

# PEER project 1A: 'A comparative analysis of National Adaptation Strategies in European Countries'

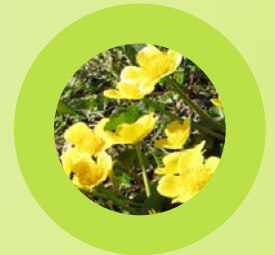
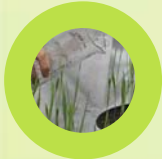
- Eurqua conference-

Oslo, 24 October 2008

Robbert Biesbroek<sup>12</sup> and Rob Swart<sup>1</sup>  
(WUR/Alterra, Netherlands)

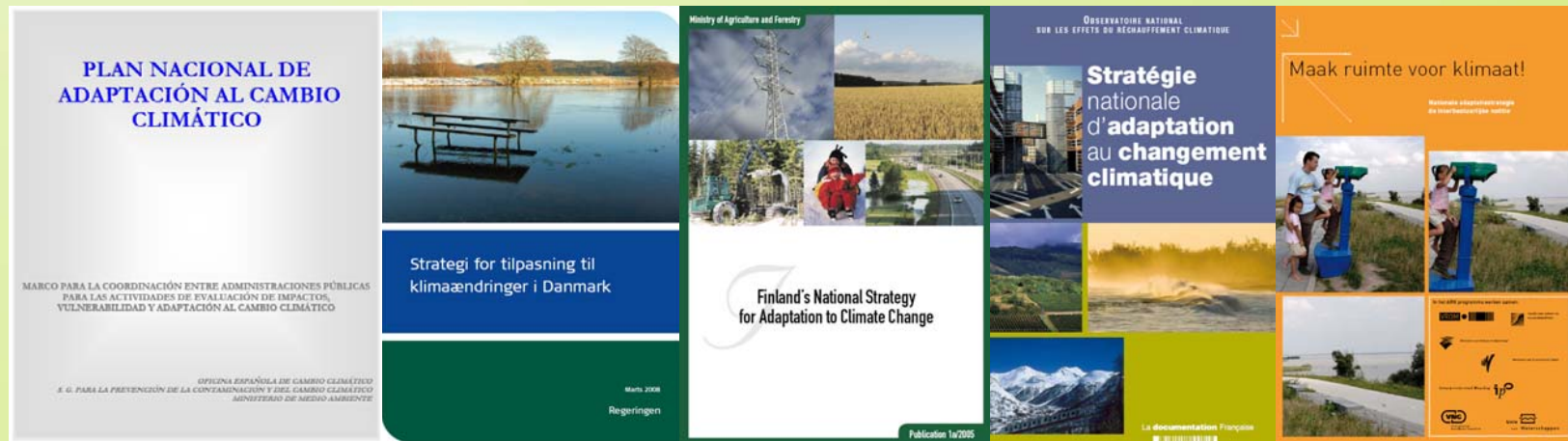
<sup>1</sup> Earth System Science and Climate Change Group (WUR)

<sup>2</sup> Public Administration and Policy Group (WUR)



# This presentation:

- Introduction to PEER
- *Context* of the PEER 1A project
- *Content* of the PEER 1A project
- First conclusions



# 'Partnership for European Environmental Research'

Network of 7 research organisations:

- created in 2001
- covering the full spectrum of natural and social environmental sciences
- combining basic, strategic and applied interdisciplinary research

