



# Adaptation in European water law and policy

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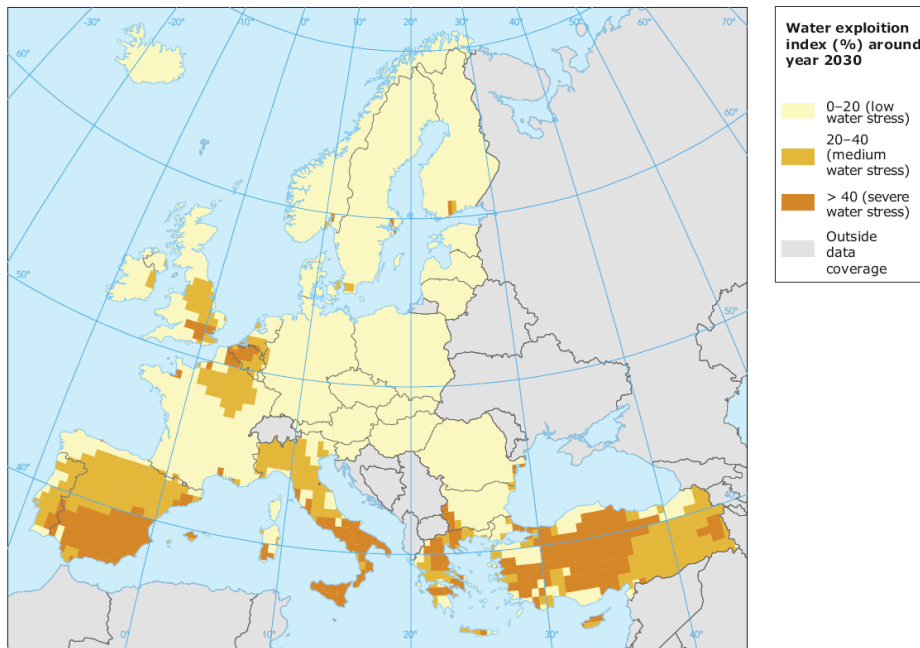
# Introduction

- Climate change adaptation and water management
- Analysis of resilience of EU water law and policy
- Compatibility, gaps and obstacles
- Points for discussion

# A tale of two Europes

## One threatened by drought

Figure 1.4 Water stress in European river basins under a base-line scenario by 2030

