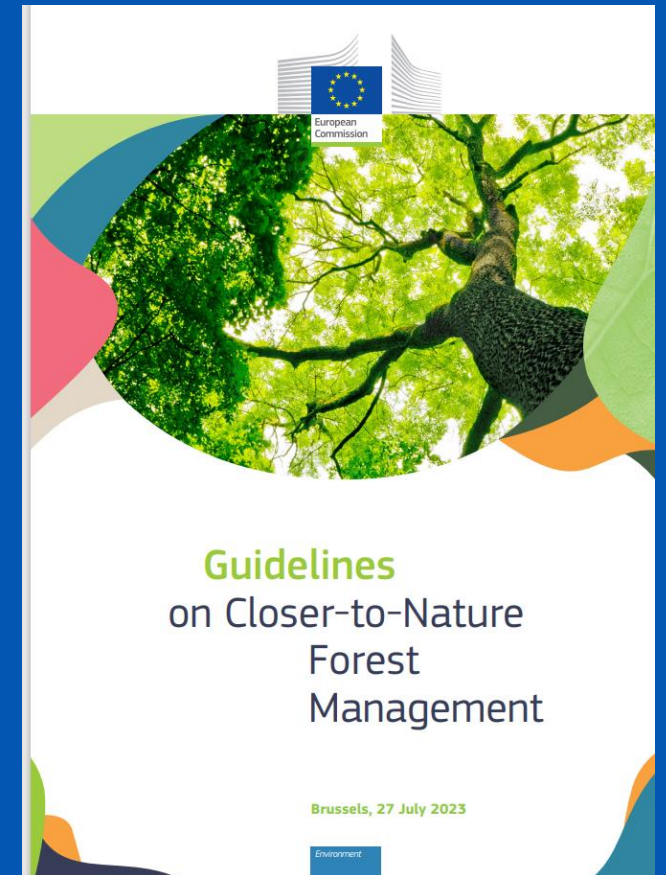




Implementation of the European Commission's Forest Guidelines in the Boreal Region

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The Policy Context

EU Biodiversity Strategy for 2030:

*“To **increase the quantity** of forests and **improve their health and resilience**” [...] “**biodiversity-friendly forestry practices** such as closer to nature forestry should be further developed.”*

*“To support this, the **Commission will develop guidelines** on [...] closer-to-nature-forestry practices.”*

New EU Forest Strategy for 2030:

*“The **Commission will develop a definition and adopt guidelines** for closer-to-nature-forestry practices and develop **a voluntary** closer-to-nature **certification scheme**.”*





Guideline Development: A collaborative and evidence- based approach

- Prepared in active dialogue with Member States experts and key stakeholders (Forest & Nature expert group, workshops, seminars)
- 3 years process, eight “rounds”
- Comprehensive literature review
- Voluntary character – designed to complement regulatory frameworks and trigger discussions for further developments at Member State level

Closer to Nature (CNF) means.....

- **biodiversity-friendly and adaptive forest management** for forest multifunctionality and climate change resilience without neglecting socio-economic benefits.

The CNF guidelines will...

- **assist competent authorities and key stakeholders** across different scales in taking up CNF principles and measures, discussing challenges and opportunities.

The CNF guidelines are...

