

### Forest management, climate and biodiversity - Impossible to balance?

Jaana Bäck University of Helsinki and Finnish Nature Panel 25.05.2023 Aalto University Aalto Arts Summer School 2023

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Suomen Luontopaneeli



# The challenge of eating and preserving 'the cake' simultaneously

Forests are important as:

- Carbon stock
  - Wood (30%), soil (60%) and products (10%)
  - Substitution of fossil materials, new products
- Carbon sink from the atmosphere
  - Growing biomass
  - Afforestation
- Source of carbon to atmosphere
  - Forest fires, disturbances
  - Harvesting, burning of wood
- And other ecosystem services (recreation, water and erosion protection, cultural values, ...)

How is biodiversity linked to these? Are there tradeoffs between different goals? What can we say about the future?



SUOMEN YMPÄRISTÖ 5 | 2018

Suomen luontotyyppien

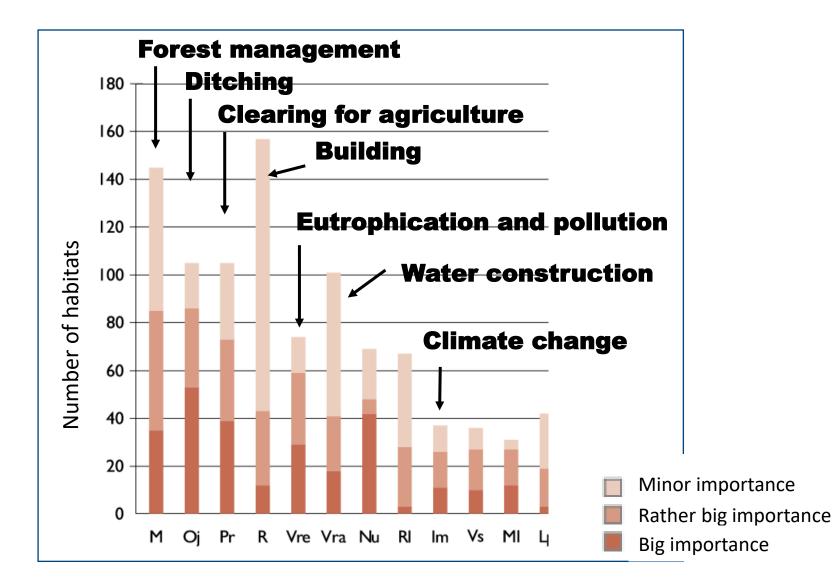
Suomen ympäristökeskus ja Ympäristöministeriö

RAN

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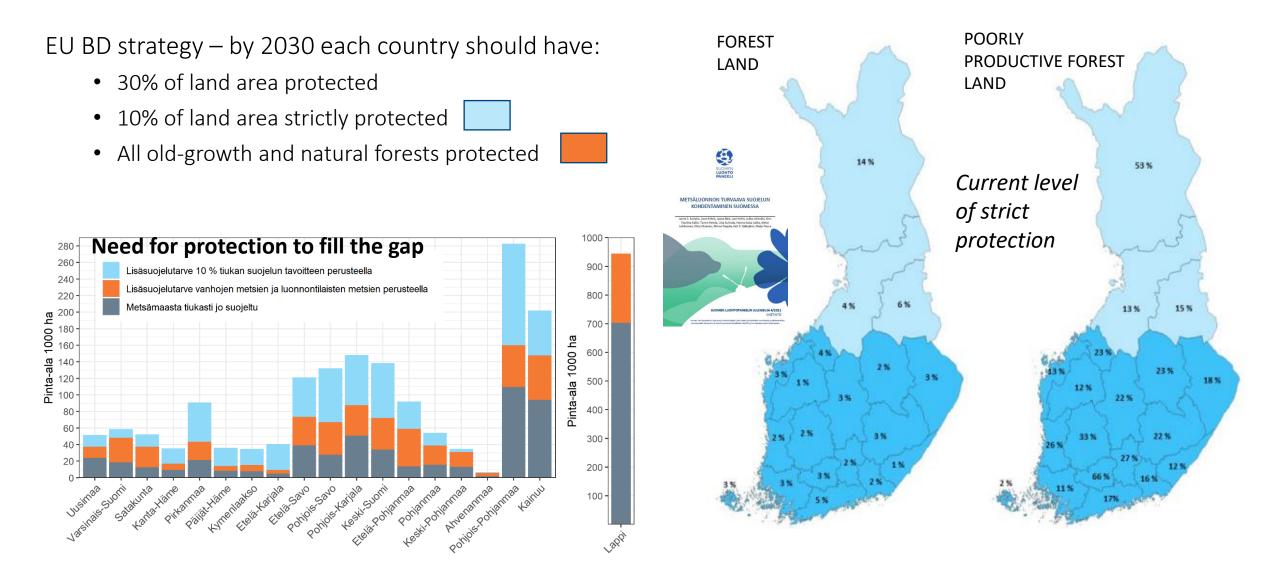
Luontotyyppien punainen kirja Osa I – tulokset ja arvioinnin r

