The Delta Programme

Keeping the Netherlands Climate Proof

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Ministry of Infrastructure and Watermanagement
The Netherlands, a delta country
Water on Dutch political agenda

Century 20th:

- 1916 floods (North)
- 1953 flood disaster (South-West)

Structural solutions with dams and barriers
Afsluitdijk dam to create IJsselmeer, Delta Works

- 1993/1995 high water levels (rivers)

Also spatial solutions
Room for the River/Meuse Projects
Delta Commission 2008

The threat is not acute, but measures to improve flood risk management and fresh water supply should be prepared urgently!
Delta Programme

- 2010 Delta Commissioner
- 2011 Delta Act
- Delta Fund
- New solutions: Room for the River
- Building with Nature
Delta programme

3 national programmes:
• Safety: risk based standards (cost benefit analysis)
• Fresh water strategy
• Spatial adaptation

6 regional programmes
Multilevel Governance & Institutions

- **Ministry** – Policy guidelines, Rijkswaterstaat - national watersystem
- **Provinces** – spatial planning, supervise municipalities and waterboards
- **Municipalities** – spatial planning, sewage & drainage system
- **Regional water authorities** – regional watersystem, waterquality, waterquantity
Regional approach

- Regional Steering Committees (regional water authorities, provinces, municipalities, central government)

- Involve local characteristics, knowledge, ideas, stakeholders

- Combine with local agenda’s

- **Supervised by Delta Commissioner**
  → Progress, uniformity, coherence
Structured decision making

2010 2011 2012 2013 2014 2015

Probleem analysis
Potential strategies
Promising strategies + Delta decisions
Preferred strategies
Nat. Water Plan
Science & stakeholder interaction


Investment plans (national & regional) legislation
Project decisions maintenance
Uncertain future → adaptive strategies

- Climate change
  - sea level rise,
  - discharge,
  - rainfall,
  - Evaporation

- Socio-economic developments
  - population,
  - economy,
  - land use/urban development
  - fresh water demand

→ Risk based
→ Adaptive strategies
→ Multifunctional measures
Policy: Multi layer safety approach floods

- Crisis management (3)
  *Reducing casualties of a flood*

- Sustainable spatial planning (2)
  *Limiting the effects of flooding*

- Prevention (1)
  *Limit the probability of a flood disaster (dikes, dunes and barriers)*
Flexible measures? Building with Nature!
Fresh water supply: current and future bottlenecks

Climate change reduces water availability
Socio-economic development changes water demand

Pressure points:
• Salinisation of fresh water inlets;
• Impossible to supply water from the main water system;
• Water demand exceeds the water buffer;
• Insufficient amount of water in rivers and canals
Delta Decision Freshwater Supply

• Freshwater is a shared responsibility; coherent measures will be taken in the main- and regional water system and by consumers.
• The freshwater strategy is adaptive to climate change

Short term:
• no-regret measures;
• elaborate the concept of “water availability”

Medium- and long term:
• enhancing freshwater buffers and supply routes
• Intensifying economic and effective use of freshwater
• Accepting water shortages more often
• Defining supply levels for the main water system
Deltaplan spatial adaptation

Waterlogging

Heat

Flooding

Drought

Delta Programme – Spatial Climate Adaptation
7 ambitions
Water-resilient and climate-proof spatial planning in the Netherlands

- Drawing up implementation agenda
- Mapping out vulnerabilities
- Conducting risk dialogue and drawing up strategy
- Capitalising on opportunities for linkage
- Regulating and embedding
- Encouraging and facilitating
- Responding to calamities
Ambition 1: Mapping out vulnerabilities

• Before 2020 every municipality has performed a stress test
Climate Effect Atlas (heat stress)
Adapting in urban areas
Design of the Green City
Global Commission on Adaptation

Supported by:

Global Leaders Call for Urgent Acceleration of Climate Adaptation Solutions

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Convening countries

- Argentina
- Bangladesh
- Canada
- China
- Costa Rica
- Denmark
- Ethiopia
- Germany
- Grenada
- India
- Indonesia
- Marshall Islands
- Mexico
- Netherlands
- Senegal
- South Africa
- United Kingdom
Thank you for your attention

For more information:

www.deltacommissaris.nl/english