

# Resilience-based Thinking in European River Basin Management & the Dutch Institutional Arrangement for Common Pool Resource Management

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# God created the world, but the Dutch made Holland



# Introduction

## **Adaptation to climate change**

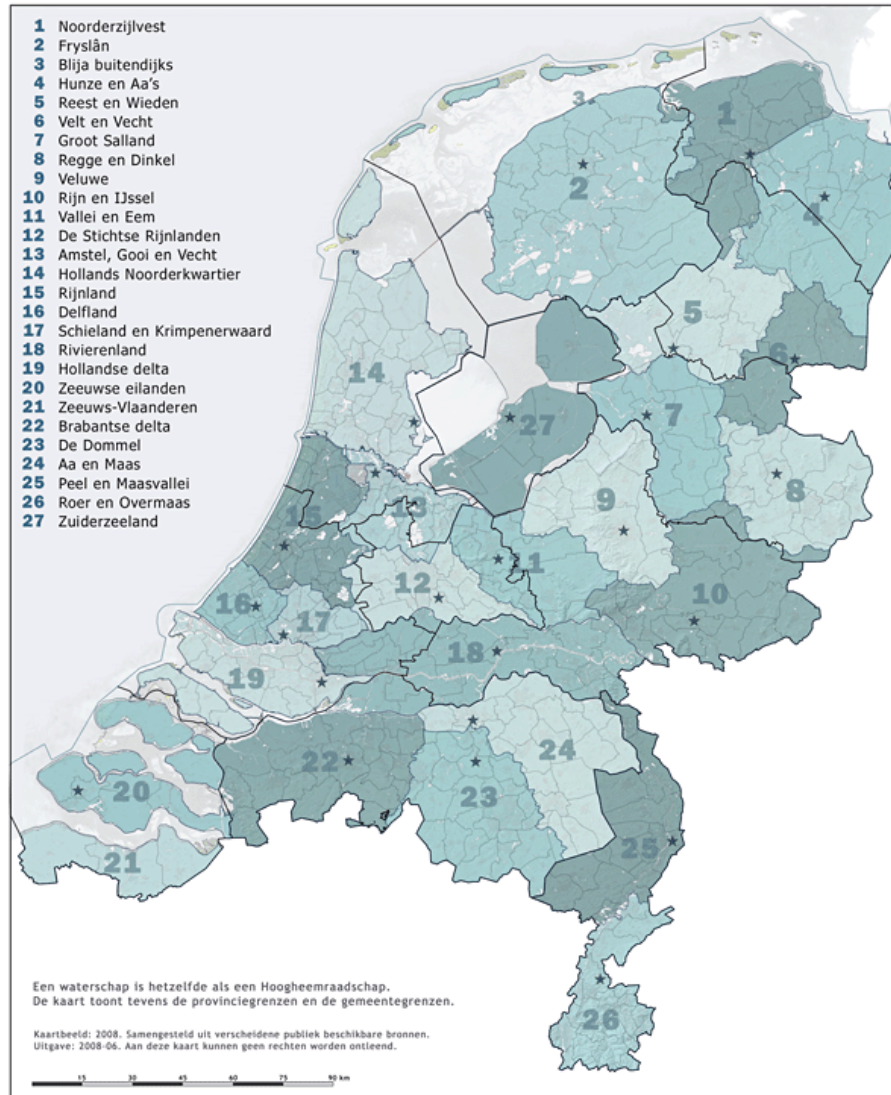
### **Resilience:**

- EU water law
- The Dutch institutional framework

*Measuring Resilience by looking at the design principles of Common Pool Resource Management*

# Water boards in the Netherlands

## 27 Waterschappen



# Organizational principles in WFD and Dutch legal framework

- Hydrological borders as organizing principle
  - (sub) river basin districts
- Involvement of the public in decision-making
  - Planning cycle
  - Public information and participation requirements
  - Dutch water boards: *stake, pay, say*
- Financial autonomy
  - EU: Cost recovery, polluter pays principle, user pays principle
  - At Dutch water board level (*stake, pay, say*), but not at state level

# Common pool resource management

1. Tragedy of the Commons, prisoners dilemma, logic of collective action
2. The state or the market
3. **Collective management**

Three puzzles:

- Supply of institutions
- Commitment
- Monitoring

# CPR design principles Ostrom (1990) applied to Dutch water boards

1. Clearly defined boundaries: v
2. Congruence between appropriation and provision rules and local conditions (restricted access): operational rules are set by water boards, but vested agricultural interests cause problems
3. Collective-choice arrangements: problematic state intervention in constitutional rules due to integration of citizens as stakeholders
4. Monitoring: v
5. Graduated sanctions: v
6. Conflict-resolution mechanisms: consensus culture to ensure good flood defense; new tasks and new collective choice rules -> need for conflict resolution mechanisms?
7. Minimal recognition of the right to organize: problematic state intervention in elections; threat of disappearance
8. Nested enterprises: large scale organizations after mergers



# Conclusions

- EU legal framework promotes resilience but: abstract
- Dutch water boards do not (any longer) meet all CPR design principles
- Consequences for social-ecological resilience: flood defense remains a common interest, but drought & biodiversity loss pits nature v agriculture.
- Role citizen representation?