Climate, environment, policies and biomass sourcing in EU

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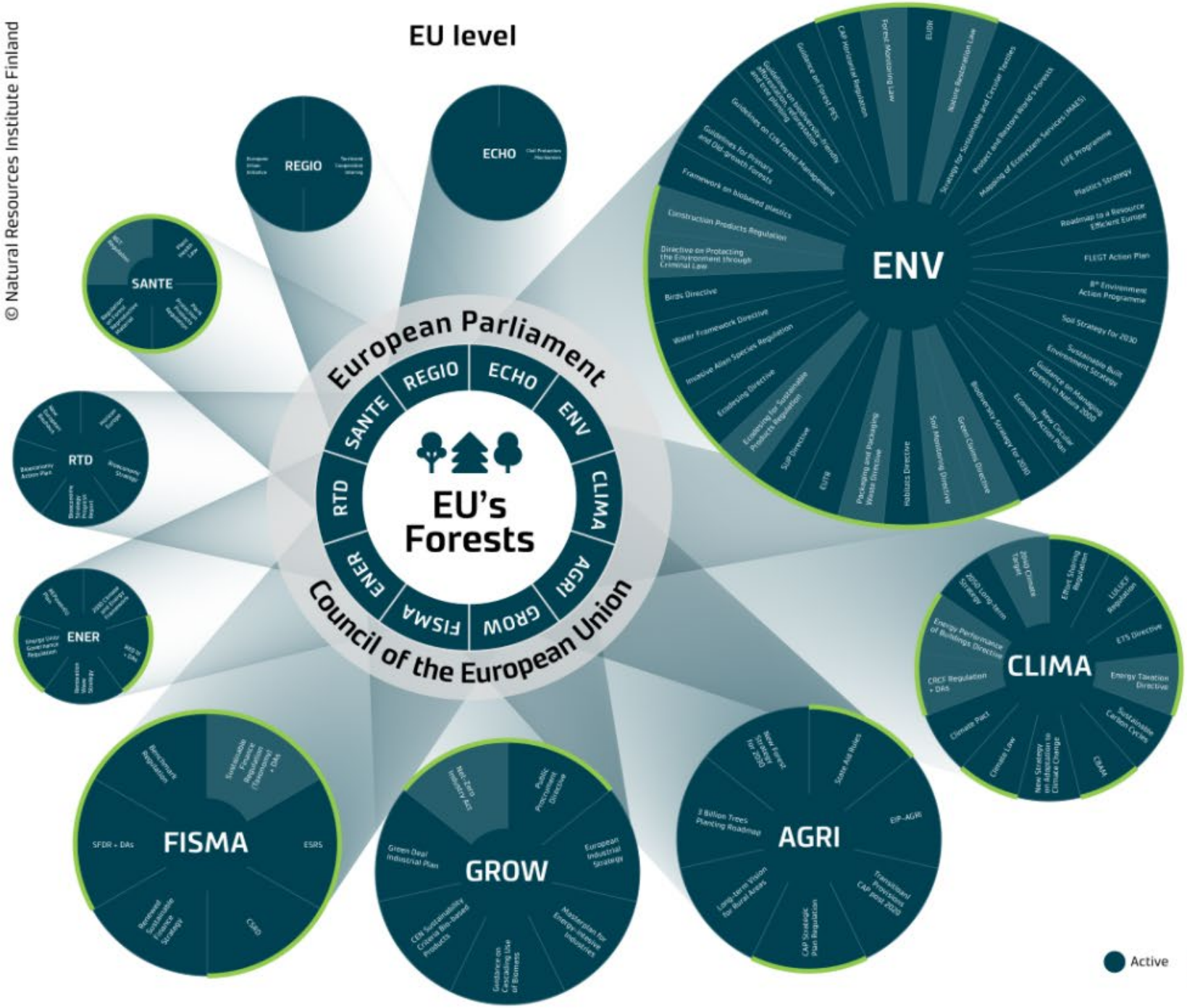
Chair, Finnish Forest Bioeconomy Science Panel

Bio4Fuels Days, June 12th, Helsinki, Finland, 2024

Current EU Forest Policy Environment

The chart is not comprehensive. Legislative documents, such as RED III or Taxonomy Regulation, are typically accompanied by delegated acts by the Comission (DAs), which are not presented separately in the chart. The division of policy instruments into the DGs is indicative. For example, the New EU Forest Strategy was prepared together with DG AGRI, DG ENV, and DG CLIMA. The chart illustrates the situation in May 2024.

EU level



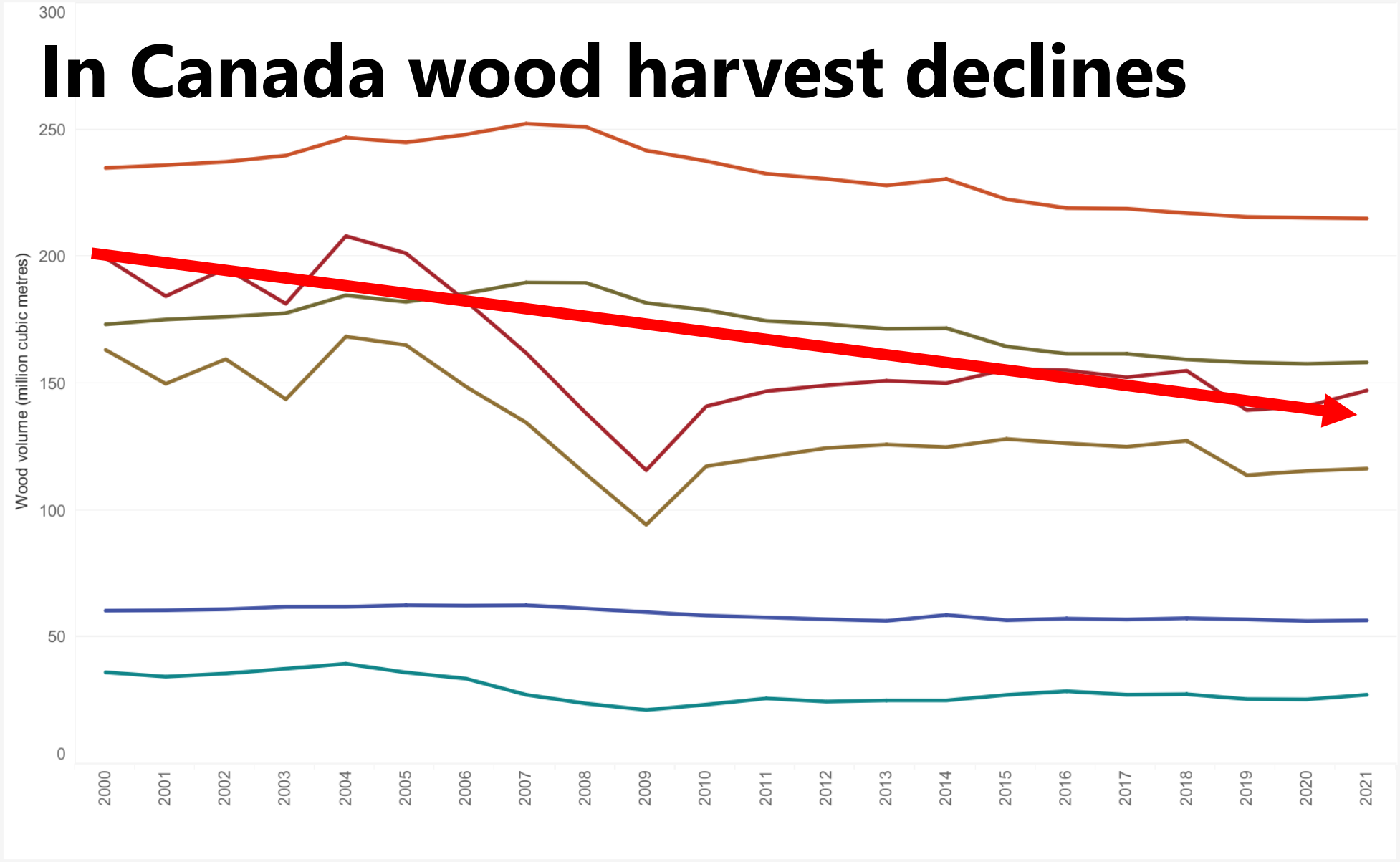
International level

- WTO Agreements
- Paris Agreement
- Forest Europe
- Biodiversity Convention
- Aarhus Convention
- UN Agenda 2030/SDGs
- Bonn Chanllenge
- Alpine Convention
- Carpathian Convention
- Bern Convention
- Ramsar Convention
- Convention on Transport - Air Pollution/ICP
- Combat Decertification Convention
- UN Forum on Forests
- Framework Convention on Climate Change (UNFCCC)

