

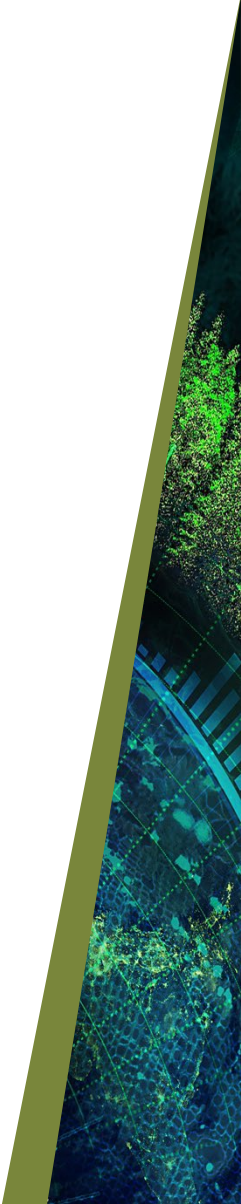


Technology and risk management in private forestry

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Short Curriculum vitae

- Senior lecturer at the department of forest resource management (faculty of forest sciences) at SLU
- PhD in forest technology, with focus on people working in forestry
- Teaching forestry students in organisation and leadership
- Research in relations between private forest owners and forestry organizations on service quality
- Associate forestry expert with the ILO 1988 -1991
- Private forest owner (together with my husband, 23 ha)





SLU IN FIGURES

4 400 FULL-TIME STUDENTS

530 DOCTORAL STUDENTS

50 DEGREE PROGRAMMES

4 000 MILLION IN TURNOVER 2021 (Sek)

3 200 FULL-TIME EMPLOYEES

225 PROFESSORS

ENVIRONMENTAL ASSESSMENT

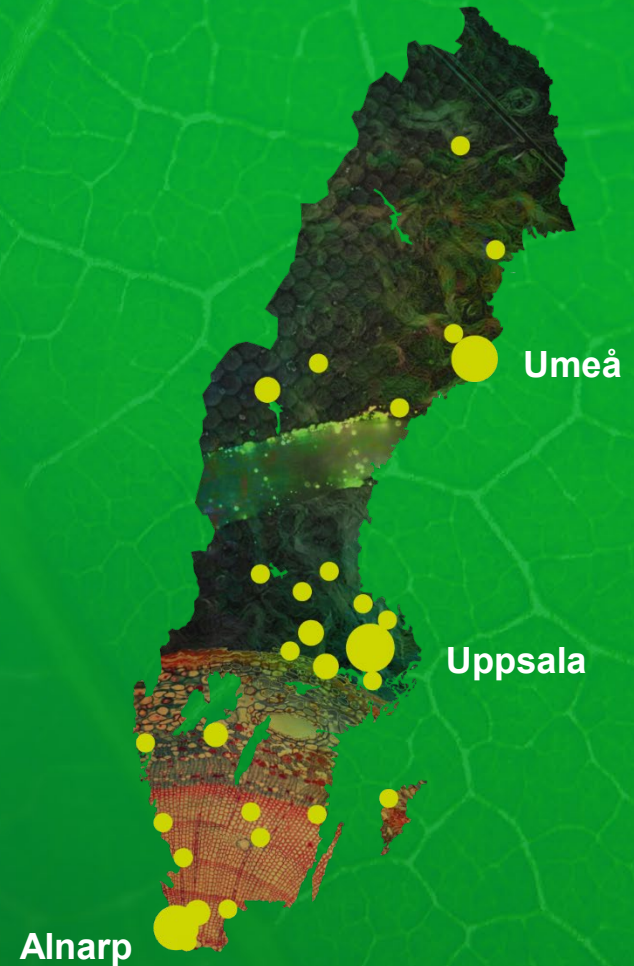
Keeping tabs on ecosystems

- Monitoring Sweden's land and water
- Knowledge and decision support
- Analyses and method development
- Open data and web services
- Citizen science



