European Economic and Social Committee

Conference on 23. September 2009, Joensuu

Facing the challenge – change in forests and the forestry sector

Session: *Climate change - the role of forests*

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Based on the Opinion EESC 626/2009:

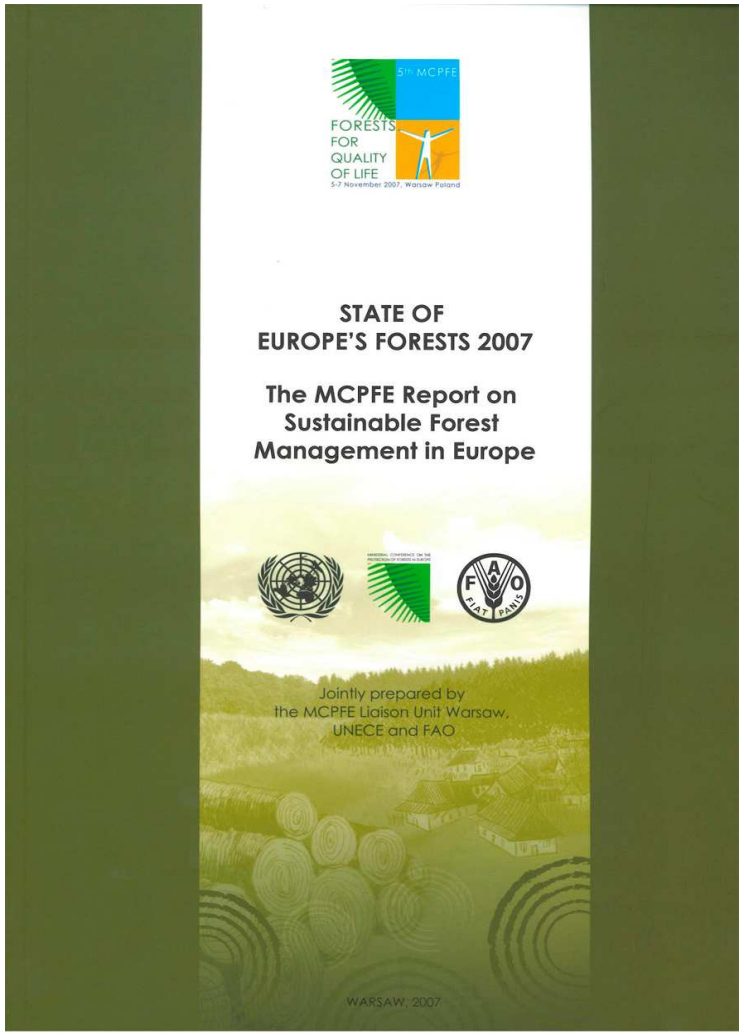
The role of forests and the forest-based sector in meeting the EU's climate commitments

Content:

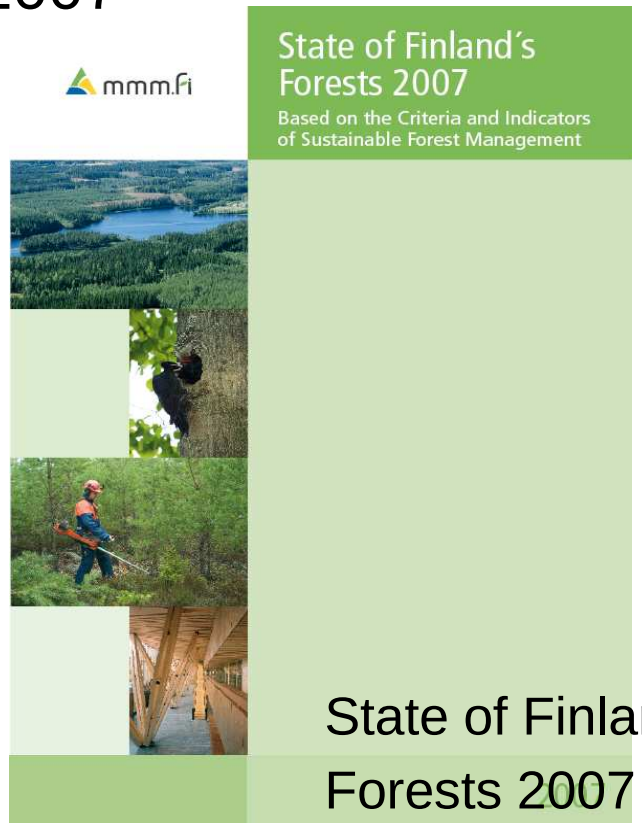
1. European forests and their use in 2009
2. Impact and Adaptation
3. Mitigation
4. Actions

1. Forest resources and their use in Europe

Long term data sources: MCPFE- comprehensive sustainability reports with ecological, economic and social aspects



5th MCPFE in Warsaw, November 2007



State of Finland's Forests 2007

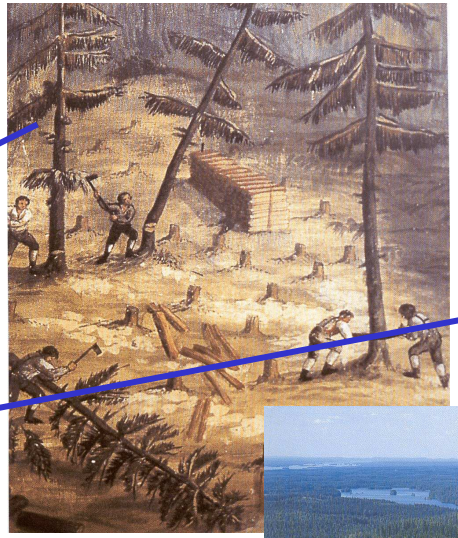
Specific characteristics of European forests

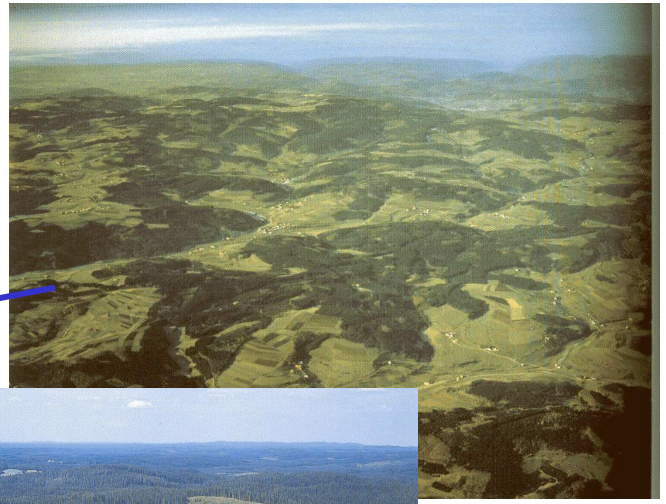
Three factors influence on the forest structures with clear difference in compare to other continents

I. Long historical forest use

II. Fragmentation

III. Private ownership

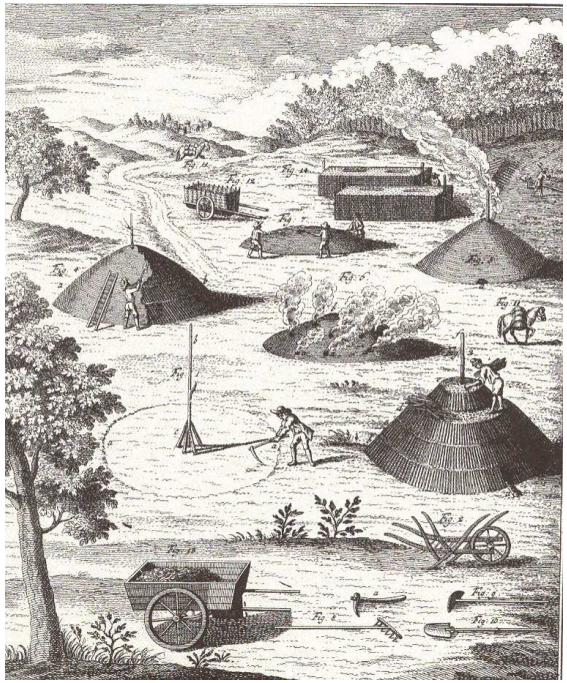




Multifunctionality as the main principle in Europe

The term "sustainable" was first related to sustainable yield of forest resources and probably first mentioned by the German

Hans Carl von Carlowitz in 1713




Mit GOtt!

