



Netherlands Environmental Assessment Agency

## **Strategies to a make The Netherlands climate proof**

Arjan Ruijs



# Objective

- Formulate a number of long term adaptation strategies to prepare the Netherlands for the effects of climate change

Set of adaptation options, chosen on the basis of a certain vision with regard to the desired government objectives and development directions of the Netherlands.

Prepare for rural areas, urban areas, main rivers, networks and health a list of possible adaptation options.

For this, a number of fundamental choices has to be made regarding who takes action and who experiences the effects.

# Climate Proofing the Netherlands

- Fundamental choices to be made

- Invest in a climate proof country ↔ ■ choose the cheapest options to guarantee a minimum level of climate proofing
- Conserve current land use ↔ ■ flexibly adjust land use to climate change effects
- The government sets the objectives and policies ↔ ■ lower authorities and the private sector react on the envisaged effects.

# Climate Proofing the Netherlands

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- Can a social cost-benefit analysis be performed?

Climate adaptation is still halfway the process from problem identification to decision making.

What are the government objectives?

Which policies/measures will be taken?

What are the effects of climate policies?

# Climate Proofing the Netherlands

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- If projects can not be described in detail
  - Describe the effects qualitatively and if possible quantitatively
  - Use CBA to facilitate and structure assessment processes
  - Use CBA to identify preferences of decision makers
- If projects can be described in detail
  - Assess the effects quantitatively
  - Monetarize the effects
  - Use CBA to prioritize projects
  - Use CBA as a decision making framework

# From adaptation options to adaptation strategies

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## ■ Evaluation framework

### ■ A. Direct Effects

- *Contribution to climate proofing* ▶
- *Costs of the adaptation options*
- *Spatial implications and scale*

### ■ B. Indirect Effects

*Effects on*

- *Other sectors and areas*
- *Quality of human environment (health, quality of life, safety)*
- *Nature and environment*
- *Mitigation (effects on ghg-emissions)*

### ■ C. Strategic Indicators

- *Synergies with other policy domains*
- *Income distribution effects*
- *Time aspects (urgency, time to impact, implementation time)*
- *Flexibility of the option*
- *Institutional dimension and social basis*

# From adaptation options to adaptation strategies

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- When are we climate proof?
  - Resistance
    - *Is the water system, country, administration, economy and nature resistant to extreme water flows, rise of the sea level and high temperatures?*
  - Resilience
    - *Can the economy, administration and nature recover fast after periods of extreme rainfall, water flows or heat?*
  - Adaptability
    - *Can authorities, land use, economy and nature adapt itself to changing circumstances?*

➔ In a later stage monetarize the effects