PBL Netherlands Environmental Assessment Agency

Roadmap for a climate resilient Romania

Presentation for Romanian Ministries and World Bank

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June 25-27, 2012, Bucharest

Roadmap to climate adaptation policy

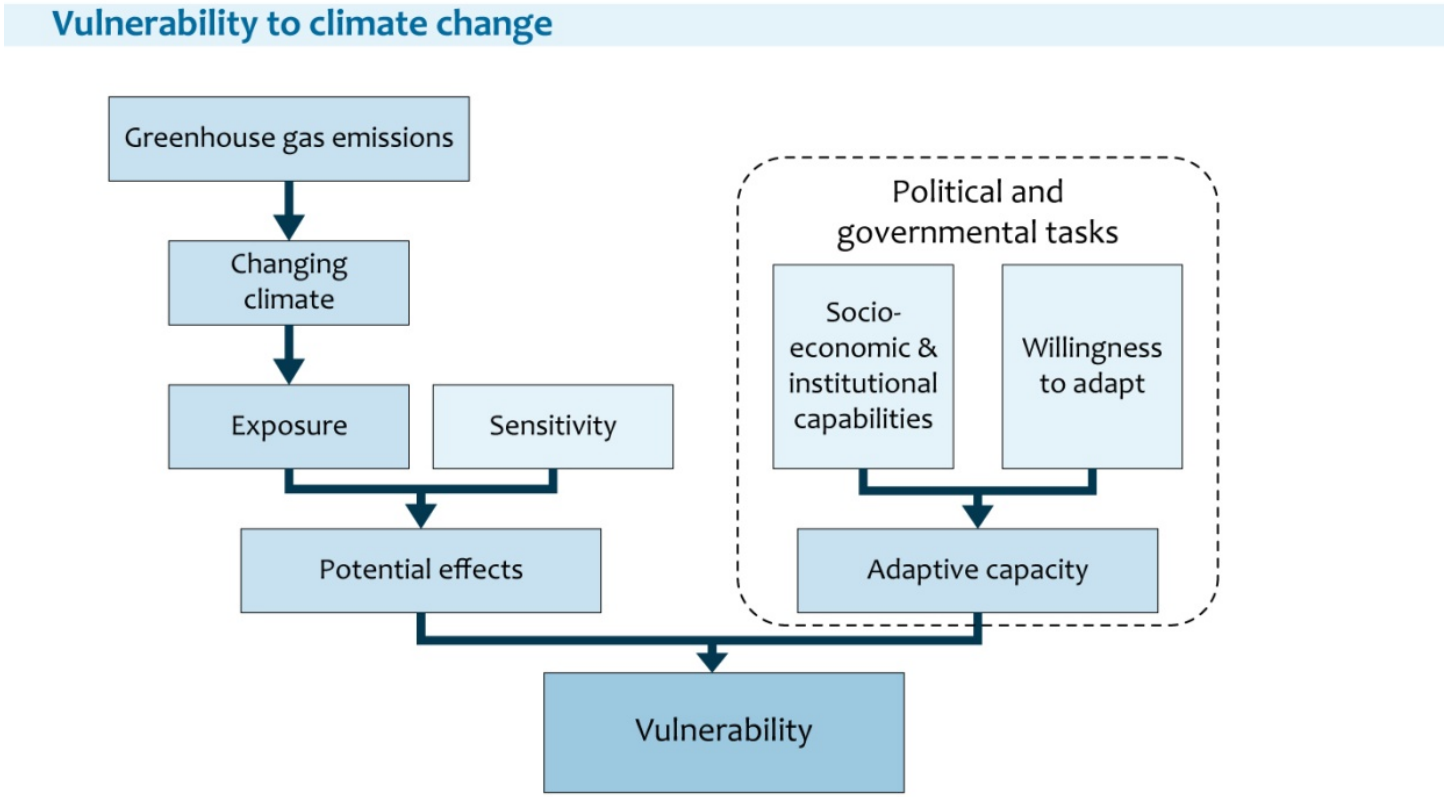
Key messages

- **Common vision and institutional ability to generate and implement an effective, efficient, integrated, and flexible adaptation policy**
- **What, how, when, and with whom?**
- **Science-society-policy interactive planning**

