

Sustainability and multi-functionality of European forests

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Baseline: Forests, EU Policy and Global commitments

Global Commitments

EU-related Actions

UN Framework Convention on Climate Change

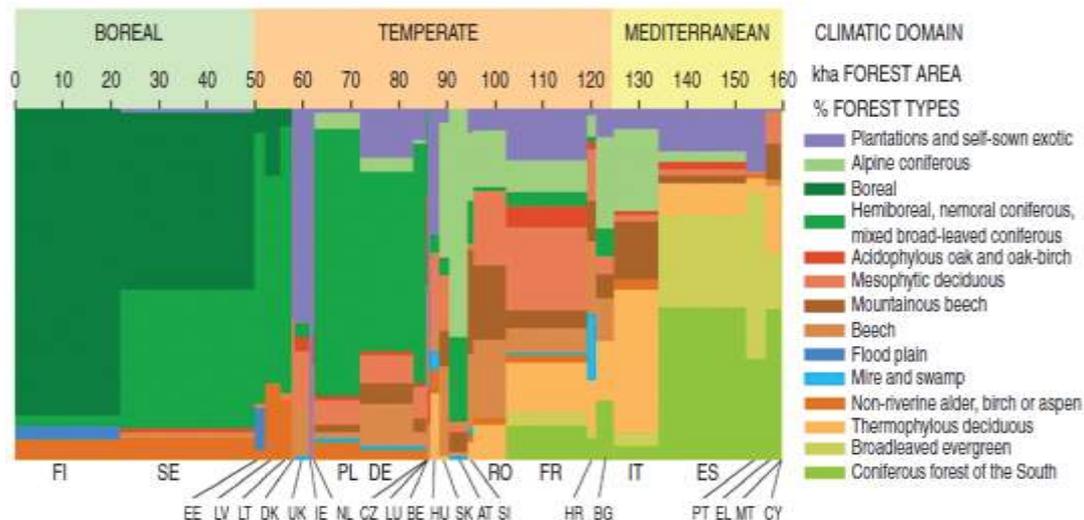
- 2009 Renewable Energy Directive (RED);
- 2011 Low Carbon Economy Roadmap;
- 2013 Decision on GHG emissions and removals;
- 2030 Climate and Energy Framework;
- 2016 Ratification of the Paris Agreement; inclusion of GHG emissions and removals from LULUCF into the 2030 Climate and Energy Framework (20 July 2016); November 2016 package on ‘Clean Energy for All Europeans’
- 2018 Jan: new RED directive

UN Convention on Biological Diversity

- Birds Directive 1979;
- Habitats Directive 1992;
- Alien Species Regulation 2014;
- Biodiversity Strategy 2011-2020;
- Mid-term review of EU Biodiversity strategy (Dec 2015)

Baseline: Forests in EU

- Diversity in history, ecological, climatic and edaphic factors, stocks and growth, management, ownership
- Forestry is important branch in many economies
- Many ecosystem services from forests are important for local people as well

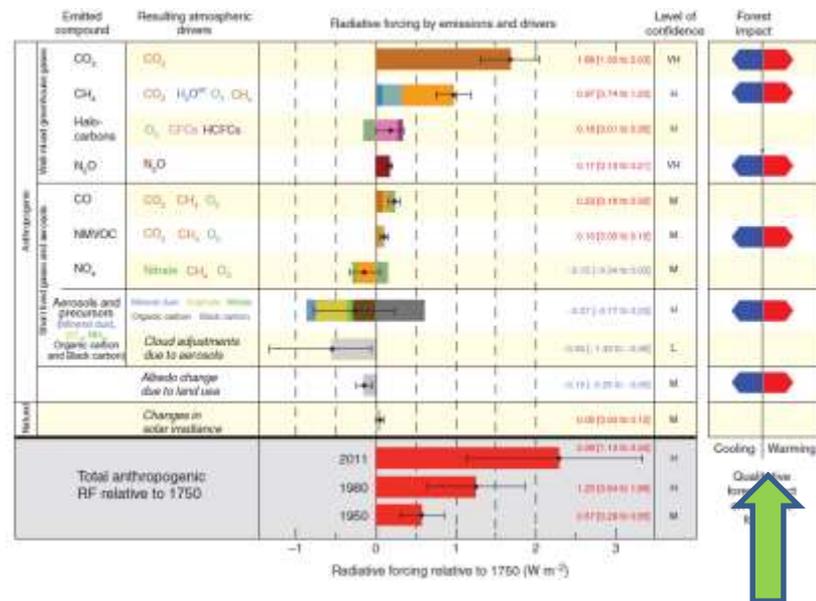


EU has only minor influence on the forest policy in Europe

- International treaties and commitments bind the Union but national legislations overrule the policies regionally → **possibilities for conflicts and strong incentives for lobbying**
- EU should develop ways to account for the national differences but simultaneously set **clear incentives for better and transparent policies** following the international obligations, esp. *Paris Agreement and Convention on Biological Diversity*

