



Institutional barriers and enabling conditions for public adaptation to climate change:

A meta-analysis of case-study evidence from Europe

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Overview

- Introduction
- Method
- Results and Discussion
- Conclusions

Introduction

- Consensus at a vague level: Institutions decisive for public adaptation!
- Confusion: How do institutions precisely shape adaptation to climate change?
- 2 dominant research strategies:

Strategy	References	Important limitations
Classificatory Framework/ List of variables	<ul style="list-style-type: none">■ e.g. Agrawal 2008/2010, Gupta et al. 2010	<ul style="list-style-type: none">■ Empirical verification■ Interrelation of institutional and non-institutional variables■ Modelling effects on adaptation processes & outcomes
In-depth case-studies	<ul style="list-style-type: none">■ e.g. Naess et al. 2005	<ul style="list-style-type: none">■ Generalizing the results■ Cross-case learning

Introduction

- Research question of this paper:
 - What are the relevant institutional dimensions of public adaptation?
 - How (in which way/ under which conditions) do these institutional attributes foster or impede adaptation processes?

- Focus:
 - Public adaptation in Europe: governments and public administration core operators of adaptation.

Method

Method and Data

- Model-centered Meta-analysis
 - Pool the statements about relations of variables (models), not the effect sizes
- Conceptual groundwork: “Diagnostic framework of CCA”
- Structured literature search: keyword search in Web of Science; cross-referencing
- Selection criteria
 - Empirical evidence on the research question
 - Transparent and adequate methods
 - English
 - Final selection: range of countries; range of hazards; range of sectors