**Vision:** to be a world leader in integrating knowledge and expertise for sustainable development



# PEER Climate Change Initiative

**Project 1A: 'Comparative analysis of National Adaptation Strategies in European Countries'**

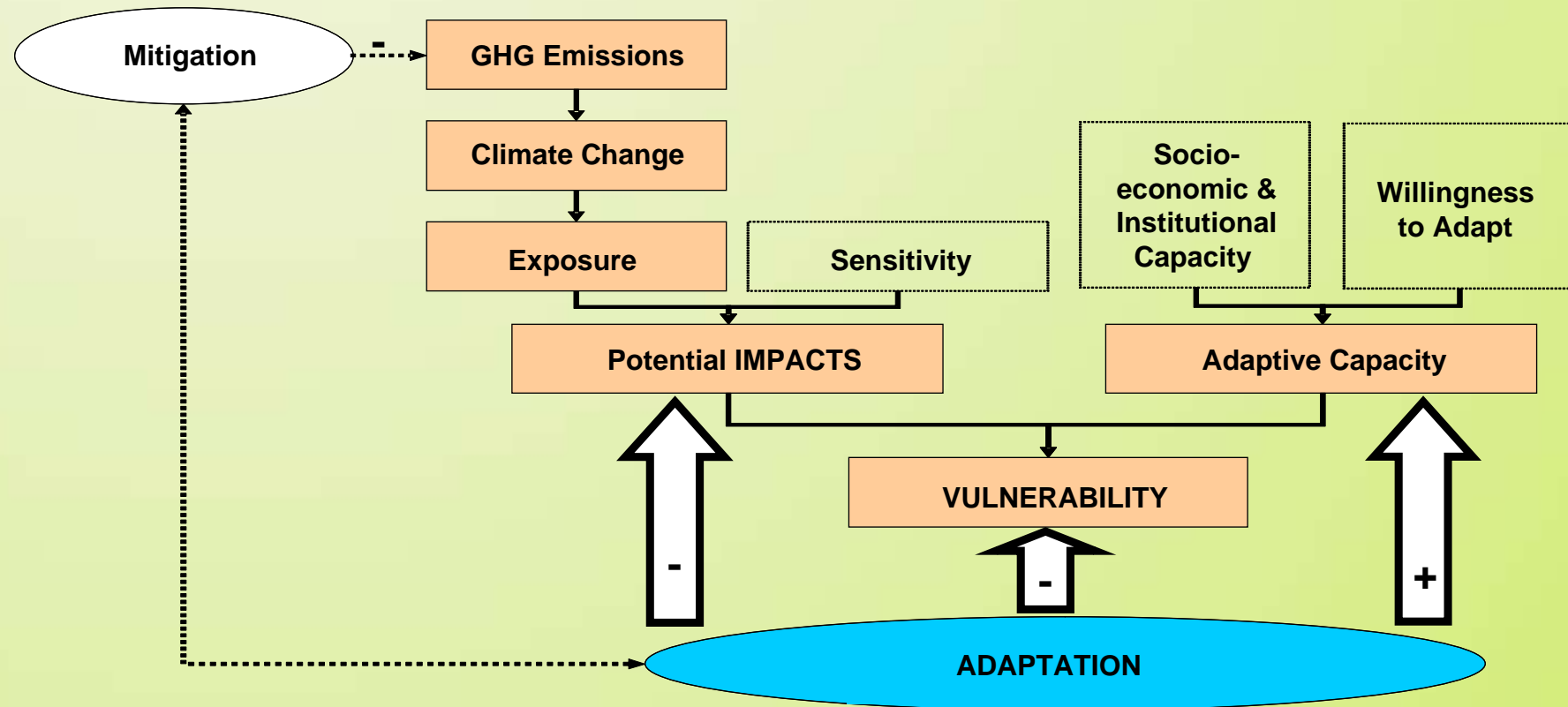
project lead: Rob Swart, Alterra (NED)

**Project 2: 'Policy integration, Coherence and Governance'**

project lead: Per Mickwitz, SYKE (FI)<sup>1</sup>

<sup>2</sup> For more information on PEER 2, please visit: [www.peer-initiative.org](http://www.peer-initiative.org)

