Reflections on science-stakeholder interactions in climate change adaptation research
From PUS to PEST

- Recent years - a shift from *Public Understanding of Science* toward *Public Engagement with Science and Technology*

- A more inclusive dialogue of science communication: stakeholders are no longer viewed only as receivers of the final product

- Science-stakeholder interactions can be fruitful in all stages of the research process, e.g. in problem formulation and evaluation of results
Why science-stakeholder interactions

- Identify socially relevant and scientifically challenging research questions
- Value of co-producing knowledge
- Provide a reality check for the research
- Improved consideration of ethical issues
- Provide knowledge and data that otherwise would remain unknown or difficult to assess
Why not?

- Stakeholder participation is sometimes perceived as something that could endanger the actual research process, or get in the way of identifying long-term viable management and policy strategies.

- Stakeholder fatigue: poor personal reward or little capacity to influence the decision.
Case-study: Swedish forestry sector

- **Aim:** To elicit stakeholder perspectives on science-stakeholder interactions and knowledge requirements on climate change adaptation

- forest owners, advisors, officials, and researchers

Jönsson and Swartling, 2014
Concept maps of dialogue content
Stakeholders’ perspective

- Cost-benefit in terms of time and concrete input into the everyday work.

- “The problem is that the answers produced by research rarely state exactly what is going to happen, and the results do not cover all areas of interest, e.g. forest economy”

- ”Without clear and straightforward answers from scientists it is easy to neglect problems or to rationalize them by saying that from a global perspective the problems are very small”
Researchers’ perspective

- should strive to clarify processes, recognize potential goal conflicts and their solution, rather than having a narrow focus on specific issues

- can be difficult to boil down complex research into "something that is easy to sell"

- tension between basic research and applied research

- non-career-optimizing activities
Dilemma: ”the valley of death”

- Stakeholders want to interact with researchers who possess excellent pedagogic skills
- Researchers are concerned that popular scientific activities takes time and provides low-merit
Ways forward – researchers’ perspective

- Interviews or surveys
- Expert opinion - closer interaction with e.g. officials
- Involve final decision makers, e.g. land owners and private persons (consumers), to contribute with scenario-narratives
- Extended peer-review to test for social robustness
Ways forward – stakeholders’ perspective

- strategic meetings
- training of advisors
- production of textbooks
- translation / visualization of research results
- joint supervision of degree work
- mentorship
- participation in reference groups of research projects
Important to identify the goal of the science-stakeholder interaction

Is it to…

– study stakeholder decision making process?

– provide up-to-date popular scientific knowledge?

– get concrete input to a research project?
Who to invite to a dialogue?

- The dialogue will be influenced by the choice of participants: private persons, land owners, advisors, officials, ngo’s

- Which perspectives are relevant to include in the research process?

- Include non-traditional stakeholders, to get a better view of e.g. potential goal conflicts?
Some tools to facilitate the dialogue

- Participatory modelling – improve the dialogue and facilitate mutual understanding
- Ethical analysis – awareness of goal conflicts
- Multicriteria decision analysis
Conclusion

- Communication between researchers and stakeholders is often impaired by linguistic barriers, different priorities and time constraints.

- Clear communication about common goals, expectations, resources and time frames is needed in order to reduce the risk of stakeholder fatigue.