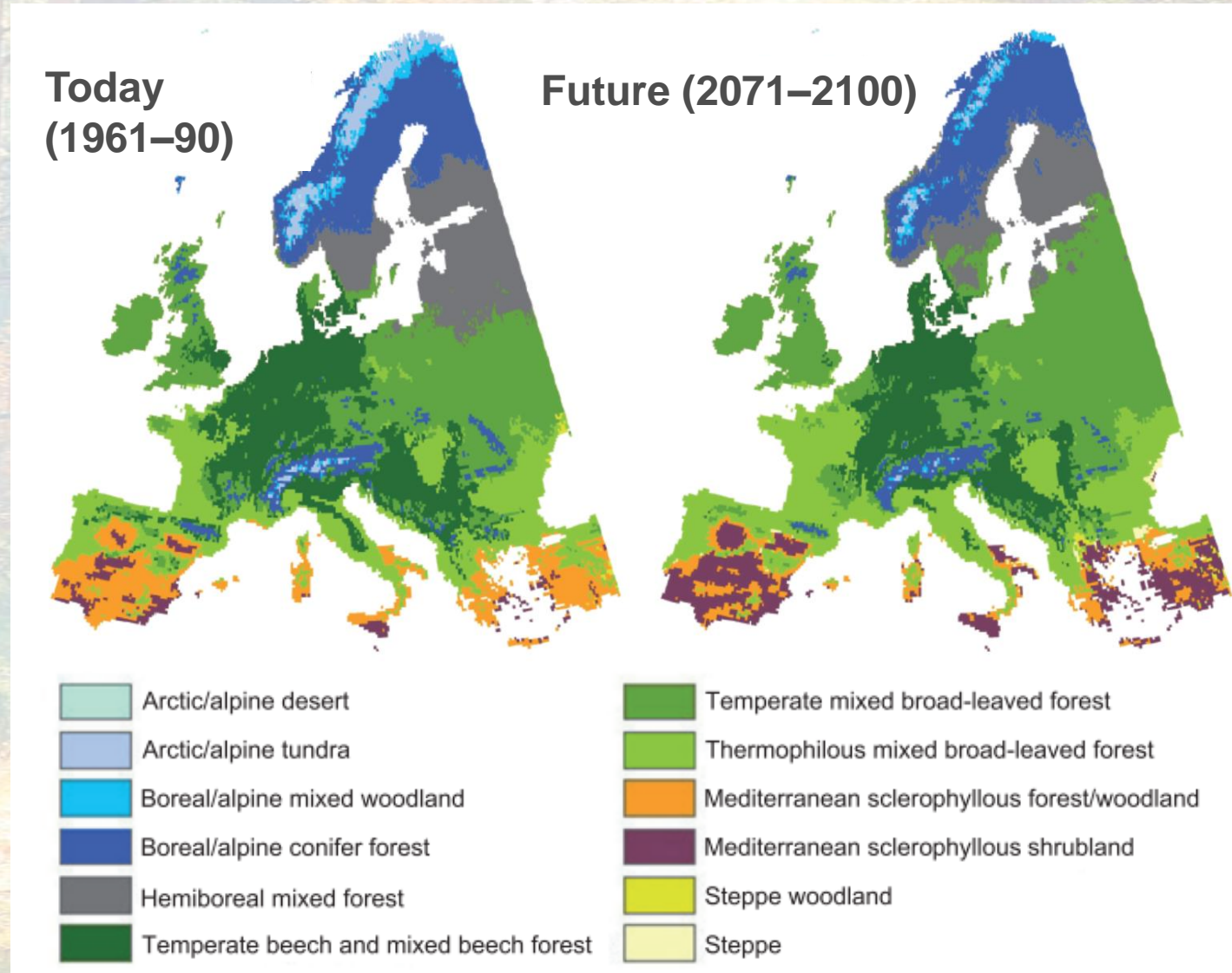
- developed for forests that have a **commercial use for timber and non-timber forest products** not explicitly designated as protected areas



