

European forest owners and SFM: perspectives from Confederation of European Forest Owners CEPF and Finland

Earth Observation for European Sustainable Forest Management -webinar
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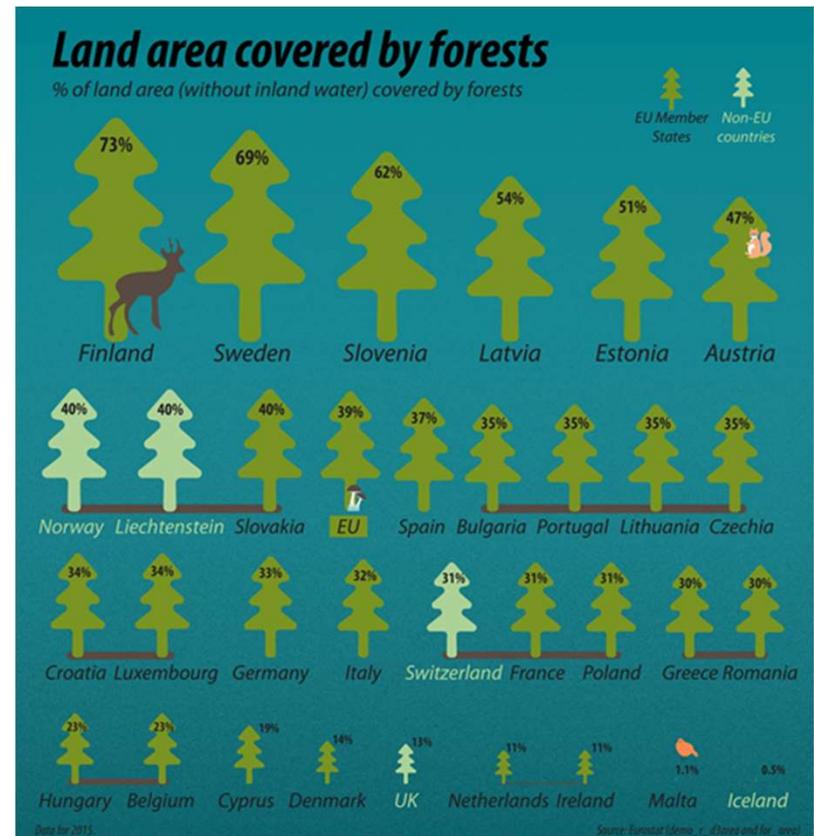
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60% of forest is owned by private forest owners in EU

- > Finland 60% (surface area)
- > Finland 70% (growth)
- > Finland 80% (cuttings)



1. Introduction

- Sustainable forest management (SFM) is the target for all
 - Forest owners must be heard in every level of decision making
 - Pressures and expectations are heavy
 - Lot of pressures from **out-** and **inside**
 - The target must be known
 - The solution must be known
 - But the target and the solution may be different in EU, national and local level
- > We need to improve the new tools to make sustainable solution in every level possible!





