



## Sustainable Forestry and Wood Production

### Wood: the most sustainable and renewable resource on the planet

Sustainably managed forests and wood products are widely acknowledged for the key role they play in climate change and sustainable living.

Wood produced from sustainably managed forests is a renewable and environmentally friendly resource. Solar energy provides the energy for tree growth, during which carbon dioxide is taken up and removed from the atmosphere in a process known as carbon sequestration. The effectiveness of wood in mitigating climate change therefore begins in the forest.

The positive role that trees play in climate change continues into the wood products arena. Construction timber, furniture and other wood products act as carbon stores, often for many decades, and considerably longer in some instances. Timber buildings in Scandinavia, for example, date as far back as the 13th century and are still in excellent working condition. In Europe, it is estimated that a one-off 4% increase in annual wood consumption would store an additional 150 million tonnes of carbon dioxide in wood products each year – close to three times the total annual greenhouse gas emissions in Ireland.

Another important point is that the energy used in harvesting and processing wood is less than that of other building materials. As a result wooden building products have low embodied energy and therefore leave a low carbon footprint.

#### Sustainability

The Wood Marketing Federation (WMF) places a strong emphasis on sustainability along all parts of the forest chain. This policy is reflected in our mission:

*to promote wood as a renewable,  
sustainable and versatile natural material.*

Forests in Ireland are managed according to the principles of sustainable forest management (SFM), ensuring that forest operations accord with environmental, social and economic principles. WMF supports and promotes the use of wood from sustainably managed forests. Members who are involved in the procurement, processing and manufacture of timber, source logs from suppliers that adhere to either voluntary certification or verifiable wood schemes.



### Climate change

Sustainably managed forests play a positive role in climate change.

- **Carbon sequestration in forests and storage in wood products:** During the growing stage, forests remove CO<sub>2</sub> from the atmosphere and convert it to cellulose – the building block of wood and living biomass – in a process known as carbon sequestration.
- **Displacement of more energy intensive building materials such as concrete and steel:** Wood used in building for structural and non-structural applications has a significantly lower carbon footprint than other materials that use fossil fuels during the manufacture. A cubic metre of wood

stores between 0.7 and 1.0 tonne of carbon dioxide depending on species.

- **Insulation and energy conservation:** Timber frame and other methods of timber construction deliver excellent energy performance.
- **Wood is a carbon neutral energy source:** Wood is acknowledged as a sustainable and environmentally friendly energy source. While burning wood for energy releases carbon dioxide into the atmosphere, it is taken back up by forests as they grow, thus closing the cycle. Therefore the use of wood fuel instead of fossil fuels provides the most direct way of mitigating greenhouse gas emissions and climate change.

- **There is little or no waste in wood product manufacture:** After a log is sawn for construction, furniture, veneering, fencing and other primary uses, the remainder is processed into engineered wood products and paper, and can be further reprocessed and recycled as energy efficient fuel and horticultural products.

The important role that forests play in mitigating climate change is outlined in the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. Ireland's National Climate Change Strategy puts the contribution of Kyoto eligible forests as mitigating over 2.0 million tonnes of carbon dioxide emissions per year over the period 2000-2012.

### International sustainability

The Wood Marketing Federation and its members support international efforts to achieve sustainable development at forest level and throughout the forest and wood chain. We acknowledge the importance of sourcing logs from the following two sustainable schemes:

- **Voluntary certification schemes:** These are independent internationally recognised schemes which demonstrate that forests and woodlands are managed according to Sustainable Forest Management (SFM) principles. Certification extends beyond the forest to include wood processors, traders and manufacturers who demonstrate, through chain-of-custody certification, that they have sourced their wood from sustainably managed forests.
- **Verifiable schemes:** Timber from these sources is acceptable where government controls operate and are enforced to a degree that forest management and related operations comply with SFM principles.

We fully supports the EU Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan. FLEGT has a core objective to secure Voluntary Partnership Agreements with timber-producing countries that wish to eliminate illegal timber from their trade with the EU and includes the following aims:

- Support improved governance and capacity building in timber producing countries.
- Encourage the private sector to adopt purchasing policies to exclude illegal timber from their supply chains.
- Support responsible public timber procurement policies.
- Encourage measures to avoid investment in activities that encourage illegal logging.
- Support governments who want to ensure that illegally harvested timber from their territory is not admitted to the EU market.

### References

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Kevin G Black and Edward P Farrell (2006). Carbon sequestration and Irish forest ecosystems. COFORD.

Eugene Hendrick and Miriam Ryan (2001) Carbon sequestration: Policy, Science and Economics. COFORD.

Information on British Columbia's Sustainable Forest Practices and Wood Products ([www.bcfestinformation.com/building-green/climate-change](http://www.bcfestinformation.com/building-green/climate-change))

### Contact Details

Coford - [www.coford.ie](http://www.coford.ie)

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Sustainable Energy Ireland - [www.sei.ie](http://www.sei.ie)

Wood Marketing Federation - [www.wood.ie](http://www.wood.ie)

### Acknowledgments

This document is brought to you by the Wood Marketing Federation – [www.wood.ie](http://www.wood.ie)

Published February 2008

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