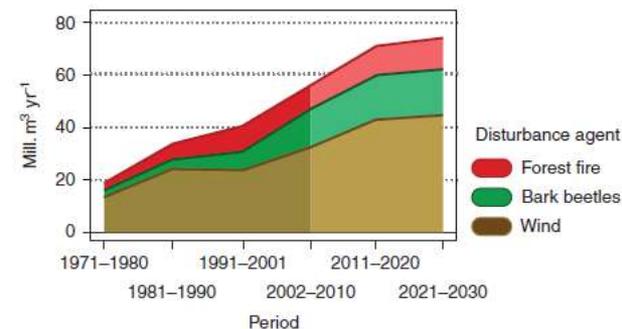
Challenge: Climate change

- Forests produce many climate benefits: sequester carbon, contribute to cloud formation, products for substituting fossil fuels and other carbon intensive materials
- Forest carbon sink and storage are *dynamic and depend on management*



Conclusion:

- The planned intensification of harvests for e.g. bioenergy will in short and medium term yield in loss of carbon sink and release of carbon from storage: **no mitigation but possible acceleration of climate change**
- Forests already suffer from climate change; fires, droughts, storms, pathogens: **current management tools are not planned to increase forest resilience nor their climate impact**



Challenge: Biodiversity

- Forest structural elements, old growth forests, and forest continuity are crucial for biodiversity
- Forest management is central in maintaining - or losing - biodiversity values of production forests: genetic, species and habitat diversity
- Good biodiversity implies often good productivity and resilience



Conclusion:

- Meeting biodiversity conservation targets is more important than ever, but seriously compromised by the planned **intensification of use of wood**
- Global and EU –level biodiversity conservation is hampered by exclusive **Member State level land use planning**
- **Land sharing & land sparing: protecting the old-growth forests** and maintaining **deadwood** in production forests are key tools for preserving biodiversity

Challenge: Socially optimal balance between wood utilization and storing carbon into forests?

- Including carbon storage always changes socially optimal forest management (never “neutral”)
- For Boreal forests, studies suggest that storing carbon into forests is among the **cheapest methods to decrease net carbon emissions**
- Given carbon price of 10-50 €/tn, it would be optimal to store huge amounts of carbon in (at least) boreal forests
- NOTE: In production forests increasing carbon storage tends to *increase* rather than *decrease* long run timber supply AND increase biodiversity values

Challenge: How to create correct incentives in market economies?

- Carbon storage is a *positive externality* and carbon emissions from harvested wood are *negative externalities*
- In market economies externalities should be controlled via **market interventions**

=> Subsidizing carbon storage and taxing (all) carbon emissions yields economically correct incentives, leading to

“Cleaner earns, polluter pays” –principle

- Subsidizing carbon storage is applied in New Zealand and Canada but **EU is behind**
- Unclear whether the immediate oxidation principle of IPCC (and applied in EU) represents a fruitful basis to create correct incentives in forestry and for utilizing wood

Challenge: Forests and climate change in EU -policy

- EU bioeconomy policy: a strong boost to use forests in energy production
- No guarantee of any balance between using forest for energy production and increasing/maintaining the storage of carbon and forest multi-functionality
- No guarantee of sustainability in long run
- Critical factors of the EU -policy setup
 - How are the **country specific forest reference levels** defined?
 - if reference levels are loose with respect to BAU, countries have incentives to transfer emissions from other sectors (like non-ETS) to forestry without any real decrease in *net* carbon emissions
 - countries should not benefit from high BAU carbon storage – only **additionality** matters

The worst case: countries use **public subsidies** for transferring emissions from non-ETS sector to LULUCF **without any real decrease in net emissions**

Challenge: Can economically profitable wood production account for climate change risks and multi-functionality?

Earlier it was thought that continuous cover forestry (CCF) is not economically viable in boreal forests

- Newer research suggests that it is viable in low and middle fertile sites
 - Good option also in drained peatlands where the water balance is critical
 - Carbon storage increases the social profitability of mixed species CCF
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- Climate change may increase insect, pathogen, storm, fire, etc risks => **increasing forest management alternatives is a *sensible risk-sharing policy***

*“Forest protection represents 30% of the
Climate Change solution, but only 3% of
Climate Finance goes towards it”*

*UN Environment Chief Erik Solheim at Global
Climate Action Summit GCAS02018*

