

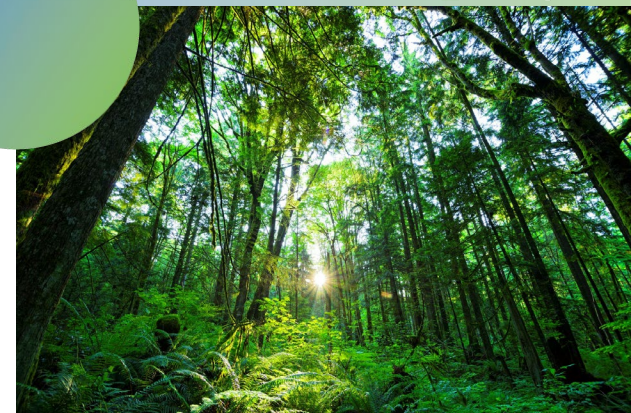


Update on the recent developments under the Air Convention:

- **Effects of air pollution on forests (ICP Forests)**
- **Adoption of guidance documents related to wood burning**

Krzysztof Olendrzynski and Alina Novikova
Secretariat of the UNECE Convention on the Long-range
Transboundary Air Pollution

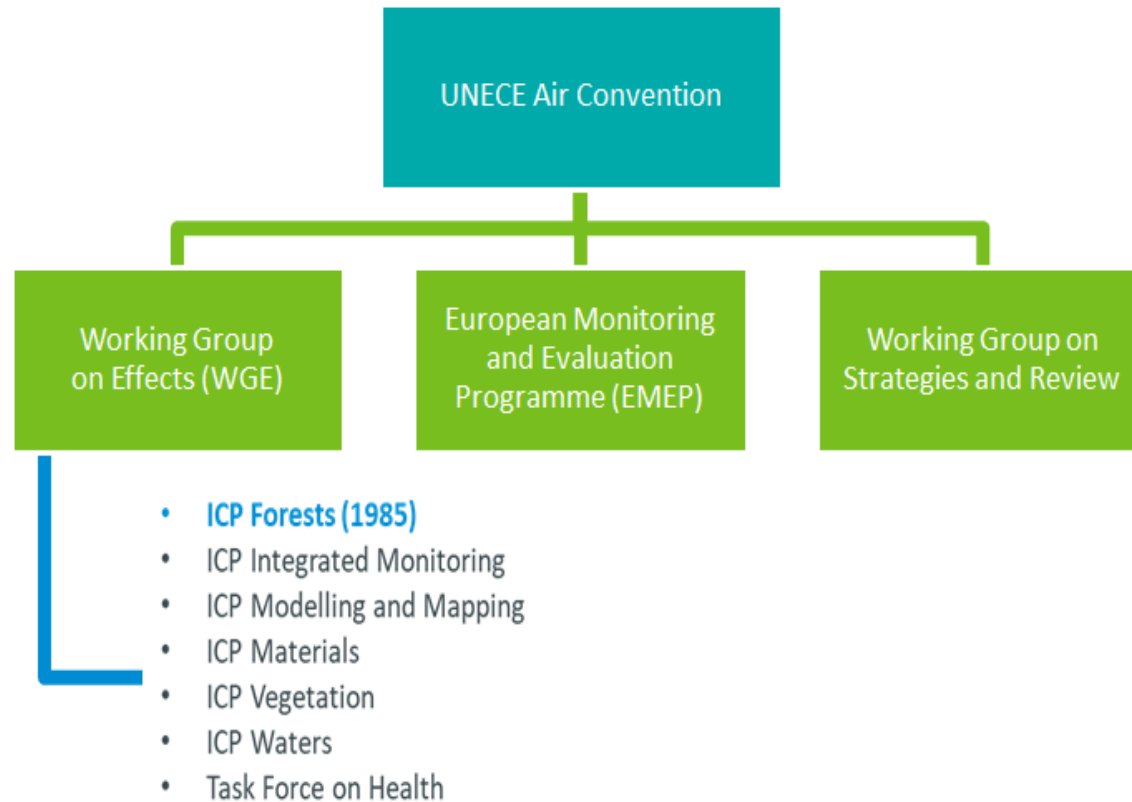
Joint Working Party on Forest Statistics, Economics
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UNECE Convention on Long-Range Transboundary Air Pollution (Air Convention)