SLU IN SWEDEN

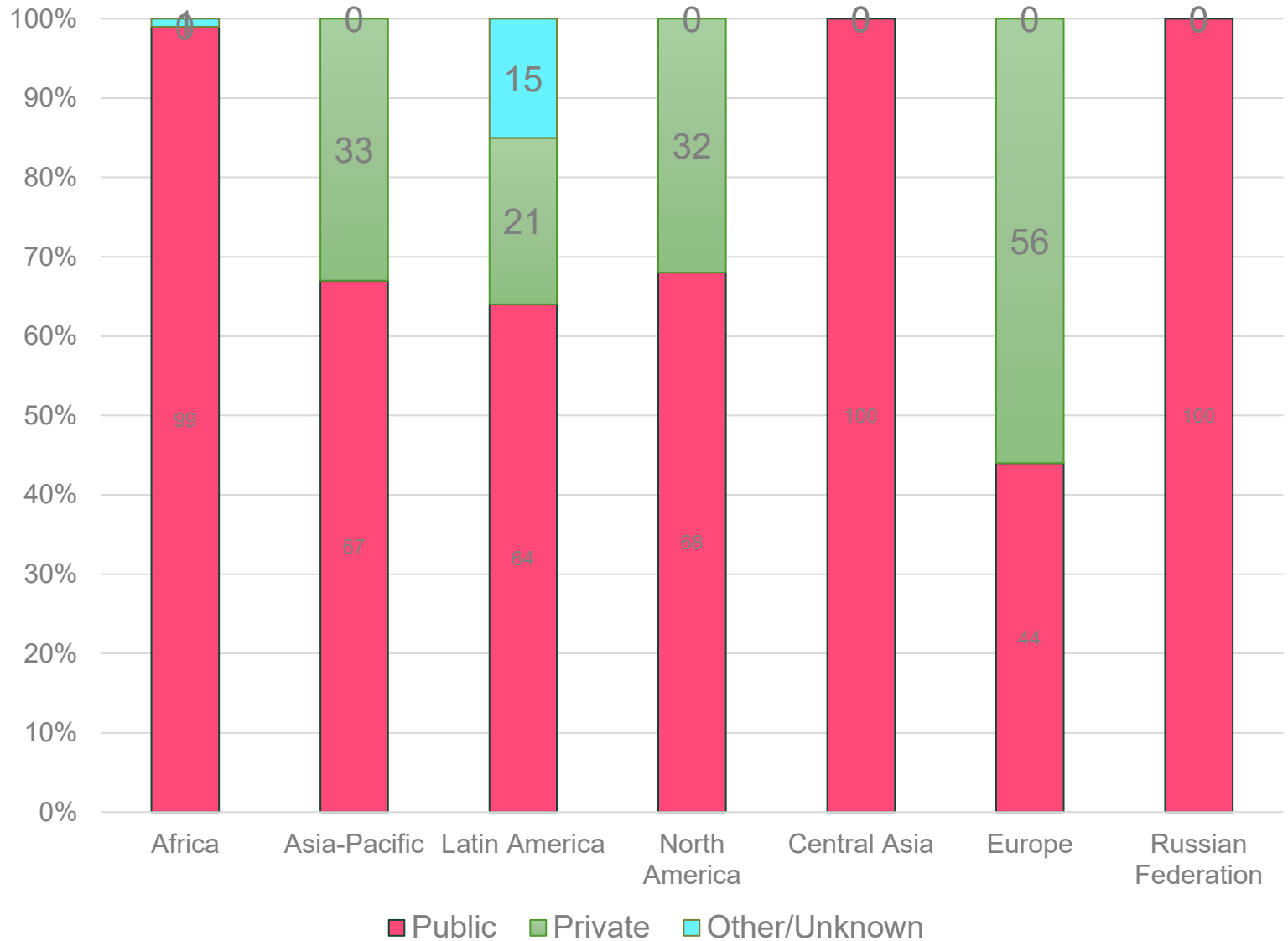
SLU is located at three principal locations in Sweden. We also conduct research, education, environmental assessment and collaborative activities at many research stations, experimental parks and campuses throughout Sweden.