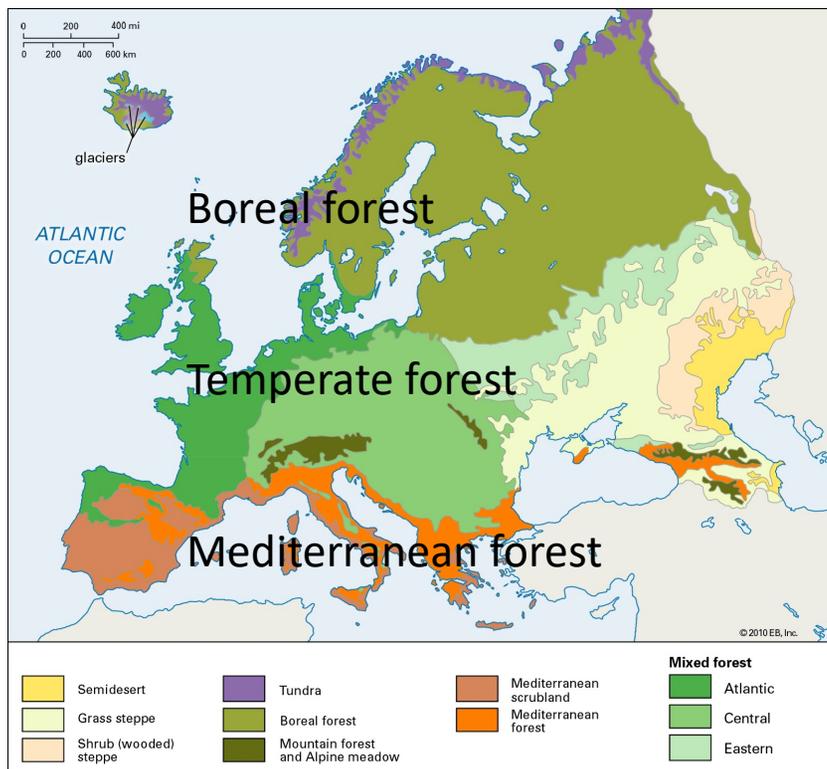
CEPF objectives

1. **To contribute** to the development, implementation and promotion of multifunctional, **sustainable and active forest management**, in order to safeguard economically viable, socially acceptable and ecologically sustainable forestry **in Europe** and around the world.
2. **To maintain** and enhance **healthy and vital forest ecosystems**, which continue to provide a diverse spectrum of goods and services to society and the environment and to achieve a balance between the multiple interests and uses of forests.
3. **To enhance the competitiveness of the forest sector** and ensure that sustainable income can be generated by the multiple goods and services that the forests and their management provide.
4. **To secure** the acknowledgement of **property rights**, which guarantee a long-term commitment and sound and sustainable land management, adding to the prosperity and diversity of Europe's landscape.

2. European forest

-Current state of sustainability in European forest

- How is the current situation of sustainable forest management (SFM) (country examples)?



Mediterranean forest:

- High biodiversity provide environmental services, but there is a low profitability

Temperate forest:

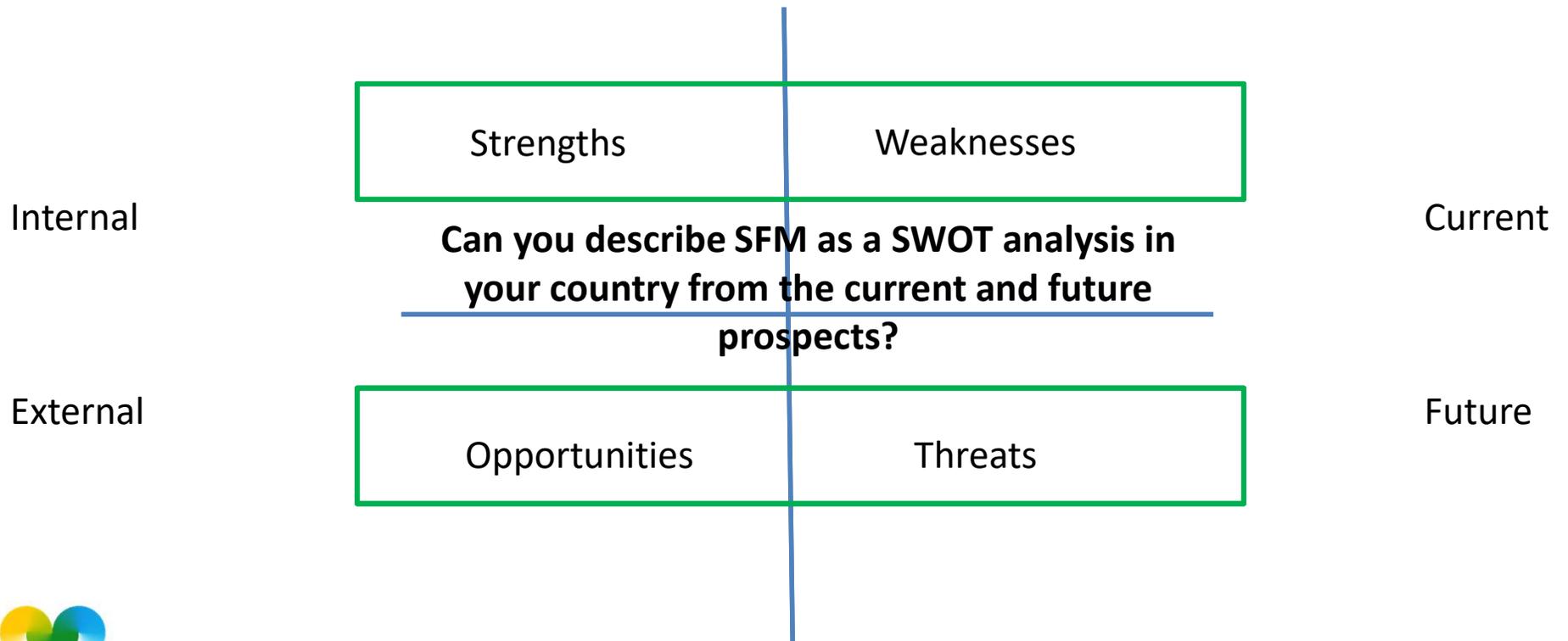
- A lot of small forest farms, which is a challenge for SFM
- Historical development determine sustainability of forestry
- Forest legislation support to **conserve and protect the forests and to increase the forest area promoting sustainable forest management.** The number of certified forest area is increasing.
- We struggle with the forest insects and storm damages