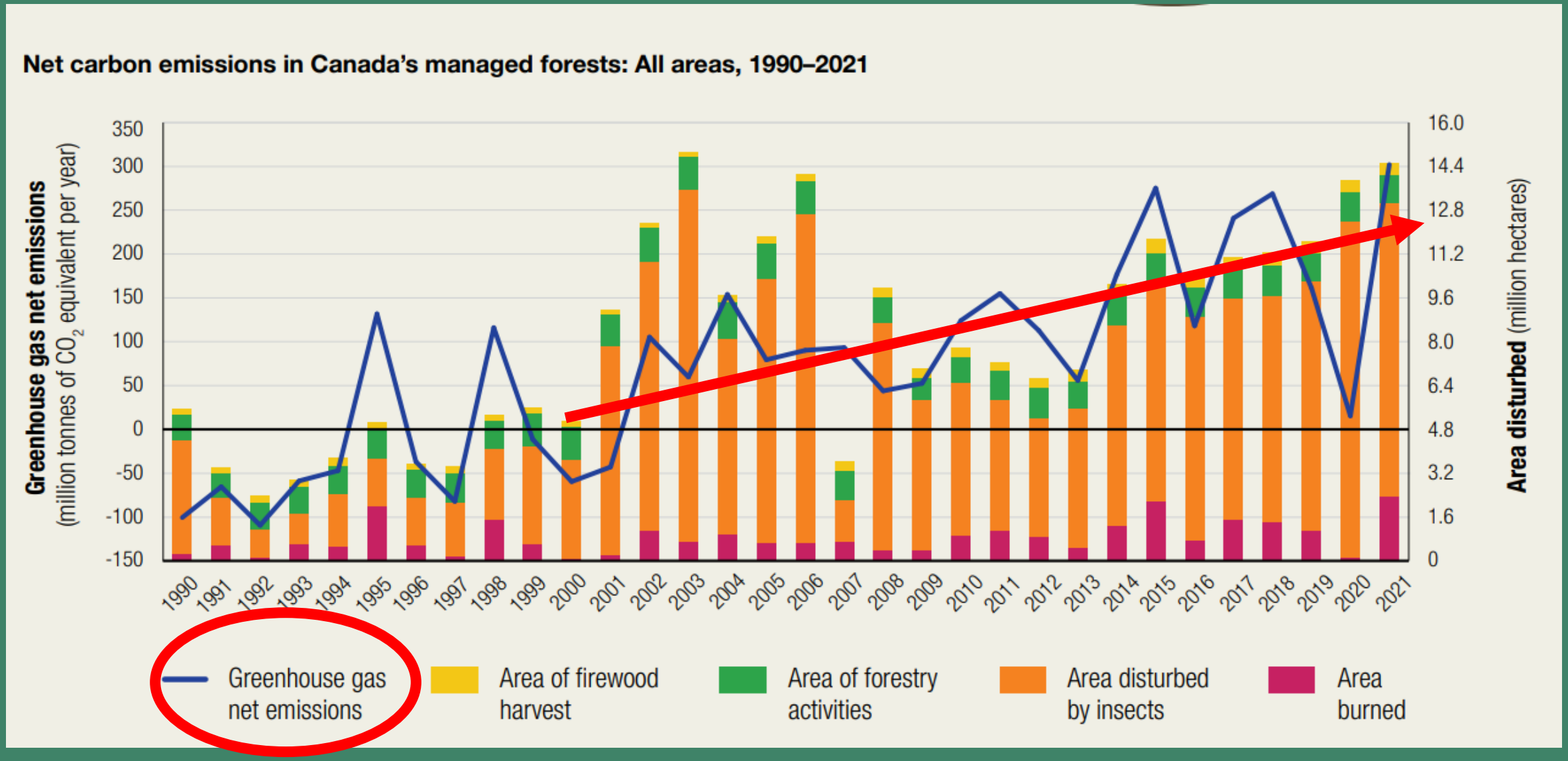
Active · In preparation · Binding legislation

