

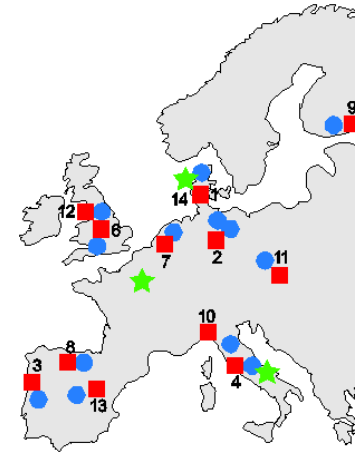
# Overview: Bottom-up climate Adaptation strategies towards a Sustainable Europe (BASE)

**Hans Sanderson**

**Aarhus University, Dept. Environmental Science**

## BASE

- Project period: Nov' 12 to Nov '16
- Total budget: Approx. 7.55 mill Euros
- 14 partners across the EU:



TEKNOLOGI-RÅDET



UNIVERSITY OF LEEDS



- Working closely with the EEA Topic Centre on Climate Change Adaptation

## BASE aims:

- **Compiling and analysing data and information on adaptation measures**, including environmental; social; economic benefits; sectoral costs; and policy implications.
- **Improve and develop new assessment methods and tools to identify conflicts and synergies** at different policy levels as well as between and within sectors to highlight strategies for improving policy coherence and effectiveness.
- **Integrate bottom-up knowledge with top-down processes** to assess the effectiveness, costs and benefits of adaptation strategies at different scales.
- **Bridge the gap** between specific assessments of adaptation measures and ‘top down’ implementation strategies.
- **Increase the integration of local knowledge** of adaptation pathways through novel participatory methods and deliberative tools for iterative adaptation strategies
- **Disseminate project results** to stakeholders to increase awareness of the impacts, costs and benefits of climate adaptation for effective and sustainable adaptation strategies through tools such as Climate-ADAPT.

## BASE structure

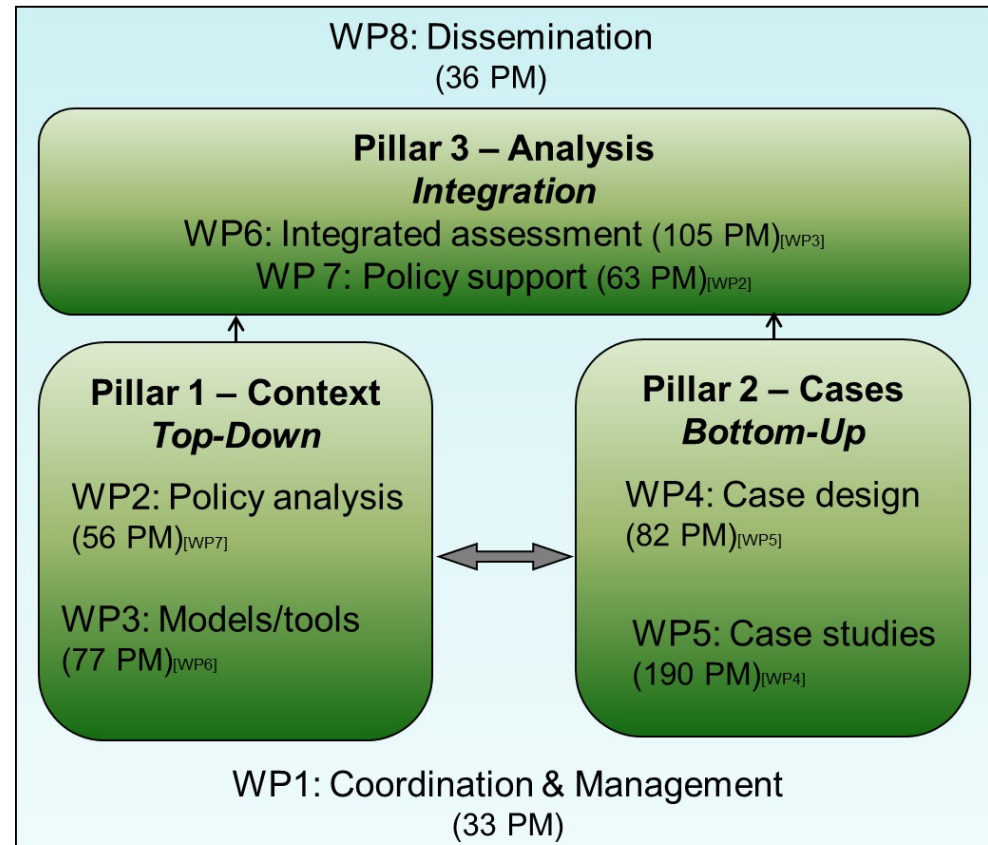
Pillar 1: Provides the policy and tools **context** for the case studies, from primarily a **Top-Down perspective**.

