# Embedding adaptive management into the legal framework: Examples from the Netherlands



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#### Introduction

- Adaptive Management
- 4 Dutch cases: Noordwijk, Overdiepse polder, Waterhouderij, Essche Stroom
- Problems and solutions
- Law in the books & the law in action

#### Adaptive management

#### Focus on learning

- Experiments
- Social learning: participation
- Bio-regional scale
- Polycentricity

The role of the legal environment in supporting or frustrating adaptive management

# Noordwijk

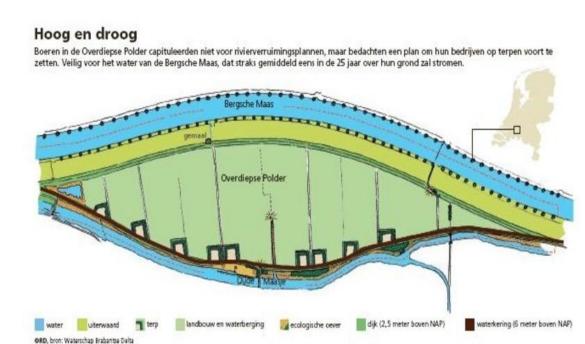


# Noordwijk (Zuid-Holland)

- Weak spot in coastal defense against flooding.
- State financed coastal defence, municipality financed spatial improvements, province coordinated, water board implemented the plan.
- Local problem: costs (loss of sea side view) for inhabitants Noordwijk, benefits (safety) for them & many others
- Innovative & adaptive solution: dyke inside broader dunes

#### Casestudy Overdiepse Polder (Meuse)





## Overdiepse polder (Meuse)

- State assigned polder as a water storage area.
- European and Dutch Law demand participation, but not in an early stage.
- Inhabitants made an innovative plan: from living behind a dyke (safety) to a terp.
- Province coordinated the process, water board implemented the plan, municipality was involved as well.
- Agreement on (flood) damages with the State.

# Casestudy Waterhouderij Walcheren (Zeeland)



#### Waterhouderij Walcheren (Zeeland)

- Near seashore -> brackish or salt groundwater -> farmers want collective storing of rain water
- Dutch law: water is free. Public regulation: use notification, public water hierarchy for use surface water in times of scarcity: farmers have a low position -> need for selfsufficiency
- Other parties involved: water boards, municipality, province, State (RWS) & ZLTO (farmers association), Deltares, Aequator, nature organizations, bank etc.
- Green deal with the State to solve a legal problem: farmers cannot easily share water



## **Essche Stroom**





## Essche Stroom (Brabant)

- Nature development, water quality and quantity
- Many authorities involved: no clear division of competences, responsibility & financing of new nature measures
- Water board implements all measures, province remains responsible and finances new nature
- Many small scale projects: increased flexibility, participation and learning opportunities

#### Conclusions

- The Dutch legal framework does not support adaptive management.
- It does not make it easy to experiment.
- It does not promote private involvement through early public participation.
- + Adaptation projects take place at the bioregional scale.
- + Polycentricity