Luke
NATURAL RESOURCES INSTITUTE FINLAND

In Canada wood harvest declines

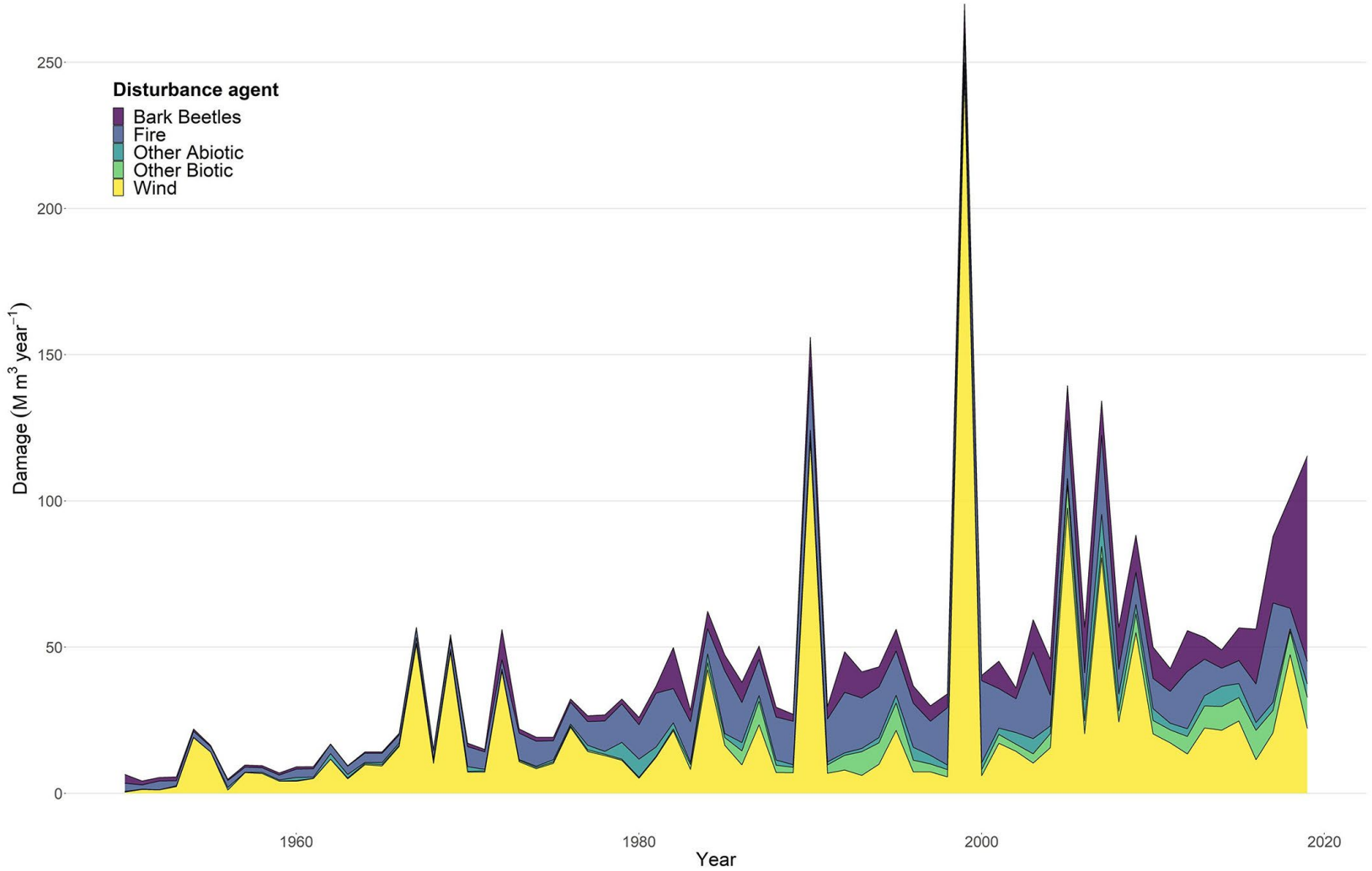


…but GHG emissions increase



https://natural-resources.canada.ca/sites/nrcan/files/forest/sof2023/NRCAN_SofForest_Annual_2023_EN_accessible-vf(1).pdf

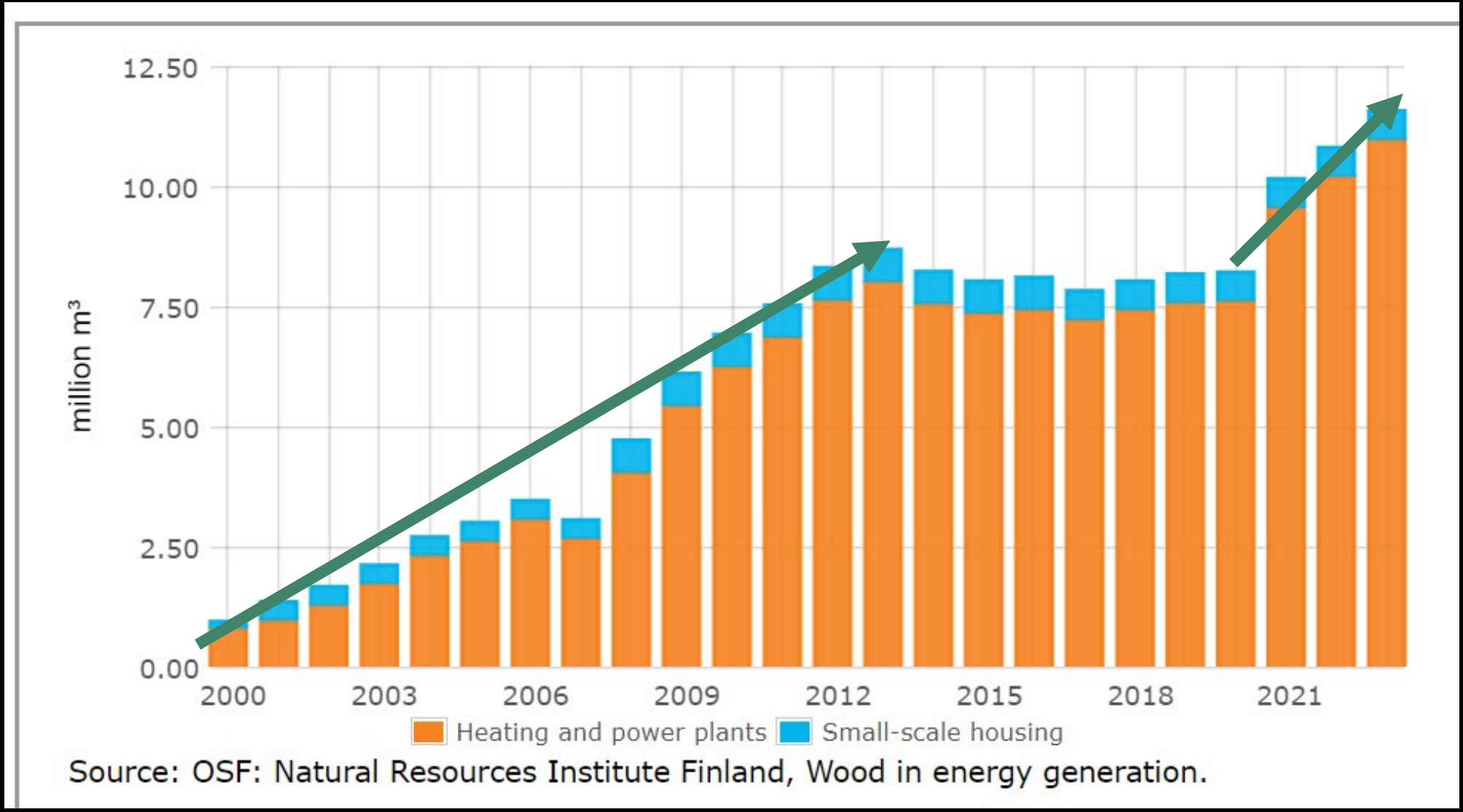
Forest disturbances increase in EU



Patacca et al. 2023 https://onlinelibrary.wiley.com/doi/10.1111/gcb.16531


Increasing competition on biomass

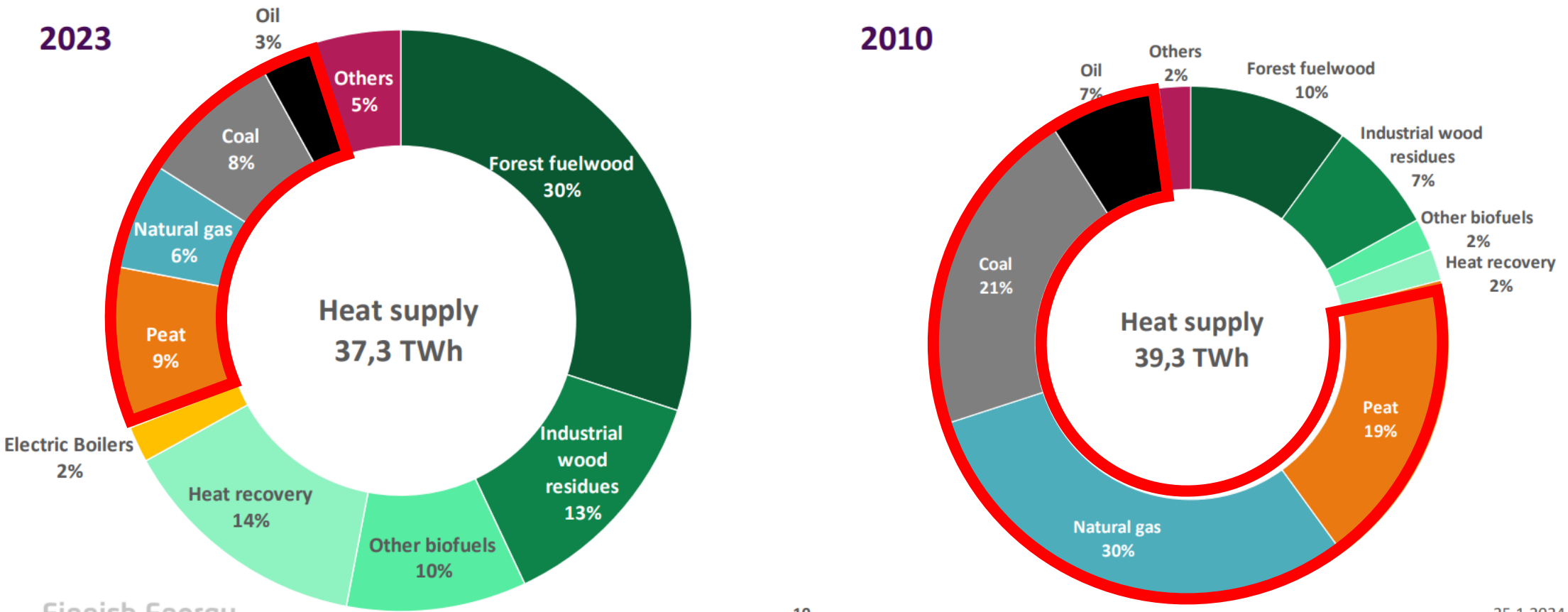
Two leaps towards 10Mm³target



Source: OSF: Natural Resources Institute Finland, Wood in energy generation.

