until 2027: 19 million euros per year



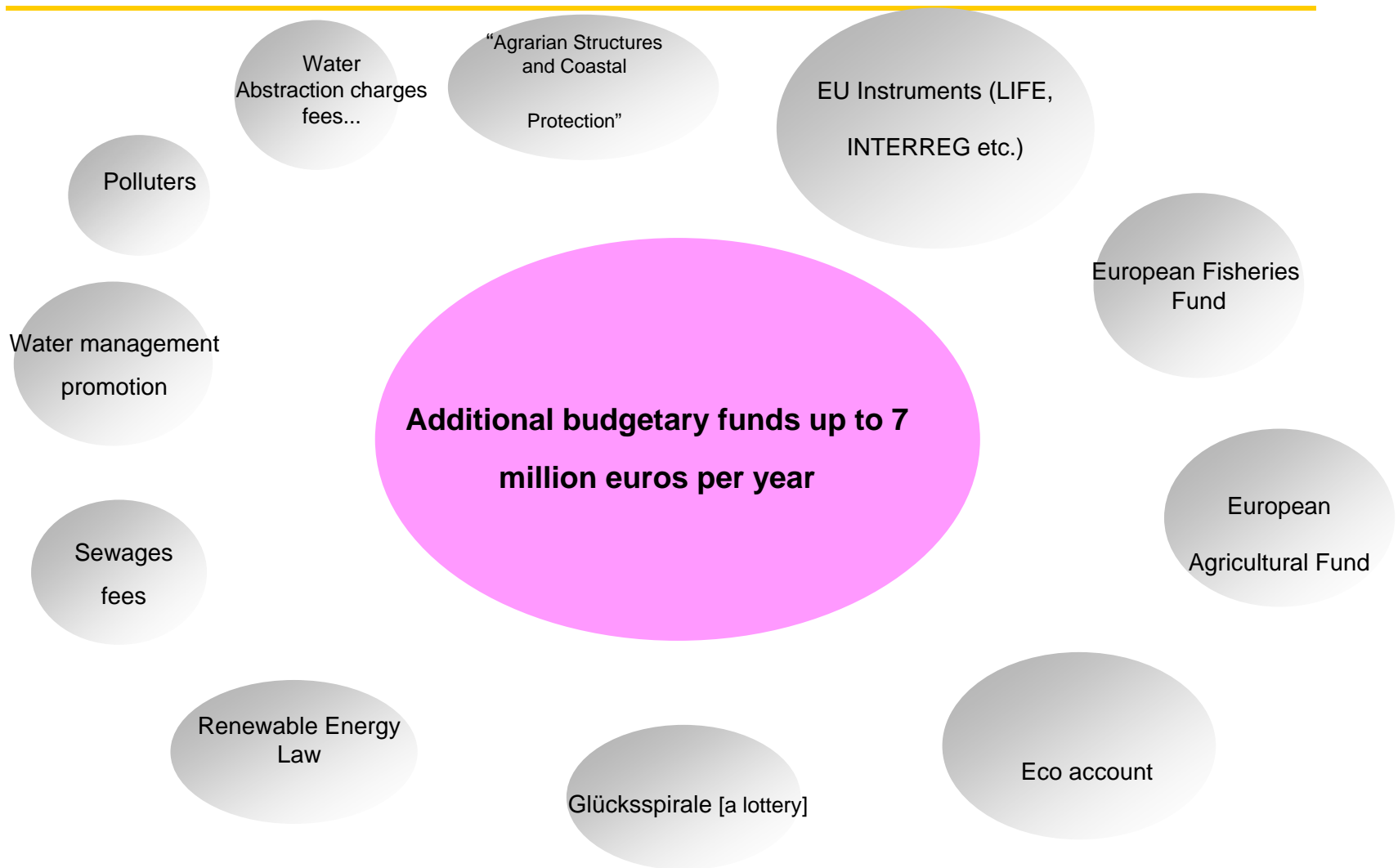
# Currently available resources...

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...for hydroecological measures: 3-5 million euros per year

- 60 to 100 years to achieve the target good water condition
- Cost-cutting opportunities such as self-reinforcing water development (land acquisition, bank strips etc.) can be used
- other financing instruments can be exploited

# Possible financing instruments



# Conclusions

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- Design for the implementation of measures needs to be developed quickly and
- Cost and financing plans need to be drawn up
- So that the policies for financing and possible consequences can be decided.