

## **Appendix 2. Eskilstuna's initial resilience assessment**

Here we present a more detailed description of Eskilstuna's initial resilience assessment. In the end of this project they decided to continue with a deepened resilience assessment focusing on food, but it has not been part of this study.

In 2011, two strategic environmental planners at the municipality, Lars Wiklund and Lars-Erik Dahlin, contacted the Stockholm Resilience Centre to initiate a collaboration. They presented the idea to one of the Municipal Commissioners and later, the municipal council gave their approval. Performing a resilience assessment was seen as a new approach to the municipality's work with sustainable development. The aim of the project, as expressed by the planners, was that it would lead to new, resilience-building strategies in the long-term planning of the municipality.

The resilience assessment process included five planning meetings, a two-day workshop, and a report, documenting the workshop (Table A2.1). The first planning meeting was in August 2011 and the final report was finalized in September 2013. During the planning process, Eskilstuna municipality was also used as a case during a three-day course on resilience assessments at the Stockholm Resilience Centre (Table A2.1). Both Lars Wiklund and Lars-Erik Dahlin took part in the course, which was used as a pilot study to test our ideas about the scope of the assessment. The core planning team included the two strategic environmental planners, Lars Wiklund and Lars-Erik Dahlin, Cathy Wilkinson and My Sellberg from Stockholm Resilience Centre, and Louise Hård af Segerstad, research communicator at Albaeco. Cathy Wilkinson was the project manager. For the initiators, this project was a first step, wherefore they did not invite any external actors. About 40 civil servants and politicians were invited to the workshop from all the different departments and companies of the municipality. In the end, 23 people participated and only one was a politician. Afterwards, they evaluated the project to see if they would take it further and involve more different stakeholders.

During the planning process, the scope of the resilience assessment was determined and the workshop was planned more in detail. The strategic environmental planners especially requested the resilience assessment to target the resilience of four areas of the municipality (water supply, food supply, employment and transports) to the threats of global financial crises, climate change and energy crises (Fig. 3). They also requested an exploration of how the planetary boundaries (Rockström et al. 2009) would impact the focal systems. Furthermore they wanted the economic, social and environmental dimensions to be taken into account when resilience of the focus areas was being assessed ("So what" in Fig. 3). The project manager laid out the overall structure of the resilience assessment (Fig. 3): "resilience of what" and "to what", drawing on section 1.1–1.3 in the workbook, "so what", which looked at impacts of the threats, and "now what", which explored different strategies for resilience and implications for governance. "So what" and "now what" was based on Paul Ryan's experience as an expert practitioner on resilience assessments. In this sense, this resilience assessment was based on the Resilience Assessment Workbook (Resilience Alliance 2010), but it was also influenced by the resilience work in Luleå municipality

(Wilkinson 2012a), the Arctic Resilience Assessment (Cathy Wilkinson, personal communication, February 2013), and Paul Ryan's work.

The workshop consisted of a mix of presentations, e.g. on resilience thinking, resilience assessments, ecosystem services and planetary boundaries, and group work (workshop agenda in Appendix 4 in Sellberg 2013). The participants were divided into four working groups, one for each focus area, and went through four different exercises to increase the understanding of the focal systems, potential impacts of large-scale threats and to spark ideas on measures:

1. *Historical timeline exercise*: drawing on section 1.4 in the workbook, but doing parallel timelines for each focus area in different colors (in the foreground of Fig. 4). The exercise was followed by a discussion on possible management eras.
2. *Discussion of system dynamics*: using the figure of regime shifts in Bellwood et al. (2004) as a metaphor to discuss their focal systems as dynamic systems with possible alternate stable states. This exploration related to section 2.2–2.3 in the workbook.
3. *Impacts of crises*: using a matrix with each of the specific threats to brainstorm possible consequences for the focal area in social, economic and ecological dimensions.
4. *Strategies for resilience*: using a list of strategies for general resilience (Appendix 1 in Sellberg 2013), developed by Cathy Wilkinson and based on Wilkinson (2012b), to identify existing and future measures for each strategy related to their focal system. This list incorporates the attributes of general resilience in section 3.3 in the workbook, as well as the stewardship strategies in section 5.2.

**Table A2.1.** Activities and participants of the Eskilstuna's initial resilience assessment

Time	Activity	Participants
Aug 2011	Initial meeting with SRC <sup>†</sup> and SEI <sup>‡</sup> researchers.	Lars Wiklund, Lars-Erik Dahlin, Louise Hård af Segerstad (Albaeco), Cathy Wilkinson (SRC), two researchers from SEI and SRC
Feb 2012	Planning meeting in Eskilstuna.	Lars Wiklund, Lars-Erik Dahlin, Cathy Wilkinson
May 2012	PhD-course about the resilience assessment at SRC, using Eskilstuna as a case.	Lars Wiklund, Lars-Erik Dahlin, Cathy Wilkinson, Louise Hård af Segerstad, My Sellberg (SRC), course participants
Sep 2012	Planning meeting at the SRC: the focus areas were determined.	Lars Wiklund, Lars-Erik Dahlin, Cathy Wilkinson, Louise Hård af Segerstad, My Sellberg
Oct 2012	Planning meeting in Eskilstuna: 1) the specific threats were determined, 2) a rough plan of the different workshop components, and 3) establishment of the project so far with the head of the Strategic Environmental Department, as well as two other planners.	Lars Wiklund, Lars-Erik Dahlin, Cathy Wilkinson, Louise Hård af Segerstad, My Sellberg, Head of the Strategic Environmental Department, two other planners

Feb 2013	Planning meeting in Eskilstuna: detailed workshop planning.	Lars Wiklund, Lars-Erik Dahlin Louise Hård af Segerstad, My Sellberg
Feb 2013	2-day workshop in Eskilstuna: education in resilience thinking and group work.	Lars Wiklund, Lars-Erik Dahlin Cathy Wilkinson, Louise Hård af Segerstad, My Sellberg, 21 other participants (civil servants + 1 local politician)
Sep 2013	Report with workshop documentation and reflections on the project	Louise Hård af Segerstad, Cathy Wilkinson, My Sellberg

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† Stockholm Resilience Centre

‡ Stockholm Environmental Institute