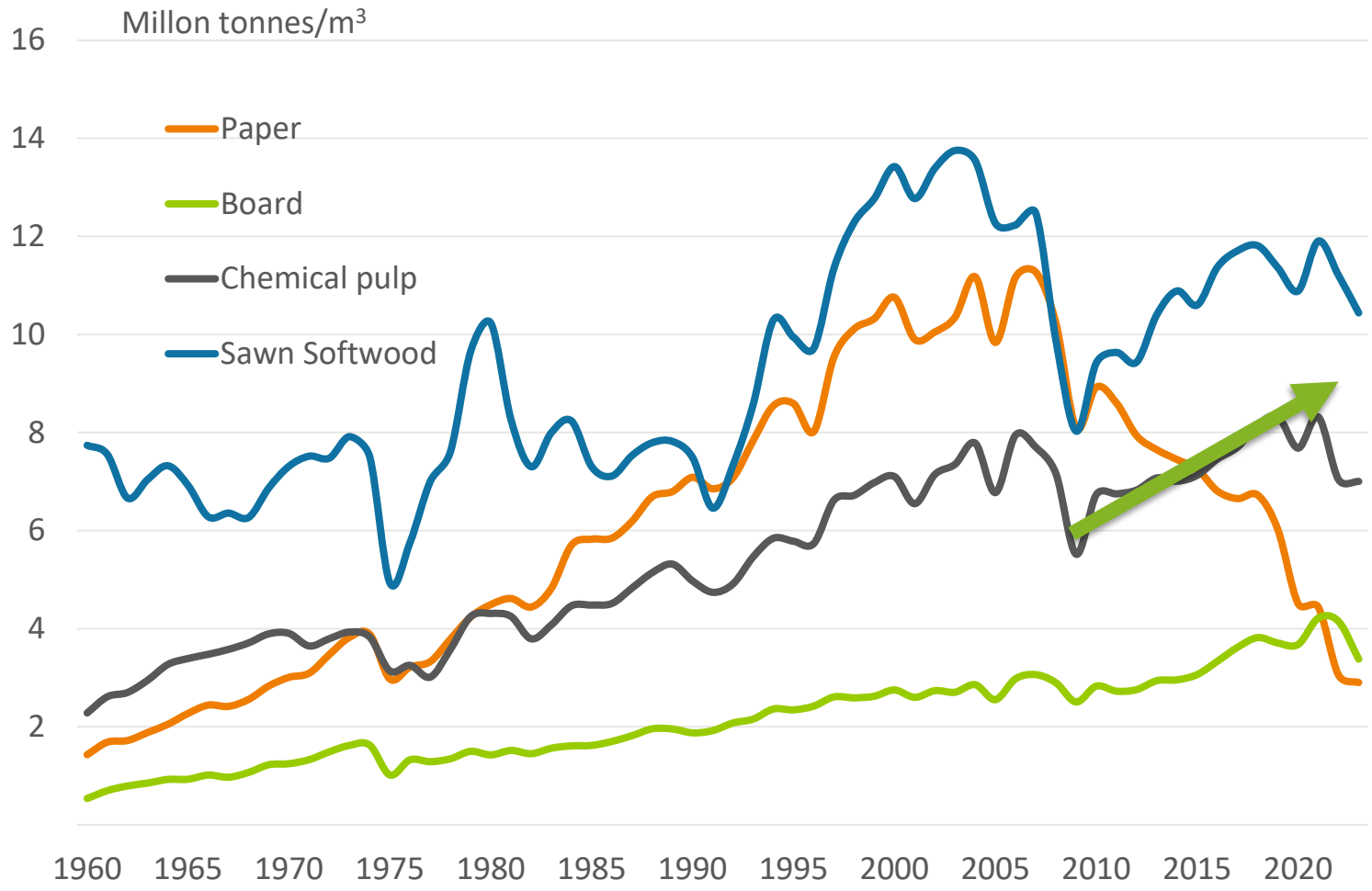
Residual biomass use has replaced fossil fuels in district heat production in Finland

Share of renewables has increased from 19 to 53 percent and heat recovery from 2 to 14 percent



Resurrection of pulp industry

Forest industry production volumes since 1960



Production		2023
Paper		2 905
Paperboard	1000 t	3 380
Chemical Pulp	1000 t	7 001
Sawn softwood*	1000 m^3	10 437
Change from prev. year		
Paper		-5,0 %
Paperboard		-18,6 %
Chemical Pulp		-0,5 %
Sawn Softwood		-6,8 %