Boreal forest:

- Forest resources have grown a lot. Forest resources and its development has been **inventoried for a long time.**
- **The PEFC-certified area corresponds most of the forests**
- Forest legislation and forest management recommendations support a wide range of silvicultural methods



-SWOT analysis





Strengths

- **EU level:** SFM definition is internationally agreed as part of the pan-European FOREST EUROPE process* and that definition has been incorporated into national legislation and voluntary systems, such as forest certifications

* <https://foresteurope.org/sustainable-forest-management-implementation/>

- **Mediterranean forest:**

- Forest certification shows the high environmental value that generates the actual forest sector

- **Temperate forest:**

- Main strength is the process where the regulations stack harmoniously from the national level to the local level (forest plot) via the regional level which gives the owner a choice in the type of sustainable management he wishes to implement
- Forest owners are aware of opportunities and challenges
- Strong expertise (software and presence in the field)

- **Boreal forest:**

- Large forest resources
- Increased growth
- Good base knowledge and monitoring of the condition of forests



Weaknesses

- EU level: SFM has been seen as complex and benefits are hard to see to all
- Mediterranean forest:
 - According to some experts, **SFM should be considered at first as the conservation of natural resources**. Multifunctional use of forests is also an important aspect to be promoted by forest management in order to be sustainable.
 - **When making the forest management more sustainable it should be necessary to make it profitable**. As productivity is low in general, then economic incentives are required to promote the management. It is also important that forest products are known.
- Temperate forest:
 - **Sometimes too complex** for the forest owners
 - Gives a lot of information on the forest which must remain the property of the owner
- Boreal forest:
 - Forest management is not in suitable level in the **young forest stands**
 - Lack of information, especially in the management of **peatlands** (carbon stock)



Threats

- EU level: SFM faces a lot of pressure and expectation from society
- Mediterranean forest:
 - Much attention is currently being paid to **forest fires and pests treatments**. These are serious problems that affect Mediterranean forests, but they **should not be reduced attention to other important components of SFM**.
- Temperate forest:
 - **Growing expectations of society** on property-wide management
 - Adaptation to Climatic and health hazards
 - Become too complex if management constraints increase
 - In the name of environmental protection, progressive questioning of the right to property and the freedom of the owner
- Boreal forest:
 - **Climate change may bring new risks** (storm damage, diseases, insect damage); one-sided distribution of tree species (spruce);
 - Weakening of active forest management and weakening of forestry financing support