- Signed in 1979, entry into force in 1983
- First international treaty to deal with air pollution on a broad regional basis
- 51 Parties in the UNECE region
- Framework Convention, has been extended by 8 protocols covering a number of pollutants
- Emission targets agreed for the following pollutants: sulphur, nitrogen oxides, volatile organic compounds, persistent organic pollutants, heavy metals, and particulate matter, including black carbon
- Results: Emission reductions by 40 to 80 per cent since 1990 in Europe (sulphur: 70%, nitrogen oxides: 40%)
- More info: <http://www.unece.org/env/lrtap/welcome.html>

Long-term monitoring of the effects of anthropogenic and natural stressors on forest ecosystems under the Air Convention – Kai Schwärzel



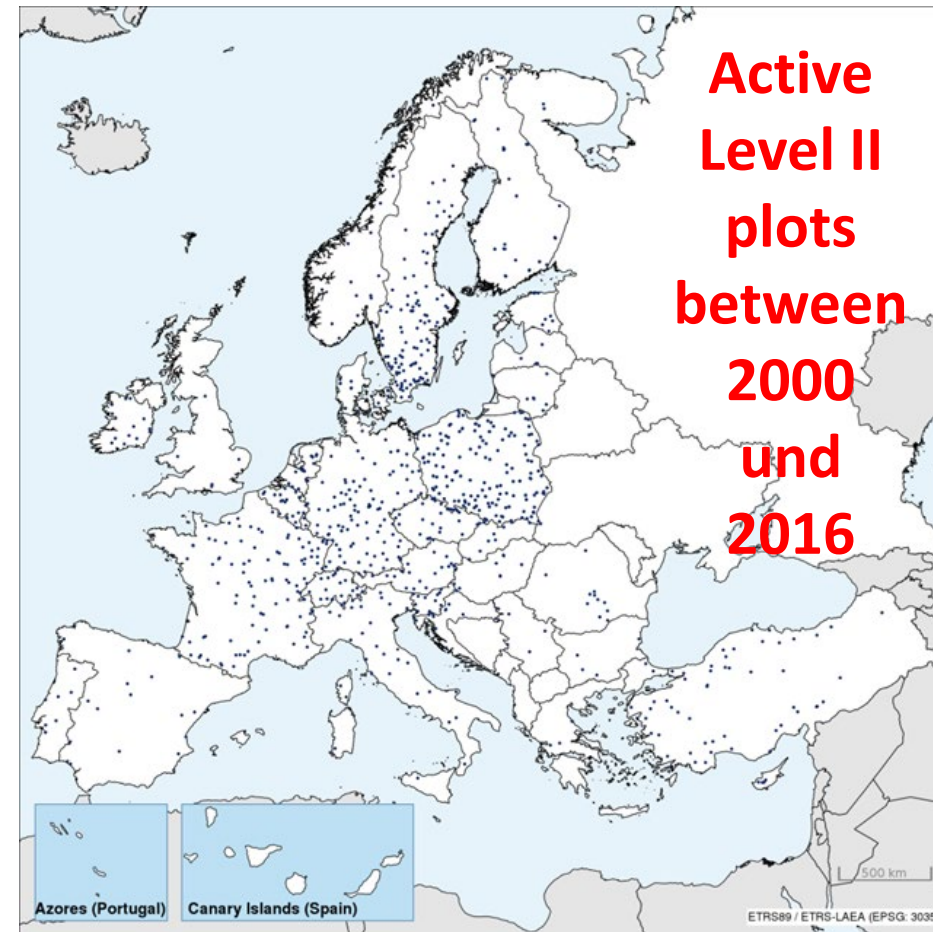
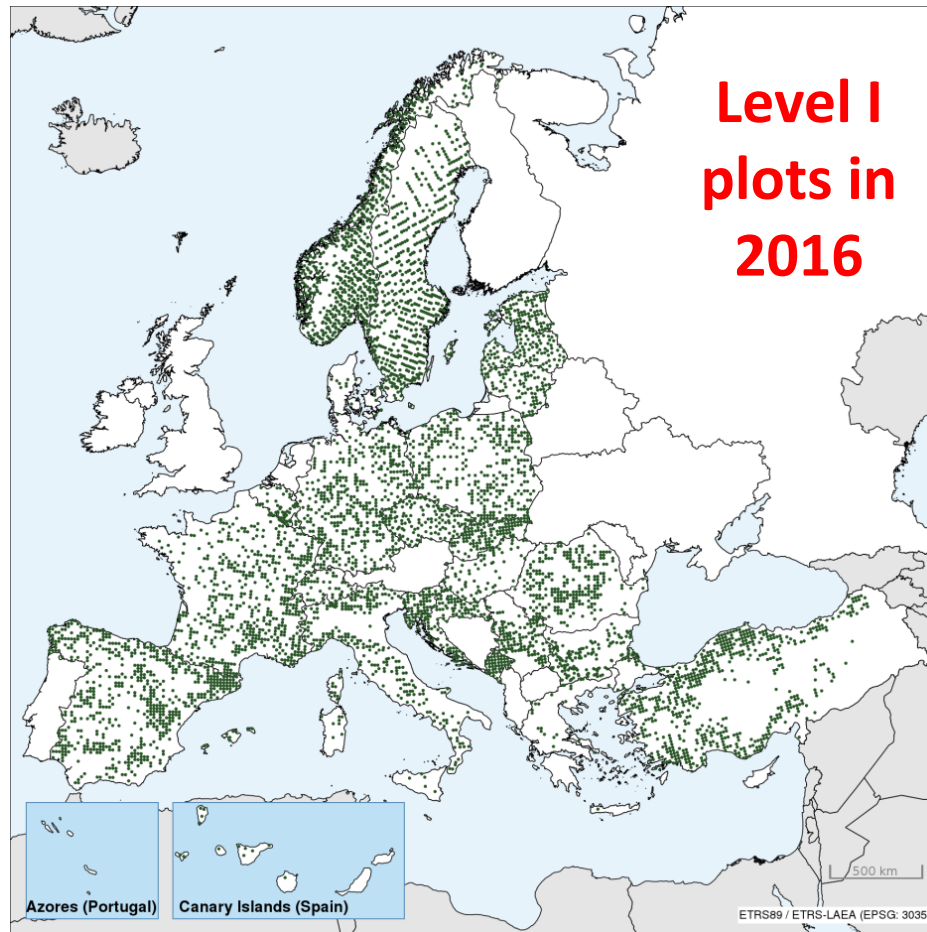
ICP Forests - International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests

- Established in 1985 with a clear political mission in response to the extensive forest damage observed in Europe
- Currently 42 participating countries, implementing and funding the monitoring
- Regular provision of information on temporal changes in the condition of European forests in relation to anthropogenic and natural stress factors (based on the Level I network).
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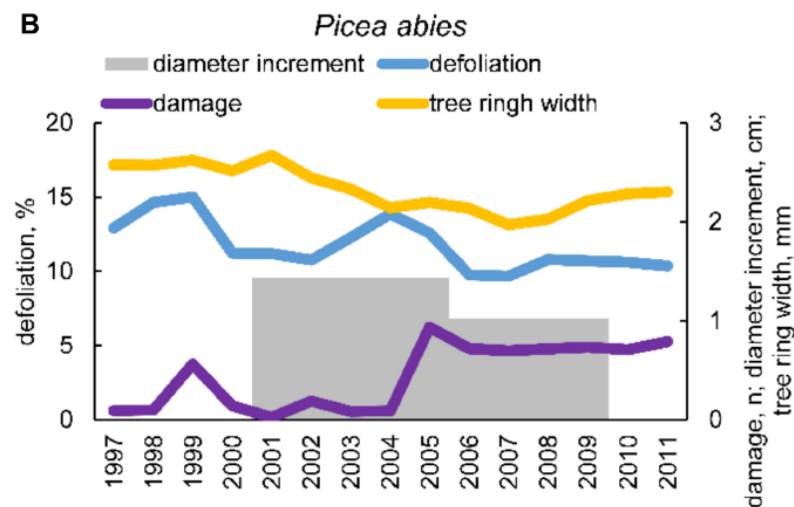
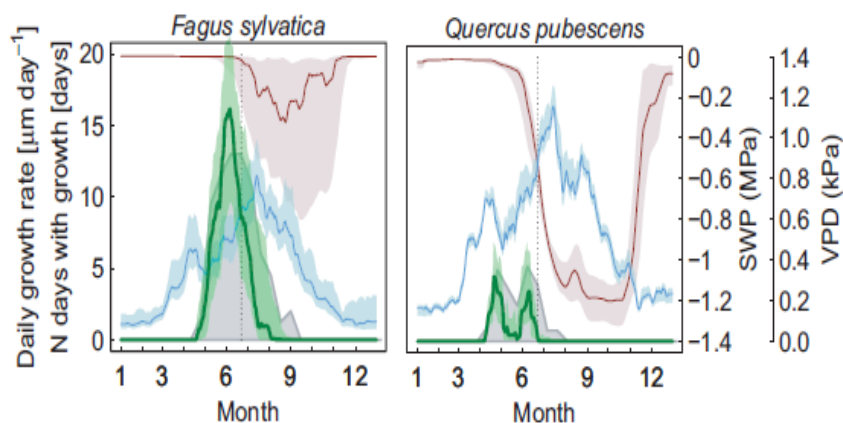
ICP Forests