SYLVICVLTVRA OECONOMICA,

Oder

Haußwirthliche Nachricht und Naturmäßige

Anweisung

Zur

Wilden Baum-Zucht,

Nebst

Gründlicher Darstellung/

Wie zu förderst durch Göttliches Benedeyen dem allenthalben und insgemein einreissenden

Grossen Holtz-Mangel/

Vermittelst Säe- Pflantz- und Versetzung vielerhand Bäume zu prospiciren/

Alles zu nothdürfftiger Versorgung des Hauß- Bau- Brau- Berg- und Schmeltz-Wesens/

Worbey zugleich eine gründliche Nachricht von den in Churfl. Sächß. Landen

Gefundenen Turff

Dessen Natürliche Beschaffenheit/ grossen Nutzen/ Gebrauch und nützlichen Verkohlung,

Von

Hannß Carl von Carlowitz/

Königl. Pohl. und Churfl. Sächß. Cammer-Rath und Ober-Berg-Hauptmann.

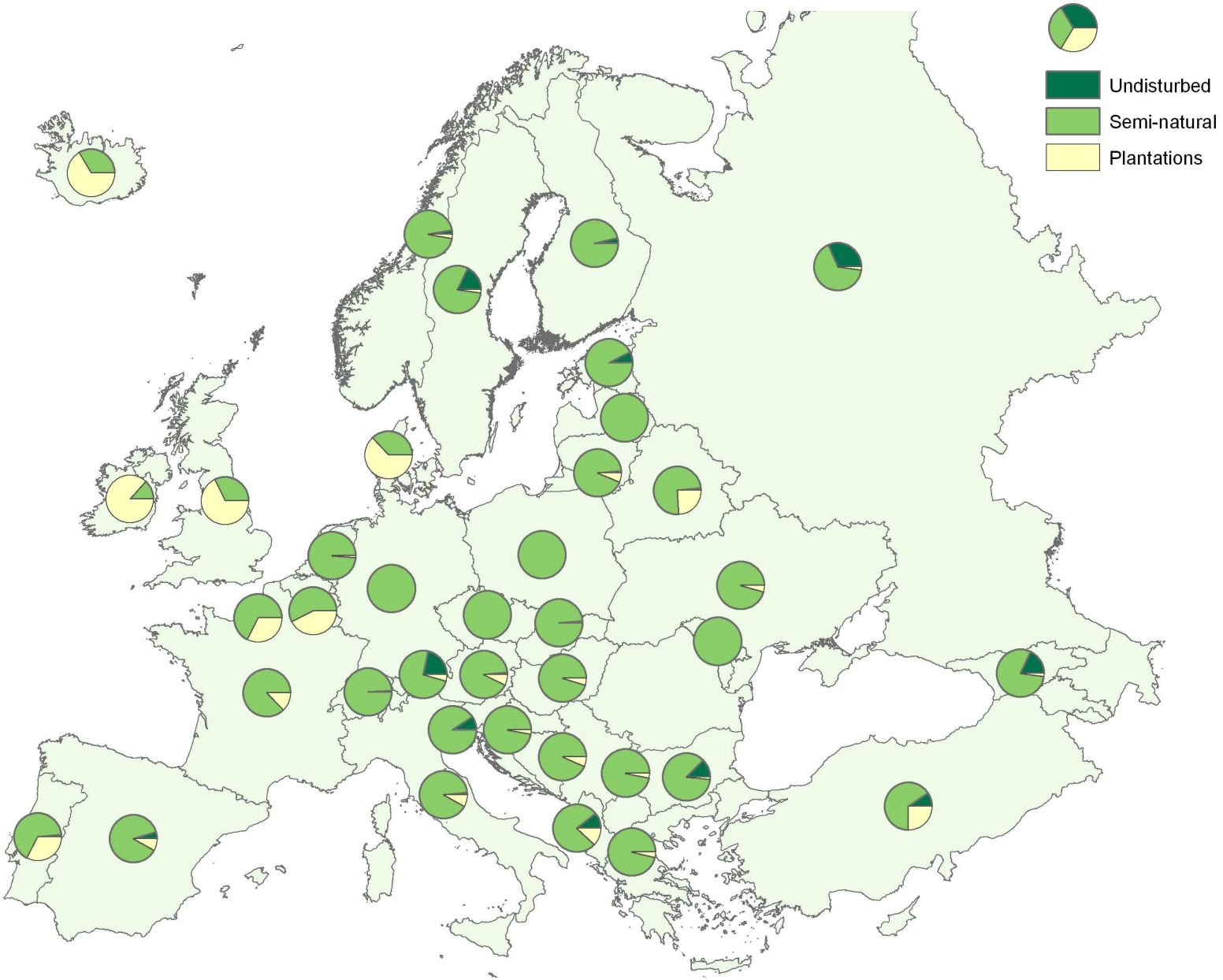
Mit Königl. Pohl. und Churfürstl. Sächß. allergnädigsten PRIVILEGIO.

LEIPZIG/

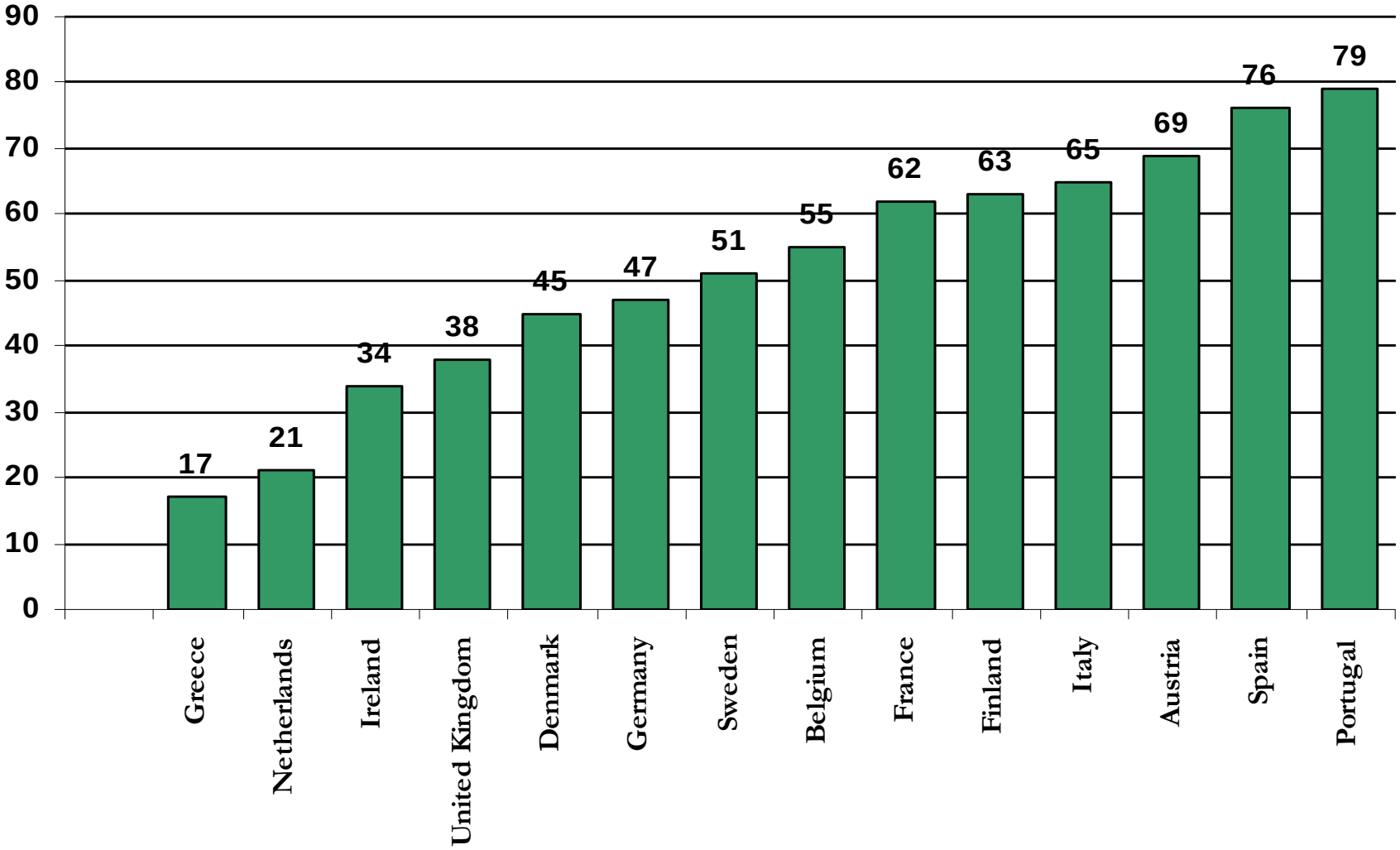
verlegts Johann Friedrich Braun 1713.