# What is adaptation?



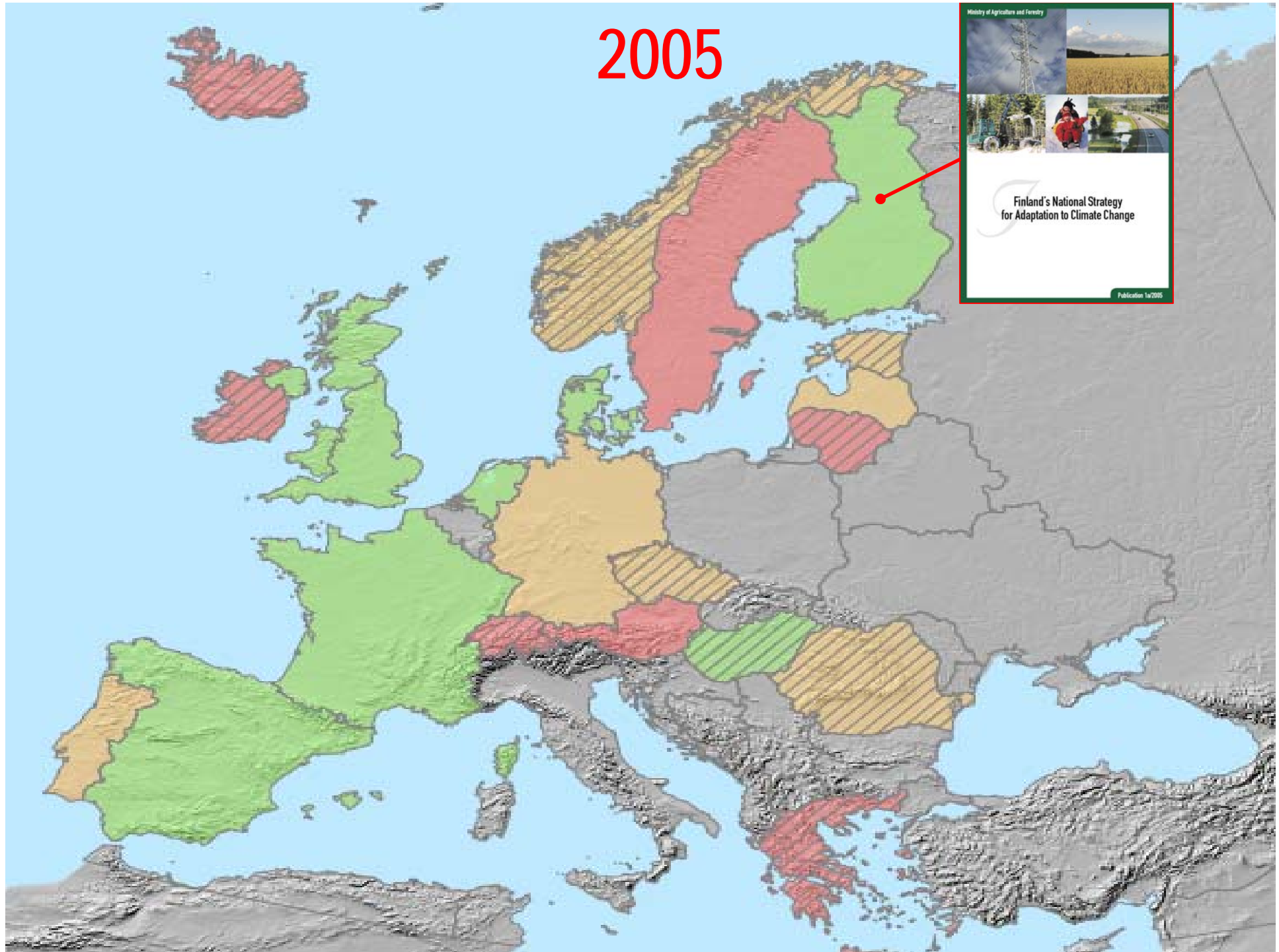
Source: Isoard S., T. Grothmann and M. Zebisch 2008, 'Climate Change Impacts, Vulnerability and Adaptation: Theory and Concepts', Workshop 'Climate Change Impacts and Adaptation in the European Alps: Focus Water', UBA Vienna.

# What is a National Adaptation Strategy?

- The National Adaptation Strategy (NAS) for a country refers to a general plan of action for addressing the impacts of climate change, including climate variability and extremes<sup>1</sup>
- It will include a mix of policies and measures with the overarching objective of reducing the country's vulnerability. Depending on the circumstances, the strategy can be comprehensive at a national level, addressing adaptation across sectors, regions and vulnerable populations, or it can be more limited, focusing on just one or two sectors or regions<sup>1</sup>

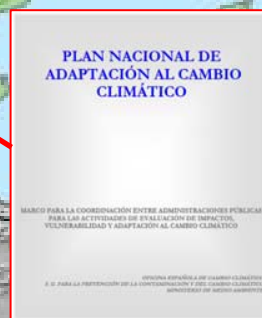
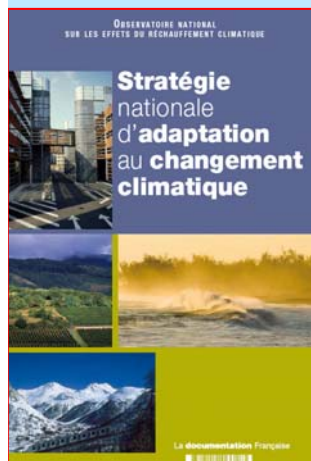
<sup>1</sup>After: Burton, I., Malone, E. L., & Huq, S. (2005). *Adaptation Policy Frameworks for Climate Change. Developing Strategies, Policies and Measures* Cambridge: Cambridge University Press.