- **Romania**
  - Ministry of Environment and Forest
  - Ministry of Agriculture
  - Association of Municipalities
  - World Bank

- **Netherlands**
  - NL Agency
  - Netherlands Environmental Assessment Agency (PBL)
    - › based on PBL roadmap reports on climate adaptation
  - Knowledge for Climate Programme

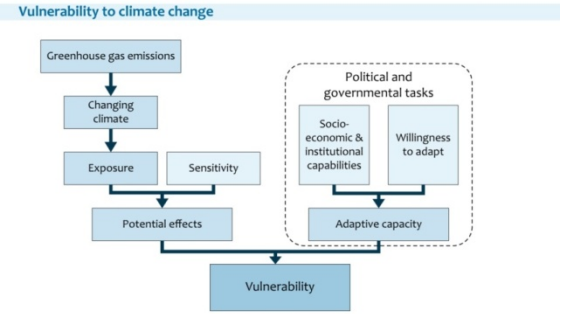
Framework for climate adaptation policy



Climate adaptation policy truisms:

- Sensing
- Assessing
- Adapting
- Organizing
- Feedback
- Adjusting

Roadmap for climate adaptation policy



1. Common vision, themes and policy domains

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2. Mapping exposure, sensitivity, CC scenario's, and impact (regular updates)
3. Listing adaptation options (technical, spatial)
4. Criteria and priorities for adaptation strategy
5. Institutional structures (level, stakeholder)
6. Financing and organizing action plan

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7. Developing flexible and integrated (co-benefit) policy
8. Implementing national/regional/local action plans
9. Monitoring and evaluating progress
10. Collaborating on interactive planning (sectors, stakeholders, EU, EEA, WHO, World Bank etc.)

Common vision, themes and policy domains

- Flood risk (sea, rivers, storms)
- Freshwater supply (drought)
- Agriculture and fisheries
- Ecosystem and biodiversity
- Infrastructure
- Urban areas
- Health
- Tourism and recreation

Criteria and priorities for adaptation policy

1. **Impact and costs** (reduction of effects, societal encroachment, risk of not intervening, damage costs, costs of measures, cost/benefit ratio)
2. **Spatial claims and scales** (national, regional, cities, neighborhoods, buildings, infrastructure, public space)
3. **Uncertainty proof** (robust, flexible, resistance, or resilience)
4. **Urgency and timing** (impact, lead/turnover time, implementation time, short-term and long-term priorities, flexible adaptive management)
5. **Mainstreaming/synergy with other policies** (GHG mitigation, quality of life, opportunities for joining planned investments, coupling with greening economy and sustainable development)
6. **Institutional ability and support** (interactive policy and planning, national/regional/local implementation, adjusting legislation, science-stakeholder-policy interface in an '*energetic society*')