Uncontrolled use and overexploitation of forest in Europe led to the establishment of organized forestry systems in 1700

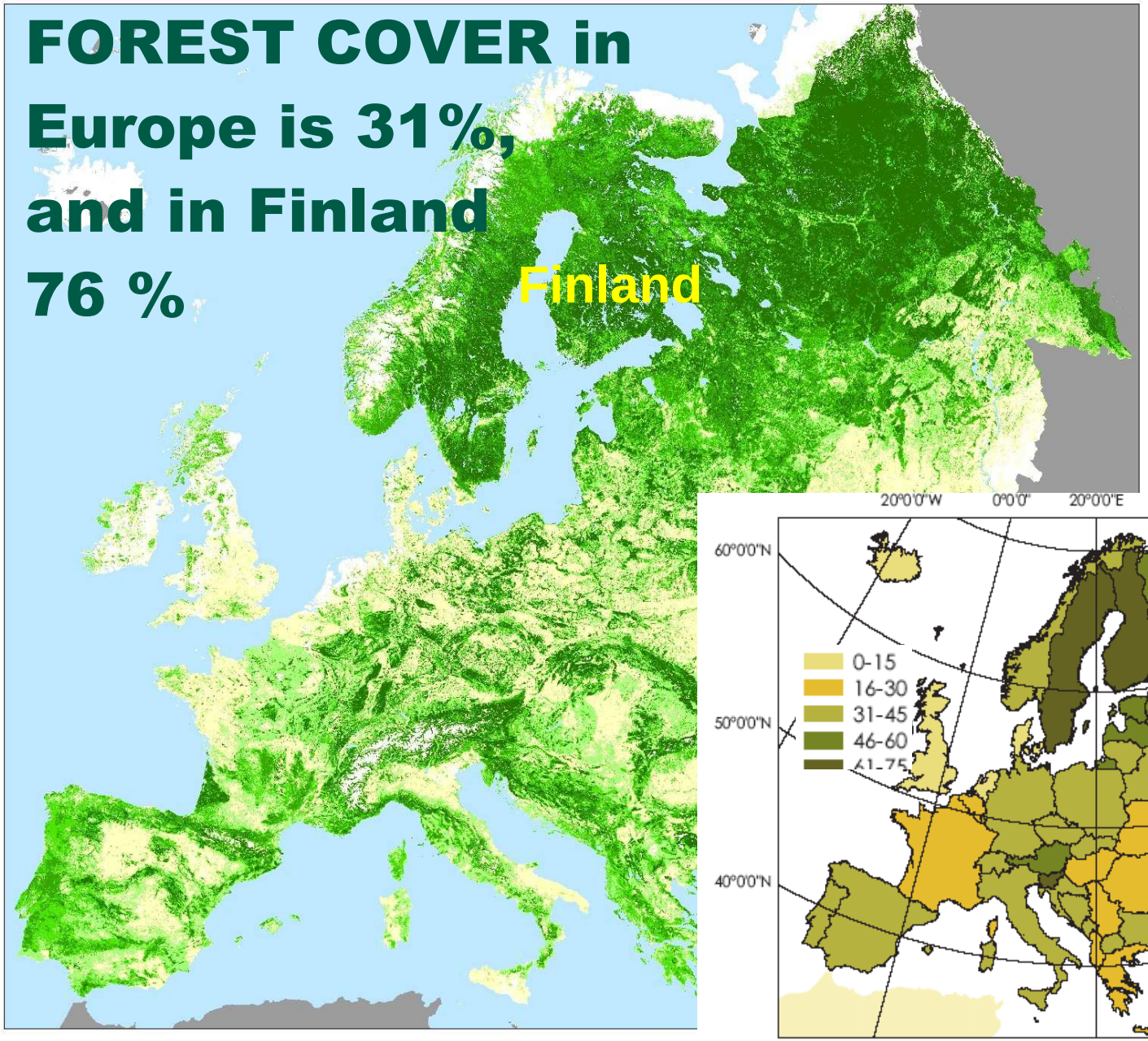
Most forests (87 %) in Europe are classified as semi-natural



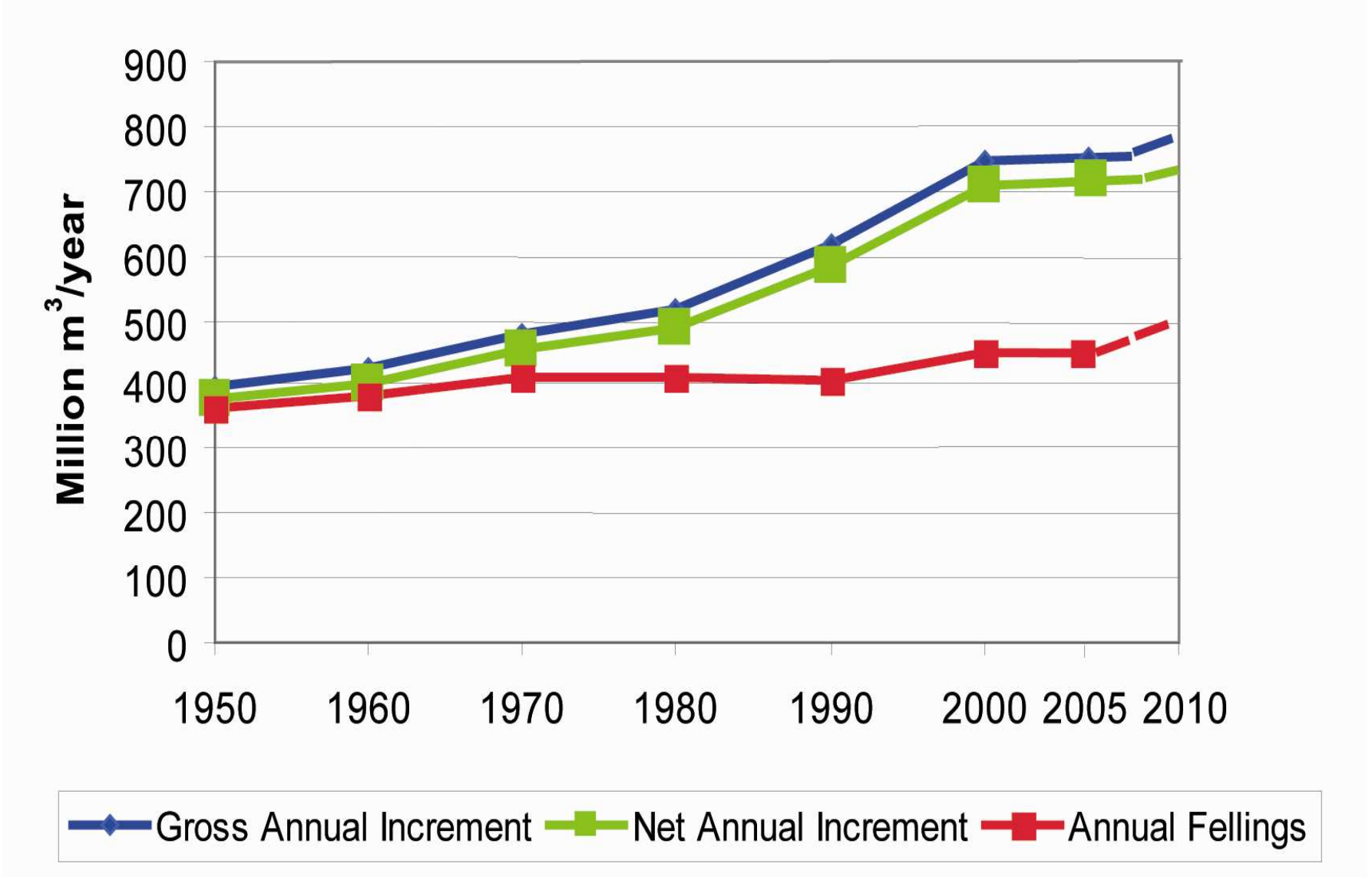
Non-industrial, private forest ownership in Europe (%)
In EU-27 60% privately owned, 40 % publicly owned