Pillar 2: Consists of the Bottom-Up research. WP4 develops a **case methodology** ensuring **comparability** between the case studies, and WP5 **implements the methodology in cases**.

Pillar 3: **integrates** and up-scales results for economic analysis & **policy support**.

The 3 pillars are **coordinated** by WP1 and **disseminated** via WP8

## Project model



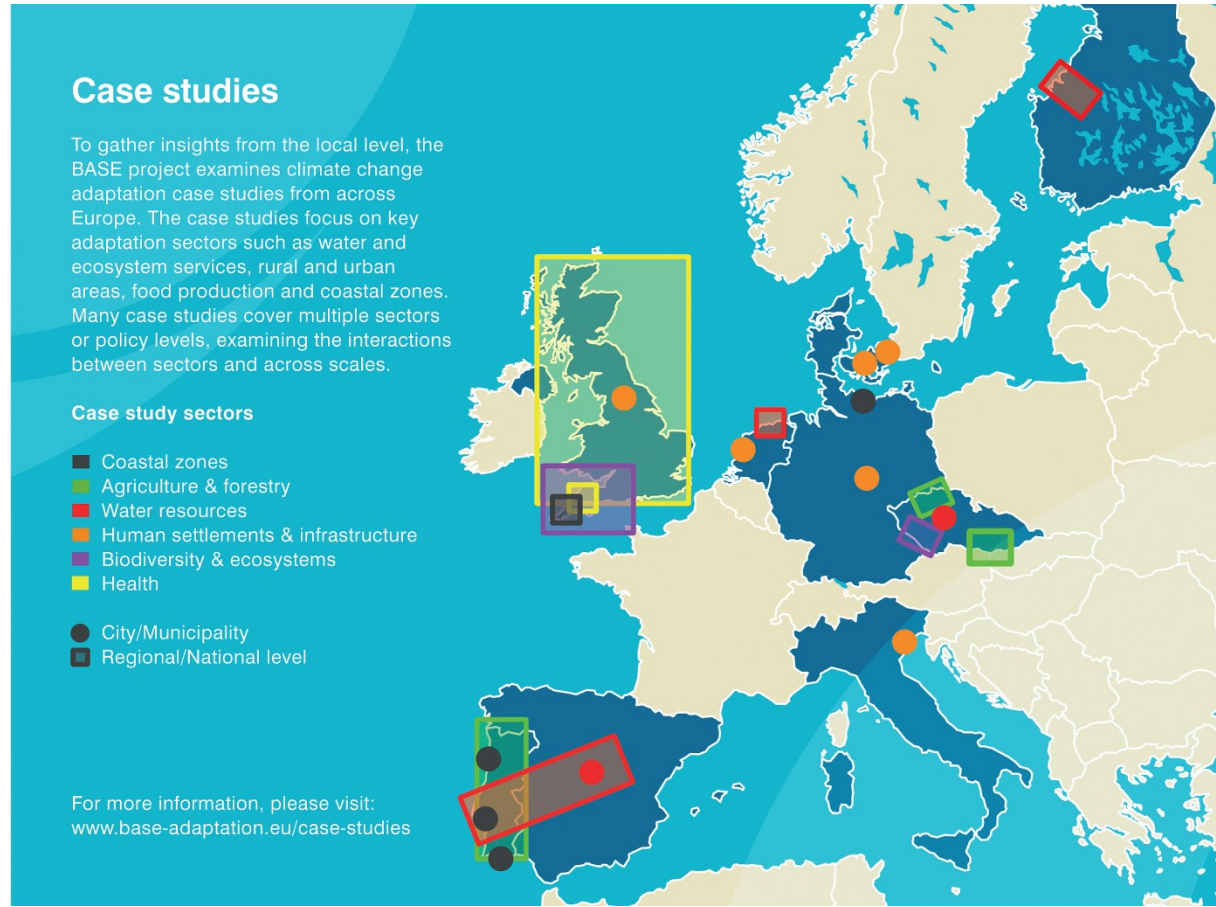
## BASE methods

- **Interdisciplinary** assessment of **costs, benefits, effectiveness, challenges and opportunities** of adaptation across sectors (**urban; rural; water; agriculture; health**)
- The cases will employ the **RCP 4.5 & 8.5** and the **SSP2 & 5** scenarios in all cases to handle uncertainty and to maintain comparability – in retrospective cases this is done to assess uncertainty related to scenarios that actually informed adopted adaptation measures
- **‘Replicate’** case studies **encompassing several sectors** will be conducted. Damage avoidance potential of adaptation measures will be assessed based on local scenarios and general ones (**cost curves**) under different temporal planning options
- The cases will also examine **flow of information from Bottom-Up to Top-Down** in planning through action research and documentary analysis
- **Adaptation pathways** will be developed using a decision analysis framework for adaptation planning and decision making.

# BASE will 'replicate' sectorial case studies across EU

For example, city cases include:

- Leeds
- Copenhagen, EU 2014 green capital
- Prague, flood prone central EU
- Venice, sea level raise
- Madrid, drought prone mega-city





## BASE Case study design – both for pro- and retrospective cases

- **Prospective and retrospective case studies** because adaptation is an iterative and forth-going **adaptive management** process
- **Common case study methodology** to ensure shared starting points, research practices and **comparability**
- Need for rigorous and ‘**replicate**’ cases, with an emphasis on **costs and benefits, participation, and implementation efficiency** in the EU
- The cases will be **multi-level** and **multi-sectorial** to ensure the assessment of **policy coherence, integration and mainstreaming** regarding adaptation
- **Common cost-benefit analysis design** and **multi-criteria analysis** for soft values