Weighing and appraising for setting adaptation policy

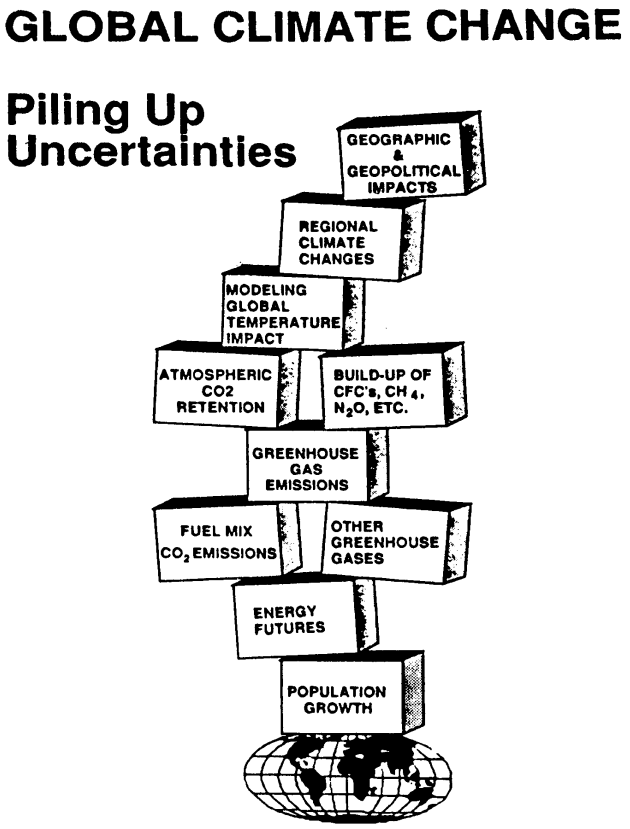
1. **Impact of adaptation options** - including risk, economic, social, or environmental benefits, and reduction of societal encroachment

2. **Approach and usefulness under uncertainty** - addressing resistance or resilience (with adaptive capacity, robustness, and flexibility)

3. **Other relevant aspects** - including socio-economic changes, public support, equity, urgency, implementation time, spatial scale, institutional ability, co-benefits with other policy fields, and interactive planning

Climate change policy is 'dealing with uncertainty'

- Considerable uncertainty about the precise rate and impact of CC
- Type of uncertainty – statistical, scenario, and ignorance
- Adaptation policy is dealing with uncertainties through risk governance