2005





2006





2007

Maak ruimte voor klimaat!

Nationale adaptatiestrategie  
na overname van de EU-richtlijn



Ministry of Agriculture and Forestry

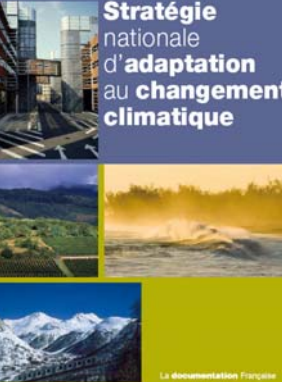


Finland's National Strategy  
for Adaptation to Climate Change

Publication 1a/2005

OBSERVATOIRE NATIONAL  
SUR LES EFFETS DU RÉCHAUFFEMENT CLIMATIQUE

Stratégie  
nationale  
d'adaptation  
au changement  
climatique



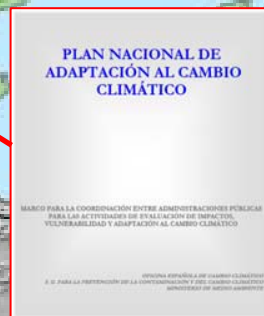
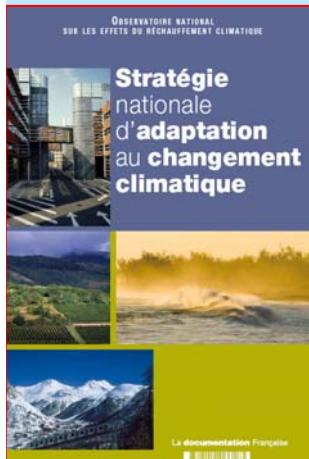
La documentation Française

PLAN NACIONAL DE  
ADAPTACIÓN AL CAMBIO  
CLIMÁTICO

MARCO PARA LA COORDINACIÓN ENTRE ADMINISTRACIONES PÚBLICAS  
PARA LAS ACTIVIDADES DE EVALUACIÓN DE IMPACTOS,  
VULNERABILIDAD Y ADAPTACIÓN AL CAMBIO CLIMÁTICO

OPINIÓN EXPUESTA A LOS COMITÉS CONSULTIVOS  
A. D. PARA LA PREVENCIÓN DE LA CONTAMINACIÓN Y DEL CAMBIO CLIMÁTICO  
AUTONOMICIDAD DE LOS GOBIERNOS AUTÓNOMOS

2008



# Which European countries have a NAS?

Adopted a NAS:	Preparing a NAS:	IVA assessments for:
Finland (2005)	Czech Republic (2008)	Austria
France (2006)	Norway (2008)	Greece
Spain (2006)	Romania (2008)	Hungary
Netherlands (2007)	Estonia (2009)	Iceland
Denmark (2008)	Germany (2009)	Ireland
United Kingdom (2008)	Latvia (2009)	Lithuania
	Portugal (??)	Sweden
		Switzerland
RED: Included in research		
		(+ most of those with NAS)

Based on: Upcoming EEA report on Climate Change impacts (2008).

# Research Strategy: Dimensions

- 1 **Drivers:** What are the motivating factors and problem setting for climate adaptation policy? (SYKE)
- 2 **Science-Policy Nexus:** How are science-policy interactions structured in an adaptation context? (Alterra)
- 3 **Knowledge transfer & Communication:** How is access to adaptation related information organised? (Alterra)
- 4 **Multi-level Governance:** How are tasks and responsibilities distributed between administrative levels? (CEMAGREF/CEH)
- 5 **Policy Integration:** What is the institutional set-up to incorporate adaptation needs into sectoral policies? (UFZ)
- 6 **Compliance & Evaluation:** How do countries ensure implementation and monitoring of their NAS? (UFZ)