Spatial distribution of Level I and Level II plots



ICP Forests activities that are linked to wood and forests

- ICP Forests identifies
 - drivers of trees and forest growth, especially in relation to abiotic stressors such as air pollution and climate change
 - relationships between trees and forest health, diversity, and growth



from Ferretti et al. (2021) in Front. For. Global Changes 4

How does ICP Forests cooperate with the forest and wood sector?



- Letter of Intent between the Wood Buffalo Environmental Association (WBEA) and ICP Forests
- Exchange at the institutional level: FAO, Forest Europe
- Contribution to the Report State of Europe's Forests 2020 (latest one)
- Organization of policy events in cooperation with Forest Europe (see next slide)

How does ICP Forests cooperate with the forest and wood sector?

Joint webinar of ICP Forests and FOREST EUROPE

Title: Monitoring and Assessing Forest Health

Date: 21st March 2022 (International Day of Forests)

<https://foresteurope.org/event/webinar-monitoring-and-assessing-forest-health/>



UNECE



Food and Agriculture Organization
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How could the cooperation between ICP Forests and the wood sector be improved?



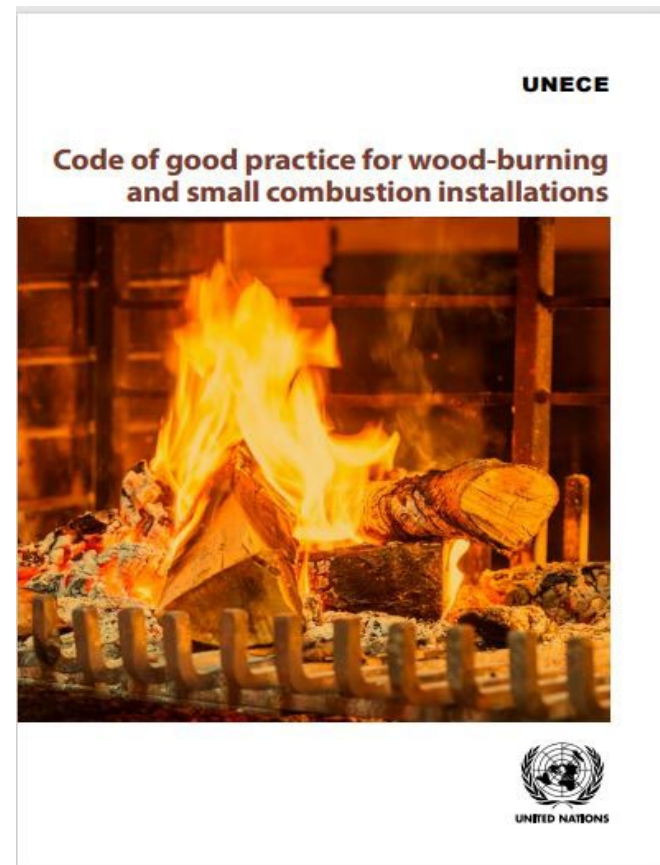
A closer cooperation might be established in connection with SDGs; ICP Forests may provide information to the impact of human-induced stressors on forests.



ICP Forests reports annually on the condition of European forests.

Code of good practice for wood-burning and small combustion installations

- Domestic wood heating: major source of particulate matter (including black carbon) and organic pollutants (dioxins/furans, PAHs and B(a)P) in the UNECE region
- Adopted by Parties to the UNECE Air Convention in December 2019
- Developed by the Task Force on Techno-economic Issues (co-led by France and Italy)
- Covers good practices and BATs for domestic wood heating installations (thermal inputs of <100 kW)