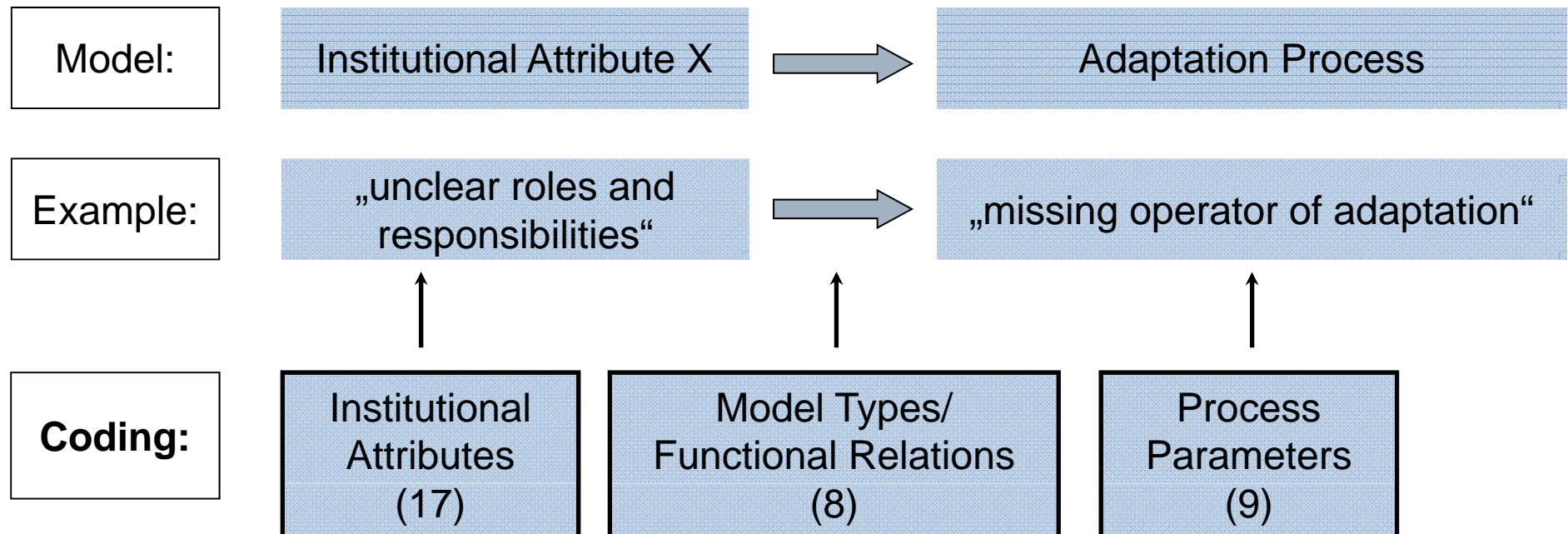
Descriptive statistics

- 12 studies
- 35 authors; 10 journals/books + 1 technical report
- 25 cases

Hazards		Countries		Data Sources	
Flood	7	Netherlands	6	Interviews	9
Multiple	4	Norway	3	Policy and planning documents	6
Coastal Erosion	1	Sweden	2	Workshops, focus groups, roundtable discussions	3
Drought	1	UK	1	First-hand experience	2
		Germany	1	Stakeholder consultations	1
		Ireland	1	Scientific literature	1
				Questionnaire	1

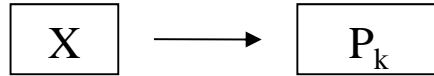
n= 12; multiple counting possible.