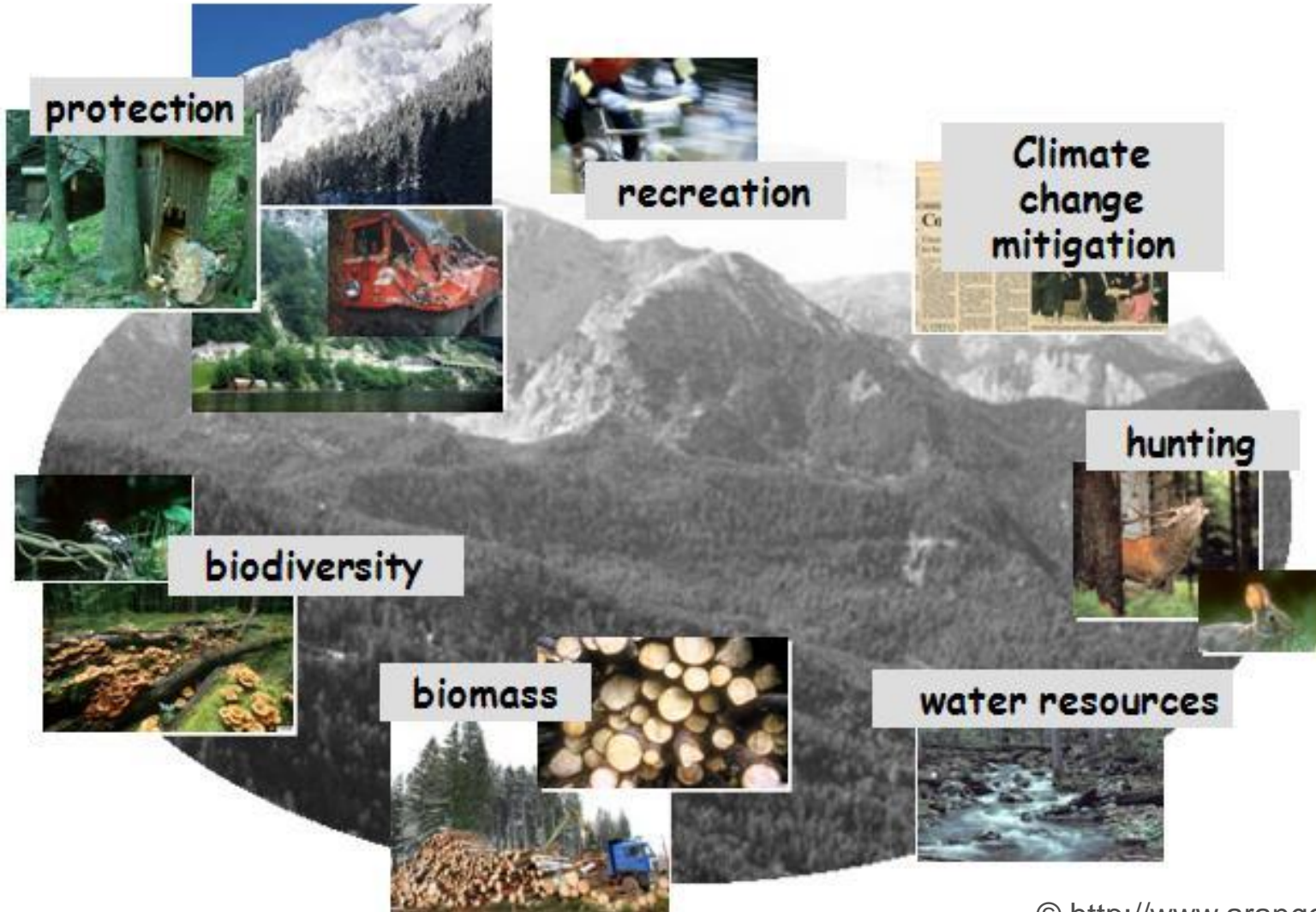
Why these guidelines / Why CNF ?

EU Forests today are not the resilient multifunctional ecosystems we want and need !

- 👍 Improvements in forest area, biomass volume and productivity
- 👎 One out of four trees shows moderate to severe defoliation and increasing
- 👎 Tree canopy mortality rate doubled since late 20th century (= 1% of the EU-27 forest area dying yearly)
- 👎 Biodiversity slight decline (14% Good conservation status in N2K)
- 👎 Climate change impacts (e.g. disturbances, ecosystem shifts are increasing)



Why these guidelines / Why CNF ?



Demand for Forest Multifunctionality is increasing and diversifying for both; services that can be substituted and services that cannot be substituted

Why these guidelines / Why CNF ?

Biodiversity cannot easily be substituted

- Support for other key services like regulation of climate and nutrient cycles
- Key to Resilience: Forests with varied tree species and functional traits (e.g drought or heat stress tolerance) are better equipped to withstand and recover from disturbances like storms and pests and are less likely to experience large-scale die-offs.
- Boosting Productivity: Higher tree diversity can increase forest productivity, making it a strategic asset for wood producing forests



* RESONATE Policy brief on the role of biodiversity in making forests resilient (in prep.)