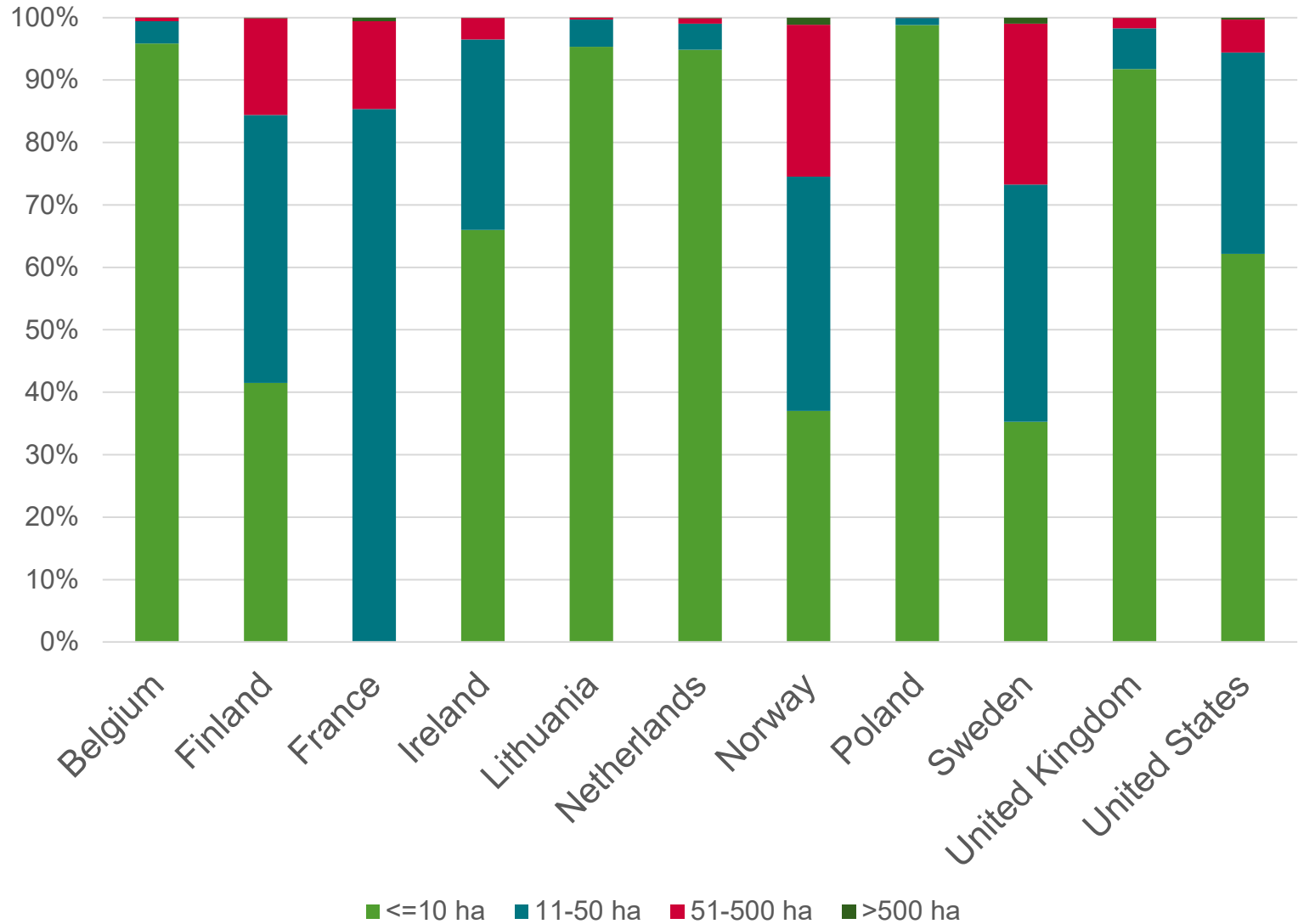
Disposition

- Private forestry – in Europe and USA
- What do forest owners do for work themselves in the forest?
- Technology
- Risk perception among forest owners
- Risk response
- Barriers for adaption
- How to reach forest owners