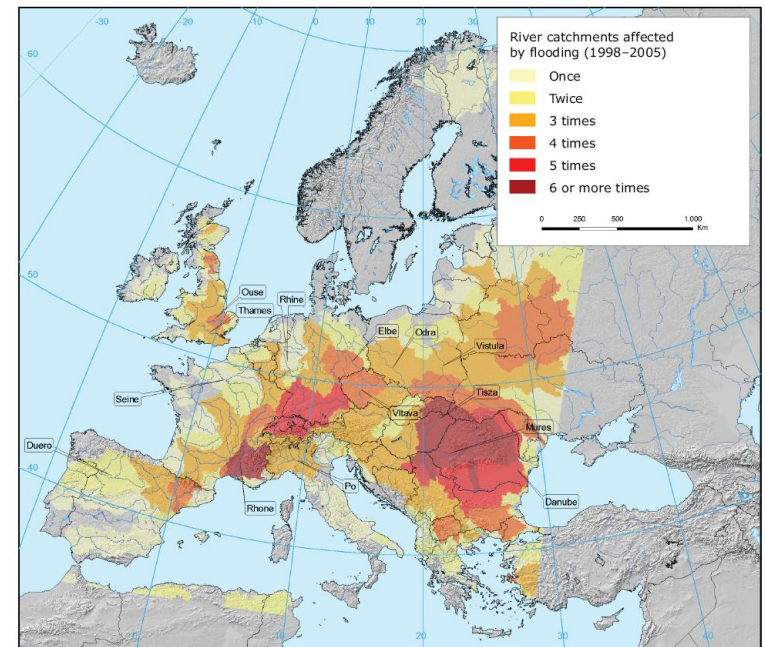


**Note:** The water exploitation index is the percentage of available water resource abstracted each year.

**Source:** EEA, 2005b.

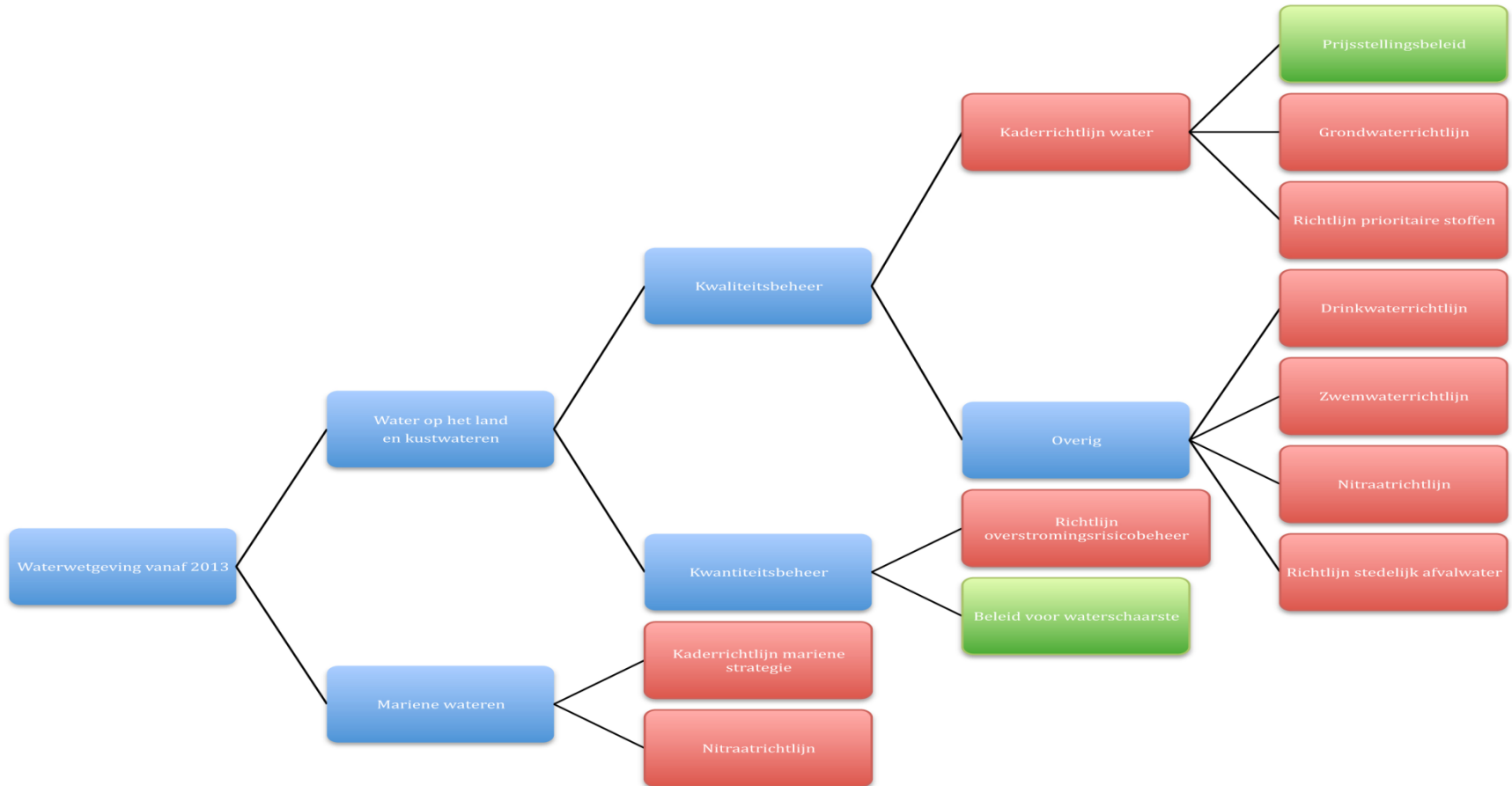
## One threatened by floods

Figure 1.3 Recurrence of flood events in Europe between 1998 and 2005



**Source:** EEA, based on data from Dartmouth Flood Observatory.

# Overview EU water law and policy



# Climate proofing the water acquis

Adaptation  reduce vulnerability and increase resilience

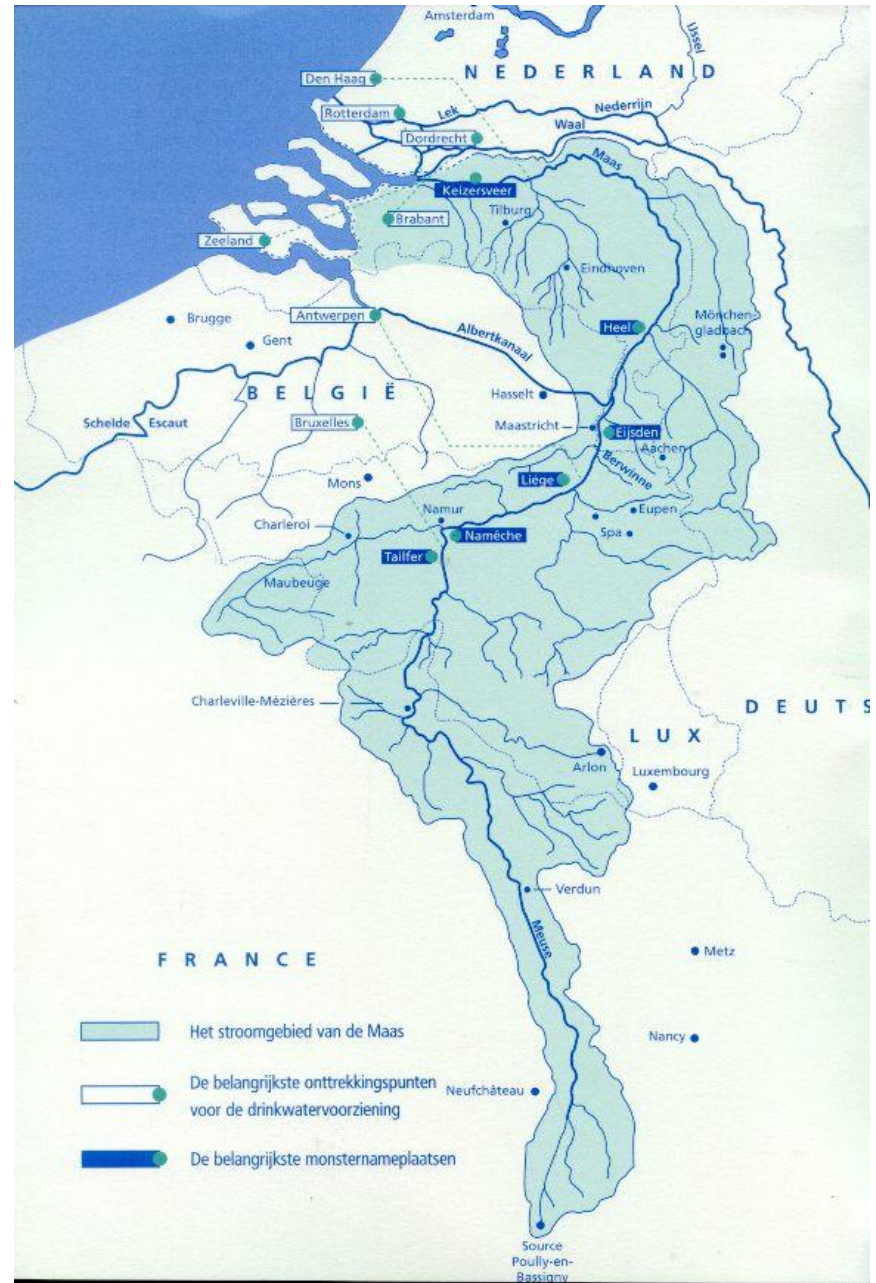
The capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks (Walker et al 2004)

- Flexibility of rules and structures
- Openness and participation
- Adaptability of rules and structures to enable learning
- Effectiveness of multilevel governance (Ebbesson 2010)

# Flexibility: River basin management

Example: Meuse river basin

- Administrative arrangements follow hydrological boundaries
- Coordination through international river commission
- But differences across national boundaries remain
  - Different competent authorities
  - Different ambitions
  - State accountability