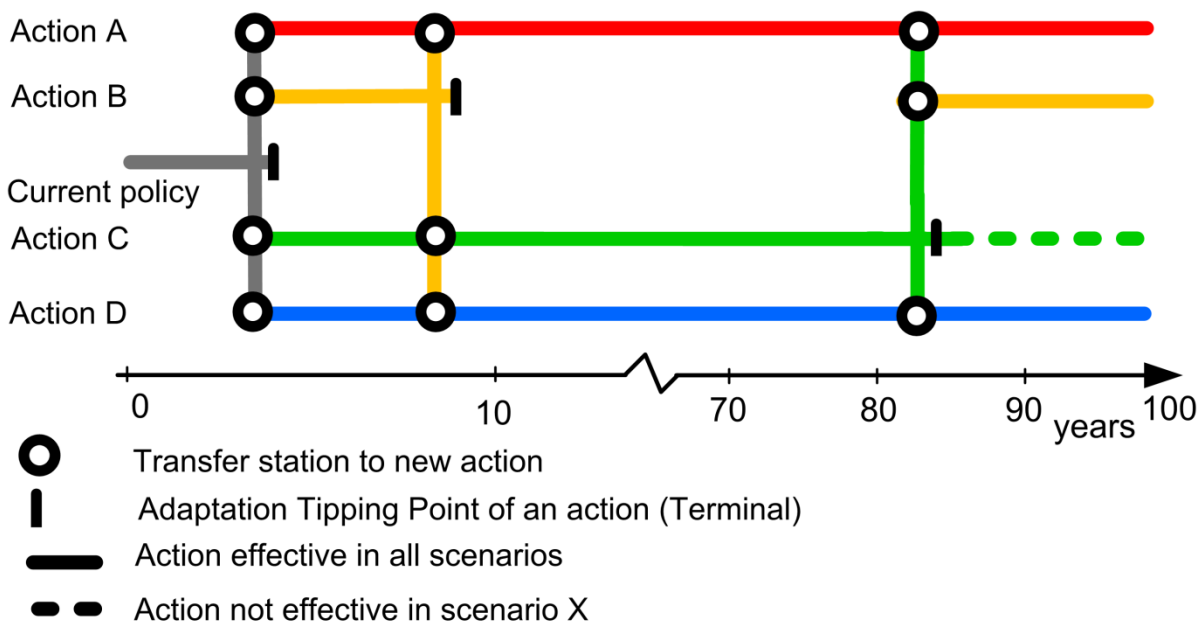
## BASE case design cont'd

- BASE will assess the direct **benefit** of adaptation as the **avoided cost of climate change impacts**
- The **cost** will be the necessary **investments and expenditure to avoid damage**
- Will use nationally recommended **discount rates** as well BASE-wide **low and high discount rates** for all the cases
- Uncertainty will be assessed in a sensitivity analysis with at least **two** different **climate change scenarios and socio-economic scenarios**
- A **common assessment software** will be used (e.g. **PRIMATE**) in CBA and MCA analyses
- **Participatory arrangements** will be analyzed in all cases and tested in selected prospective cases
