

8TH INTERNATIONAL WILDLAND FIRE CONFERENCE

GOVERNANCE PRINCIPLES:

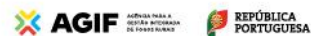
Towards an International
Framework

Porto - Portugal | **May 16-19th**, 2023

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www.wildfire2023.pt

LOCAL ORGANIZER



INTERNATIONAL LIAISON COMMITTEE FOR THE IWFC





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Finland - a country of thousand lakes and vast forests, but minor forest fires

Finnish Forest Industries Federation
Timo Tolonen

Forest facts



Forest area
22,8 mil. ha¹



Annual growth
103,5 mil. m³/a



Harvesting volume
68 976*²



Net sink of forest
27,8 mil. tonnes
CO₂ekv.³



Number of
forest owners
620 000



Average size of
forest holding 30 ha



Stumpage earnings
2,14 bil. €⁴



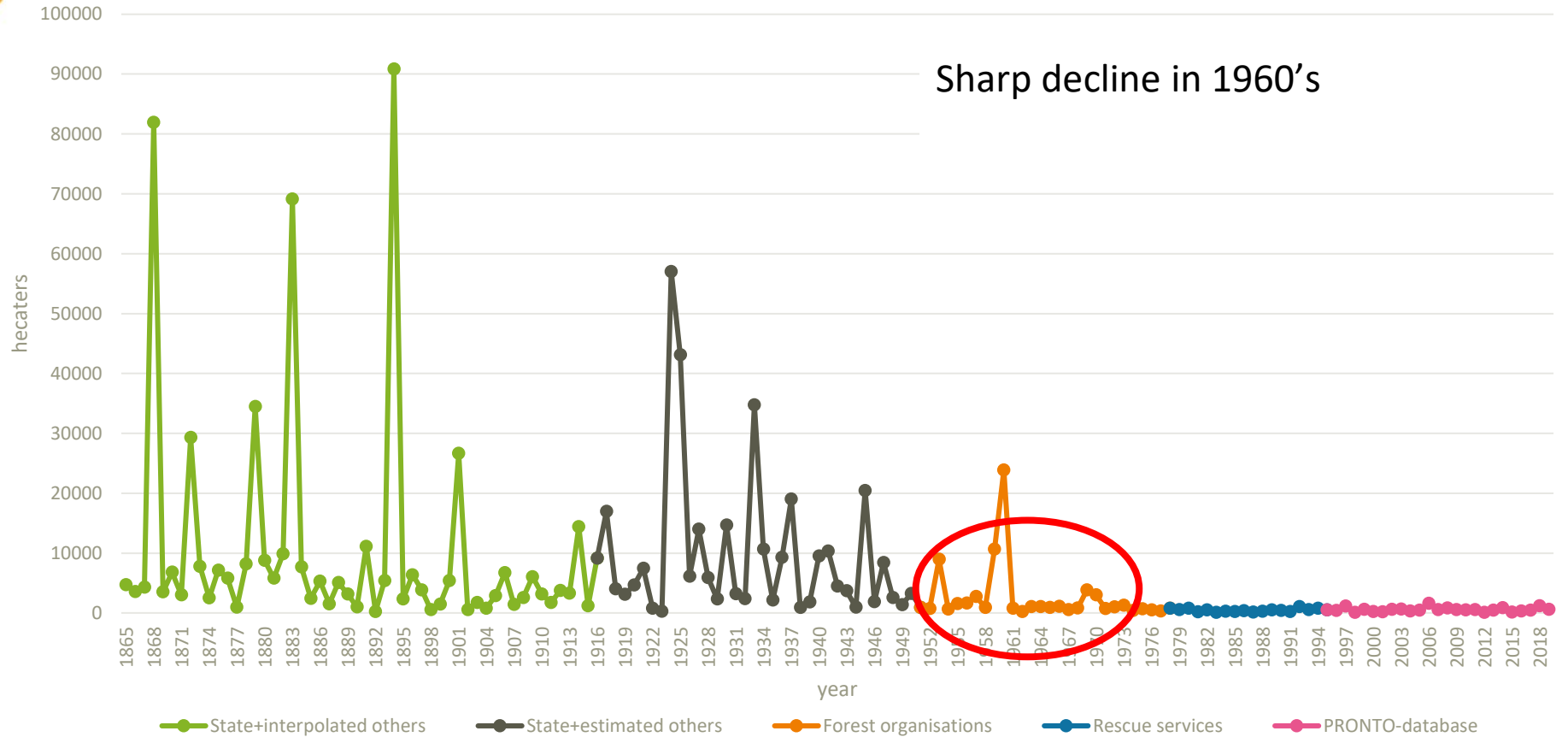
The share of
the protected area
13%



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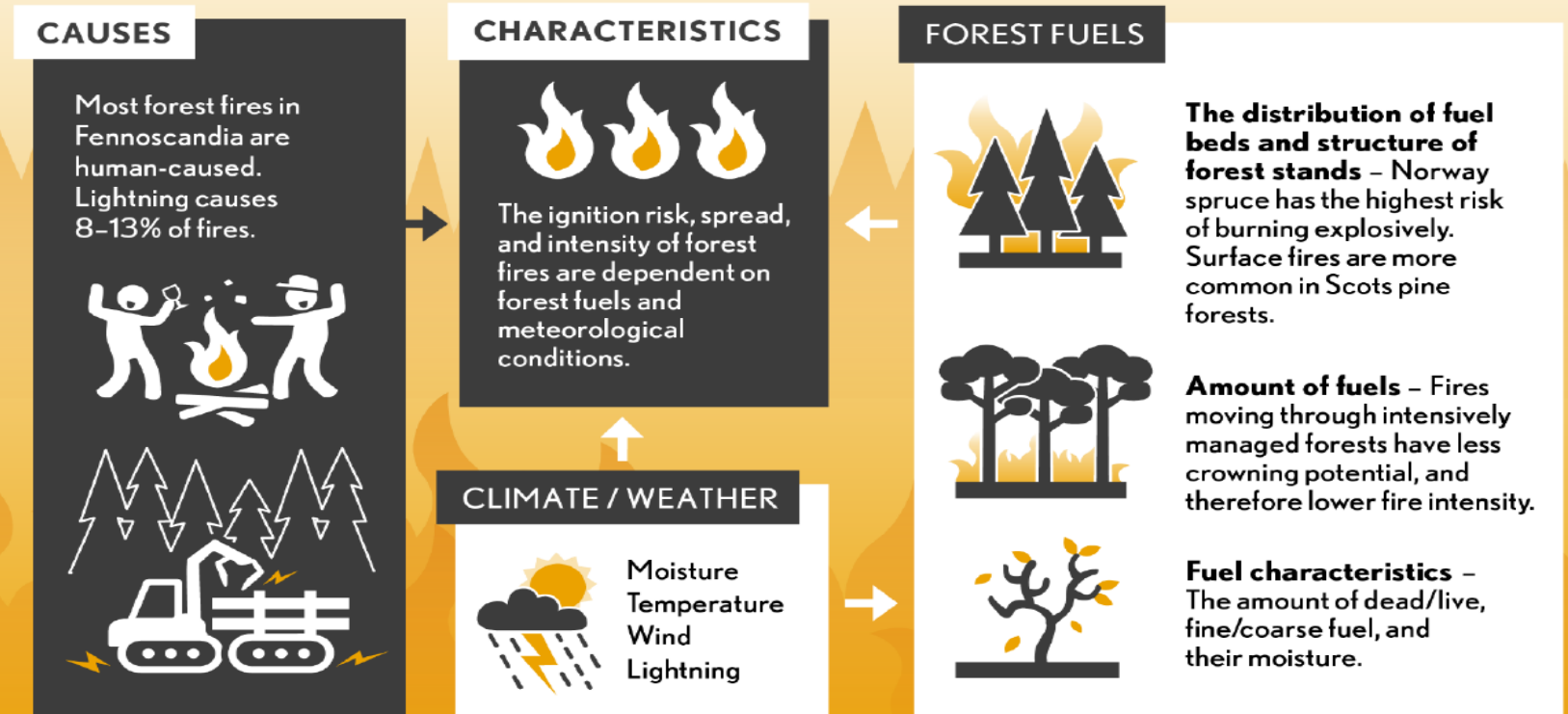
Forest fires – past and present

Annual forest fire area



The occurrence of forest fires

The occurrence of forest fires depends on weather, forest fuels, and human activities



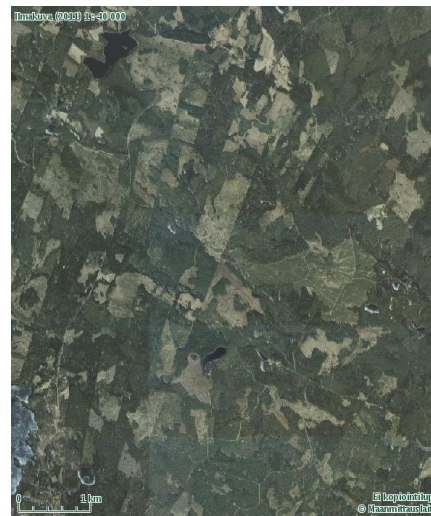
Factors affecting forest fire risk in Finland

- Geography and climate (water bodies, peatlands, wind, heat sum, precipitation, lightning)
- Forest management and silviculture
 - Due to high amount of private forest owners, the stand size is rather small ("mosaic") and there are few large, united forest areas
 - Reduction of fire load from trees; preference for pine, timely thinning, harvesting of the crown mass for energy have reduced the fire load in forests
- Forest road network; In Nordic countries density is usually 10-20 m/ha (Sweden 16 m/ha, Finland 13 m/ha , Romania 6 m/ha, Russia 1.5 m/ha...)



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Horizontal fuel discontinuity



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Vertical fuel discontinuity

Photos: Luke/Erkki Oksanen

Factors affecting forest fire risk in Finland

- National Warning System; Forest Fire Warnings from the Finnish Meteorological Institute
- Attitude, awareness, knowledge and skills of citizens (decrease in smoking)
- Forest fire control flights, obligation to report on scheduled flights and civil aviation
- Contract Fire Brigade System, Regional Fire Brigades and Village Rescue Municipalities
- Cooperation between protection and rescue authorities and the possibility of official assistance written in law (e.g., the Finnish Defense Forces are able to be called to fire extinguishing task in one telephone call)
- Luck!



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Climate change increases the risk of forest fires

- Climate is expected to warm, which
 - will lead to enhanced evapotranspiration
 - further tends to decrease soil moisture content
- This may be partly offset by an increase in precipitation levels
- Climate change will increase the fire risk in the Fennoscandian area during this century
- Severe fire weather conditions would occur more frequently in the future



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