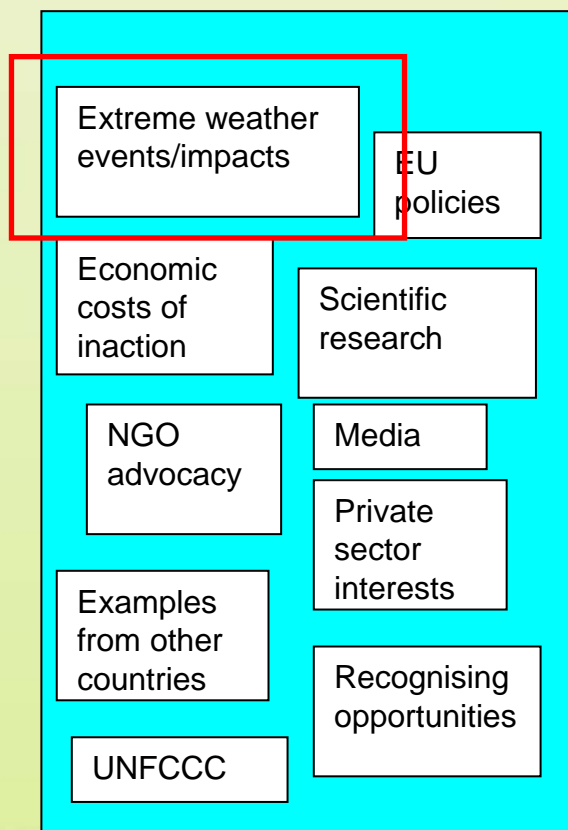
**Source of information:** national policy documents, interviews, networking at meetings

1

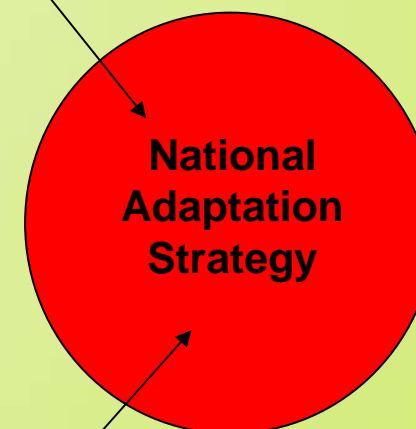
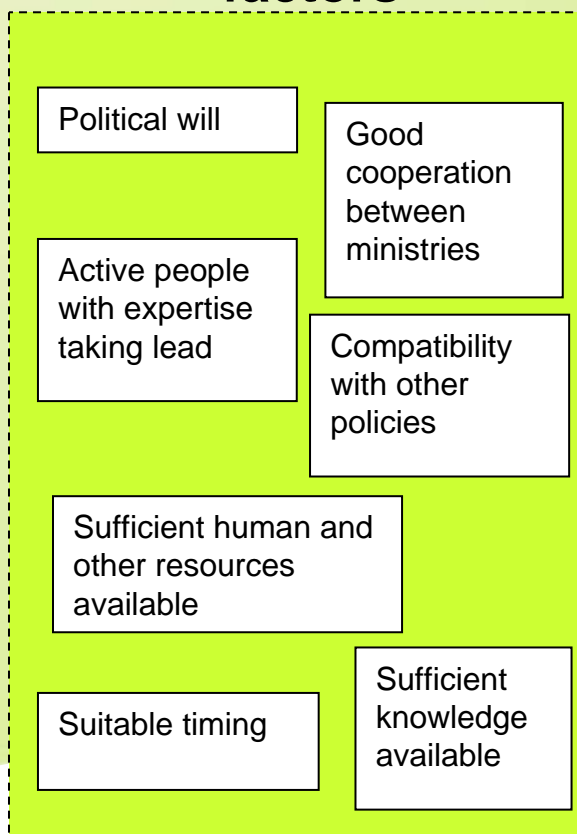
# Drivers for adaptation policy

(Lead: SYKE)

## Key drivers for adaptation policies



## Key facilitating factors



## 1

# Drivers for adaptation policy

(Lead: SYKE)

Vulnerable sector	DK	ES	FI	FR	LV (?)	NL	PT	SE	UK
Agriculture	X	X	X	X	X	X	X	X	X
Biodiversity		XX	X	XX		X	X	X	X
Coastal management	X	XX		X	X	X	X	X	X
Communication infrastructure			X					X	
Construction and buildings	X	X	X	X			X	X	X
Emergency and rescue services	X								
Energy, electricity supply	X	X	X	X	X		X	X	
Finance and insurance	X	X	X	X		X	X		X
Fishery	X	X	X				X	X	X
Forests, forestry	X	X	X		X		X	X	X
Human health	X	X	X	XX			X	X	X
Hunting		X	X						
Industry		X	X	X					X
Mountainous zones		X							
Nature protection	X							X	X
Reindeer husbandry			X					X	
Spatial planning, land use	X		X			XX	X		X
Soils, erosion		X					X		X
Transport		X	X	X				X	X
Tourism and recreation		X	X	X		X	X	X	X
Water resource management	X	XX	X	XX	(?)	XX	X	X	X