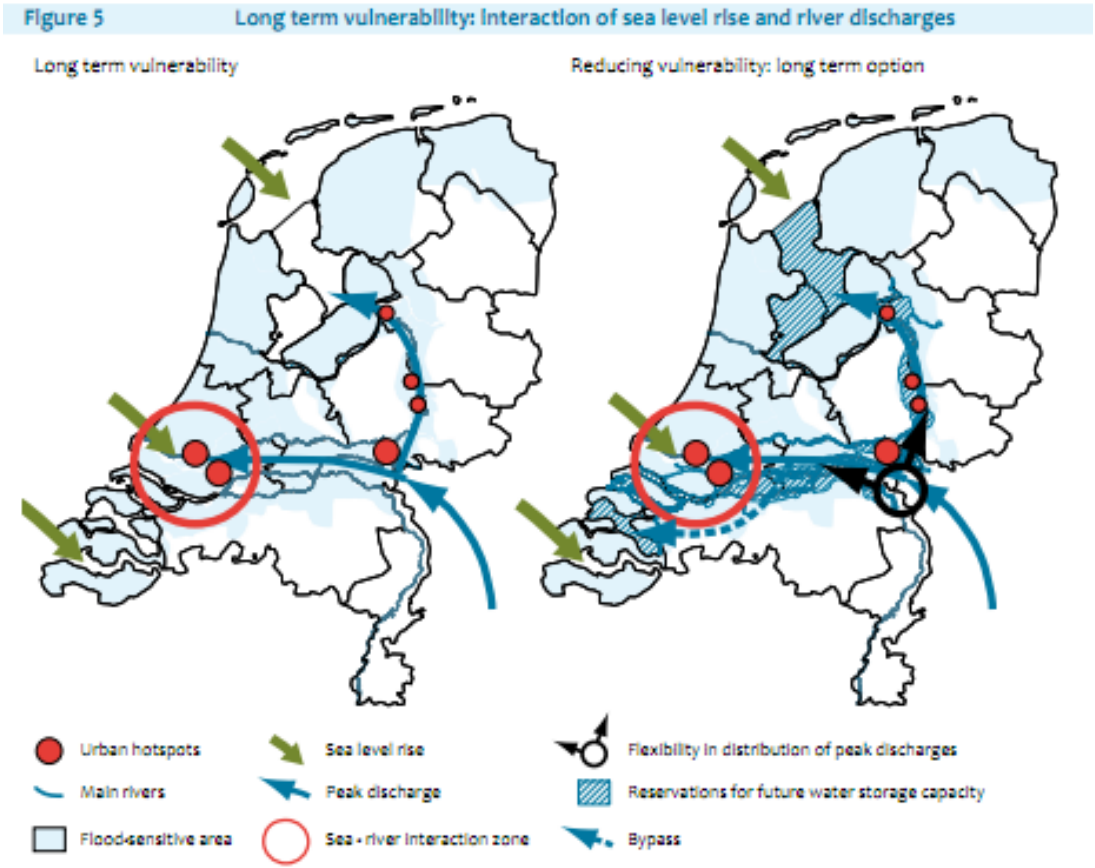


Different adaptation policies depending on level of uncertainty and relevance of impact

Level\impact	Low relevance	High relevance
Low uncertainty	Risk reduction Focus on low cost or co-benefit options	Risk reduction Consider costly and extensive options
High uncertainty	Enhancing capability of dealing with uncertainties and surprises (e.g. resilience approach) Focus on low cost or co-benefit options	Enhancing capability of dealing with uncertainties and surprises (e.g. resilience approach) Consider costly and extensive options

- Examples in The Netherlands through PBL studies…

Flooding and water storage – safer and more climate resilient



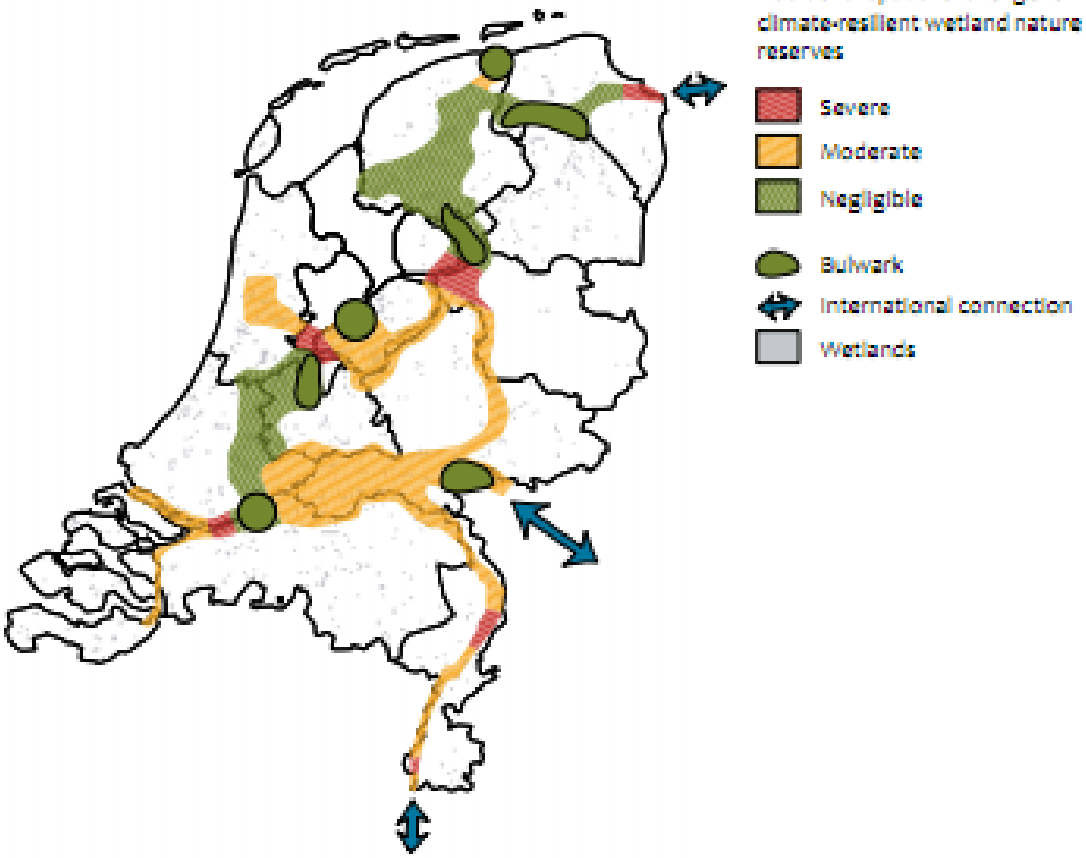
Enhancing dyke safety

- impact, population, fixed assets, built-up areas
- less sensitive for unexpected, extreme climate conditions