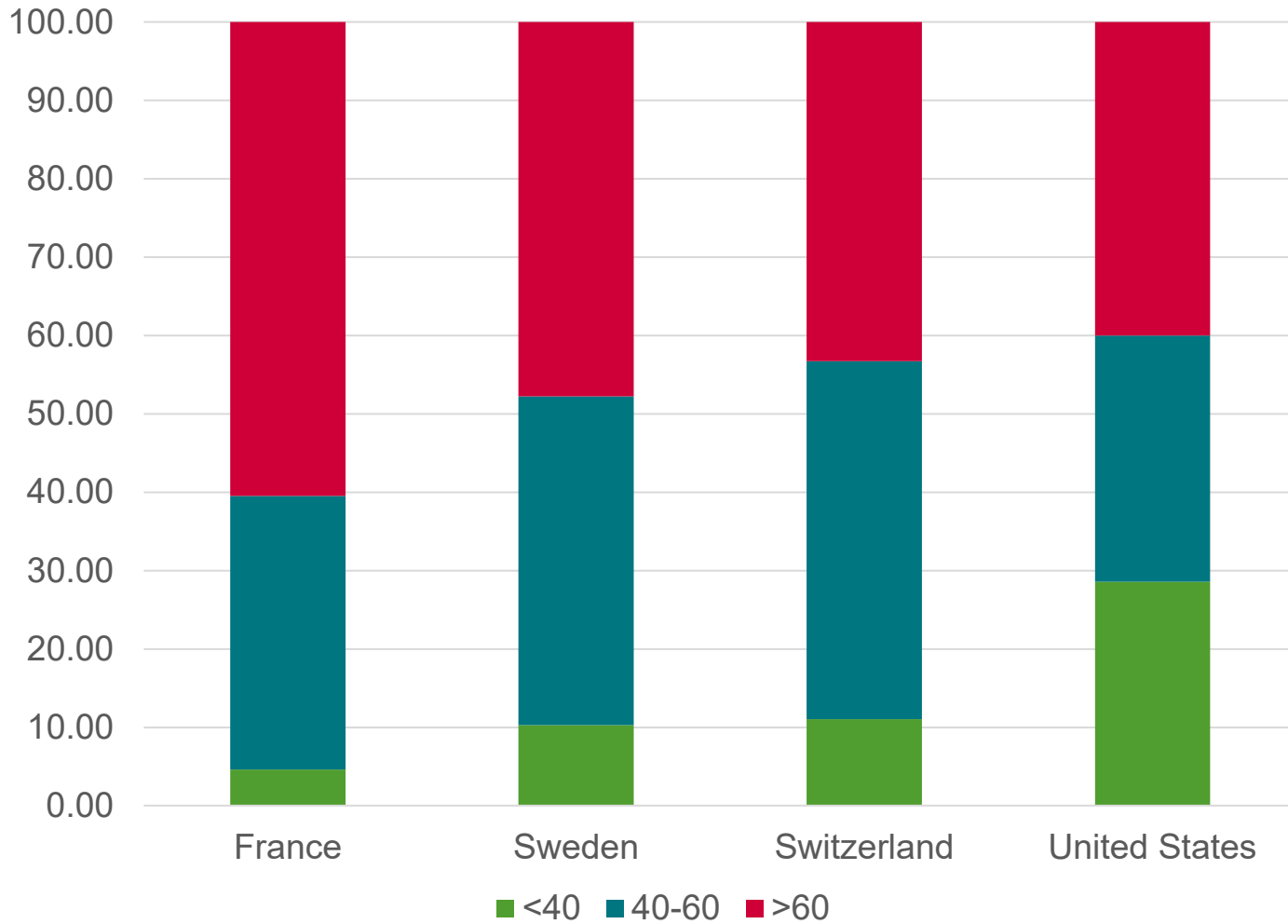
Forest ownership distribution (forest area)



Distribution of properties according to size (ha)

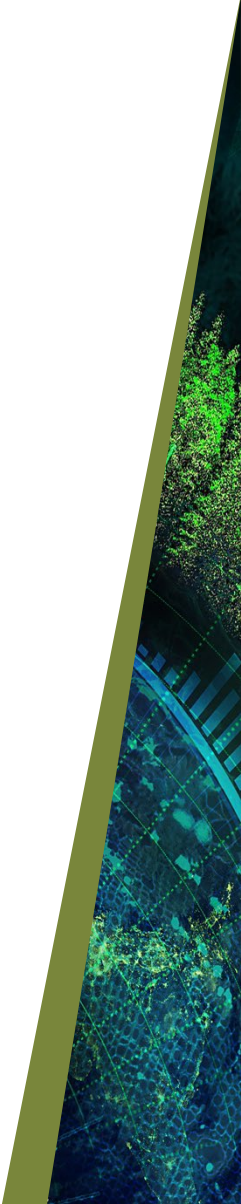


Distribution (perc) over age class



Forest management of private forest

- Very large variation depending on property size, owner's values and objectives
- Few have management plans or seek advice
- Policy tools are regulations, incentives, advice, organization
- Owners of small properties generally undertake the work themselves
- Medium to large-scale owners usually outsource operations to other companies
- New owners generally have limited forest skills and usually outsource the forest works to companies or become members of forest owners' associations
- In some Central and Eastern European forest works are mainly undertaken by the forest owners while in some Western European forest work is mainly carried out by forest contractors





What forestry work do Swedish private forest owners perform themselves

Activity	Percentage (area)
Final felling	none
Thinning	14%
Felling for household purposes	29%
Terrain transport	10%
Planting	23%
Precommercial thinning	49%
Site scarification	none