# 1

# Drivers for adaptation policy

(Lead: SYKE)

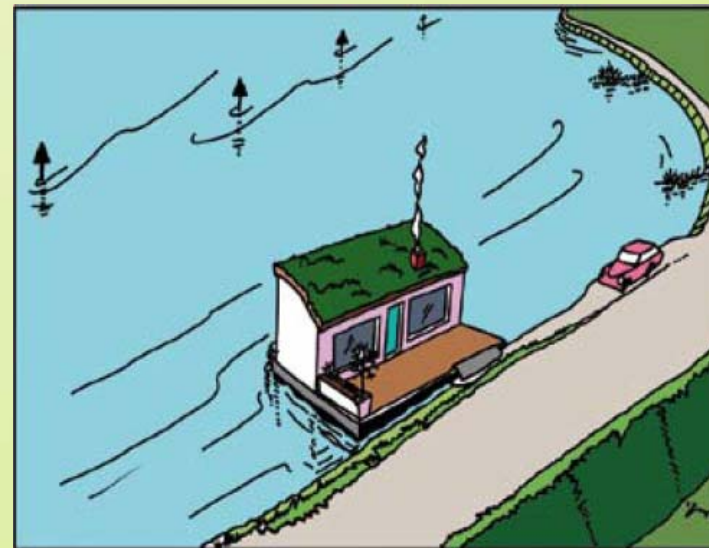
"The Dutch NAS"

## Challenge



Overijssel, Delfland with high damage potential

## Possible solution in NAS<sup>1</sup>



Coastal house relocation, water system; water housing tourism (flexible)

<sup>1</sup> VROM. (2007). *Maak Ruimte voor Klimaat! Nationale Adaptatie Strategie. De beleidsnotitie*. The Hague: Ministry of Housing, Spatial Planning and the Environment (VROM)



# 1

## Drivers for adaptation policy

(Lead: SYKE)

- **Potential opportunities mentioned in the NAS:**
  - Exporting knowledge (NED),
  - Agriculture (Sweden, Finland, Spain, Germany)
  - Forestry (Sweden, Finland)
- **Global considerations**
  - Development cooperation (PT, FR, ES)
  - Trade effects (FI, SE)
  - Security, migration concerns

# 2

## Science-policy nexus

(Lead: Alterra)

### Complexity of the climate problem for policy:

- Non-linearity of the problem -> high uncertainty
- 'wicked problem' -> Unstructured problem definition
- Never be fully scientifically understood -> dealing with uncertainty

**Contradiction:** knowledge development (*Science*) (fundamental research of system) vs knowledge demand (*Policy*) (applied, practical solutions)

**Knowledge paradox:** Too much information leads to inaction

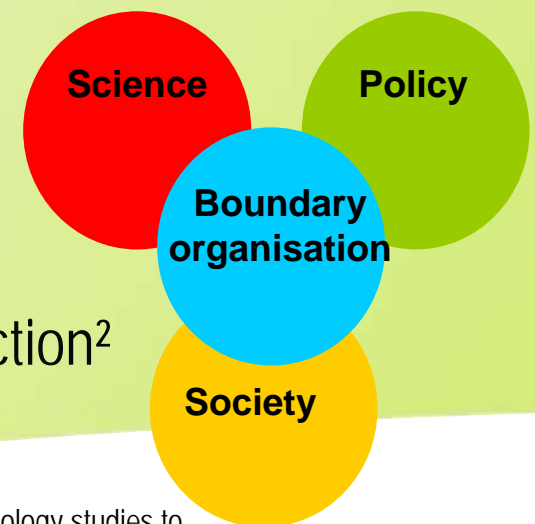
# 2

## Science-policy nexus

(Lead: Alterra)

### Adaptation requires work at the boundary between science and policy

- Demarcation of science and policy (legitimacy, credibility) -> stimulate arrangements between them for interactions<sup>1</sup>
- Boundary organisations
- Boundary objects – function as intermediary
- Not only science and policy, but also society
- From Mode 1 to Mode 1 and 2 knowledge production<sup>2</sup>



<sup>1</sup> Hoppe, R. (2005). Rethinking the science-policy nexus: From knowledge utilization and science technology studies to types of boundary arrangements. *Poiesis und Praxis*, 3(3), 199-215

<sup>2</sup> Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. London: SAGE Publications.