Floodplain, bypass, and area reservation

- sensitive areas
- spatial plans in riverside areas
- increasing water reserves

Climate corridor of wetland nature reserves



Ecosystems and biodiversity

- restoring natural processes

- multifunctionality

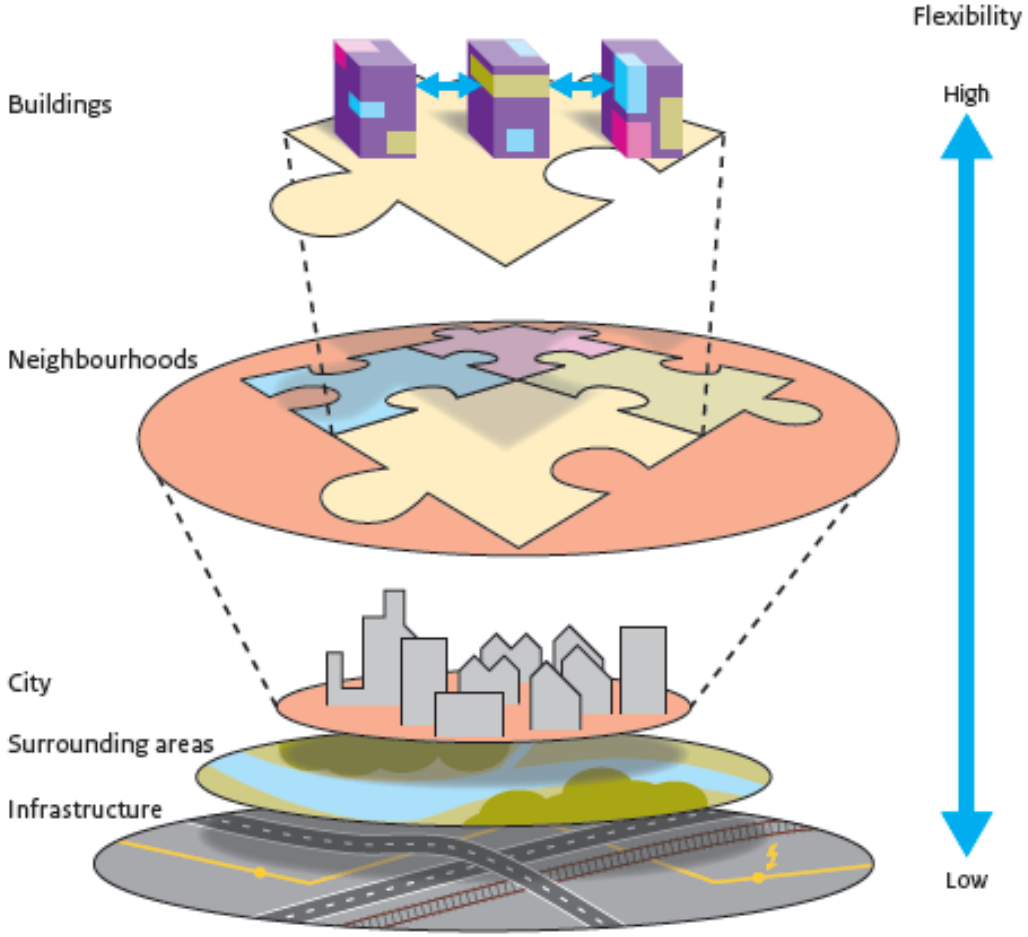
- connectivity

Diversified farming integrated with restoring natural hydrological dynamics (with spin-off for nature conservation)