FOREST COVER in Europe is 31%, and in Finland 76 %

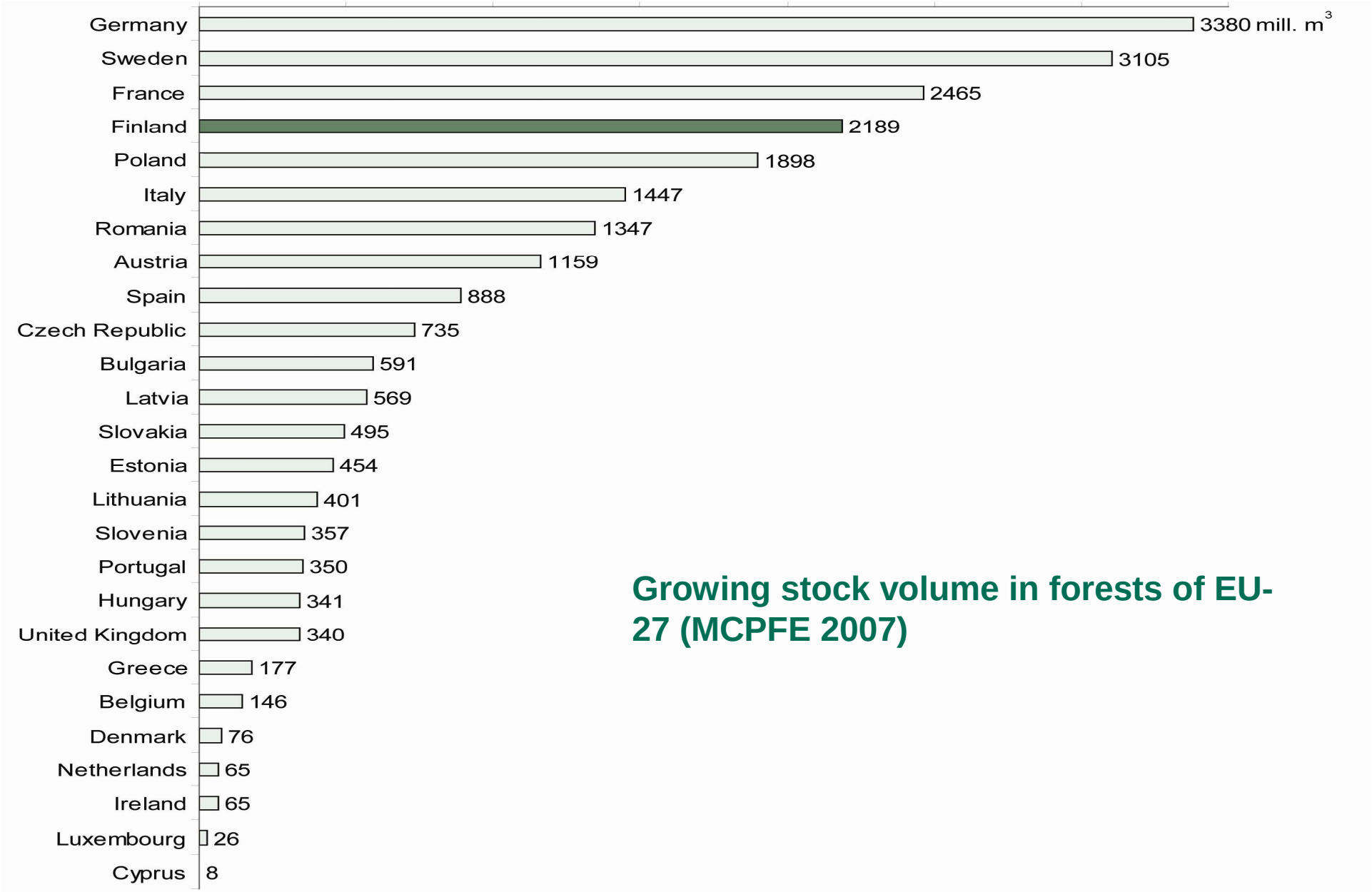


Annual increment and fellings of wood resources in Europe for 1950–2010



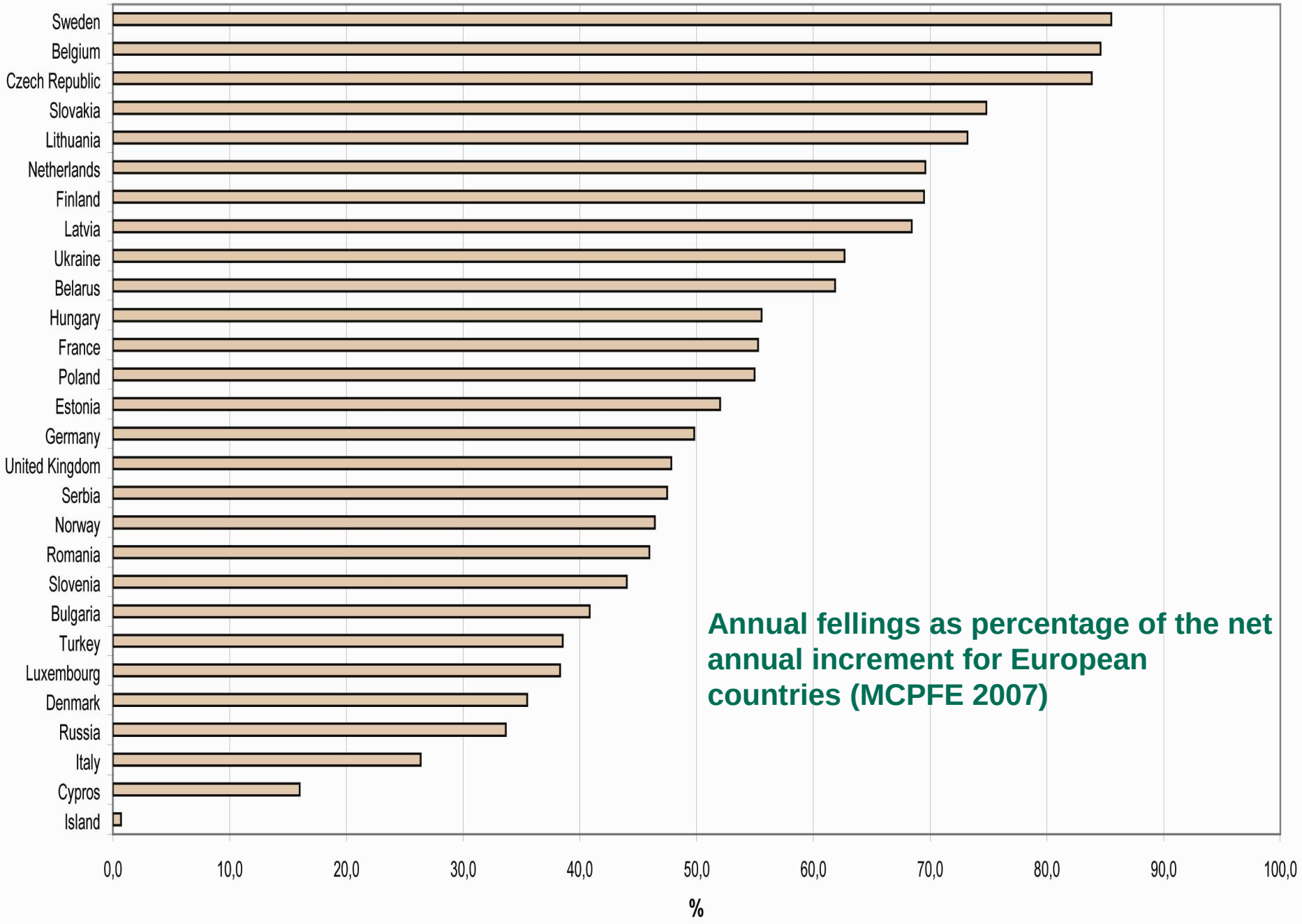
Data for 1950–1980: Kuusela, K. 1994. Forest Resources in Europe 1950–1990. European Forest Institute. Research Report 1,154 p.
Data for 1990–2005: MCPFE 2007. State of Europe's Forests 2007, 247 p. Gross annual increment estimated.
Data for 2010 estimated.