*estimate

SOURCE: FFiF

Energy transition reshapes land use

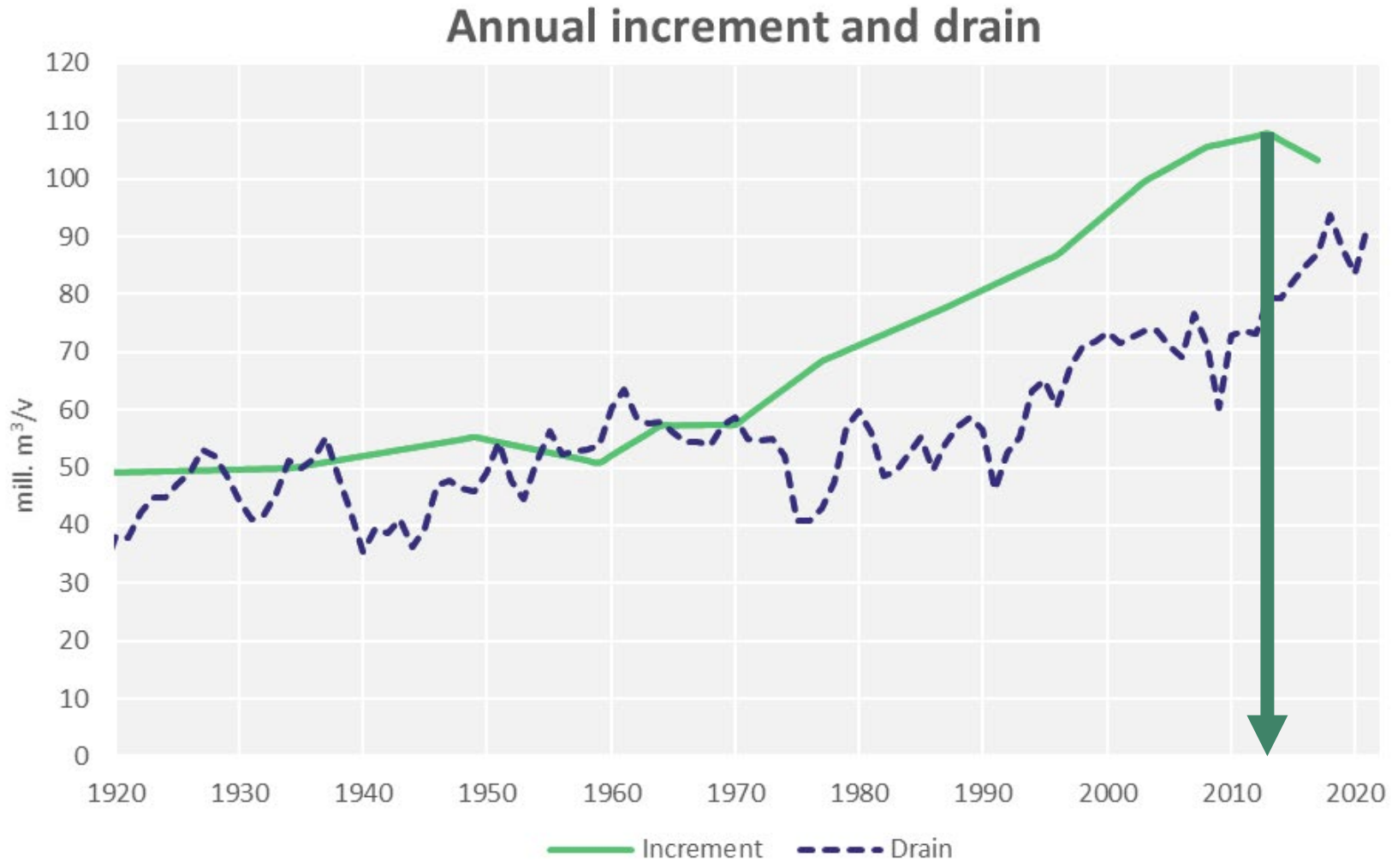
Photo by William DeHoogh on Unsplash

https://cbmjournal.biomedcentral.com/articles/10.1186/s13021-023-00234-0/figures/1

Impacts on land use

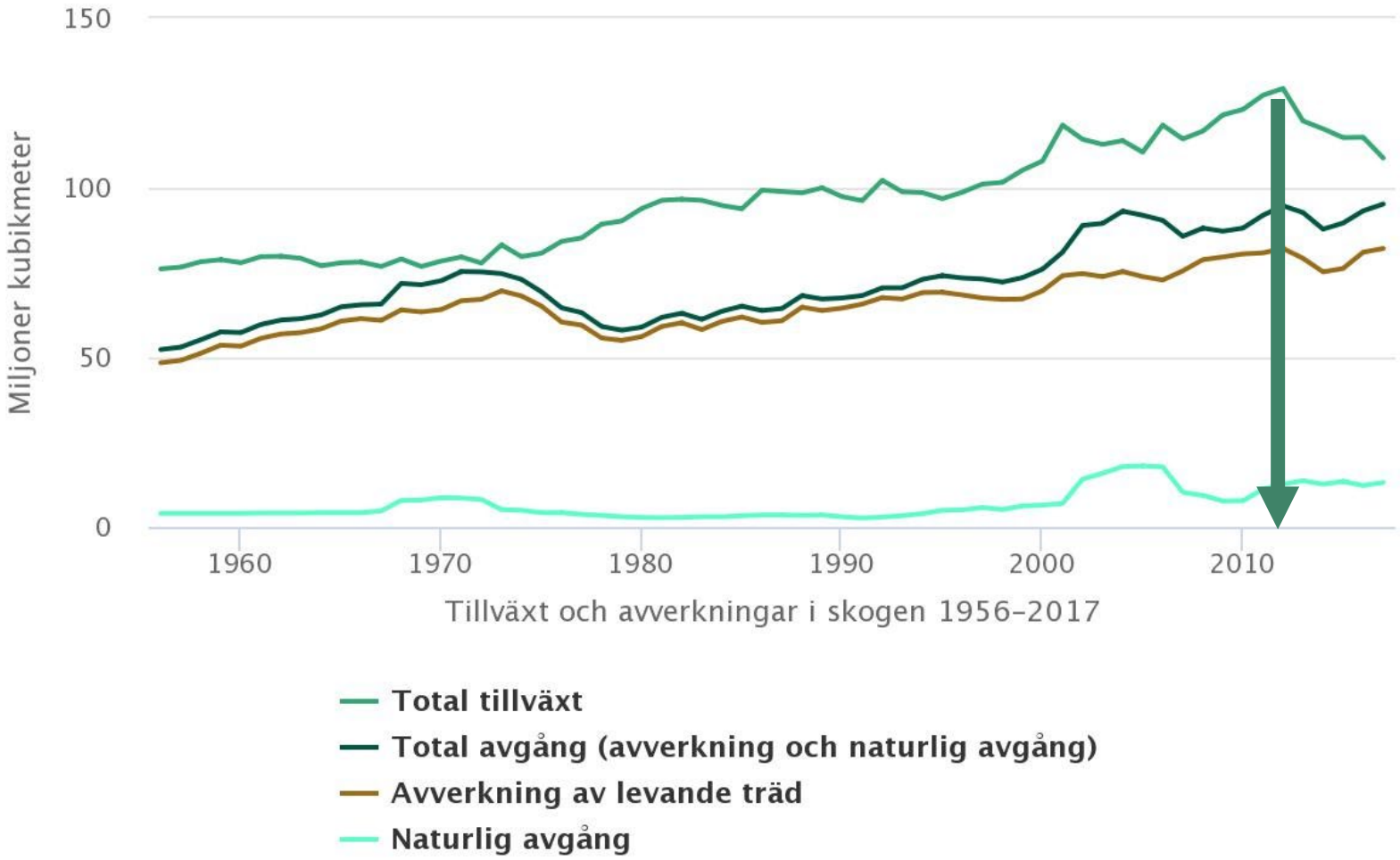
- Income for landowners as land rent
- Transfer of farmland and forest land to energy production and transfer
- Intensive studies going on about the impacts of mammals, birds and insect populations
- How to ensure just transition?

Forest growth in Finland...