Coding Scheme

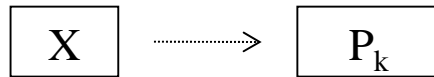


Coding Scheme: Model Types

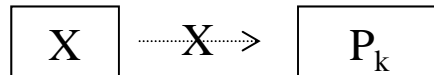
1. Direct Effect



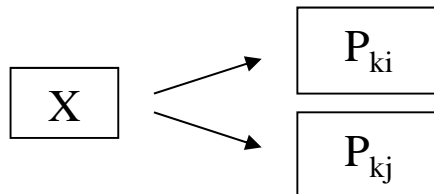
2. Relevance



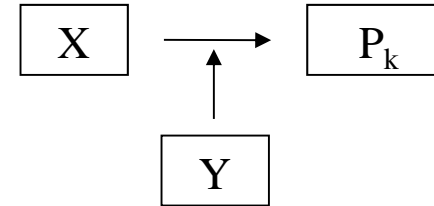
3. Insignificance



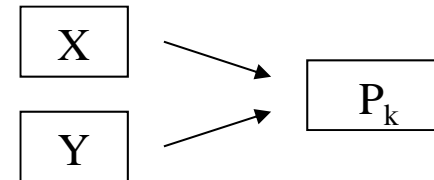
4. Differential Effect



5. Moderator Effect



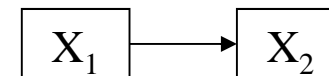
6. Conjoint Effect



7. Mediator Effect



8. Internal Effect



- Combinations of Model Types are possible

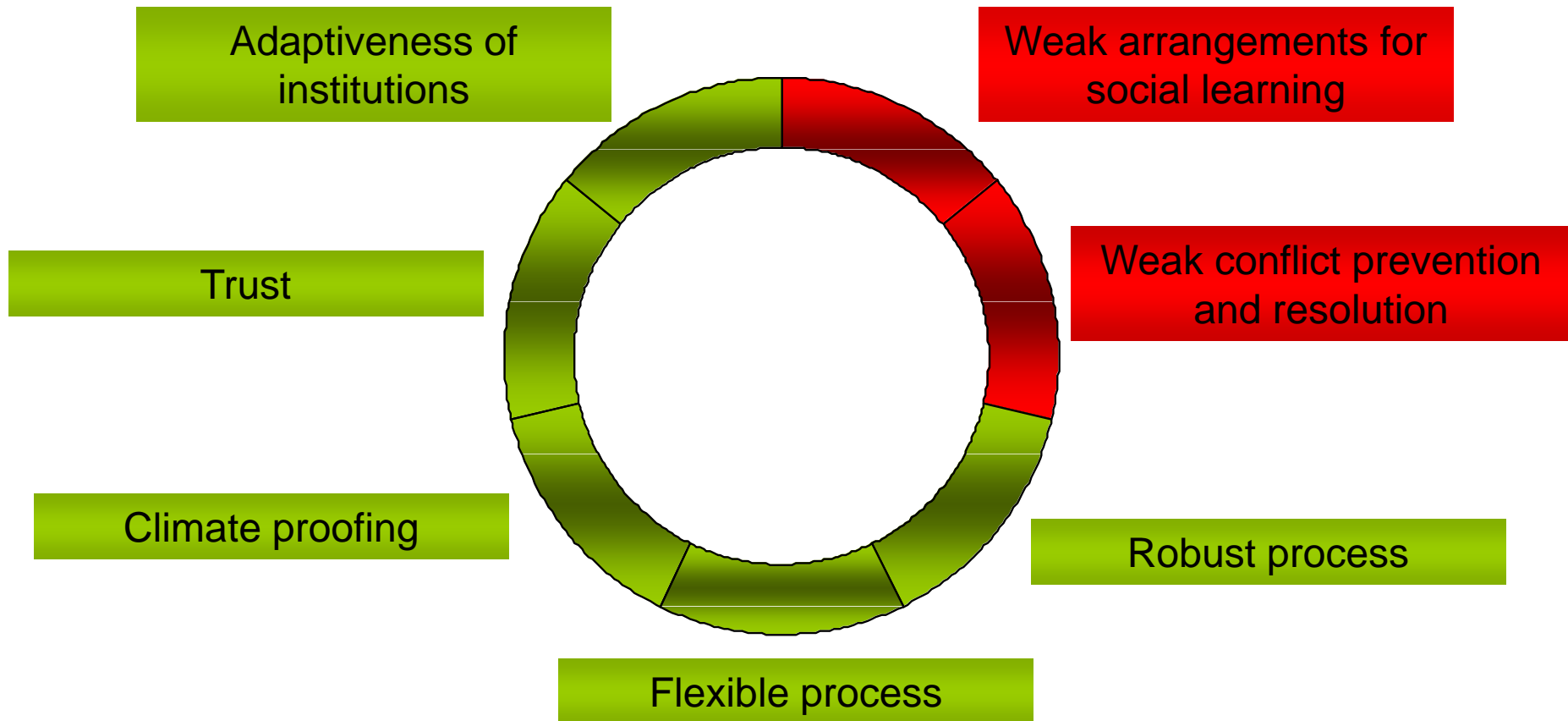
Coding Scheme

- 9 Process Parameters P_k

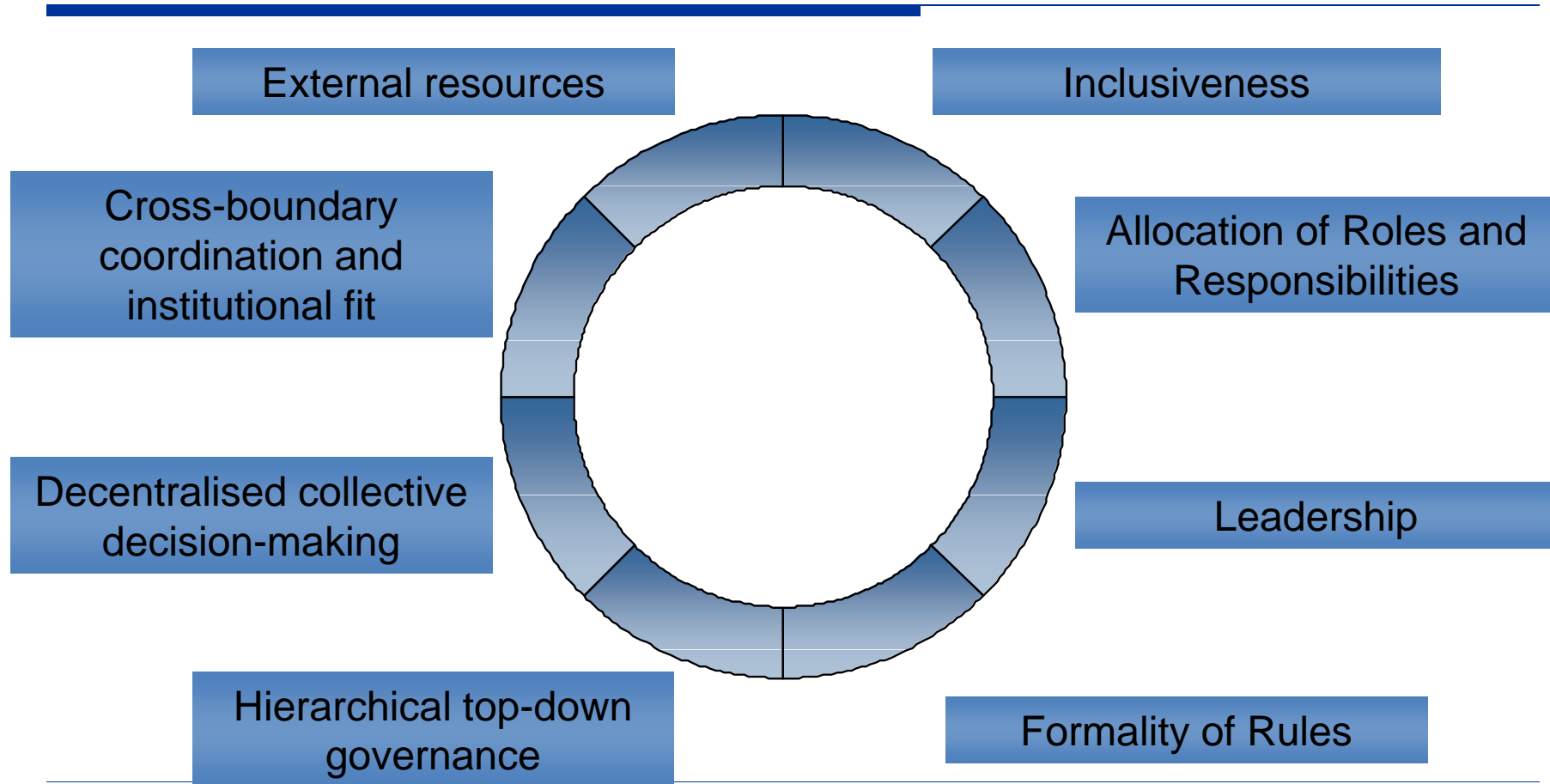
Process Parameter		Process Parameter (cont'd)	
m	Means for Adaptation	u	Understanding
o	Operators of Adaptation	a	Awareness
c	Costs of Ad. (incl. transaction costs)	b	Balanced decision-making