Wood resources in Europe 2007



Growing stock volume in forests of EU-27 (MCPFE 2007)

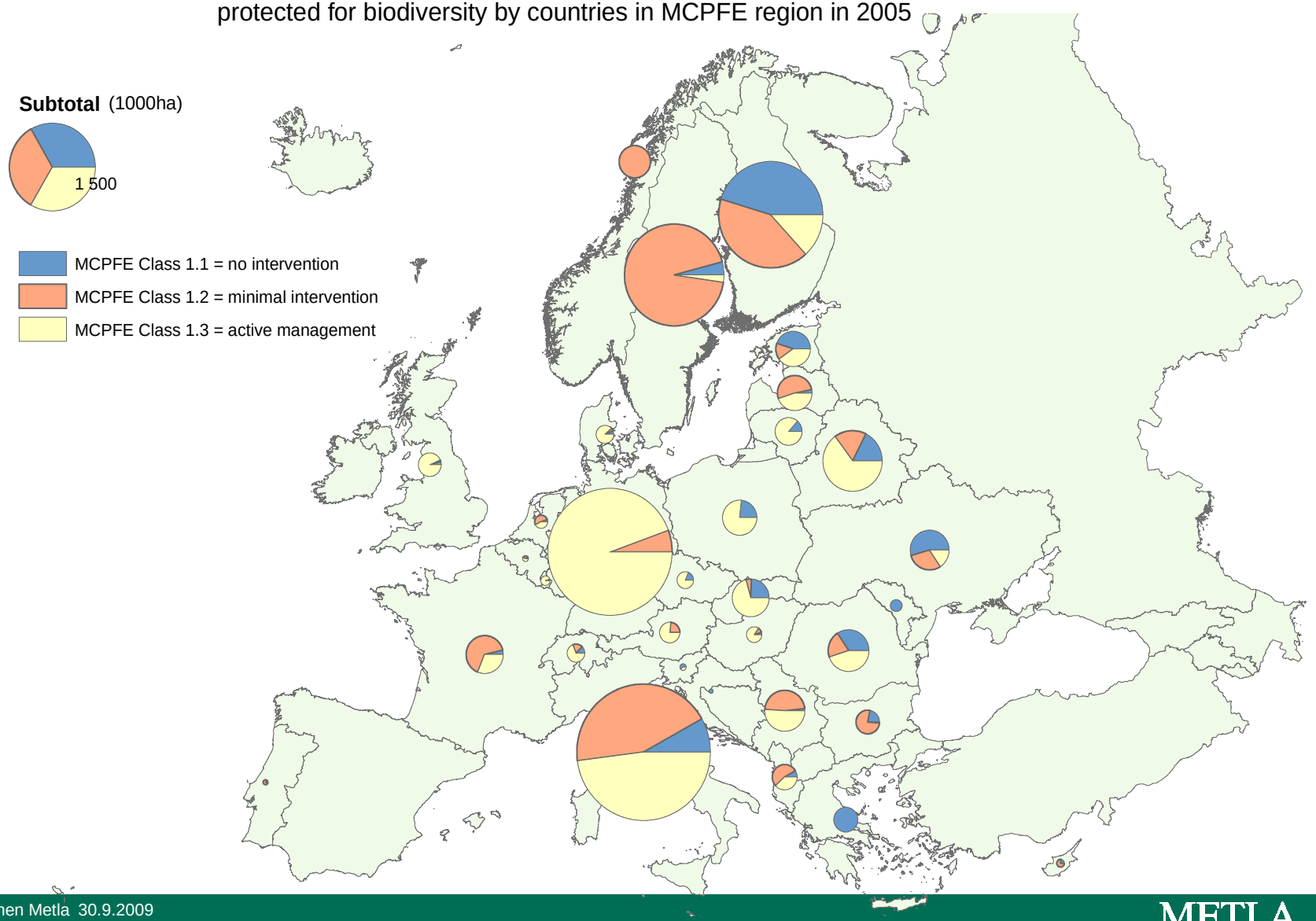
Forest utilization rate in Europe is about 50%



Annual fellings as percentage of the net annual increment for European countries (MCPFE 2007)

8,7 % of forest area is protected for biodiversity in Europe, in addition 11 % for landscape protection, in Total 20 %

Share of the MCPFE Classes 1.1-1.3 of the total forest and other wooded land area protected for biodiversity by countries in MCPFE region in 2005



Conclusion one :

The role of forest growth in mitigation to climate change is really important also in European scale

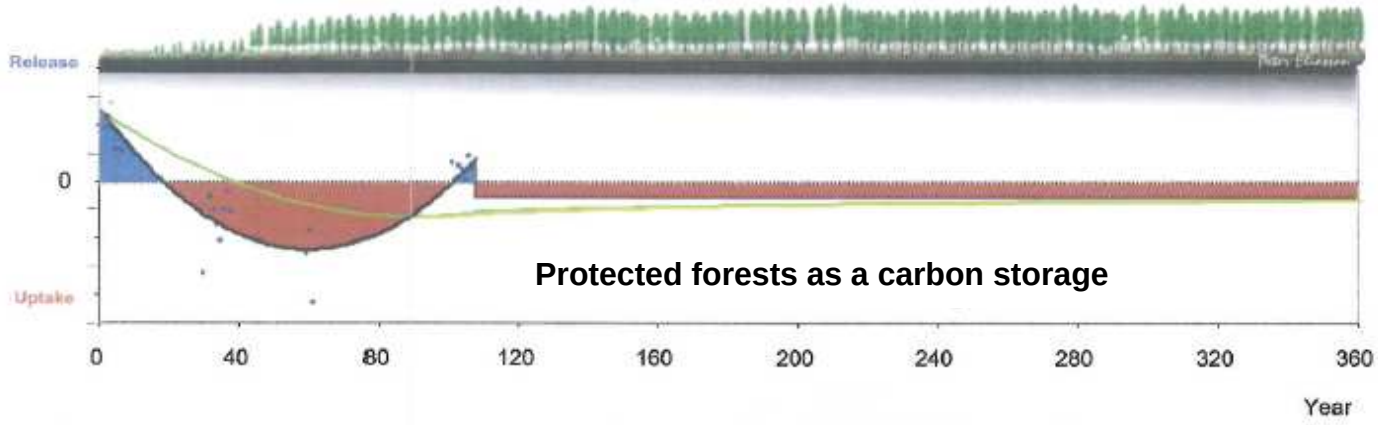
- For several decades now, European forests have been functioning as carbon sinks because their annual growth has exceeded fellings, thus helping to slow the build-up of carbon dioxide in the atmosphere.
- **Forests** cover 31% of Europe's land area and it is estimated that they **sequester approx. 7- 10%** of Europe's annual carbon dioxide emissions[1].

[1] Nabuurs, G.J. et al. 2003. Temporal evolution of the European Forest sector carbon sink 1950-1999. Global Change Biology 9.

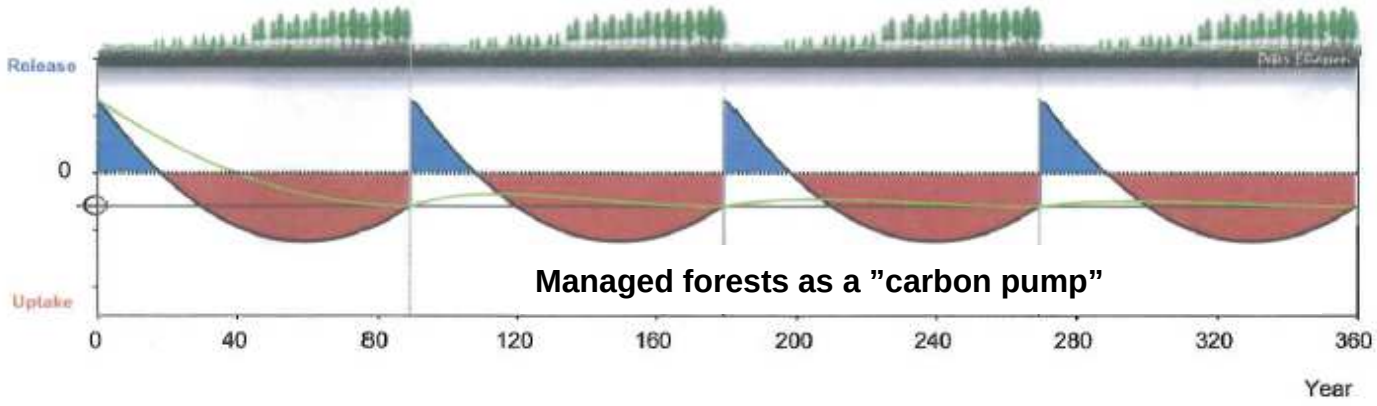
Conclusion two: Carbon sequestration effectiveness

The protected forests are in their end stage pure carbon storages. The increasing of protection reduce the area, which could act as a carbon ”pump” from the air into the forest and forest products

The carbon flow from the air into the forests can constantly only be quaranteed by forest management and use of wood



Protected forests as a carbon storage



Managed forests as a ”carbon pump”

