www.unece.org/forests/outlook/climate.html

The forest sector can play a major role in climate change mitigation strategies. Forests can sequester carbon by taking in carbon dioxide (CO_2), a major contributor to greenhouse effect, from the atmosphere, and transforming it into biomass through photosynthesis. Forests accumulate large stocks of carbon in the form of woody biomass and in forest soils. In sustainably managed forests, the amount of carbon that can be released as a result of harvesting is equal to or smaller than the amount taken from the atmosphere, making forests “carbon-neutral” or “carbon sinks”. Promoting the expansion of sustainably managed forests, increasing sound mobilisation of wood, as well as replacing carbon-intensive commodities through wood products and bio-energy would enlarge carbon sink potential and significantly contribute to offsetting greenhouse gas (GHG) emissions.

Forests and the wood they provide can serve as renewable sources of energy and substitute fossil fuels. Wood is currently the most important source of renewable energy worldwide as well as in the UNECE region. In the EU27, more than five percent of primary energy is supplied by wood, which is more than all other renewables combined. Wood can be used as a building material, in place of steel or concrete which are less eco-friendly and possess inferior insulation properties. All the wood used in buildings as well as in other products stores carbon. Provided they come from sustainably managed forests, wood products contribute to offsetting greenhouse gas (GHG) emissions for their life duration, and can ultimately serve as sources of energy.

As a result of changes in temperature and rainfall, adverse effects of climate change, such as more frequent and stronger droughts, forest fires, storms and insect infestations have already destroyed millions of hectares of forests. Forest degradation and destruction is not only causing ecological, economic and social damages, but also the release of huge quantities of carbon dioxide, further compounding global warming. Without mitigation efforts, climate change will even more threaten forests and the benefits they provide, including carbon sequestration. Not only adaptation measures, but also considerable mitigation efforts to reduce and offset GHG emissions, will be crucial for minimizing the impacts of climate change on forest, and in particular enabling them to mitigate climate change in the long term. For more information on climate change and the forest sector, please review the following pages:

- Role of Forests in Carbon Sinks and Sequestration
Carbon Storage in Harvested Wood Products
Green Building and Certification
Wood Energy
Adaptation to Climate Change
Forest Policies, Institutions and Policy Tools Relevant to Climate Change

Role of UNECE/FAO in Addressing Climate Change

The UNECE/FAO Forestry and Timber Section has identified the direction and scope for its future work on forest and climate change: 12 lines of activities, which include:

Role of Forests in Carbon Sinks and Sequestration
Potential Sustainable Wood Supply
    PSWS study
Sustainable mobilization of wood
    Grenoble workshop
    Good practice guidance
Carbon Storage in Harvested Wood Products
Green Building and Certification
Wood Energy
Adaptation to Climate Change
Forest Policies, Institutions and Policy Tools Relevant to Climate Change

UNECE/FAO is implementing its programme of activities on forest and climate change by:

Providing data, statistics and analysis on forest resources, products and policies relevant to

climate change

Serving as an open forum
Strengthening communication and awareness raising
Building capacities through workshops, policy forums and seminars