i	Incentives for adaptive action	e	Effectiveness
ma	Incentives for mal-adaptive action		

Results and Discussion

Institutional Barriers and Enabling Conditions for Public Adaptation: converging evidence



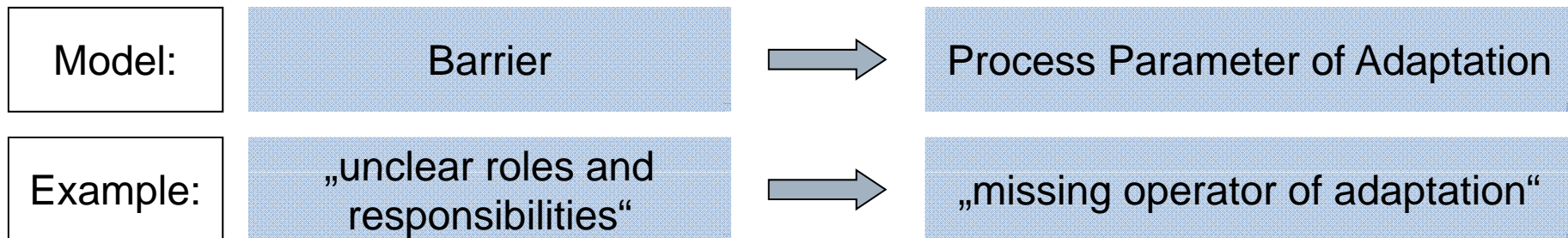
Institutional Barriers and Enabling Conditions for Public Adaptation: diverging evidence



Conclusions

Conclusions

- A few institutional attributes are unambiguously barriers/ enabling conditions.
- The effect of several other institutional attributes on processes of adaptation depends on the interplay with other variables.
- Use: diagnose institutional problems of public adaptation; build explanatory theory for adaptation; MCMA for systematic qualitative reviews
- Modelling barriers to adaptation:



Thank you very much for your attention!

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