Protected

Managed

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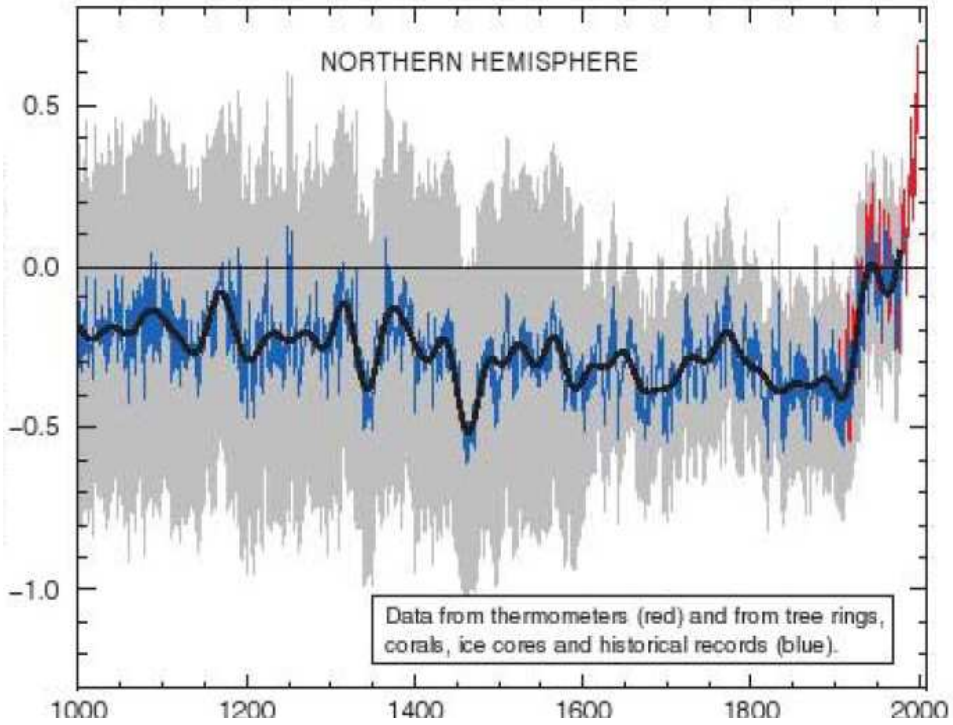
2. Impact and Adaptation

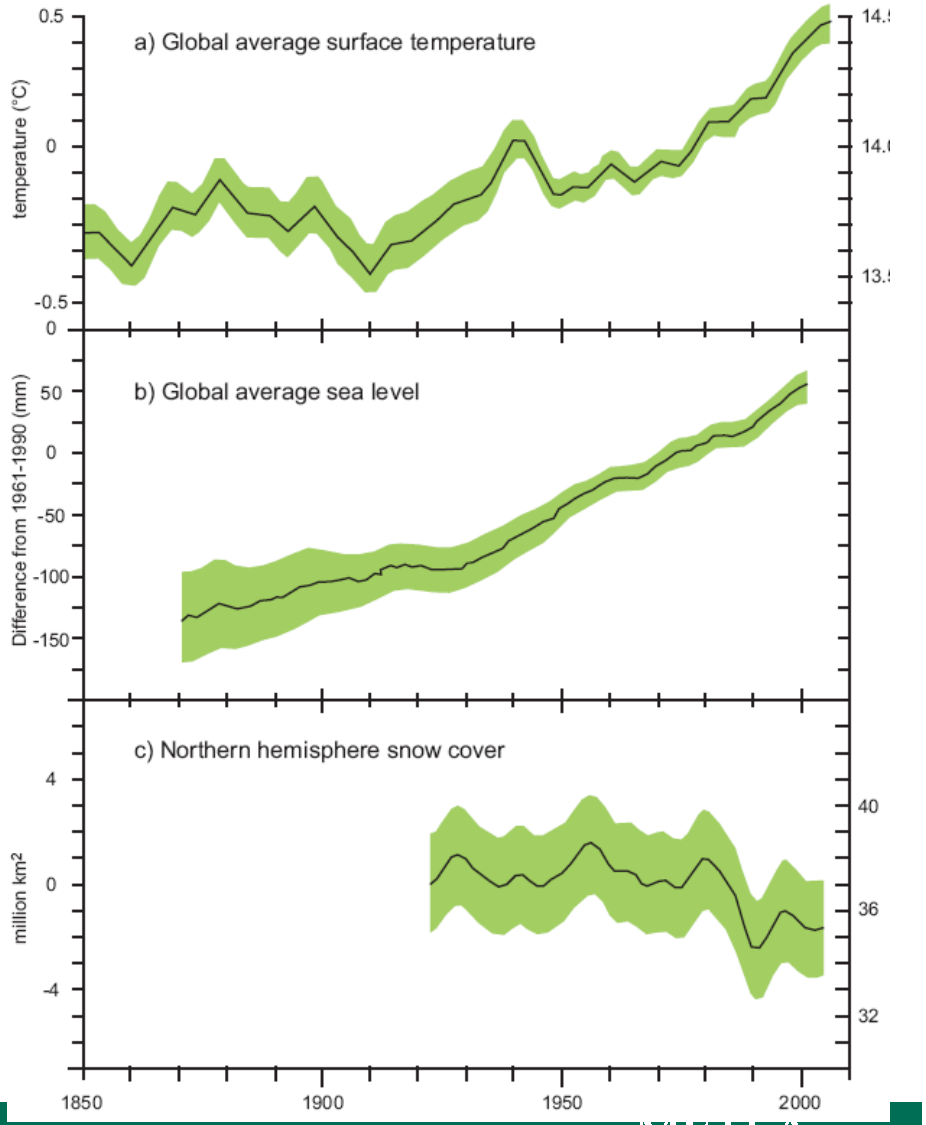
The goal of EU climate policy is

to curtail global warming so that the average increase in global temperature does not exceed 20th century level by more than 2℃.

Evidence of temperature increase



Annual temperature,
Sea Level,
Snow cover



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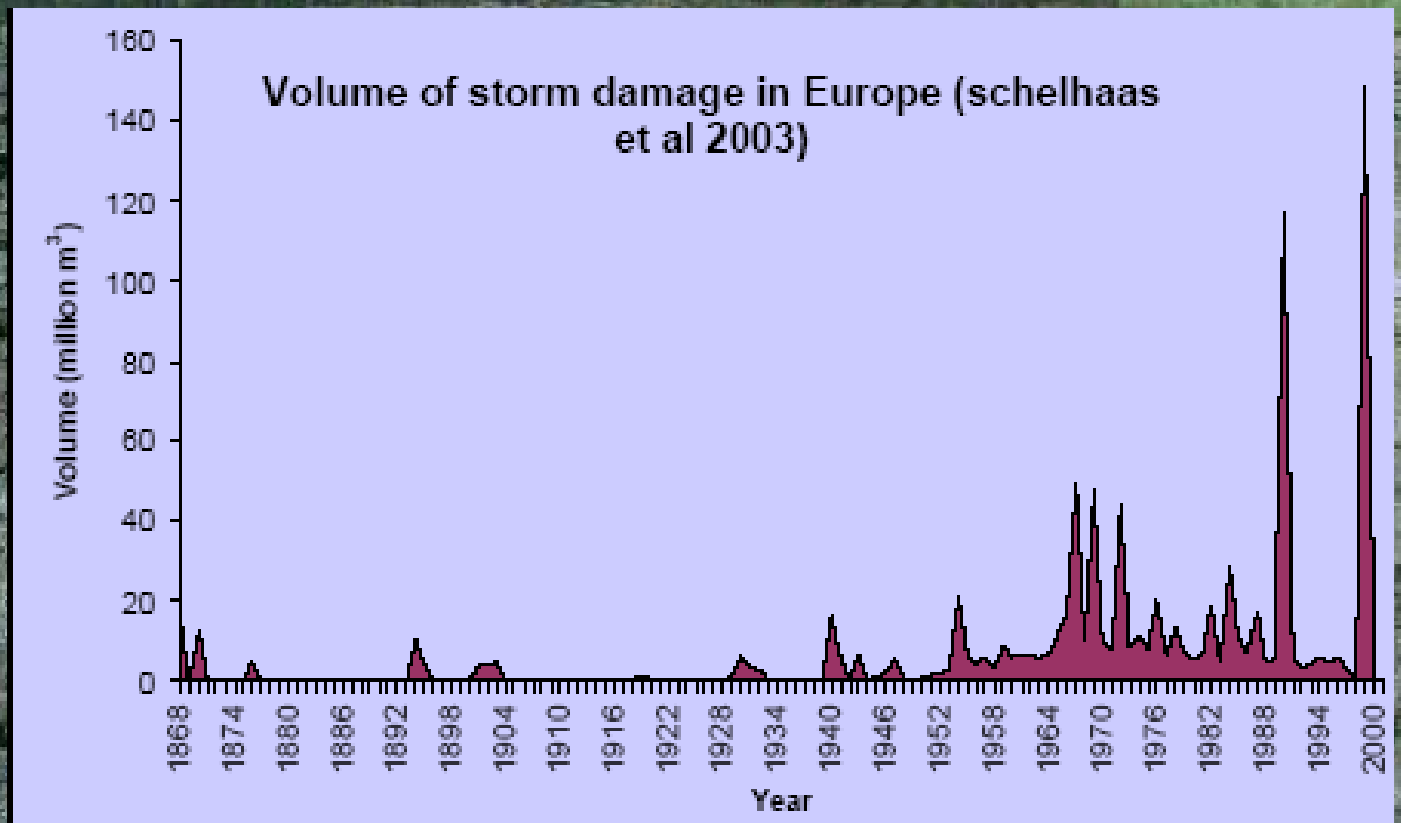
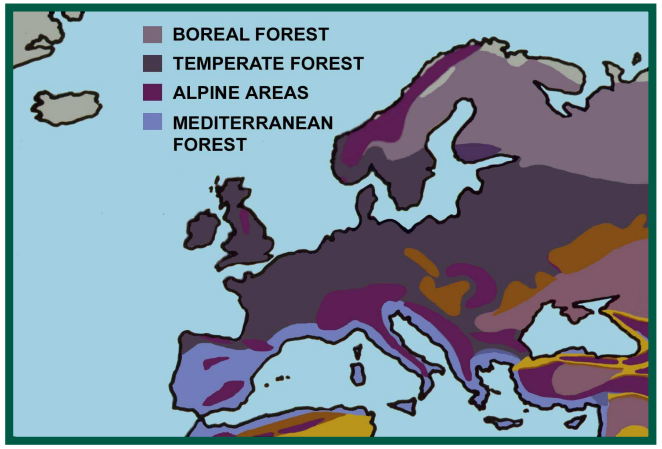
Extreme weather phenomena such as drought, forest fires, storms or snow damage: frequency increased