Framing CNF: Basic Principles



Closer-to-nature forest management (CNF):

“considers forests as ecosystems composed of a variety of organisms and abiotic elements above and below ground, all working together to constitute and maintain forest multifunctionality”

- based on ecosystem dynamics
- permits ecosystem dynamics and functioning
- integrates technical, economical, and social considerations
- integrates forest functions at different spatial scales
- uses a variety of silvicultural systems based on natural disturbance patterns of the region
- harvests timber with low-impact paying equal attention to what is retained in the forest as to what is removed

**Building on: Larsen, J.B.et al. 2022. Closer-to Nature Forest Management. From Science to Policy 12. EFI*

CNF: Main objectives



Enhance structural complexity

Closer-to-nature forest management strives to create forests that are more:

- Heterogeneous and diverse in height, diameter, age and species
- Mixed with denser and sparser parts

...according to their natural mix of species and structures, forest type and phase of development

Promote natural forest dynamics

Closer-to-nature forest management relies as much as possible on natural dynamics with:

...light interventions to orientate natural dynamics in line with objectives and the natural range and distribution of existing and potential species of the considered site

- reduced investment costs (e.g. planting in the long-term)

Biodiversity benefits of various practices

Name	Main characteristics	Limitations
Close to Nature Silviculture	<p>Optimize forest ecosystem use and conservation for sustainability and profitability.</p> <p>Single-tree selection harvest</p> <p>Smaller group harvesting (<0.2ha) possible to create mosaic stands.</p>	<p>Risk of limited flexibility to ensure adaptive capacity of forest ecosystems in a changing climate subject to shifting ecological conditions and societal needs.</p>
Integrated forest management “INTEGRATE”:	<p>Combining ecosystem service provision in forest landscape</p> <p>Focus on aligning biodiversity conservation and sustainable wood production.</p>	<p>Forest biodiversity requires a comprehensive concept that combines segregative (protected areas/ no go-areas) and integrative (off-reserve) conservation instruments</p>
Continuous cover forestry	<p>Heterogenous forests by selecting and harvesting individual trees or groups of trees.</p> <p>Clear-felling is preferably limited to 0,25 ha to ensure continuity of woodland conditions.</p>	<p>Biodiversity benefits depend on the level of wood-harvest intensity and the combination with other measures like set-aside areas or dead-wood retention.</p>
Triad Management	<p>Forest organized in sectors with varying management intensities and integration levels.</p>	<p>Biodiversity benefits in practice not clear.</p> <p>Might undermine multifunctionality and resilience.</p> <p>Difficult in mixed-ownership settings.</p>
Silvo-pastoral systems/ Agro-forestry	<p>Combination of tree growing with agriculture on the same land.</p> <p>Valuable for biodiversity, including rare and endangered species and multifunctionality</p>	<p>Challenged by agricultural intensification and rural exodus restoration and maintenance of natural processes or low intensity management practices are required</p>
Retention Forestry	<p>Strengthen biodiversity in even-aged management and clearcutting systems by strengthening continuity in forest structure, composition, and complexity.</p> <p>Variable retention levels at landscape scale ensures structural diversity.</p>	<p>Actual benefit depends on position and volume of retention trees left in the stand.</p> <p>Post-harvest mortality can be significant pending for example tree-species and diameter.</p> <p>Benefits for red-listed species not clear.</p>

