

Climate change and Irish forestry

Forests provide a range of raw materials for industry as well as services to society. In order to sustain production and service provision a well balanced age structure is needed at the national forest level. One of the main services provided by forests - climate change mitigation - is strongly dependent on having young age classes to balance out harvest and other decreases in carbon stocks. In the Irish context this entails the need to continue afforestation at a 15,000 ha plus level for the next two decades. Achievement of this goal will not only sustain the ability of the national forest estate to remove carbon dioxide from the atmosphere, it will also provide a renewable energy resource and a sustainable raw material for construction and a range of other uses. Expansion of the national forest estate should therefore be a key component of national climate change and land use policy.

- Climate change, caused by emissions of greenhouse gases, is forecast to have devastating impacts on human society, unless emissions are checked and reversed.
- Deforestation (loss of forest cover) is one of the major contributors to climate change, and currently accounts for 17% of global greenhouse gas emissions.
- On the other hand, the forestry sector provides a range of opportunities to mitigate rises in greenhouse gas levels, including:
 - afforestation/reforestation;
 - forest management;
 - reduced deforestation (land use change from forest to non-forest);
 - increased use of wood products;
 - use of forest products for bioenergy to replace fossil fuel use.
- The total carbon reservoir or store in Irish forests currently exceeds one billion tonnes of carbon dioxide, most of which is in the soil.
- Annual removal of carbon dioxide from the atmosphere by Ireland's forests exceeds 6 million tonnes per annum, or 3.6 million tonnes net of carbon dioxide removed in roundwood harvest.
- Kyoto forests - those established since 1990 – will sequester 11 million tonnes of carbon dioxide over the 5-year period to the end of 2012, which will have in today's terms a value to Irish Exchequer of €220 million.
- Pre-1990 forests also sequester carbon, and contribute to climate change mitigation, but are not currently part of Ireland's forest carbon accounting regime.
- Maintaining the climate change benefits of Irish forests will require continuation of the national afforestation programme at a rate exceeding 15,000 ha per annum over the next two decades.
- Deforestation at the national level needs to be controlled in order to protect the climate change mitigation benefits of Ireland's forests.
- Wood energy and wind are the most important renewable sources. Government policy foresees major growth in the use of wood for energy generation in the future, another reason to maintain a 15,000 ha per annum afforestation programme.
- Forests also have an important role in helping society to adapt to existing and future climate change.
- Forests are themselves vulnerable to the impacts of climate change, and this must be considered when planning the management of future forests.