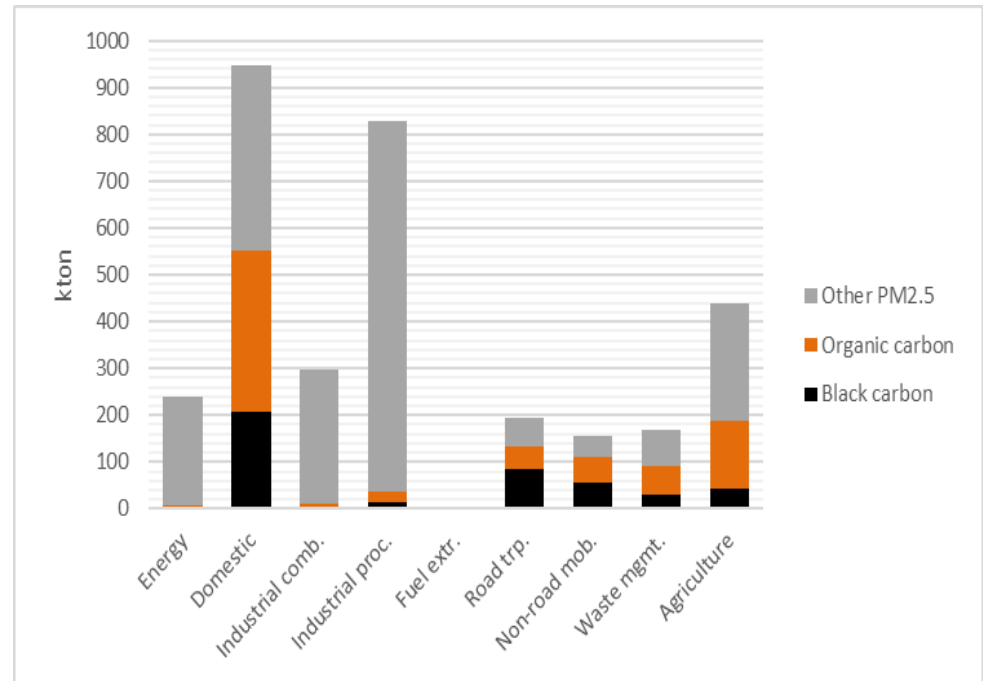


Code of good practice for wood-burning and small combustion installations

- Recommendations: selection of installation and firewood, fuel loading, lighting and extinguishing the fire, combustion and maintenance
- Most of recommendations are of low or even no cost and can be applied easily
- Large applicability throughout the region (a special section on countries in Eastern Europe, the Caucasus and Central Asia)
- Can be used as a reference for the development of awareness-raising materials for end-users at the national and local levels
- Implemented on voluntary basis, has a potential to produce significant emission reductions from the sector

Prioritizing reductions of particulate matter from sources that are also significant sources of black carbon – analysis and guidance

- [The guidance document](#) adopted by Parties to the Air Convention in December 2021
- Developed by the Task Force on Integrated Assessment Modelling in cooperation with the Task Force on Techno-economic Issues
- As not all PM_{2.5} sources are sources of black carbon, the document helps guide actions to reduce emissions of PM_{2.5} that are also effective in reducing emissions of black carbon



Modelled emissions of fine particulate matter/black carbon/organic carbon in the UNECE region in 2015.
Source: Klimont, "Global anthropogenic emissions"

Prioritizing reductions of particulate matter from sources that are also significant sources of black carbon – analysis and guidance

- Based on reported emission scenarios available in the GAINS model and aggregated for 3 regions:
 1. Belarus, Republic of Moldova, Russian Federation (European part only) and Ukraine;
 2. Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia and Turkey, as well as Kosovo*;
 3. EU, Norway, Switzerland, and UK
- Scenarios: baseline (2020-2030) and potential emission reductions by 2030 (maximum technically feasible reduction)

* in the context of Security Council resolution 1244

Priority sectors (when seeking reductions of PM and BC beyond current legislation)

- **1st region:** (1) agricultural waste burning; (2) wood-fuelled heating stoves; (3) coke production in coke ovens; (4) flaring in refineries; and (5) gas pipeline compressors;
- **2nd region:** (1) wood-fuelled heating stoves; (2) agricultural waste burning; (3) brown coal-fuelled heating stoves; (4) hard coal-fuelled heating stoves; and (5) diesel-fuelled vehicles in agriculture;
- **3rd region:** (1) wood-fuelled heating stoves; (2) agricultural waste burning; (3) wood-fuelled single house boilers; (4) hard coal-fuelled heating stoves; and (5) meat frying, barbecues in households



THANK YOU

Krzysztof Olendrzynski and Alina Novikova
Secretariat of the UNECE Convention on the Long-range
Transboundary Air Pollution
UNECE
2 June 2022, Geneva



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