

Knowledge for adaptation: the ADAM digital adaptation compendium

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In order to make "intelligent societal decisions concerning [...] adaptation strategies" (<http://climatecongress.ku.dk/about/>), there is a need and opportunity to use knowledge supplied by science. However, for knowledge to be influential in decision making, it must be tailored toward the demands of decision makers (Clark et al., PNAS, 2003, vol. 100, no. 14, pp. 8086-8091), which, in the field of climate change adaptation, remains a challenge. The demand of decision makers has, to date, not sufficiently been taken into account in the research-based production of knowledge for adaptation: a huge gap remains between the conceptual work on the supply side and the concrete needs of decision making. The knowledge supply is found in a great number of disparate case studies and expressed by means of abstract, often vaguely defined, and sometime competing, concepts, such as resilience, vulnerability and adaptive capacity. Furthermore, knowledge is supplied on various aspects of adaptation including observed impacts, potential impacts, optimal adaptation strategies and institutional barriers to adaptation, but little work has been done to relate these aspects. A number of large scale efforts have been made to synthesize the fragmented knowledge, most prominently in the form of the Millennium Ecosystem Assessment and the Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC). However, while these syntheses provide high-level synopsis on the state of the planet useful for international policy making, they provide little information for concrete adaptation decision making within at a specific location or for a specific sector.

The European funded project ADAM (Adaptation and Mitigation Strategies) currently addresses the challenge of providing knowledge for adaptation from both the demand and supply side. It aims at supplying transdisciplinary, research-based knowledge in a form that meets the demands of local and regional climate change adaptation decision-making.

From the demand side, we engage with stakeholders to ensure that research-based knowledge is provided in a format that is tailored to end-users.

Interviews and workshops are conducted with decision-makers in order to explore how they perceive climate change, currently adapt to it, and what research-based knowledge they perceive to be useful. Preliminary findings include that the information needs to meet the problem framing of decision makers; adaptation is commonly framed not from a climate change perspective, but from, e.g., a hazard management or development perspectives. From the supply side, case studies - taken from the literature and conducted within the ADAM project - are meta-analysed, i.e. they are coded on the basis of a framework that is general enough to uniformly represent the results irrespective of the concepts used or aspect of adaptation researched. Demand and supply are then aligned in the form of a digital adaptation compendium, an interactive web site that makes the uniformly coded case-study information available in the form identified through the stakeholder engagement. The digital compendium will, e.g., allow its users to retrieve information on potential impacts and available adaptation measures, for specific locations, sectors or hazards. It includes a catalogue of adaptation measures related to information on experiences that others have already had with these measures.