# 2

## Science-policy nexus

(Lead: Alterra)

- Climate system emphasis (1980s-)
  - e.g. SILMU (FI), NOP (NL)
- Mitigation and national impacts (2000s-)
  - e.g. FINADAPT (FI), SIAM (PT), KALME (LV), ECCE (ES)
- Regional and local impacts, vulnerability and adaptation (2005s-)
  - e.g. ISTO (FI), KfC (NL)



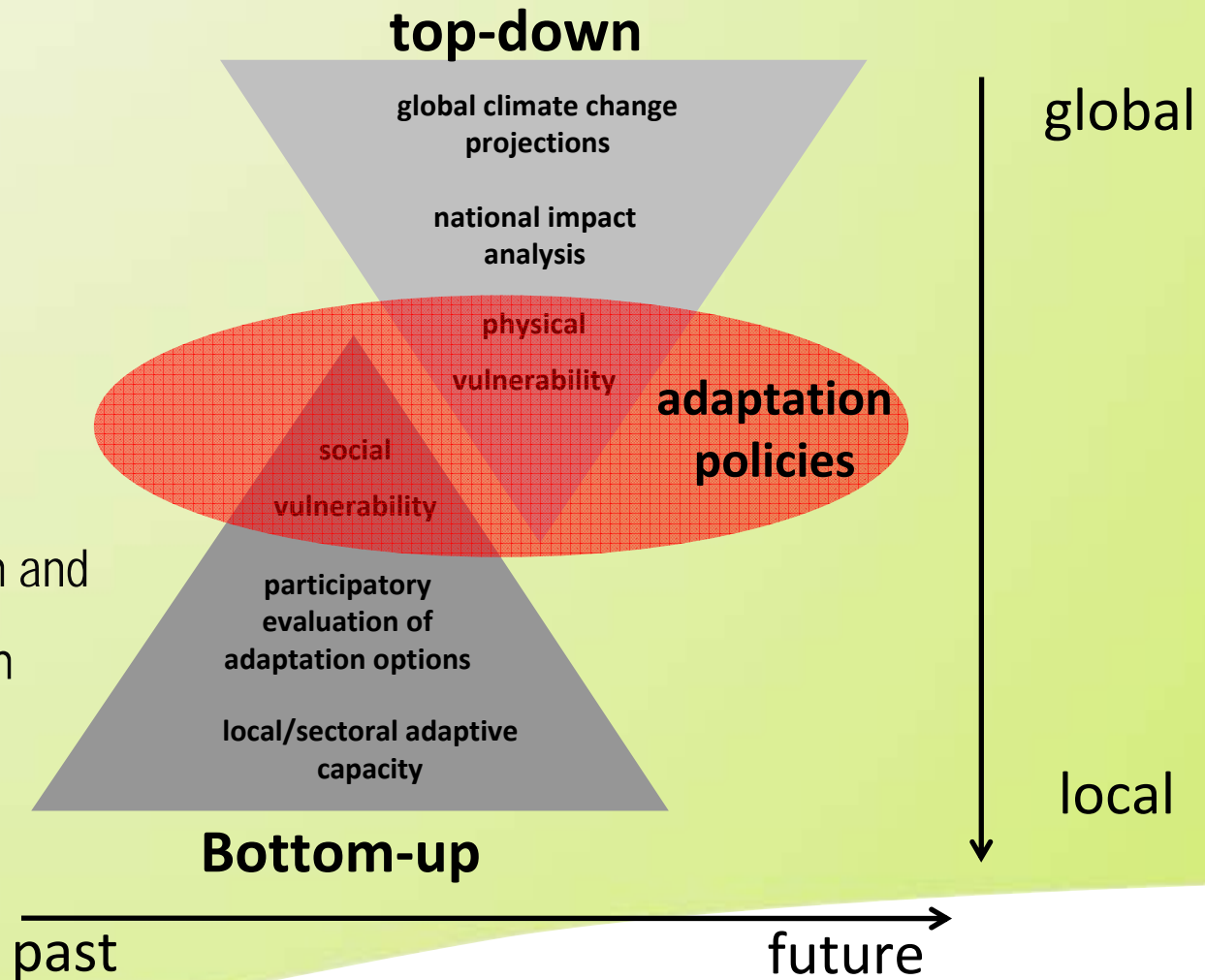
# 2

## Science-policy nexus

(Lead: Alterra)

