

Session 10 - Climate Change and Forest Sector Adaptive Capacity

Summary report

Participants discussed the current changes in the forest sector related to climate change. Presentations from the EFI and Canadian researchers provided the following conclusions in this regard.

- The European Forest Institute (EFI) has through questionnaires to different EU-countries investigated the awareness and understanding of climate change issues and the willingness and motivation to take action. Findings from the questionnaire show that priorities are affected by region (vegetation/geographical/political), economical situation, national regulations and legal framework. Measures are focussing on reducing risks while little attention is given to potential benefits from climate change. Most common strategies being applied on the ground are selection of forest material and adaptation of silvicultural practices (e.g. thinning regimes).
- A Canadian (Johnston *et al.*) investigation with informal interviews and discussions with forest managers concluded that: institutional barriers were more important than technical; local knowledge is needed since adaptations must be local; and embedded science models are needed where scientists and practitioners work out strategies together.

The forest sector is expected to be impacted by a number of factors associated with climate change including increased occurrence of drought, windthrow, heavy rains and floods, fire, and pest and disease outbreaks. It was noted that such occurrences will impact the economic viability of the forest sector. If the future viability of forest sector is at risk, impacts on people and institutions could include unemployment in rural areas dependent of forest-based industries such as northern Canada or northern Europe.

Session participants discussed the adaptive measures and potential management actions needed to address the impacts of climate change on the forest sector. In the presentations and discussions it was distinguished between adaptive capacity, adaptation measures and the implementation or promotion of these measures.

Adaptation capacity is considered an important element of the function assessing vulnerability. This does not only apply to climate change but also to other challenges in the forest sector. Improving capacity to adapt to climate change can be improved by making the forest sector more viable, in particular through research and development and innovation.

A basic for discussing adaptation is to determine the needs of society to the forest. Depending on the definition of society's need/demands to the forest, adaptation measures have to be chosen. In particular European countries seem to define their demands according to the criteria for sustainable forest management. Canadian participants saw the criteria for SFM just as a basis to discuss and determine future needs.

Adaptation can be divided into biological or ecosystem adaptation (not discussed in depth in this session) and socio-economic adaptation to climate change. Participants noted a number of possible measures to adapt to climate change:

- improvements in technology (e.g. for harvesting, genetically modified trees), financial resources, institutions, human and social capital;
- on a forest management level - thinning to adapt the stand structure toward uneven stands and choosing adequate tree species (spreading risk, increasing biodiversity);
- improvement of infrastructure to facilitate harvesting (in the northern hemisphere climate change leads to shorter harvesting periods).

Participants noted that special focus has to be set on adaptation in tropical countries. In particular they noted that the negative impacts of biofuel production on domestic food production and deforestation have to be addressed.

Session participants suggested the following activities and policies would be needed to support adaptation of forests and the forest sector to climate change.

- Promote the dissemination of existing knowledge on climate change impacts and adaptation.
- Education of the public to make them aware of possible impacts of climate change as well as opportunities to react and adapt (and the associated costs).
- Taxes on carbon (or incentives for renewable energy) can help to make the forest sector more viable and thus be more prepared to take measures to adapt to climate change