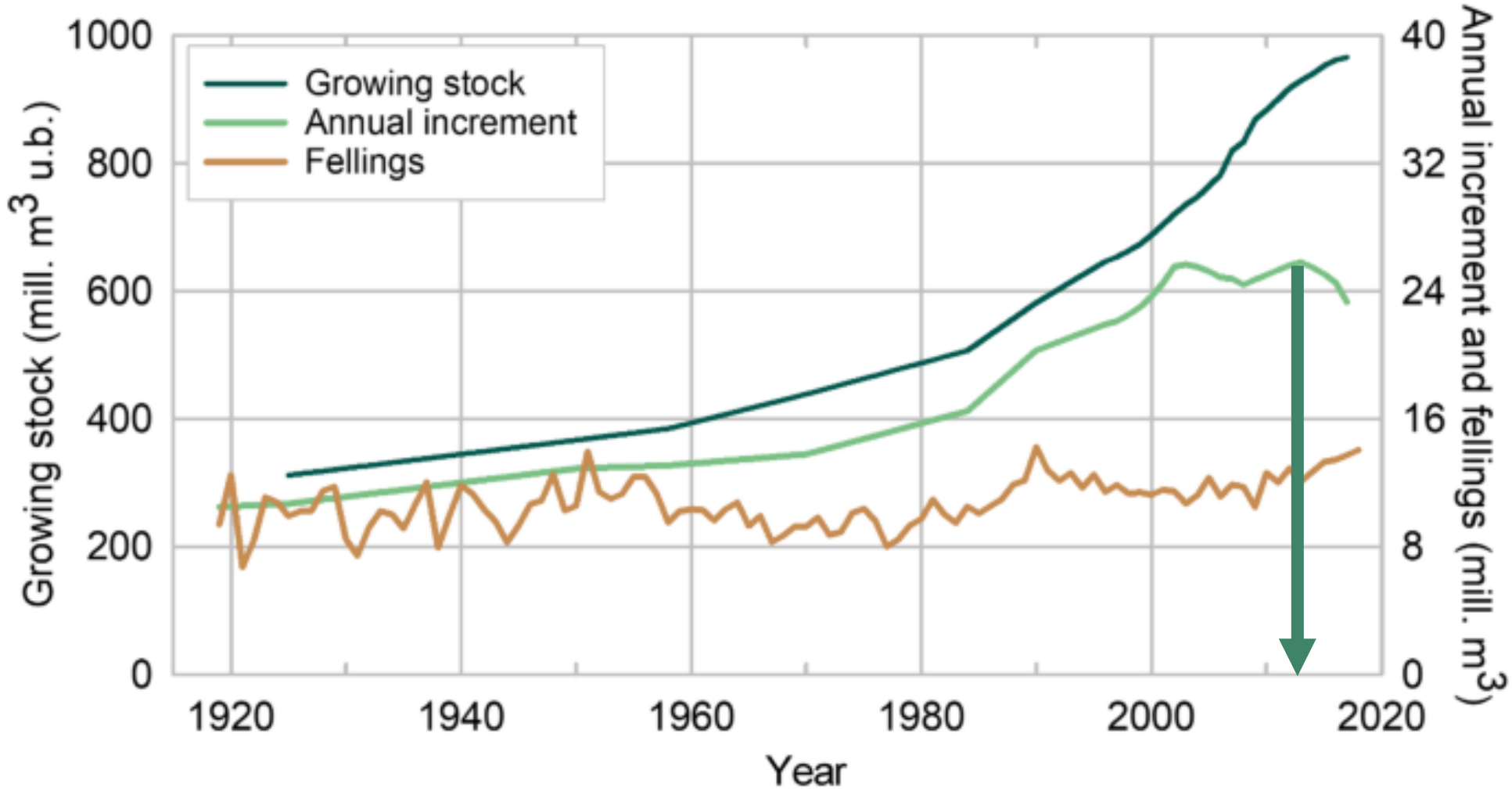
Lähde: Luke

…Sweden



Lähde: https://www.slu.se/nfi

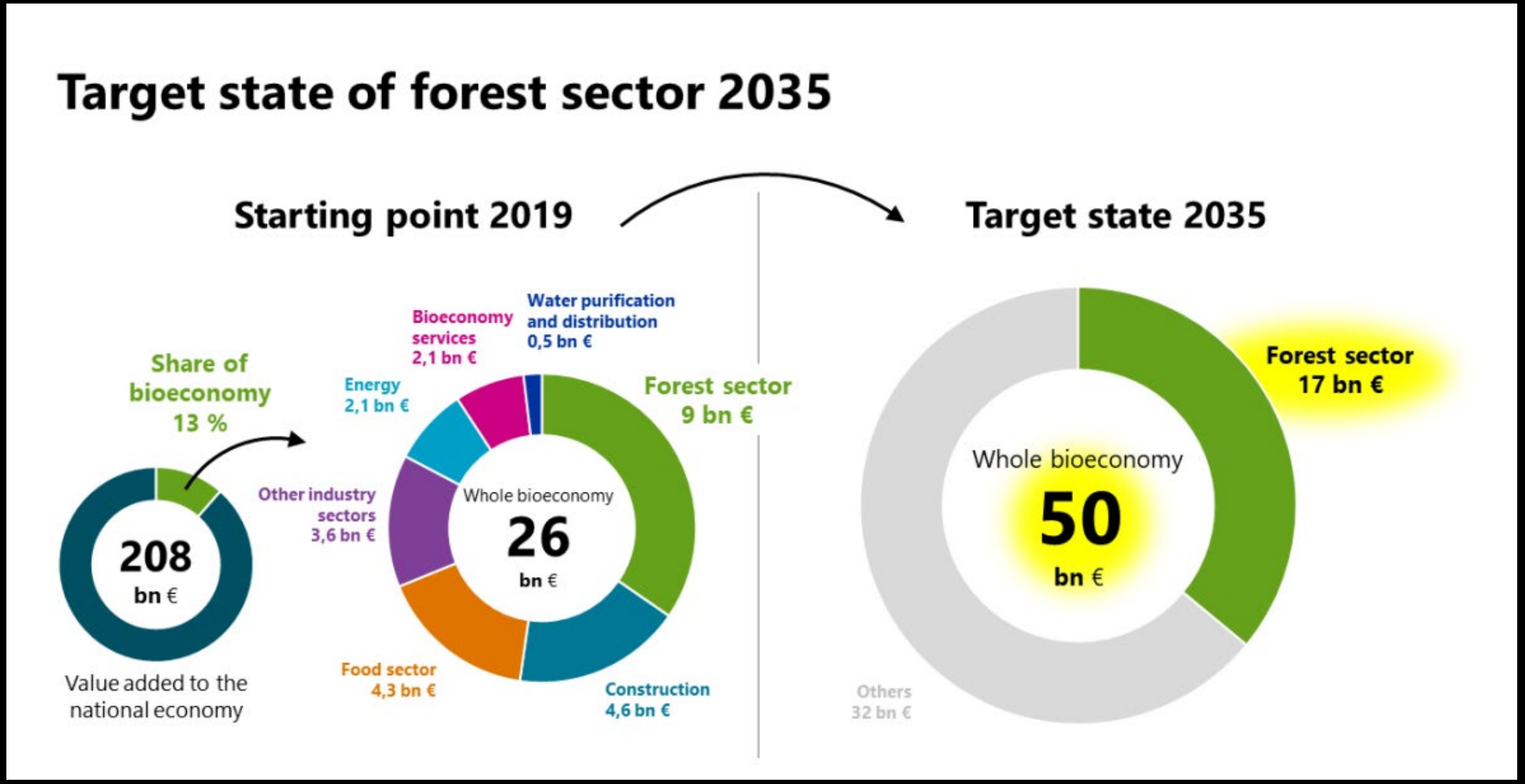
...and Norway



Lähde: https://www.ssb.no/en/statbank/table/06289/

Aiming at value added products

Bioeconomy strategy aims at double value added



Forestry, mechanical and fibre process

MECHANICAL WOOD PROCESS

FIBRE PROCESS

Wood

By-products

Pulp

By-products

CLT

Sawn timber

Hemicellulose

Packaging materials

Textile fibre

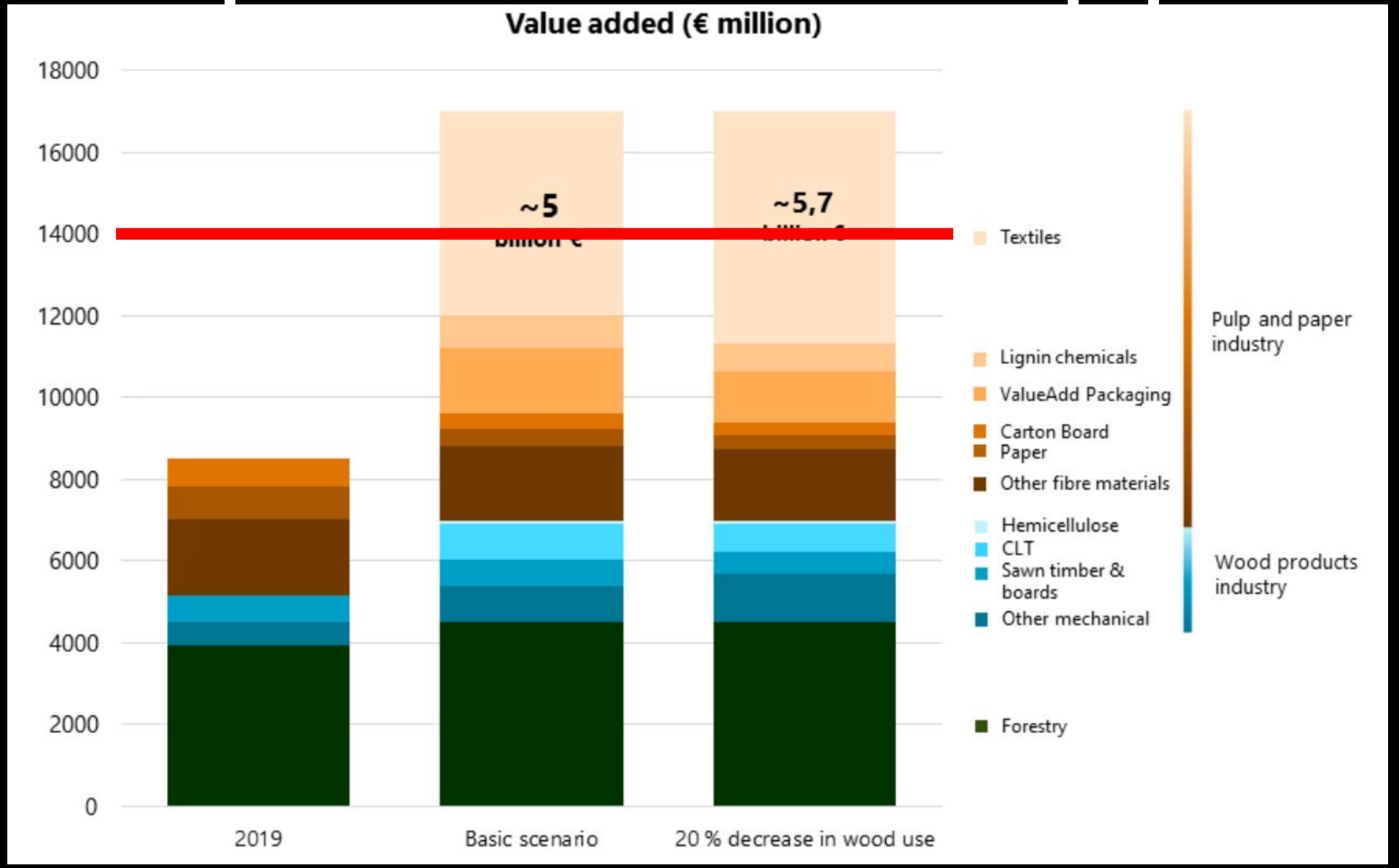
Paper

Tissue paper

Lignin

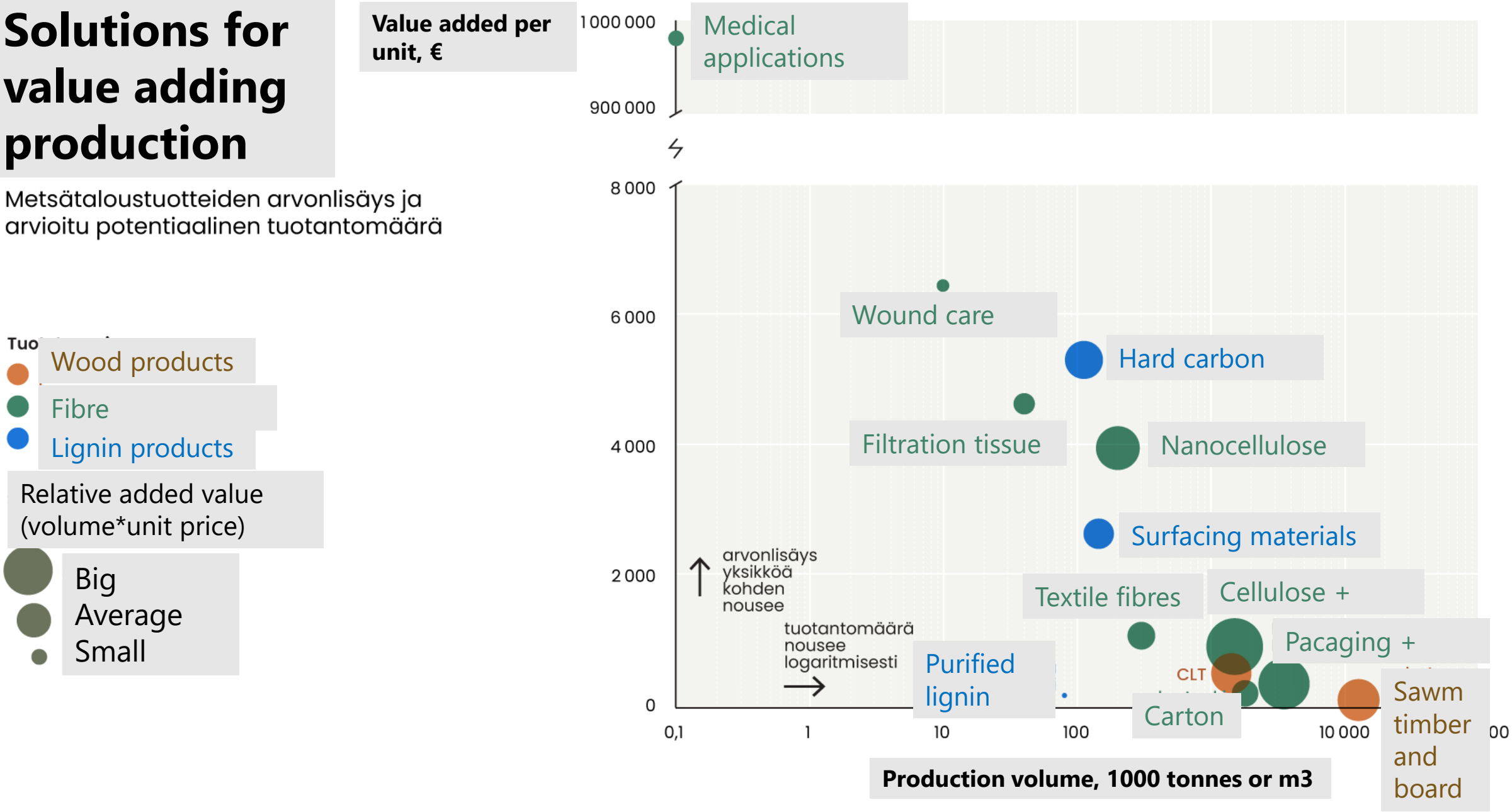

40% (1 600 kt) lignin to products
€ 1,5 billion value added

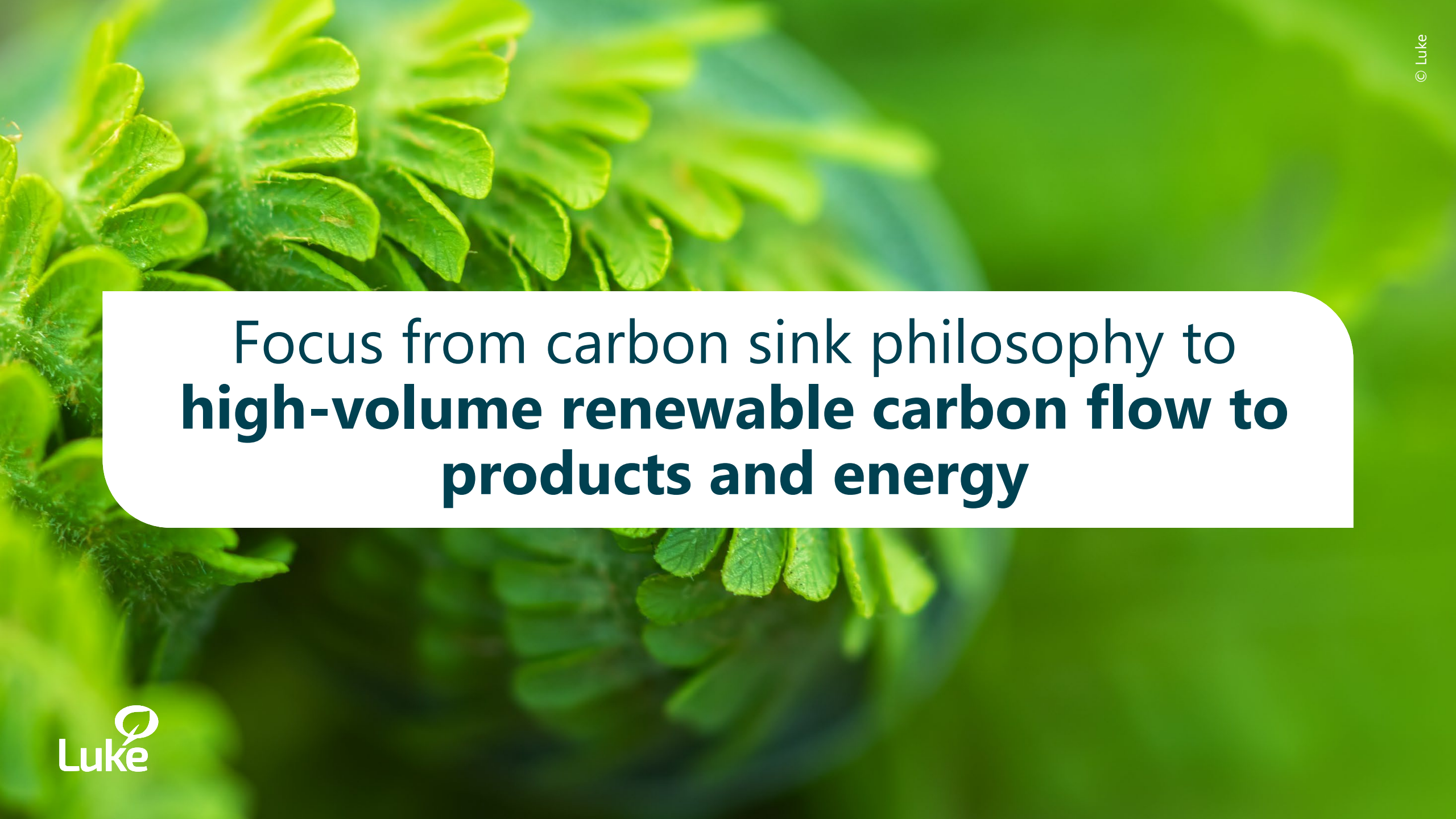