Combination with dunes, coast and marshland

Combination with forest, heathland and stream valleys

Multi-level, multi-actor urban development creates climate-proof cities within 50-60 years if one starts tomorrow



Key messages for cities (1)

Urban exposures and sensitivities

- flooding, water nuisance, heat stress, air pollution, and drought
- vary considerably in nature and scale
- additional adaptation challenges in densely built/compact areas
  - › extensive hard surfacing, causing more heat build-up and more water nuisance

Broad range of adaptation measures available

- cities, neighborhoods, streets, buildings, infra, public space

Structural (spatial) measures implemented in urban development projects

- construction of parks, canals, ponds, urban ventilation, thermal energy storage, modified sewerage systems
- **key actors**: municipal councils, city planners, architects, and real estate developers

Key messages for cities (2)

Appropriate (technical) measures in new and existing urban areas:

- adaptation at the scale of individual buildings or streets
- insulation, green roofs and adapting street paving for water retention
- **key actors**: municipal councils, housing corporations, building companies, and private property owners

Key messages for cities (3)

- Many adaptation measures mostly ‘no-regret’ or ‘low-regret’
- Tailor-made solutions (with additional challenge in compact cities)
- Timely (early) coupling with urban development, restructuring, and spatial planning
- Co-benefits/synergies from linking with other policies - CC mitigation, restructuring and investment agenda’s, environmental policies, and spatial planning
- Climate proofing as a (economic) opportunity for green growth and sustainable development
- Seek and implement incremental, flexible, and integrated adaptation policies

Implementing climate-proofing ‘today’ considerably reduces investment costs ‘tomorrow’ !!

In 2060-2070 ~80-90% of the (existing) urban regions can be made climate-proof, but one has to start now !!

Key messages for cities (4)

Integrated, multi-level urban governance:

1. Central government must create planning and investment conditions for regional and local authorities.

2. Regional and local authorities must steer and implement adaptation strategies (through local, bottom-up, and multi-stakeholder actions and alliances).

3. If municipal authorities, city developers, housing corporations and private property owners consistently incorporate adaptation into their investment plans, additional costs can be minimised.

Institutional structuring of NL adaptation policy (1)

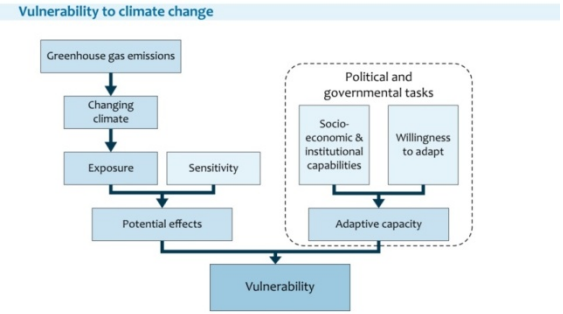
- **2006 ARK programme: A**daptatie **R**uimte **en K**limaat‘
  - Ministeries, provinces, waterboards, and municipalities all work together
  - Long-term goal is to root adaptation in awareness, policy, and regulation
  - Short-term goal is to generate a momentum
  - Common vision, integrated policy, and financial framework for realisation of concrete measures
  - Track 1 - awareness, network, strategy development
  - Track 2 – knowledge development and opening up
  - Track 3 – instruments, measures, and stimulation of innovation
- **Started with an adopted motion in parliament 2005**
- **Phase I (2006-2007) - strategy and agenda**
- **Government decision 2007 – national strategy adopted**
- **Phase II (2008-2014) – strategy in practice, projects, and tailor-made (spatial) planning**

Institutional structuring of NL adaptation policy (2)

DELTA Programme (DP)(2010-present)