- WP4 will determine **core research questions** and **data formats** to manage the case studies





# Iterative and adaptive management and adaptation pathways – communicate and facilitate decision-making



Adaptation Pathways Map

Path actions	Relative Costs	Target effects	Side effects
1 ○	+++	+	0
2 ○	+++++	0	0
3 ○	+++	0	0
4 ○	+++	0	0
5 ○	0	0	-
6 ○	++++	0	-
7 ○	+++	0	-
8 ○	+	+	- - -
9 ○	++	+	- - -

Scorecard pathways

# BASE and the European Adaptation Strategy

**Mikael Hildén, leader of WP2**  
**SYKE**

## The general logic of the EU strategy

**Policy integration:** Used as concept and applied by naming specific policy sectors

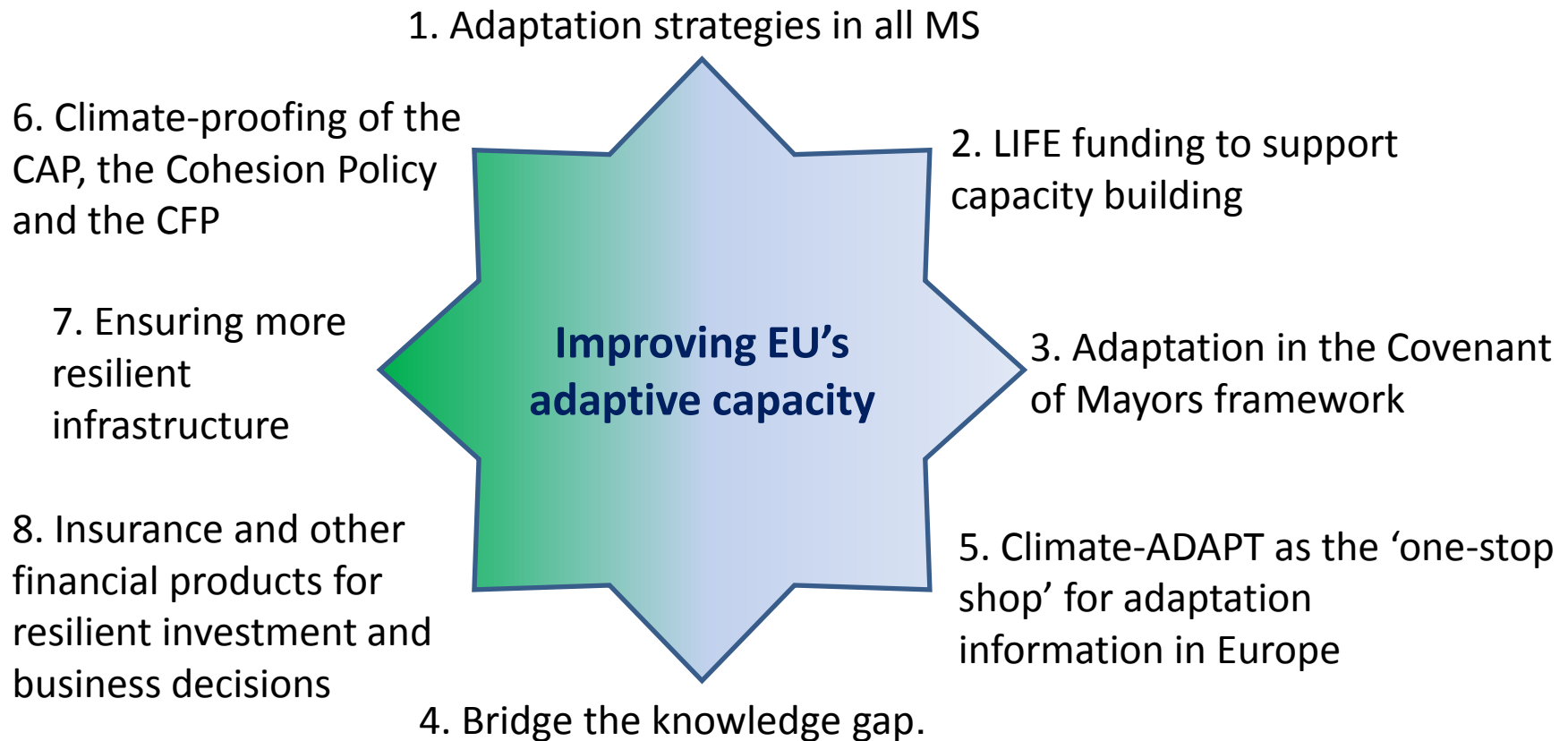
**Eight specific actions:** The focal areas of the strategy – from “soft” information based to “semi-normative” directing funding

