Challenges for local climate adaptation in three Swedish municipalities

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The aim

- “How, when and why” climate adaptation comes about or not at the local level: what drives and restricts change
- Challenges for working with climate adaptation in planning and decision-making at the local level from case studies in three small/middle-sized Swedish municipalities at risk for flooding and/or erosion
- Lessons from current practice can lead to important insights of future potentials and challenges that needs to be approached

The research outline

Mistra (CLIPORE/CSP 2012+) “Agendas and strategies for climate adaptation” 2004-2006 och Formas “Planning for climate adaptation” 2007-2010.

- Interviews with representatives of national authorities in charge of climate change, spatial planning, risk management and environment (2005)
- Case-studies in two flood-prone municipalities (Wallby and Riverby). Document studies and interviews with officials working with climate change, spatial planning, risk management and environment (2005)
- A case-study in an erosion-burdened municipality (Coastby). Document studies and interviews with officials and politicians working with climate change, spatial planning, risk management and environment (2008)
- A set of interviews with planners in municipalities that have proactively approached climate adaptation in planning (late 2009)

Case-study characteristics

1. **Wallby**. Middle-sized (76 000 pop., 1300 km²) located in the South of Sweden. High risk of flooding due to lowland localisation of city-centre. Currently large-scale technical adaptation by rebuilding an old embankment, following scenarios of ”worst-case”. Currently processing a climate adaptation programme (2009).
2. **Riverby**. Middle-sized (55 000 pop., 228 918 km²) located North of Dalälven. Long history of exposure to flooding. Small-scale adaptation to reoccurring floods / wait-and-see in terms of climate change. Political ambitions of waterfront settlements at odds with risk-management.
3. **Coastby**. Small (27 200 pop., 355 km²) coastal municpality in the South-East of Sweden with a long history of beach erosion and attempts to manage it by solid constructions. Today an integrated coastal zone policy, aimed at soft management and including considerations of climate change. Lack of cross-sectoral exchange.

Challenge 1: Finding a role

- Ability to raise awareness, allocate resources and actively prioritize climate adaptation by means of political support, leadership and key-actors driving change.
- The importance of vertical administrative coordination:

  LOCALLY: On the one hand a lack of resources, call for guidance and external competence (risk of wait-and-see) while on the other hand emphasising the local monopoly of planning

  REGIONALLY: new role in the making. The need to balance local sovereignty and the new “proactive” role.

  NATIONALLY: coordinating sector interests, how communicate with other levels/actors

Challenge 2: Tensions and conflicts

- Maintain priority as the legitimacy of climate risks are often event driven and characterised by it-won't-happen-here-mentalities
- Make visible and mediate conflicts between interests, values and priorities at the local level e.g. safety vs. scenery involved in attractive waterfront settlements, e.g. prioritising long-term and future-oriented risks alongside short-term gains and priorities
- Conflicting institutional frameworks e.g. ICZM principles vs. Natura 2000/let nature have its course regarding how to manage eroding land

Challenge 3: Adapting to what?

- Assessing and determining acceptable safety levels and what is reasonable to adapt to: often reoccurring/local experience or worst case/expert-driven?
- Communicative gaps regarding what is included or not in scenarios and adaptation measures: historical data or future climate change?
- Technical fix of climate adaptation and trust in " the magic of figures" e.g. "738 m^3 is the answer". Reliance on the adequateness of the figures rather than the precautionary principle and the avoidance of further settlements in risky areas. Solid technical measures e.g. embankments may trigger further development and exploitation in areas that should be avoided

Challenge 4: Horizontal / cross-sectoral interaction and learning?

- Climate adaptation appears to be a question for technical administration, security coordinator or rescue services. Watertight bulkhead in relation to planners, environmental officials and politicians.
- New arenas, procedures and structures for horizontal and cross-sectoral coordination and learning is required
- Sectoral ownership, professional babies and interdepartmental rivalry seems to come in the way of integrated processes
- The risk for personalised rather than organisational learning, lack or mainstreaming and continuity

To summarize a few points…

- Awareness does not necessarily translate to action
- Goals of climate adaptation “on paper” needs to be made part of concrete working practices “in use”
- A combination of key actors with willingness, engagement, mandate and competence AND organisational mainstreaming across sectoral borders is required
- Conflicting interests, values, priorities and institutional frameworks needs to be make visible and mediated in practical planning and decision-making
- A continuity in climate adaptation is needed to overcome event-driven tendencies
- Increased vertical administrative interplay and knowledge exchange is needed

Publications

- Sofie Storbjörk and Anna Jonsson (in preparation) “Locating the institutional dimension of adaptive capacity”. To be submitted to *Climate Policy*.
- Sofie Storbjörk and Johan Hedrén (2009),”Building institutional capacity for climate adaptation? The case of beach erosion in Sweden”. Paper to be presented at the GECHS-conference *Human Security in the Era of Global Change*, Oslo 22-24th of June 2009.
- Sofie Storbjörk (2009), “Challenges for organisational learning and local climate adaptation in Sweden”, Paper submitted to *Journal of Environmental Policy and Planning*.
- Sofie Storbjörk (forthcoming), ”Att tänka efter före? Om klimatanpassningens kommunala utmaningar”, in Tora Friberg (Ed), *SAMTAL 2009 Dilemman ur kommunstrategisk synvinkel*. Centrum för kommunstrategiska studier.
- Sofie Storbjörk (2009), ”Klimatanpassning och den fysiska planeringens utmaningar”. Vadstena forum för samhällsbyggande *Klimatets krav på samhället – nu och i framtiden*.
- Sofie Storbjörk (2009), “Perspektiv på klimatanpassningens tekniska fix”, in Per Gyberg and Jonas Hallström (Eds), *Världens gång – teknikens utveckling*. Studentlitteratur: Lund.
- Sofie Storbjörk (2007), “Governing Climate Adaptation in the Local Arena: Challenges of Risk-Management and Planning in Sweden”. *Local Environment* Vol. 12, No. 5, 457-469.
- Sofie Storbjörk (2007), *Klimatanpassning i Sverige – Drivkrafter och utmaningar för riskhantering och fysisk planering*. CSPR Research Report 06:02. 86 pages.
- Sofie Storbjörk (2007), “Capacity for change? A theoretical overview of conditions for adaptive capacity”, Paper presented at the 13th Annual International Sustainable Development Research Conference, June 10-12 2007, Västerås, Sweden.
- Sofie Storbjörk (2005), “Planning for Climate Change Adaptation – Knowledge, Expert Claims and Uncertainties in Responses to Climate Variations and Risks”, Paper presented at the 7th Nordic Environmental Social Science Research Conference *A New Generation and a New Climate for the Environment*, Göteborg University, June 15-17 2005.