



Barriers and Drivers to the Implementation of Adaptation in Europe

Dr. Olivia Rendón
Sustainability Research Institute
University of Leeds, UK

Adaptation Futures Conference
Rotterdam; May 10th 2016



Rationale

- Research is needed to provide causal explanations of the occurrence of barriers/drivers of climate change adaptation (CCA) and analyse how they differ over time;
- Priority needs to be placed on analysing the solutions to overcoming barriers (Eisenack et al. 2014; Biesbroek et al. 2013).

Objectives

- Identify and explain the barriers and drivers to CCA
 - Analyse the barriers and drivers at different stages of adaptation progress
 - Explore how barriers to adaptation are overcome and understand what works.
-



Research Approach

- **Stages of adaptation:**
 1. *Preparing the ground*
 2. *Assessing risks and vulnerability*
 3. *Identifying adaptation options*
 4. *Assessing adaptation options*
 5. *Implementation*
 6. *Monitoring & Evaluation*
- **Factors influencing adaptation:**
 - i. *Knowledge about CCA*
 - ii. *Actor-related aspects*
 - iii. *Framing of CCA*
 - iv. *Local/regional context*
 - v. *Regulatory framework*
 - vi. *Institutional context*
 - vii. *Resources*
 - viii. *Nature of measure*



3



Case Studies

Case	CC Impacts	Adaptation Measures (e.g.)	Stage
South Devon	Flood, sea-level rise	Sea wall reinforcement, re-routing rail	1
South Moravia	Drought	Agriculture, water retention/saving, and insurance measures	1
Usti	Drought	Agriculture, water retention/saving, and insurance measures	1
Madrid	Heat	Heat warning systems, green roofs	2
Holstebro	Flood	Farmer as water manager	3
Kalajoki	Flood	Water storage, flood regulation, grey infrastructure, etc.	3
Alentejo	Drought	Water retention landscape	4
Kalundborg	Flood, sea-level rise	Coastal defenses, abandoning summer houses	4
Ilhavo/Vagos Coast	Flood, sea-level rise	Breakwater, sand dike, sand nourishments, etc.	4
Timmendorfer Sd.	Flood, sea-level rise	Dike, glass walls, etc.	4
Cascais	Flood	Retention gardens, green corridors/roofs, catchment re-naturing	4/5
Copenhagen	Flood, heat, sea-level rise	Soft, grey, organizational, and governance measures	5
IJsselmeer	Drought, flood, sea-level rise	Flexible water level, reduced usage, pumping, etc.	5
Jena	Flood, heat	Local climate adaptation strategy - JenKAS	5
Leeds	Flood	Grey infrastructure, potential SuDS and ecosystem-based approach	5
Prague	Flood	Grey infrastructure	5
Rotterdam	Flood, sea-level rise	Flood defences, room for the river measures, multi-layer safety	5/6

4



Key Findings (1)

- Actor-related aspects, resources, knowledge and the institutional context were the most influential factors on CCA for all cases.
- More advanced case studies are less likely to find the regulatory framework to be a barrier and more likely for the institutional setting to be one.

"The UK regulatory framework doesn't indicate who is responsible for addressing (and paying for)..adaptation challenges" (South Devon S1)

"Political instability...several changes in structure and governance which significantly delayed and slowed down our momentum for adaptation" (Cascais S4)

"lack of communication (and information sharing) between departments and agencies (EA, LCC, RMA)" (Leeds S5)

"adaptation plans remain plans" (Kalundborg S4)

5



Key Findings (2)

- Less advanced cases are driven by aligning CCA with existing policies at different scales.

Adaptation was framed as: *water management* (Holstebro), *health concern* (Madrid), *agricultural management* (South Moravia, Usti)

- Local and national non-climatic policies are more adept at driving adaptation than EU policies.

River basin mgt plans (Kalajoki), *Framework for coastal defense* (Timmendorfer Strand)

- Future case prospects are linked to the stage of adaptation progress, with advanced cases having a positive outlook and early cases being negative.

"It is not expected that this government will actively start... supporting CCA strategies and policies" (South Devon)

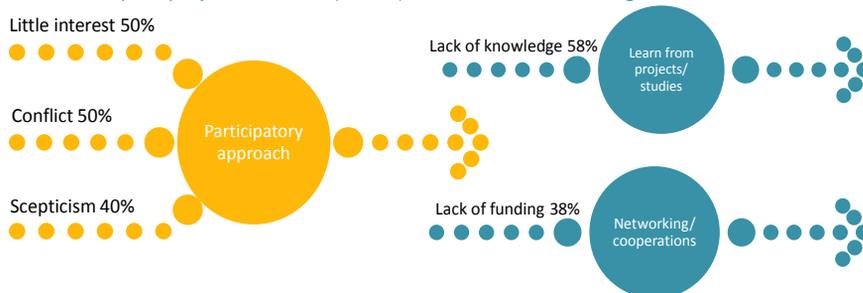
"...flood protection of the city has a very high level importance" (Prague)

6



Overcoming Barriers

- Only advanced cases (stages 3-5) reported overcoming barriers (12/17)
- The 3 most common barriers overcome were: lack of knowledge or uncertainty, conflict/resistance/opposition, and lack of funding
- The 3 most common “solutions” were: using a participatory approach, learning from pilot projects/studies (BASE) and institutional change.



7



Take away messages...

1. Political decisions are a common barrier!

2. Synergistic measures can be an initial fast way forward!

3. Local policies promote action!

4. Institutions are too slow in the uptake of new regulations!

5. There is no single solution, but participation can solve many problems!

8



Thank you!

Contact:
Dr. Olivia Rendón o.r.rendon@leeds.ac.uk
Sustainability Research Institute
University of Leeds, UK

(Acknowledging input/support from all BASE case study researchers)

www.base-adaptation.eu

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under Grant Agreement No. 308337 (Project BASE). The contents of this presentation are the sole responsibility of BASE and can in no way be taken to reflect the views of the European Union.