**A framework for coordination:** EU-MS-Stakeholders

**Guiding financing:** Based on the target of at least 20 % of the EU budget for climate-related expenditures

**Monitoring, evaluation and review:** Indicators to help evaluate adaptation efforts and vulnerabilities across the EU

## The Strategy's Specific Actions



## **BASE contributions to the implementation of the strategy – the softer parts**

- Action 1 → BASE: what is the role of the national strategies in local action? What can national strategies learn from local adaptation? How does the local challenge the national?
- Action 2 and 3 → BASE: what kind of local action seem meaningful, what stumbling blocks should one be aware of? How can participation contribute?
- Action 4 and 5 → BASE: local and regional level as well as macro analyses; model development; approaches to be used in implementation at the local/national level; cases to be described and displayed.

## **BASE contributions to the implementation of the strategy – the harder parts**

- Action 6 → BASE: What does it take to change the logic of practice, what can cases reveal about changing practice? What adaptation pathways can be identified in the sectors?
- Action 7 → BASE: What do cases reveal about the role of standards and their effects, how does one actually implement green infrastructure? What are the side-effects? How do standards determine adaptation pathways?
- Action 8 → BASE: The economics of insurance: Evaluating adaptation under uncertainty

## Monitoring, evaluation and review – the BASE contribution

- How does one measure progress in adaptation? → BASE: conceptual analysis and case testing; participatory dialogues.
- Evaluating EU and country strategies → BASE: The scaling issue - Top-Down-Bottom-Up interaction in producing adaptive capacity.
- The issues to review → BASE Policy Briefs
- Finding the contributions:

[www.base-adapt.eu](http://www.base-adapt.eu)



## Conclusions

- EU adaptation challenges:
  - Knowing when and how to act and at what level – the risk assessment in a multilevel governance context
  - How does one make ethically acceptable business and profit of adaptation?
  - The challenge of ambiguity in politics – how to use scientific results meaningfully?
- BASE challenges:
  - Ensuring case study ‘replicability’ and management of uncertainty in data, learning from diversity
  - Integrating case study data and processes in economic models (up-scaling) and the economics of implementation
  - Analysis of adaptation coherence across sectors policies – understanding the sector logic
  - Providing policy advice – communicate in relevant terms and levels – pathways – will they work?

# Thank you for your attention!

Hans Sanderson & Mikael Hildén

With contributions from

Jouni Paavola (Uni Leeds) and Ad Jeuken (Deltares)

Tel. +45-8715-8632; +358-40-7401675

Email: [hasa@dmu.dk](mailto:hasa@dmu.dk); [mikael.hilden@ymparisto.fi](mailto:mikael.hilden@ymparisto.fi)

[www.base-adapt.eu](http://www.base-adapt.eu)