Closer to Nature Forest Management Toolbox

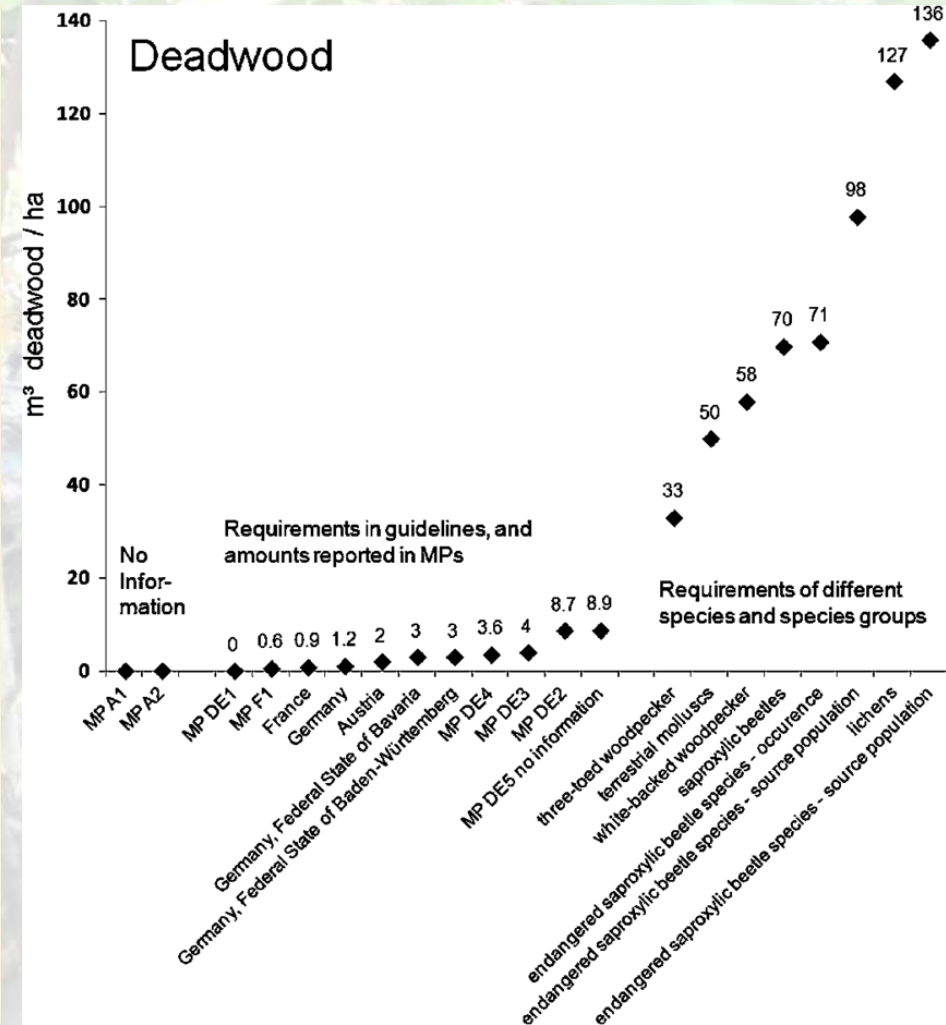
- **Use natural tree regeneration**
- Ensure respectful harvest conditions
- Minimize management interventions
- Protect forest soil and water
- **Optimize deadwood**
- Set areas aside
- Take a scale-specific approach
- Manage ungulate species

Optimising deadwood retention



There is no waste in the forest

- Important role as natural habitat, nutrient pool, water storage and precursor of soil organic matter
- Certain species of fungi, mosses and insects will not occur without deadwood.
- Volume, type and stage of decay are important
- Volumes, density and locations in balance with fire management, safety (recreation) and pest outbreak
- Removing all deadwood will counteract efforts to improve biodiversity



Promoting natural tree regeneration



- First choice because:
 - Preserves and increases genetic diversity
 - Strengthens adaptive resilience
 - Promotes spatial and temporal heterogeneity
- Artificial regeneration if:
 - Natural regeneration not possible (no seed trees, browsing, competitive ground vegetation)
 - Need for assisted migration (climate adaptation)
 - Restoration needs (e.g. food habitats)

**EC Guidelines on biodiversity friendly afforestation, reforestation and tree planting*

Enabling the Transition

- **Training and Skills** Planning the Transition
- **Economic Viability** Adaptive Management and Resilience
- **Mapping and Monitoring** Taking account of Forest Fires

Training and Skills



- Knowledge transfer and relevant skills are key
- European Pact for Skills - support in establishing a network for upskilling and reskilling
- European Social Fund Plus (ESF+) financial support for educational programs
- TSI Flagship on Nature Resilience
- Existing networks: INTEGRATE / Pro Silva