- National programme; collaboration between national government, provinces, municipalities, and water boards; civil society organizations also have a say
- Objective is to protect the Netherlands and its future generations from high water and ensure a sufficient supply of freshwater through adaptation of spatial planning
- Delta Act
- Delta Fund
- Delta Commissioner (appointed by the government)
- Delta Decisions (5)(Water safety, Freshwater strategy, Water level IJsselmeer region, Rhine-Meuse delta, Spatial adaptation)
- Government and parliament feedback and control

Roadmap for climate adaptation policy



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Suggestion for Romanian CC adaptation integrated system response

- Strengthen Romanian economy and security
- Advocate climate proofing with all sectors
- Build awareness, structures, capacity, funding, and instruments
- Find and reward front runners and good practices
- Consider climate change adaptation as an opportunity
- Link to sustainable development and green growth
- Develop smart, flexible and integrated, adaptive management plans and policies

Suggestion for implementation of a climate adaptation policy in Romania (results from G2G project)

Collaboration between Romanian Ministry of Environment and Forest, Romanian Ministry of Agriculture, Romanian Association of Municipalities, Dutch Ministry of Environment and Infrastructure, coordinated by NL Agency and Romanian Business Development Group (BDG):

1. **Setting the agenda towards adaptation policy**
2. **Development of national adaptation strategy (2011)**
3. **Further consultation on strategy and policy implementation**

   (now also involving Netherlands Environmental Assessment Agency (PBL) and Dutch Knowledge for Climate Programme as advisors through AgentschapMNL)
4. **Organization/structure/communicate/raise awareness through conducting a 1st order assessment (parallel to the mitigation/greening economy assessment)**
5. **Implementation of national action plan at national, regional, and local/city scale**
6. **Crucial contribution to develop a climate-resilient economy**

Communication/awareness / 1st order assessment

Conduct a 1st order assessment/outlook on CC effects and adaptation in Romania, through…

- **Strategic Environmental Assessment (SEA) of the national adaptation strategy**
- **Major climate issues, scenario's, indicators, impacts, costs and benefits from (non-)adaptation – 1st order assessment**
- **Collect, and advertise and reward, best practices and front runner projects**
- **Organization, communication and awareness action plan**
- **Organize interactive stakeholder planning through establishing workgroups and interdepartemental committees**
- **Develop financing plan, time plan with deadlines, and structured networks (Romanian government, EU Structural Funds, EU Framework Programma, EIB, World Bank, …)**

Implementation of CCA national action plan at national, regional, and local scale

(Dutch Delta Programme as an example)

- **Goverment decision**
- **Climate Commissioner (or Minister of Environment responsible on behalf of the government)**
- **Multi-ministries, cities and stakeholder Task Force and CCA Bureau**
- **Climate Act**
- **Climate Fund**
- **Major Romanian adaptation decisions to prepare**
- **Government, regional and municipal authority feedback and control**

Contributions to a climate-resilient economy

- **Climate already present a significant risk to people and economies**
- **Climate change has the potential to worsen these risks and substantially reduce GDP**
- **Climate adaptation is thus an urgent priority for the custodians of national and local economies, such as finance ministers and mayors**
- **Such decision-makers ask:**
  - What is the potential climate-related loss to our economy and society over the coming decades?
  - How much of that loss can we avert, and with what measures?
  - What investments will be required to fund those measures?
  - Will the benefits of those investments outweigh the costs?
  - Can we identify actions to minimize the impact at the lowest cost to society!

- **Climate-proofing is crucial to develop a resilient, competitive economy and must therefore be part of future economic outlooks of Romania**

Thank you ☺ leendert.vanbree@pbl.nl

www.pbl.nl

- **The effects of climate change in the Netherlands (2005, update in 2012)**
- **Roadmap to a climate-proof Netherlands (2009)**
- **Climate adaptation in the Dutch delta – strategic options for development (2011)**

www.deltares.nl/nl/expertise/100357/stedelijk-bodem-en-waterbeheer/1076101

- **Building the Netherlands climate proof: urban areas (background document)**

Other documents available on request