# Flexible goals and objectives

- Good chemical status
  - objectives for dangerous substances set at EU level; other objectives set at national level
- Good ecological status
  - Objectives set at (sub) river basin level; intercalibration
- Good quantitative status
  - Objective for groundwater set at EU and lower level
  - Only indirect ecological objective for surface waters

## **Monitoring and reporting obligations**

**Enforceable obligation to act? Justifiable inaction:**



**4 (conditional) exemptions**

# Struggle between different users

## Openness:

Plans, programmes of measures and maps

## Public participation


- Goals
- Plans
- Proposed measures

Rights vs sustainable use obligation





# Adaptability

- Programmatic approach
- Cyclic process
- Monitoring and reporting obligations
- Obligation to react adequately on physical and societal changes/ use of exemptions
- Static goal WFD  dynamic goal MSFD and PPP goal FD
- Sustainable use: cost recovery 'obligation'

# Effectiveness of multilevel governance

Monitoring and reporting obligations, but...difficulty in enforcing achievement of WFD goals?



Act or invoke exemptions

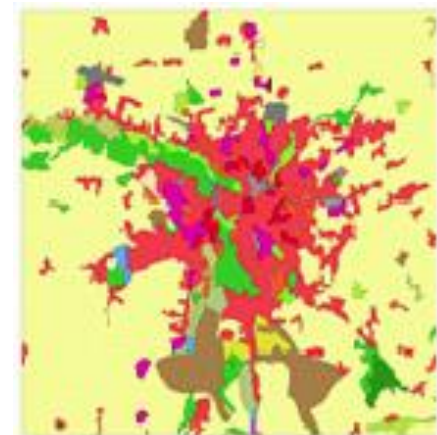
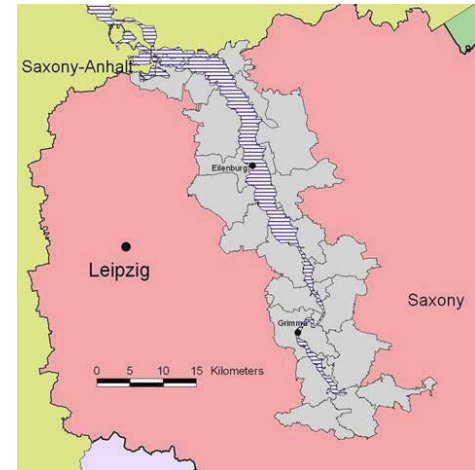
- Differences across national boundaries instead of river basin
- Accountability of individual Member States; not shared by entire river basin
- Struggle between users; lack of (private) enforcement



Absence of minimum level of protection at EU level

# Flooding: Floods Directive

- No EU minimum safety norms. Enforcement?
- Best practice or Coordination beyond non-shift principle is missing
  1. Assessment
  2. Information: Flood hazard and flood risk (below) maps
  3. Adaptive plans but **programmes of measures are missing; public participation?**



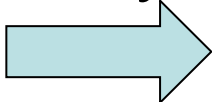
# Water quality: WFD and daughter Directives

- Adaptive and flexible river basin management and public participation allow for local circumstances to be taken into account.

## Effectiveness?

- large differences and lack of coordination across national boundaries
- Enforceable obligation to achieve objectives? Act or rely on exemptions; obligations are linked with Article 4 WFD goals instead of Article 1 WFD goals.
- Link to water quantity management is missing.
- Struggle between users: fair distribution and sustainable use is hardly regulated. Instead: economic analysis and cost recovery 'obligation'.

# Water scarcity: WFD

- Water Scarcity and Drought Strategy instead of Directive  lack of binding, enforceable obligations may hamper effectiveness
- Good quantitative groundwater status goal and no good surface water quantitative status goal
- Struggle between users: fair distribution and sustainable use is hardly regulated. Instead economic analysis and cost recovery 'obligation'

# Points for discussion

- The normative principles of adaptation to climate change should be further elaborated
  - to include resilience
  - to stimulate the creation of green infrastructure for ecosystem water storage
  - to facilitate fair distribution of water and taking measures in a coordinated manner
- Shared responsibility at river basin level should be matched with shared accountability to improve performance?
- The EU approach should focus on a minimum protection level and not overtly rely on subsidiarity
- The uncertainties of climate change should be reflected in adaptive good status obligations instead of exemptions