Economic viability

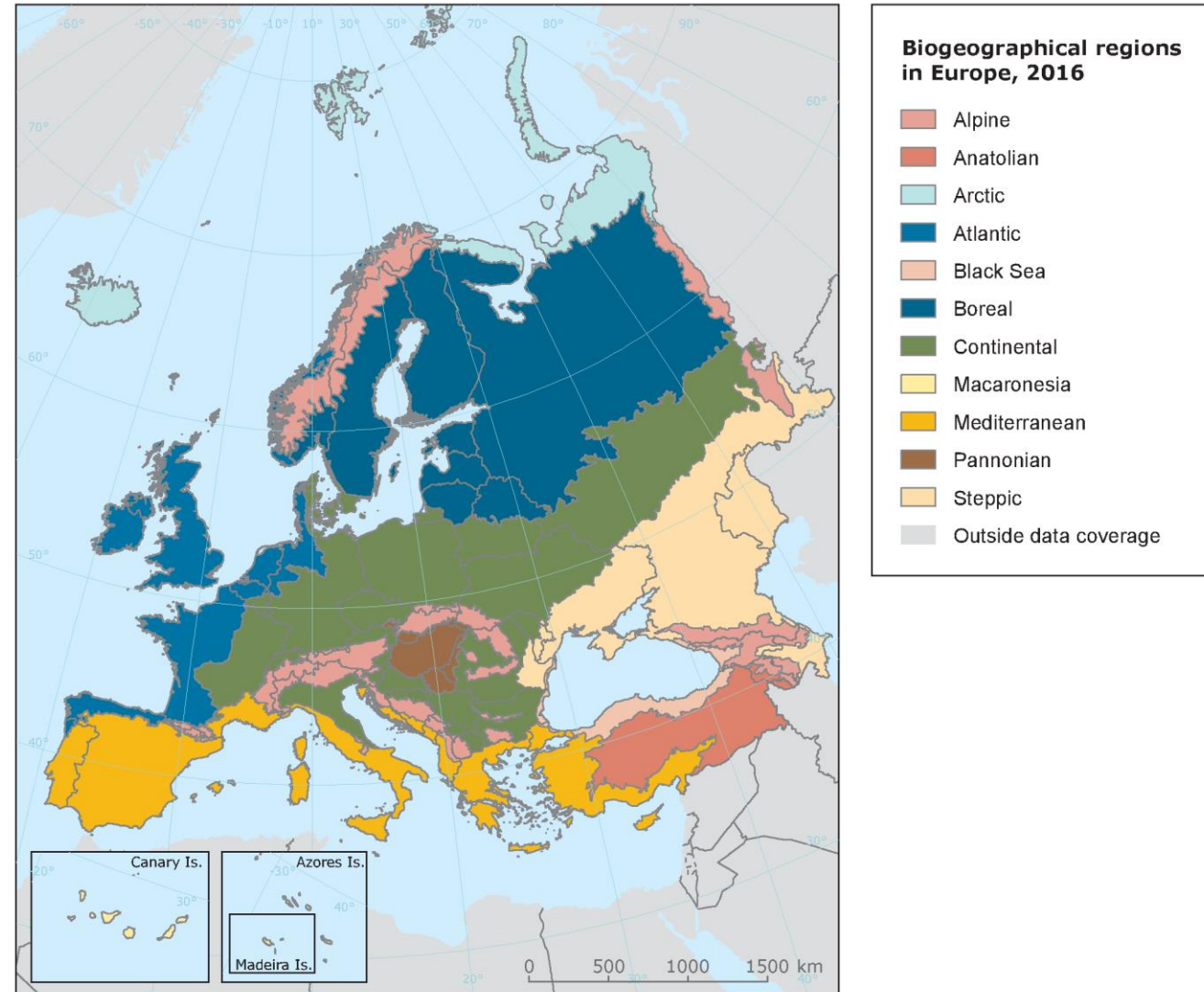


- Important driver, especially for private forest owners
- Influenced by site productivity, timber quality, market prices and operational costs
- CNF can be financially more profitable than forests managed in an intensive manner, whilst also reducing risks
- Forest have much more to offer than wood -> **Payment for Ecosystem Services**
- Funding (CAP, New State Aid Guidelines, LIFE, Horizon Europe)

From theory to practice in the Boreal region

Translate common objectives and principles into region-specific forestry reality

- *Questions on CNF*
- *Challenges and opportunities*
- *Good practices and lessons learned*
- *Incentives*





Thank you for your attention

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