Pulp to textile fibres – "New paper"



Solutions for value adding production

Metsätaloustuotteiden arvonlisäys ja arvioitu potentiaalinen tuotantomäärä




Focus from carbon sink philosophy to
high-volume renewable carbon flow to
products and energy
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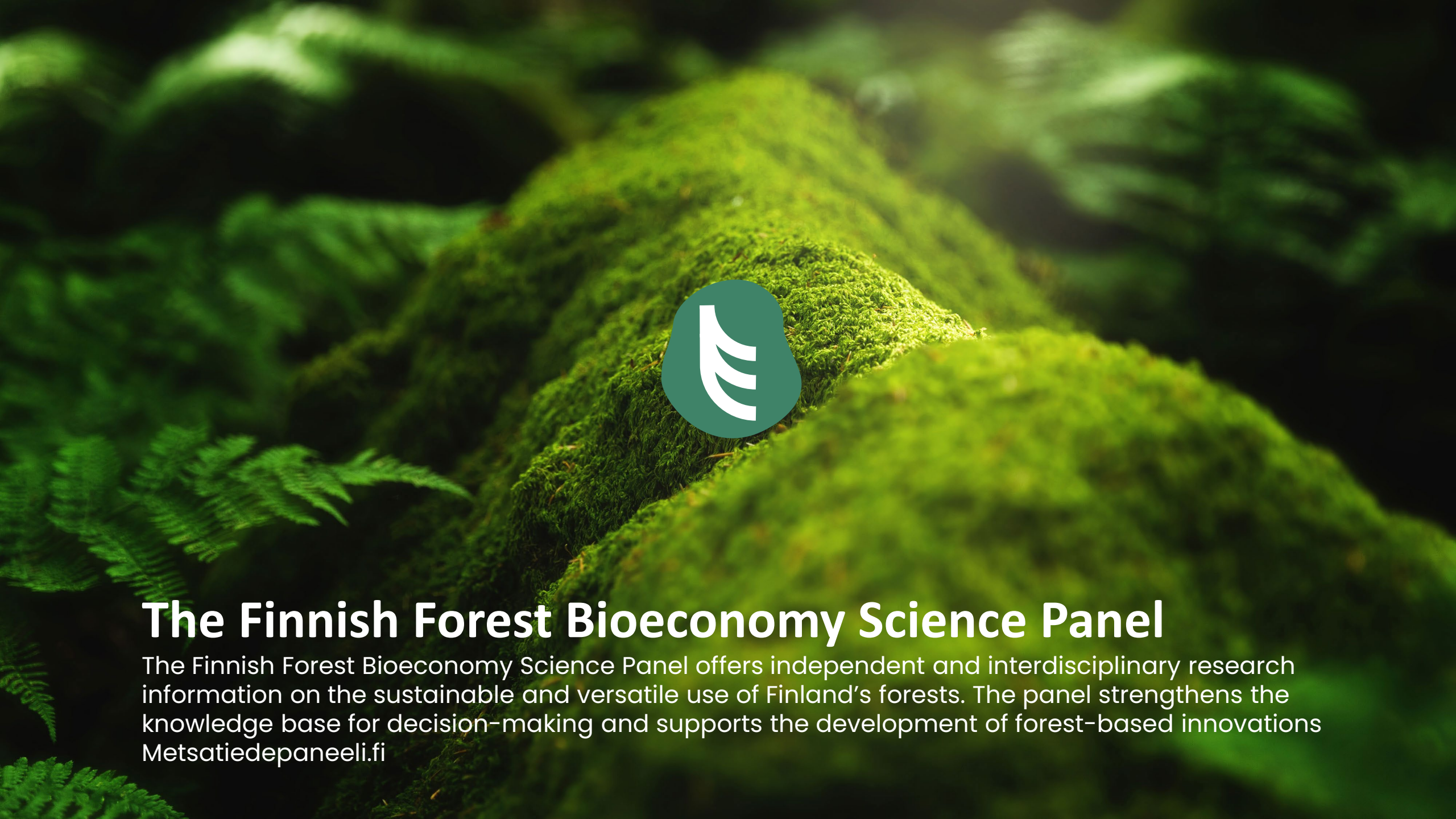
Luke

More value added from forest

Lintunen, J., Kohl, J., Buchert, J., Asikainen, A., Jyske, T., Maunuksela, J. & Lehto, J. 2024. 2035 Vision: Doubling the Value Added of Finland´s Forest sector. Natural resources and bioeconomy studies 15/2024. Natural Resources Institute Finland, Helsinki. 21 p.

Österberg, M., Karjalainen, M., Lintunen, J., Tammelin, T., Asikainen, A., Vakkilainen, E., Toivonen, R., Virta, P. Henn, A., Nuutinen, E-M., Kohl, J., Hassinen, J. 2024. Lankusta lääkkeisiin - Tuoteportfolion arvonnoususta uutta arvonlisää metsäsektorille. Metsäbiotalouden tiedepaneelin raportti 1/2024. Metsäbiotalouden tiedepaneeli. Helsinki. 36 s



The Finnish Forest Bioeconomy Science Panel

The Finnish Forest Bioeconomy Science Panel offers independent and interdisciplinary research information on the sustainable and versatile use of Finland’s forests. The panel strengthens the knowledge base for decision-making and supports the development of forest-based innovations
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