Opportunities

- EU level: SFM can be increased by developing the decision support tools with reliable information
- Mediterranean forest:
 - There is a great opportunity to **reinforce forest policies so that the value of the sector is increased.**
- Temperate forest:
 - **Support from society** (citizens' agreement)
 - **Increasing challenge of the forest facing the climate change**
 - **New decision support tools** -> to enable forest owner's management decisions
- Boreal forest:
 - **Opportunity to increase forest use while safeguarding biodiversity and other ecosystem services** => requires more investment in forest management and growth; stronger market-based production of ecosystem services (incl. carbon sequestration)



4. Case Finland: New tools for SFM?

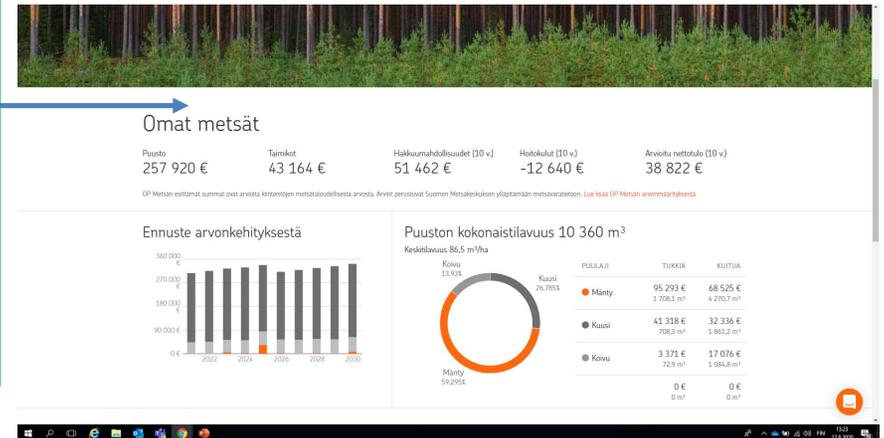
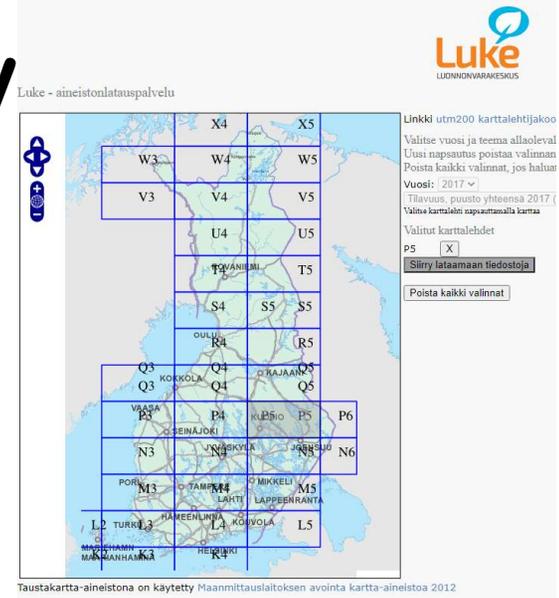
Economical sustainability

- Forest inventory and management tools are in good condition:

- NFI (National Forest Inventory) gives the main database
<http://kartta.luke.fi/opendata/valinta.html>
- Laser scanning digital forest plans (www.metsaan.fi) free for forest owners

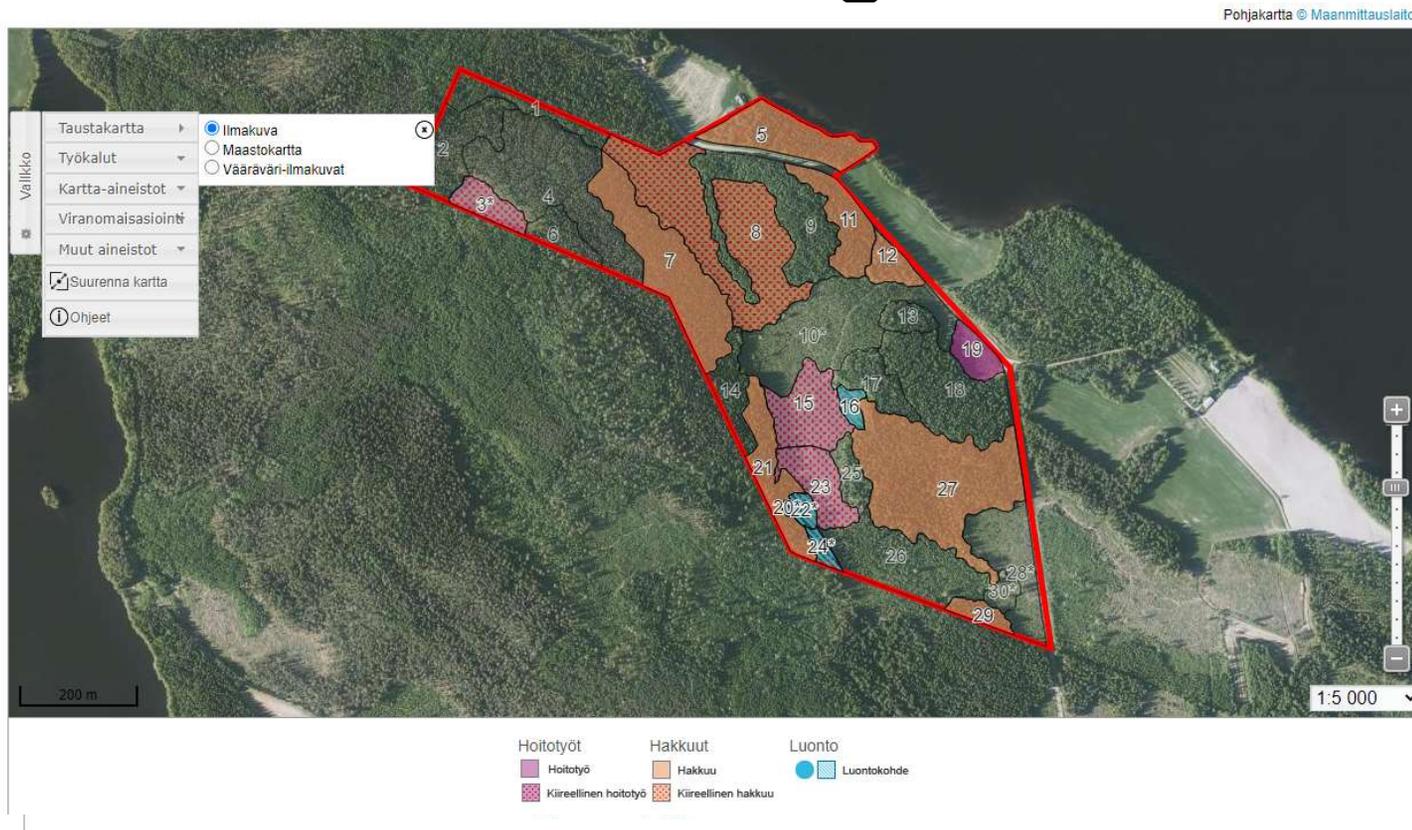
- New tools are needed:

- What is the profitability of forest for its owner?
- What is value of land?
 - Bank sector has been active:
<https://www.op-metsa.fi>
- -> What is the value for alternative environmental and climate practices at forest?
- How could them be compensated to the private forest owners?



Metsään.fi service

-How to manage forest?



Social sustainability

- Socially sustainable element means how the regional level is taken into account in sustainable matters

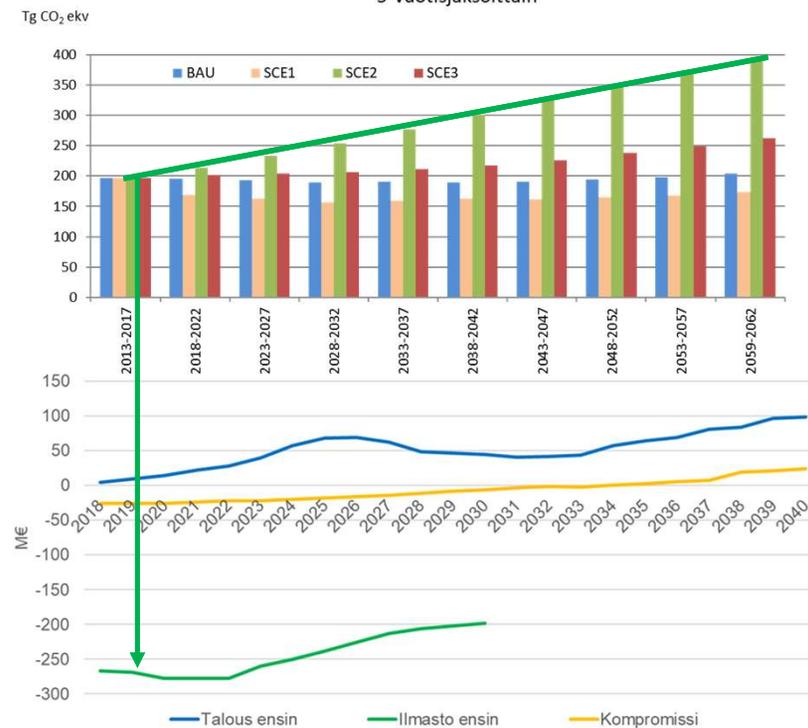
- The regional case analysis must be developed to understand social links of SFM

- Here is the example about one important forestry area of Finland (South Savo)
- How do the cutting scenarios (and regional carbon neutrality aims) influence on the forest carbon storage and economy?
- -> **Compromise is needed. Information is needed for policy decisions**



<https://www.helsinki.fi/fi/atom/178754>

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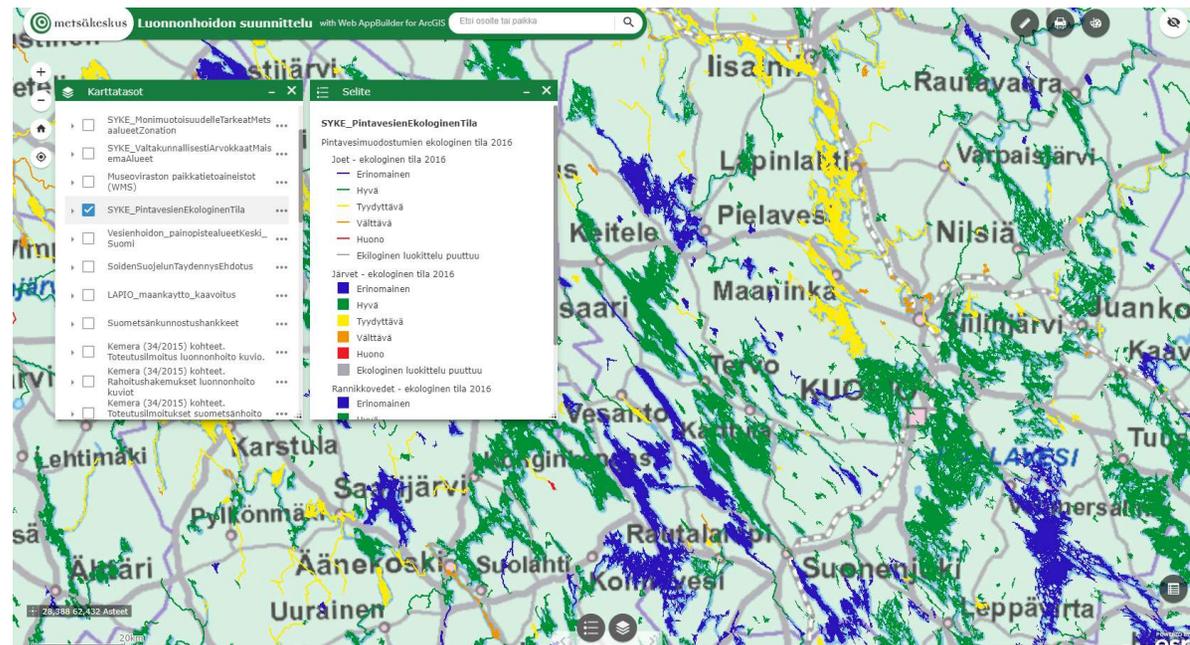


SCE1 economy first SCE2 climate first SCE3 compromise

Environmental sustainability

- Environmental sustainability is not only the forest protection, but all aspects of nature ecology
- That's why it must be followed not only international and national level but also on local level management
 - > Controlling in general level and more exact spatial data for operational level is needed

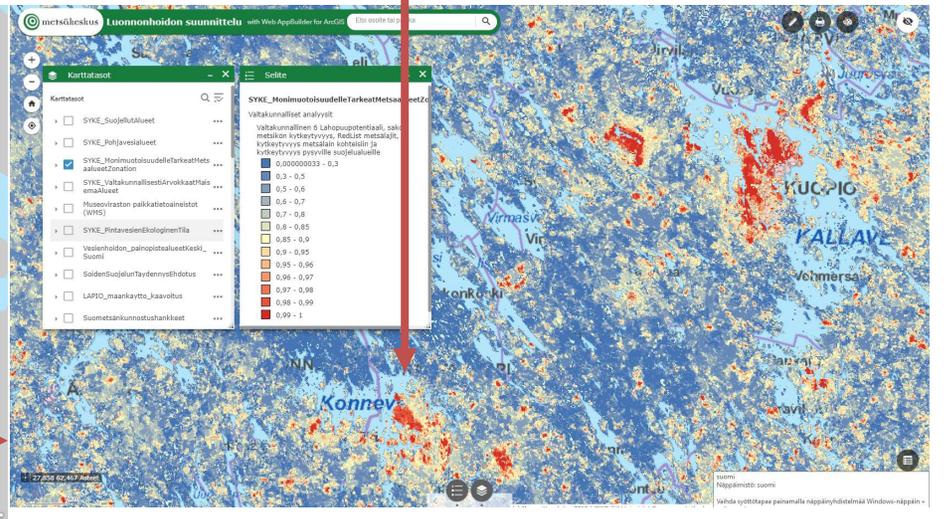
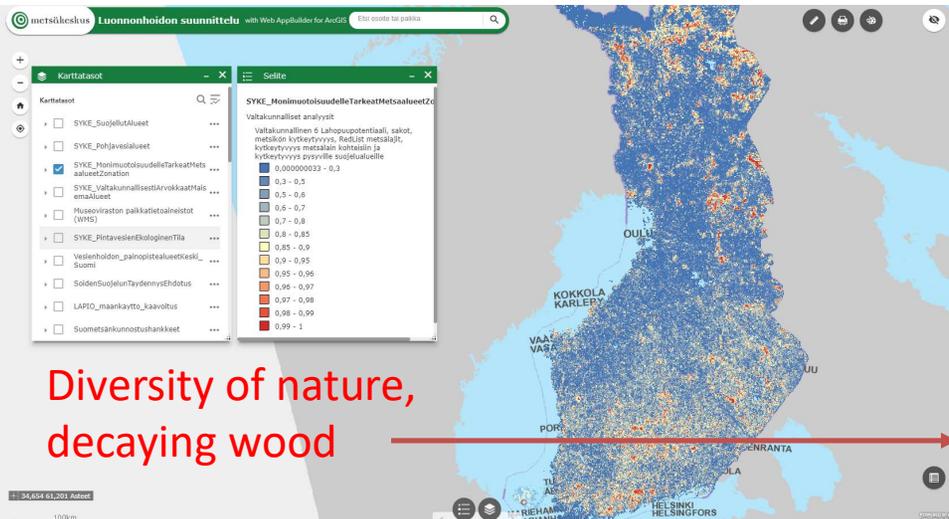
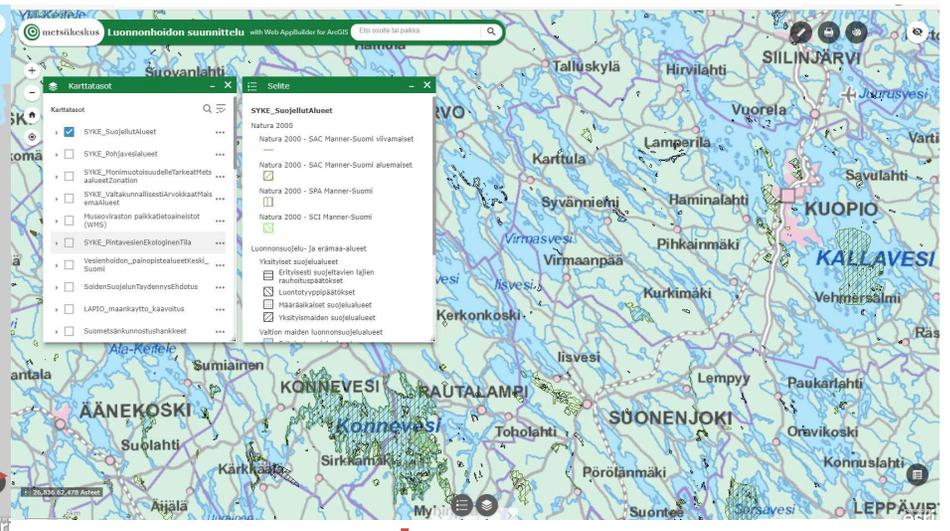
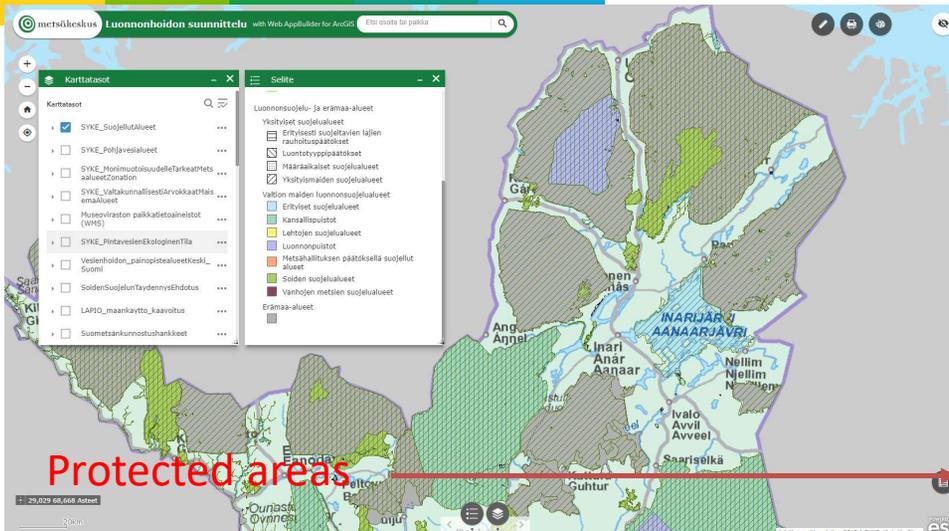
Ecological situation of surface waters:



Data available:

<https://metsakeskus.map.sarcgis.com/apps/webappviewer/index.html?id=645cb868e3b545beb9a9a27a0bfcc731>







5. Conclusion

- Europe:
 - SFM is the ABC of forest management for all of us
 - The internal current strengths and weaknesses of SFM
 - Forest certification systems and SFM processes increasing harmoniously **from national to local level**. Large resources for building bioeconomy.
 - SFM must be **profitable, not too complex** and knowledge must be increased
 - The external future threats and opportunities of SFM:
 - **Climate change** brings the new risks, but SFM must not suffer at the same time. Growing expectations of society bring the **pressure** all the time.
 - Opportunity to **increase forest use while safeguarding biodiversity and other ecosystem services**. Climate change is a challenge for building sustainable bioeconomy related society.



5. Conclusion

- Finland:
 - It is important to bring **the new tools** of SFM to the forest owner's operational level (Spatial data)
 - SFM potential methods differs greatly between the forest farms and forest owners -> **precision SFM** needed

What do we need more?:

- **Combined reliable methods** must be developed so that the statistical and forest inventory results are combined with lidar analysis
- **Value of land?** -> How to compensate possible losses to the private forest owners to keep the profitability as reasonable level?
- **We need to follow the development of carbon storages and carbon sinks of forest** which will become even more important
- **"Early warning"** – information on the potential spread of forest destructions is needed