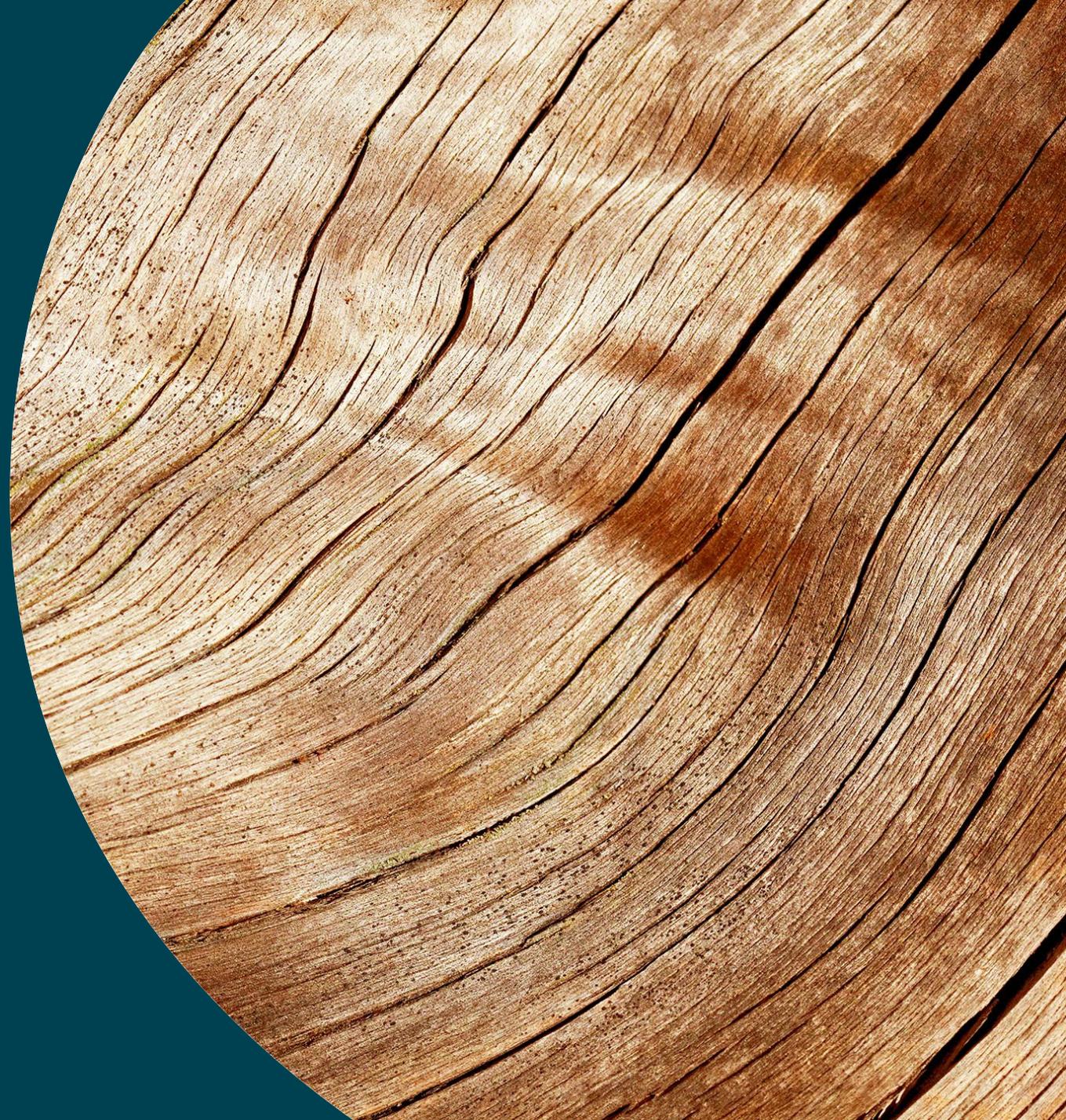


Multi-Disciplinary Review of Policy Instruments for Forest-Based Climate Change Mitigation

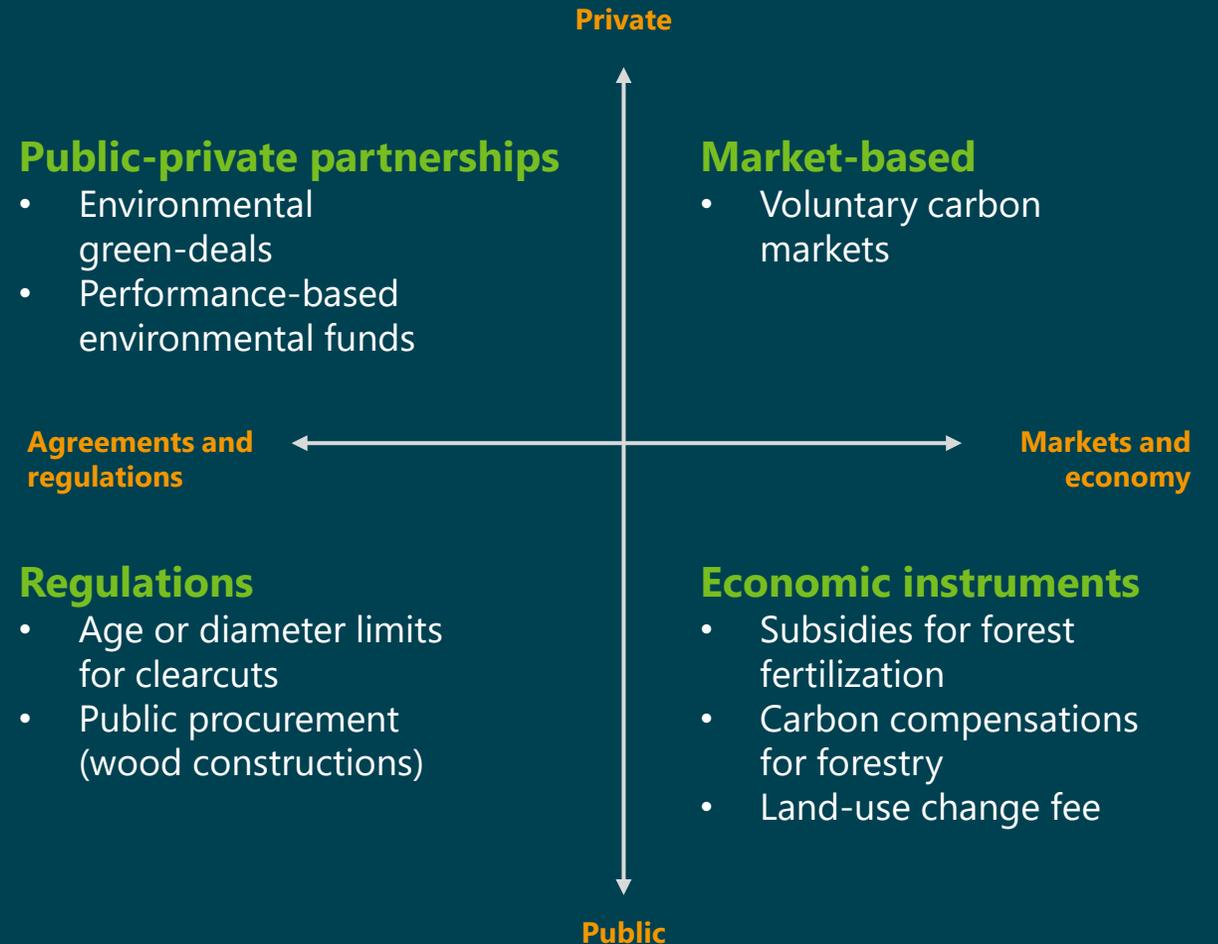
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Finland cannot reach its climate commitments without strong policy measures

Background

- Finland has ambitious climate targets, that partially rely on forest sinks
- Upland forest sinks are declining, and peatland forest soil emissions are increasing
- Climate-smart forest management, avoiding deforestation, and long-lived wood products could offer climate benefits
- What policy options could steer these activities?



Law, constraints

Social acceptability

- Industry, forest-owners, NGO, government
- 2 extensive workshops for the assessment of policy measures
- 27 interviewees
- Forest-owner workshops (3), Morning coffees with stakeholders (3), interview occasions (5)
- Special workshops
- Survey for forest owners
- Survey: 1 482 respondents (10 000)
- Views on carbon abatement and policies
- Choice experiment on carbon compensation: initiative, compensation, source of funding, deforestation

Economics and cost-effectiveness

- Forest-sector modelling (Carbon and economics, FinFEP)
- Decisions and development of forest and energy sectors, forest resources, forest-owner cutting decisions and profits
- Evaluated against baseline-scenario of no additional policies

Environment, constraints

Policy Recommendation 1

Joint implementation of

- **carbon compensation (voluntary participation)**
 - **land-use change fee**
 - **policies driving wood construction**
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- Mutually beneficial and balancing, and cost-effective policies
 - Carbon compensations balance increased wood sourcing due to increase in wood construction
 - Fee for land-use change needed - carbon compensations unlikely reduce forest-to-urban land transformations
 - Land-use change fee could fund compensations



Policy Recommendation 3

Longer forest rotations / diameter thresholds for final cuttings

- Offers a fast solution and can replace carbon compensation in Recommendation 1
- Short term solution: Impactful until the carbon stocks saturate (10-20 yrs)
- Widely acceptable among stakeholders
- Risk: harvest leakage to existing old-growth forests (should be considered in law-making)



Policy Recommendation 3

Green deals and performance-based environmental funds should be developed for mitigation

- Possibilities to engage companies and private funding for forest-based mitigation
- Flexible, can be suited for specific purpose (e.g. combine multiple nature-targets)
- Potential for testing e.g. carbon compensations in limited scope
- Examples of green deal agreements and environmental funds needed



Policy Recommendation 4

Carbon pricing should cover most of the forest area – voluntary systems should be attractive

- Policy coverage should be extensive, otherwise harvests leak elsewhere
- Attractiveness of carbon compensations can be increased by
 - Familiar forest advisor, personalized forest-management programmes
 - Clear rules, limited contract times / withdrawal possibility, risk coverage
 - High compensation price – needs to balance with wood market reactions



Thank you!



Project:



<https://www.luke.fi/en/projects/hilmari>

More info (in Finnish):



<http://urn.fi/URN:ISBN:978-952-380-835-5>

More info (in Finnish):



<http://urn.fi/URN:ISBN:978-952-380-829-4>

Further research needs

- Different types of carbon compensation systems should developed and tested in practice
 - accounting rules & baselines, other environmental goals, verification, etc.
- Combined and cross-effects of new policies and the existing forestry-steering system
- Costs of new forest-based policies relative to emission reductions in other sectors and offset process



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Publications

Aino Assmuth, Hilja Autto, Kirsi-Maria Halonen, Emmi Haltia, Suvi Huttunen, Jussi Lintunen, Annika Lonkila, Tiina M. Nieminen, Paavo Ojanen, Mikko Peltoniemi, Kaisa Pietilä, Johanna Pohjola, Esa-Jussi Viitala, Jussi Uusivuori, 2024. Forest carbon payments: A multidisciplinary review of policy options for promoting carbon storage in EU member states, *Land Use Policy*, Volume 147, 2024, 107341, ISSN 0264-8377, <https://doi.org/10.1016/j.landusepol.2024.107341>.

Pitzén, S., Lukkarinen, J. & Primmer, E. Coherent at face value: Integration of forest carbon targets in Finnish policy strategies. *Ambio* 52, 1861–1877 (2023). <https://doi.org/10.1007/s13280-023-01923-3>

- Halonen, K-M. Is public procurement fit for reaching sustainability goals? A law and economics approach to green public procurement, *Maastricht Journal of European and Comparative Law* 2021, DOI: doi/full/10.1177/1023263X211016756
-
- Halonen, K-M., Avoimuus, tasapuolinen kohtelu ja julkisten varojen tehokas käyttö– vihreiden hankintojen esteitä vai mahdollistajia? *Ympäristöjuridiikka* 4/2021 s. 49–70
-
- Tikkanen, V-M, Päästökompensatioon perustuvien hiilineutraaliusväittämien markkinointi. *Defensor Legis* 1/2023, s. 73–92.

