

Sustainable forestry is like earning interest on carbon in the bank.

Forests store (or sequester) carbon naturally and efficiently. It's logical - although surprising to some - that sustainably managed forests have the potential to store even more carbon than unharvested forests. How? By supplying sawn timber and other wood products which add to the carbon stored in our homes and buildings.

A carbon positive industry

According to the Federal Government's State of the Forests Report (2008), Forestry is one of the most greenhouse-friendly sectors of the Australian economy. In fact, it was the only industry sector to be carbon positive in 2005. So increased use of wood in construction will assist Australia in offsetting its overall greenhouse gas emissions.

Wood products: a natural carbon store

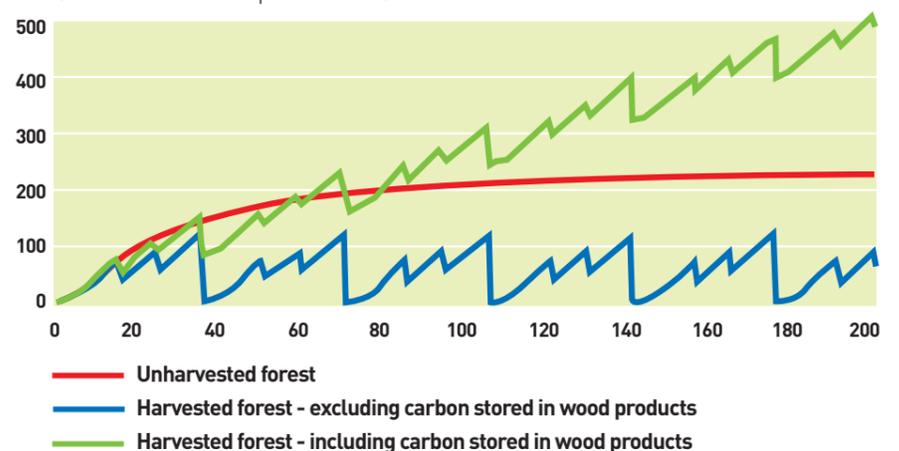
Harvesting a forest doesn't release all its carbon - in fact the wood and timber products it produces continue to store carbon, rather than rotting on the forest floor. Then, the regrowth forest absorbs more CO₂ and the cycle repeats.

The figure to the right shows how much more carbon is cumulatively stored in a harvested forest than an unharvested forest.

An international endorsement

The International Panel on Climate Change reported that "In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit."²

Carbon storage in harvested and unharvested forests¹
(Tonnes of carbon per hectare)



Carbon storage in a forest that is unharvested, harvested (35 year rotation) with no storage in wood products, and harvested with carbon storage in wood products recognised. After 200 years, the carbon stored in the 'wood products included' option (about 500 tonnes of carbon per hectare) was more than double the carbon stored if the forest had been left unharvested for the same period of time. If the forest is harvested and storage in wood products is not recognised, then by year 200 the carbon stored in that forest is only about 50 tonnes per hectare or 10% of the 'wood products included' option.

However, commercial harvest of forests is considered an immediate emission of greenhouse gases under the current rules of most schemes, with no recognition of the role of wood products in long-term storage of carbon. Failure to account for this could have over-estimated worldwide carbon dioxide emission by at least 10 per cent.

This simulation does not take into account any carbon storage in soil and emissions due to slash decay which are assumed to occur at the year of harvest.

Carbon storage values for the unharvested forest kindly provided by Mr Rob Waterhouse (AGO).

¹ Source: *Forests, Wood and Australia's Carbon Balance* (Forest & Wood Products Australia, Cooperative Research Centre for Greenhouse Accounting, 2006)

² Nabuurs, G.J. et al, 2007: *Forestry*. In *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA