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Dealing with uncertainties – communication between disciplines

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Autumn school

“Dealing with uncertainties in research for climate adaptation”

Background and aim

- climate adaptation research inevitably involves uncertainty issues
- each discipline own methods, definitions, etc.
- uncertainties propagate from one field of research to the other
- essential to look over the borders of ones own discipline

Aim

- active learning about uncertainties and dealing with uncertainties
- obtaining insight in approaches for communi-cation and visualization of uncertainties
- constructing of a common frame of reference

Set-up Autumn school

Day 1: terminology and types of uncertainty
Day 2: methods for dealing with uncertainties
Day 3: communication about uncertainties

Mornings: lectures
Afternoons: case sessions
End afternoons: discussions contributing to "Common Frame of Reference"
Evening day 1: serious game

- 38 PhDs/postdocs: governance, decision management, climate impacts and climate physics
- contributions from many different lecturers

Common Frame of Reference

Common Frame of Reference (CFR)

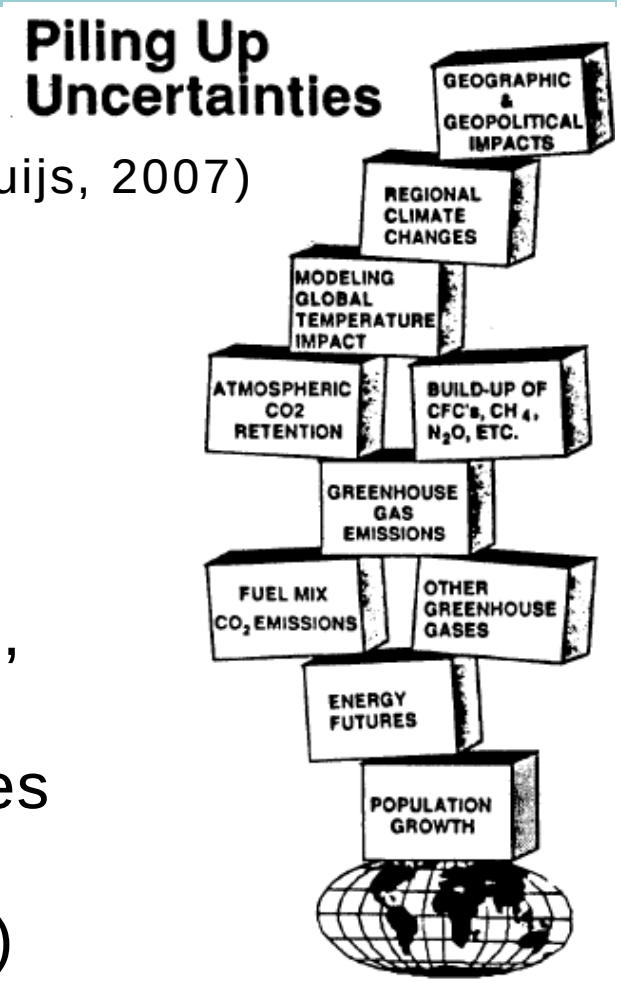
- meant to help researchers in climate adaptation to work together and communicate together on climate change
- meant to help researchers explain to others (e.g. decision makers) why and when we agree and when and why we disagree, and on what exactly

Common definitions / typologies

Useful typologies (Dessai & van der Sluijs, 2007)

Based on distinctions between:

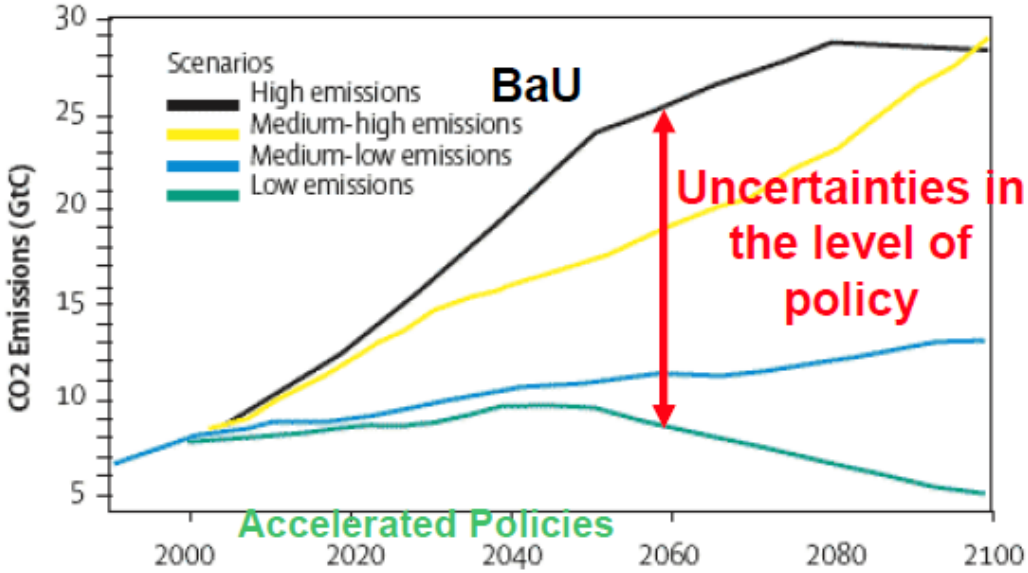
- levels (indicate how difficult it is to describe uncertainty);
- sources
  - (natural) variability;
  - lack of (system) understanding, inherent complexity
  - varying perceptions, preferences (ambiguity)
- locations (for model-based analysis)



Common understandings

Why take uncertainties into account?

- scientists' goal is to improve humanity's understanding of the World
- communicating uncertainty enhances credibility
- decision makers can achieve superior outcomes
- communicating the limitations and uncertainties inherent in scientific findings helps other scientists to formulate important research questions



Common understandings

Tasks policy makers and scientists:

- scientists: trying to understand policy makers + explaining their research
- policy makers: making clear what is relevant + trying to understand scientists

No agreement on how far scientists should go in communication:

- from limited efforts (too much simplification touches upon integrity of researcher)
- up to much effort (societal responsibility)

Common documents

List of documents considered useful by all participants on the subjects treated

All documentation, lectures, summaries of discussions, the Common Frame of Reference, etc. available through:

http://www.knmi.nl/climatescenarios/autumnschool2012/

Do’s and don’ts

A few examples:

- adjust the communication to the target audience
- be aware of the question behind the question of users
- don’t take over the chair of the policymaker: scientists should deliver the scientific information, policy makers should make the decisions
- don’t only focus on uncertainties. but also highlight what is certain

Recommen-dations

Main recommendations

- need for typology of ambiguity, etc.
- more guidance needed in finding the right method to deal with uncertainties
- more information needed on methods how to deal with uncertainties related to human actions (ambiguity, framing, perception, risk aversion) (de Boer et al., 2010);
- need for a platform to discuss methods and exchange experiences