Most common tools
found in the garage of a
forest owner





Equipment used by contractors



harvester



skidder



forwarder

Natural risks that forest owners are exposed to

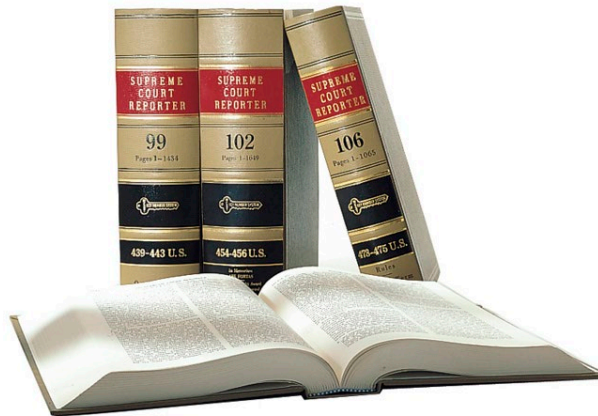


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Societal risks that forest owners may be exposed to



Price dropp



Changes in the law



Risk perception of forest owners

Male Swedish forest (67 years old):

"It is bloody traumatic when it [storm] comes because it destroys your concept. You have tried to think. 'Here we should keep it like this' and so on. And everything has very long time cycles ... all other operations are 50 years, here it is 60,70,80, and if we talk about oak, 120, 150 years Everything is longterm" (Eriksson 2014)



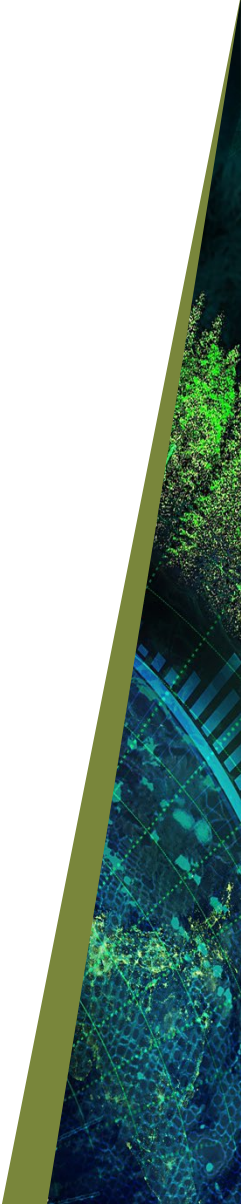
Risk perception among forest owners

Risk = Probability an event may occur * magnitude of its effect

Female Swedish forest owner:

"I think you have to be prepared for changes, and I think everyone has to be. But then again, we don't know how fast the changes will occur Of course there will be changes in the vegetation if you expect an increase in the temperature by a couple of degrees. That is obvious, but I don't know what it means" (Uggla & Lidskog 2016)

Risk management is not an integrated part of the forestry culture



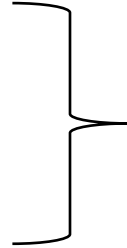
Risk response

- Varied response to risks, some are passive others adapt their management
- Risk response depends on the forest owner experience
- Climate change is still a risk forest owners do not prepare for as its uncertainty is difficult to assess for the owners



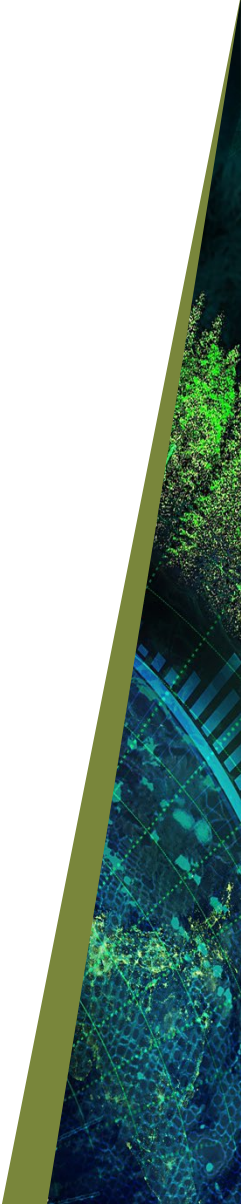
Barriers to adaption

- Lack of knowledge
- Financial constraints
- Time constraints



Mentioned by the owners

- Institutional barriers: industry depends on certain tree species
- Technology: formed for a certain way of forest management
- Demographic: we think in terms of properties without considering the landscape



How to reach forest owners?

- Message needs to be adapted to how the forest owner receive, make sense of and negotiate the message
- Very often the forest owner does not ask for advice from extension organizations



Carrot, stick and sermon policy

Thank you very much

References

Eriksson L. 2014. Risk perception and responses among private forest owners in Sweden. *Small-scale forestry* 13:483-500. DOI 10.1007/s11842-014-9266-6

Ugglå Y, Lidskog R. 2016. Climate risks and forest practices: forest owners' acceptance of advice concerning climate change. *Scandinavian Journal of Forest Research*, 31:618-625. <https://doi.org/10.1080/02827581.2015.1134648>