2. The impact of climate change on forests (Regional differences)



Regional differences must be recognized:

- in the **Mediterranean region** it is likely that dry, hot periods will increase, resulting in a shortage of fresh water and an increased risk of forest fires and desertification;
- in **central Europe** the growing season will become longer; forest growth may increase; the proportion of broadleaved trees is likely to grow; rainfall amounts may decline and drought occur; climatic extremes, notably storm damage, will become more prevalent;
- in the **northern coniferous zone** the growing season is likely to lengthen; forest growth may increase; wind damages will become more prevalent; and in the temperate zone insect pests are expected to spread northwards, possible causing damage on a massive scale.

climatic extremes, fire, storm in the south, insect pest in the north

2. Adaptation: The role of forest management in adapting to climate change

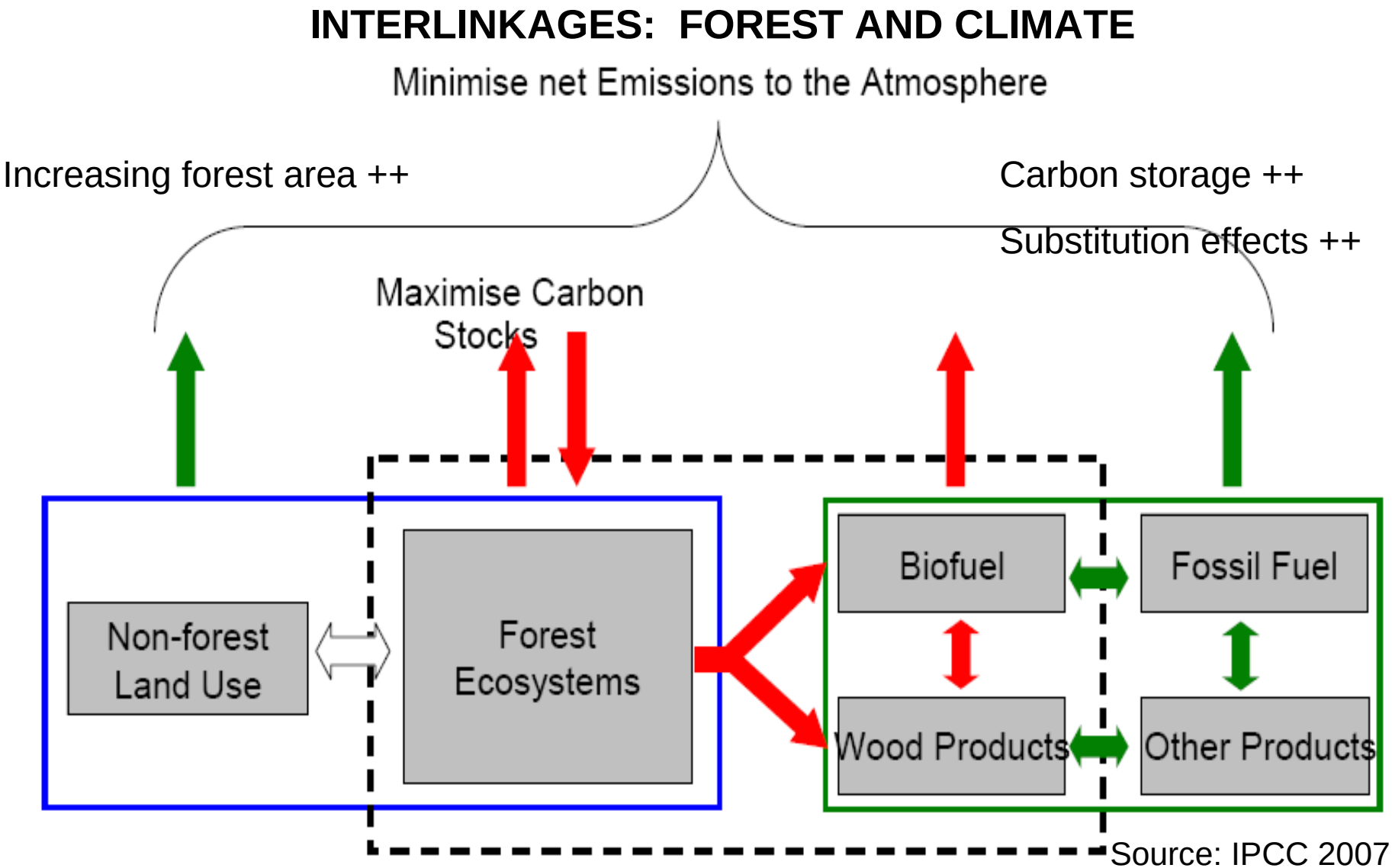
- **Good forest management** is the main way of improving the ability of forests to adapt to climate change **(tree species, regeneration, native tree species, mixed forests, conversion, restoration, biodiversity, alien species, damaging plant pests)**

- **Forest management contingency** plans for the prevention of forest damage caused by extreme phenomena

- **Areas that are particularly at risk** from such extreme weather conditions must **be mapped** out in advance.

- **Awareness of the importance of forest management** in adapting to climate change must be increased among members of the public, forest owners and those responsible for forest management.

3. Mitigation: The role of forests in curbing the climate change

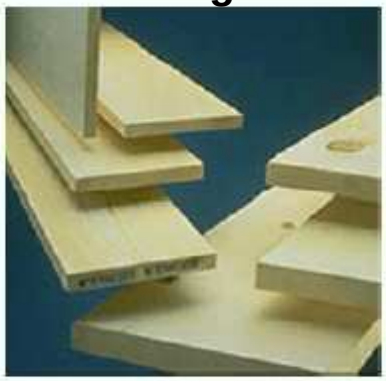


Use of wood for construction (life-cycle, standards)

Wood is a carbon storage, and its use means huge carbon emission savings in construction

Sustainably managed forest

Maintains carbon stock



Increment harvested and manufactured into wood products

Percentage of wood product remain in use for 100 years = permanent additional carbon storage

Conclusion: Use of wood for construction and other wood products

- Member State governments should incorporate "green construction" timber materials into timber supply policy and apply forest certification requirements that are compatible with the international concept of sustainability

- The more widespread construction of wooden buildings worldwide and the use of wood in construction are limited by the lack of uniform standards, rules and certification criteria.