#### **Reasons for biodiversity loss in forest habitats**





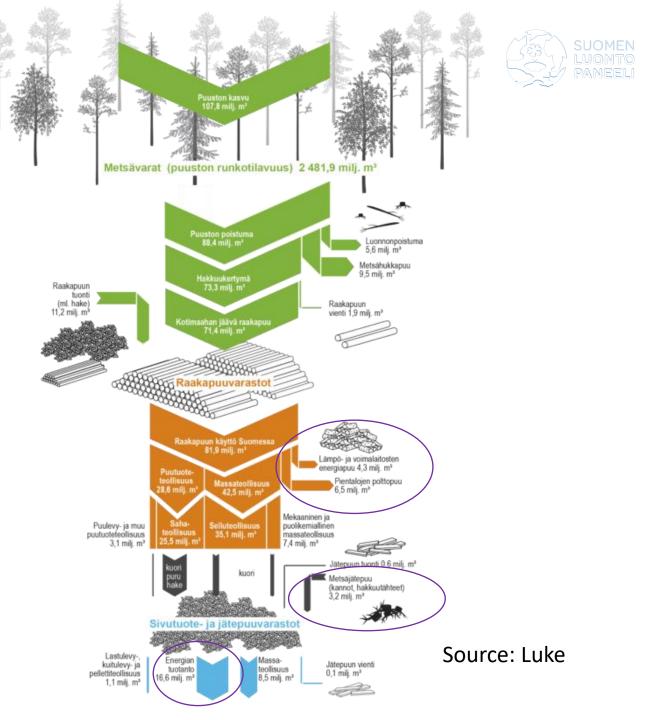
### **Protected forests in Finland**



## Use of harvested wood in Finland

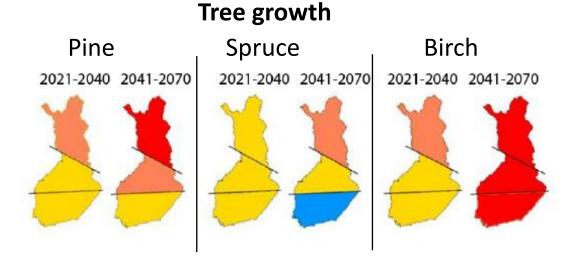
57%  $\rightarrow$  energy 41%  $\rightarrow$  products from forest industry

- Paper and cardboard 18%
- Sawn wood 12%
- Laminated wood, panels 12%
- Black liquor 27 %
- Heat and power plants 22%
- Households 8%





### Future: Risks for forestry will increase



Significant increase

Moderate increase

Moderate decrease

No change

#### **Risks**

Bark beetles Root rot (spruce and pine) Windthrow 2021-2040 2041-2070 2021-2040 2041-2070 2021-2040 2041-2070 Forest fires Snow damage Drought periods 2021-2040 2041-2070 2021-2040 2041-2070 2021-2040 2041-2070

Lehtonen ym 2020



### **KIITOS!**

24.5.202

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