Adaptation policy is combination of:

- Fundamental and applied research
- Top-down research and
- Bottom-up research



# 2

## Science-policy nexus

(Lead: Alterra)

### Organisations involved in the development of NAS

- **Drafting NAS**
  - Sometimes overlap between other organisations e.g. ARK
- **Coordinating organisations**
  - Research (science-policy), knowledge transfer between governments e.g.
- **Boundary organisations**
  - Interactions between science-policy and society. e.g. UKCIP
- **Advisory or assessment organisations**
  - Government, working group, consultant (Ecoprogresso, PT)

## 2

# Science-policy nexus

(Lead: Alterra)

Country	Coordination unit at government level	Established	Role(s) of organisation
Denmark	<i>'koordinationsforum for klimatilpasning'</i>	2008 -	Coordination Unit
	<i>Koordineringsenhed for forskning i klimatilpasning'</i>	proposed	Coordination unit; advisory unit
	<i>'Videncenter for klimatilpasning'</i>	proposed	Coordination unit
Finland	<i>Coordination unit of adaptation to climate change</i>	September 2008	Coordination, advisory
	<i>Working group for preparing the NAS</i>	2003-2004	Drafting the NAS
France	<i>'Observatoire national sur les effets du réchauffement climatique (ONERC)'</i>	February 2001	XXX
Germany	<i>Kompetenzzentrum Klimafolgen und Anpassung (KomPass)</i>	October 2006 -	Coordination Unit
	<i>Federal Environmental Ministry Unit on adaptation</i>	existing	Drafting the NAS
	<i>national advisory council on climate adaptation</i>	proposed	Advisory organisation
Latvia	<i>Climate and Renewable Department (within Latvian Ministry of the Environment)</i>	existing	Coordination unit, drafting the NAS
Netherlands	<i>Adaptation Space and Climate (ARK)</i>	June 2006	Coordination Unit; drafting the NAS
	<i>Netherlands Environmental Assessment agency (MNP)</i>	existing	Advisory organisation
Portugal	<i>Comissão para as Alterações Climáticas (CAC)'</i>	existing	Coordination Unit
	<i>Ecoprogresso</i>	existing	Drafting the report
Spain	<i>El Grupo Interministerial de Cambio Climático</i>	2005 -	
	<i>Oficina Española de Cambio Climático</i>	2001 -	Writing the NAS
	<i>Comisión Delegada del Gobierno para el Cambio Climático</i>	2008 -	Coordinating the NAS
Sweden	<i>Klimat- och sårbarhetsutredningen'</i>	June 2005 -	Coordination Unit
	<i>Foundation for Strategic Environmental Research (MISTRA)</i>	existing	Advisory organisation
United Kingdom	<i>Climate Impacts Programme (UKCIP)</i>	1997 -	Boundary organisation
	<i>DEFRA (special adaptation unit)</i>	existing	Drafting the report; coordinating unit
	<i>Climate Change Adaptation Sub-Committee of the Committee on Climate Change</i>	to be established in 2008	Advisory organisation



# Concluding (1/2)

- Since 2005, development of National Adaptation Strategies in Europe has rapidly accelerated. More developments are expected in the coming years (EU White Paper).
- These are first steps to get political support-> Adaptation Action Plans/Agendas will be more specific dividing responsibility amongst actors at all relevant scales
- Recent extreme events, such as droughts, (near) floods, have been drivers for adaptation policy
- Coastal zone and water resource management are portrayed as key vulnerable sectors in almost all NAS
- Often pre-existing (e.g., flood risk) plans to deal with weather-related events are upgraded into climate change adaptation plans and only later coordinated with NAS

# Concluding (2/2)

- Science and policy do not automatically match – flexible work at the boundary is needed following rapid policy developments (often neglected)
- Developments of NAS is a conjoint effort of science and policy interactions through new or existing institutions
- *Science* needs to listen to the knowledge needs of policy (paradigm shift)
- *Policy* should learn how to cope with large uncertainties -> there is no definite answer ->no regret strategies.
- Science should speed up! -> policy development appears to overtake science (shift from climate system/impacts to action-oriented research)

# Thank You

## Partnership for European Environmental Research<sup>1</sup>

Questions and/or information please contact:

robbert.biesbroek@wur.nl

<sup>1</sup> for more information see [www.peer-initiative.org](http://www.peer-initiative.org)