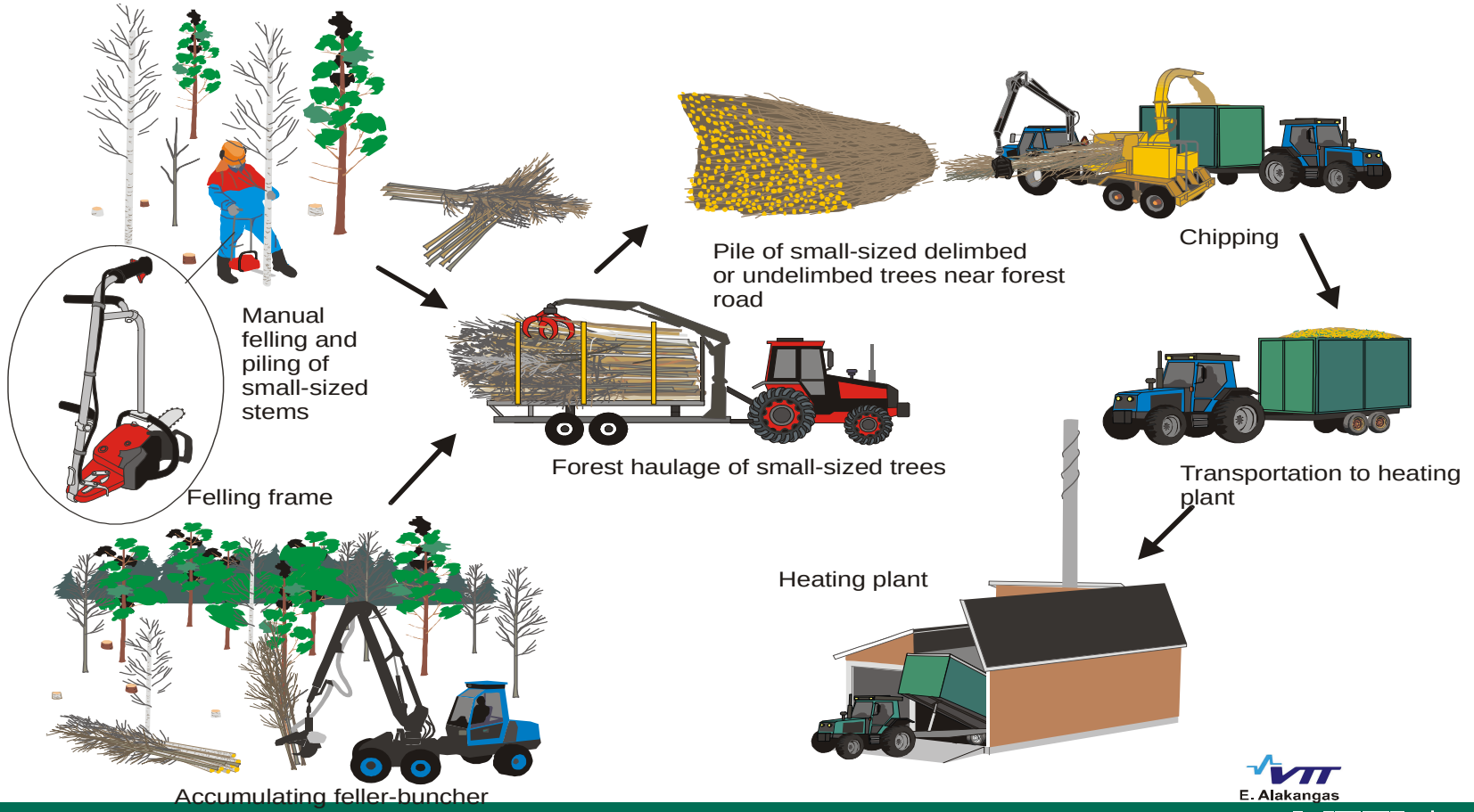
- The construction sector should have at its disposal analyses of the life-cycle and greenhouse gas emissions of products, based on scientific calculations, so that it could compare various materials on an impartial basis.

Wood-based energy (heating, electricity, biofuels)

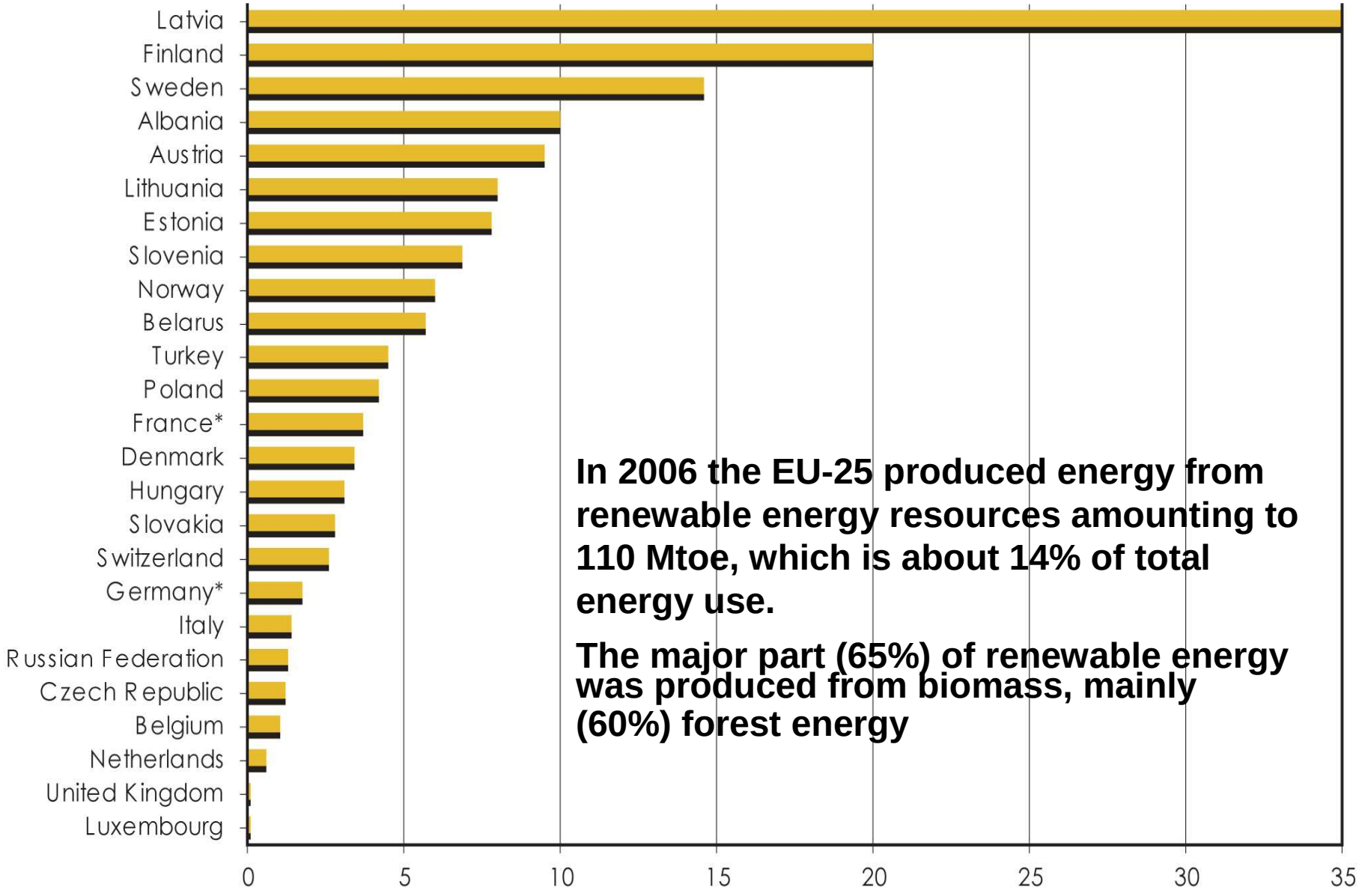
Considerably increase of renewable bioenergy (EU RED Directive) is expected

Bioenergy from wooden biomass

- resources, availability, harvesting, transportation and logistics



Share of wood-based energy in Europe



In 2006 the EU-25 produced energy from renewable energy resources amounting to 110 Mtoe, which is about 14% of total energy use.

The major part (65%) of renewable energy was produced from biomass, mainly (60%) forest energy

Conclusions: Wood-based energy

- Forest biomass is the most important immediately accessible renewable bioenergy resource in Europe

- End-use support, i.e. feed-in tariffs for the production of "green energy", is an important instrument for developing various kinds of bioenergy strategies at both local and regional level

- The forest biomass harvesting potential of Europe's forests is 100-200 million cubic metres a year, taking into consideration that harvesting does not pose a threat to the environment, forest biodiversity and conservation areas. At present, the amount of forest biomass harvested is estimated to be some 10–15% of the harvesting potential.

4. Proposed actions/Final conclusions

- The use of sustainably produced wood should be promoted in different ways and for different purposes. Forest resources in Europe allow substantial increase of the use of wood

- Rules and standards for sustainably produced forest biomass (**EU RES Directive) and for Green Public Procurement (GPP)** are important and should be linked to the Europe-wide MCPFE sustainability criteria in order to avoid unnecessary work and duplication

- Amendments **(inclusion Harvested Wood Products and REDD instrument in carbon balance calculations)** for greenhouse gas reporting in the post-Kyoto period**,** in Copenhagen 2009 are necessary

- Support of research, the mapping of risk areas susceptible to the effects of climate change and the development of systems for monitoring the condition of forests and to ensure funding for these

Wooden Metla House in Joensuu

Thank you for your attention

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