NORTHERN FORESTS AND CLIMATE CHANGE

NGO CONTRIBUTION TO
45TH JOINT ECE/FAO WORKING PARTY DISCUSSION ON
FORESTS AND CLIMATE CHANGE

GENEVA, 23 MAY 2024
• NGO coalition: increase visibility of Northern Forests in international climate debate;

• Based on common demands:
  • Limit temperature rise to 1.5°C;
  • Protect and restore forests to deliver full range of ecosystem services;
  • Protect at least 30% of forests, incl. all primary forests, in every country;
  • Shift to ecosystem/close-to-nature management models.
Includes boreal and temperate forests of North America and Europe, including Russia.

Source: Adapted from United Nations World map, 2020.
>40% SHARE OF GLOBAL FOREST COVER
<20% SHARE OF PROTECTED FORESTS

Source: FAO Global Forest Resources Assessment 2020
**ALMOST HALF OF GLOBAL CARBON STOCK**

<table>
<thead>
<tr>
<th>Global forest carbon stock</th>
<th>Share of global forest carbon stock</th>
<th>Share of carbon stock in forest biomass</th>
<th>Share of carbon stock in forest soils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Forests</td>
<td>47%</td>
<td>39%</td>
<td>57%</td>
</tr>
<tr>
<td>North America</td>
<td>21%</td>
<td>19%</td>
<td>23%</td>
</tr>
<tr>
<td>Russia</td>
<td>20%</td>
<td>15%</td>
<td>26%</td>
</tr>
<tr>
<td>Europe (excl. Russia)</td>
<td>6%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Other Forests</strong></td>
<td><strong>53%</strong></td>
<td><strong>61%</strong></td>
<td><strong>43%</strong></td>
</tr>
<tr>
<td>Central &amp; South America</td>
<td>23%</td>
<td>29%</td>
<td>15%</td>
</tr>
<tr>
<td>Asia</td>
<td>13%</td>
<td>12%</td>
<td>14%</td>
</tr>
<tr>
<td>Africa</td>
<td>12%</td>
<td>15%</td>
<td>9%</td>
</tr>
<tr>
<td>Oceania</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: FAO Global Forest Resources Assessment 2020
Climate impacts in northern forests

March 2024

- Higher than average temperature
- Increased droughts/fires, insects, ...
- Managed forests more vulnerable
Figure 9: "Burning embers" showing the risk of wildfire damage in relation to global mean surface temperature change. The colour bar represents level of impact/risk while the confidence level for transition is given with the letter H for high and M for medium. Text boxes explain example impacts for the different levels of impact.\textsuperscript{62}
Figure 11: Insect outbreaks over time and the response function of insect pests to temperature anomalies in Europe. PBL and BL describe the potential biomass loss and biomass loss respectively and are measures for vulnerability.\textsuperscript{70}
CARBON SINKS GOING DOWN

Historical net CO$_2$ emissions from LULUCF sector

- 1990: World -3.80, Northern Forest -1.41
- 1995: World -2.70, Northern Forest -2.13
- 2000: World -4.68, Northern Forest -3.29
- 2005: World -2.70, Northern Forest -2.13
- 2010: World -2.70, Northern Forest -2.13
- 2015: World -2.70, Northern Forest -2.13
- 2020: World -2.70, Northern Forest -2.13

Source: Climate Analytics based on FAO data
UNFCCC'S FIRST GLOBAL STOCKTAKE

“28.(d) Calls on Parties to contribute to (..) transitioning away from fossil fuels”

33. “Further emphasizes the importance of (..) enhanced efforts towards halting and reversing deforestation and forest degradation by 2030”
RISK OF INCREASING BIO-ENERGY PRODUCTION

Demand and Supply of Industrial Wood Pellets in 2017

Demand and Supply of Industrial Wood Pellets in 2027

Source: Trade data, Bioenergy Europe

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© EPI 2018

Wood Pellet Demand
Wood Pellet Supply
in Million Tonnes
NORTHERN FOREST IN MITIGATION SCENARIOS

Modelled future CO₂ emissions pathways from LULUCF sector

Northern Forest - MESSAGE

Northern Forest - WITCH

Source: Climate Analytics
HUGE POTENTIAL IN PROTECTION AND RESTORATION

Regional map of land-based cost-effective mitigation potential density

Mitigation category for (a) and (b)

<table>
<thead>
<tr>
<th>Sectoral</th>
<th>IAM:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forests and other ecosystems – manage</td>
<td>Forests and other ecosystems – protect</td>
</tr>
<tr>
<td>Forests and other ecosystems – protect</td>
<td>(reduce land use change)</td>
</tr>
<tr>
<td>Forests and other ecosystems – restore</td>
<td>Forests and other ecosystems – manage and restore (enhance carbon)</td>
</tr>
<tr>
<td>Agriculture – reduce emissions</td>
<td>Agriculture – reduce emissions</td>
</tr>
<tr>
<td>Agriculture – sequester carbon</td>
<td>BECCS</td>
</tr>
<tr>
<td>Demand-side</td>
<td></td>
</tr>
</tbody>
</table>

Source: Roe et.al. Land-based measures to mitigate climate change (2021)
SUGGESTIONS FOR COP29 (BAKU) AND COP30 (BELEM)

- Synergy (UNFCCC/CBD/UNFF);
- Operationalisation Article 5 (Paris Agreement);
- Forests and Climate Change Dialogue;
- Glasgow Declaration Accountability Framework.
THANK YOU

more info:
AirClim
Northern Forests and Climate Change Project
Wendel Trio
wendel.trio@telenet.be