



State of Australia's forests

Sustainable yield

Sustainable yield is the quantity of timber or other product that can be harvested from a forest while ensuring that the functioning of the forest ecosystem as a whole is maintained and the flow of products is continuous in perpetuity.

Native forests

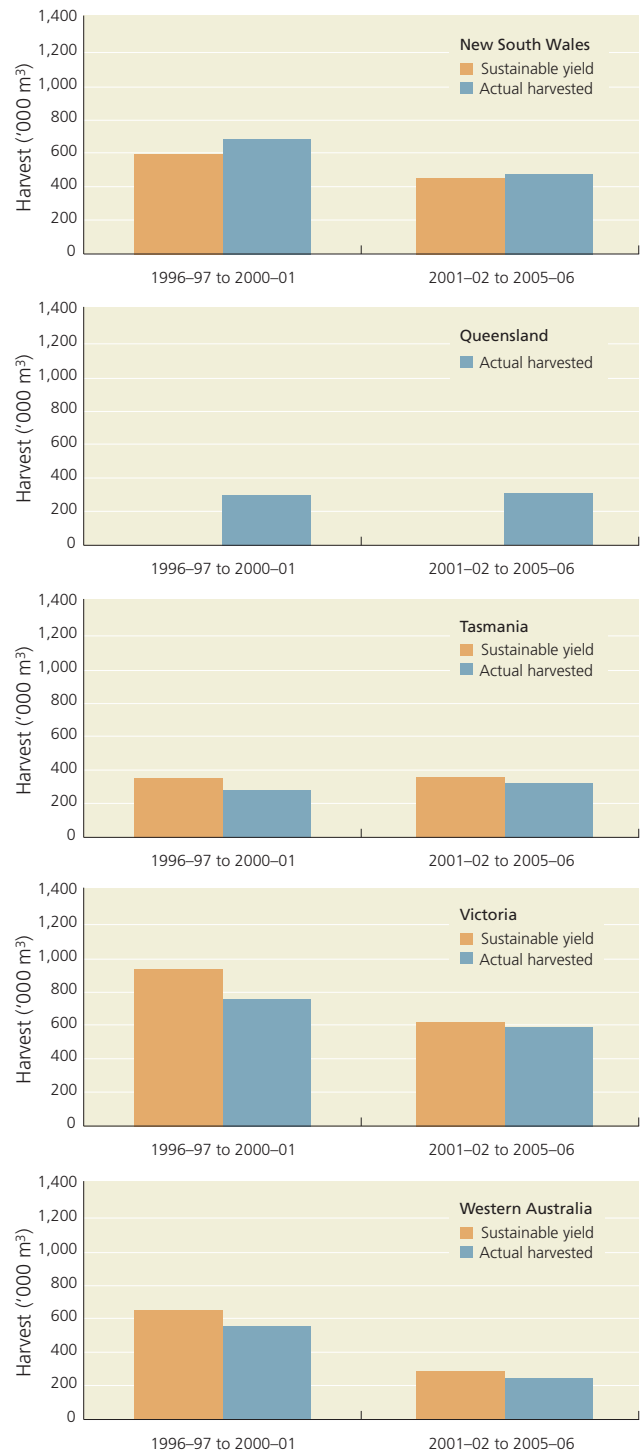
Most of Australia's harvest of native forest timber takes place in publicly owned forests known as multiple-use public forests. Australia-wide, the area of these forests has become smaller as forests are withdrawn from timber production and placed in nature conservation reserves. The volume of timber harvested from them is also decreasing, while the harvest of timber from plantations is increasing.

Significant native forest harvesting still takes place in New South Wales, Queensland, Tasmania, Victoria and Western Australia. All these states have formal processes, backed by legislation or codes of forest practice, to calculate sustainable yield for high-quality sawlog and veneer production in multiple-use public forests. Calculations take into account data on a range of parameters, such as forest type and age class, standing timber volumes, terrain, accessibility, timber growth and yield, restrictions on harvesting imposed by codes of forest practice and other regulations, as well as requirements for recreation use, water production and conservation.

Sustainable yield varies over time according to management strategies, improved resource data and utilisation standards, and the area of land available for harvesting. Estimates are therefore reviewed periodically, usually every five years. For a range of reasons, annual harvesting levels are likely to fluctuate around the sustainable volume, but overcuts in some years must be balanced by undercuts in others. In New South Wales, for example, under state forest agreements the industry is permitted to vary its actual cut by $\pm 5\%$ the sustainable yield, which allows it to take into account previous undercuts as part of its current allocation; this is the reason why Figure 1 shows the actual harvest in New South Wales to be slightly higher than the sustainable yield.

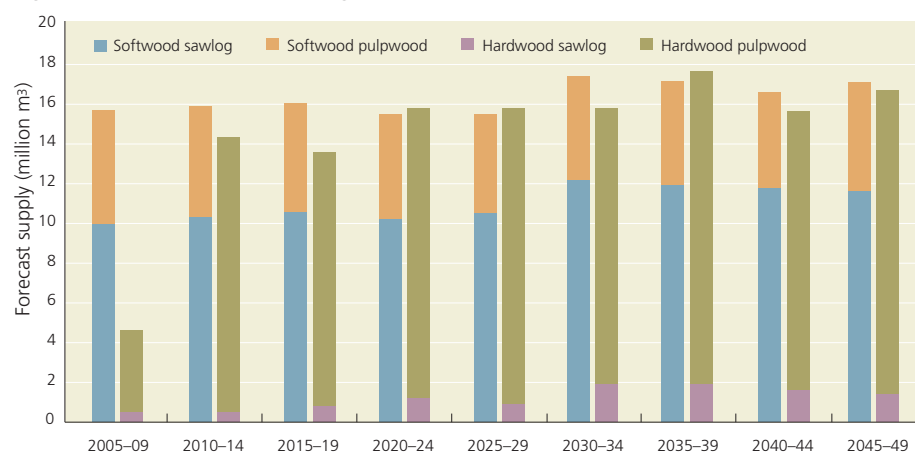
In Queensland in 1999, the state government agreed to a 25-year transition in which public native forests in the state's southeast – its major timber-producing area – will be withdrawn from timber harvesting and re-categorised as nature conservation reserves. For this reason, Figure 1 does not show sustainable yield volumes for Queensland.

Figure 1: Average annual sawlog harvest level compared with calculated sustainable yield in multiple-use public native forests, by state



Source: State-supplied data from MIG (2008)

Figure 2: Forecast plantation log supply,^a 2005–2049, Australia



Loading pine logs.

^a BRS estimates based on current plantings

With the exception of Tasmania, the calculated sustainable yield from multiple-use public native forests was reduced in the five years to 2005–06, due mainly to reductions in the area allocated to harvesting and further restrictions on harvesting (Figure 1). In Tasmania, the sustainable sawlog yield from multiple-use public native forest fluctuated slightly in line with forest management strategies in the short term, but without adversely affecting long-term sawlog availability. The volume of sawlogs harvested from multiple-use public native forests over the period from 1992–93 to 2005–06 was less than the prescribed sustainable level in New South Wales, Victoria and Western Australia.

The supply of sawlogs from private native forests is significant in New South Wales, Queensland and Tasmania. In Tasmania, this supply declined markedly in the five years to 2005–06; for other states, recent data on private sawlog supply are unavailable.

Plantation forests

The area of plantations in Australia increased from 1.63 million hectares in 2003 to 1.82 million hectares in 2006. Nearly all the increase was in hardwood (mostly pulpwood) plantations, from 503,000 hectares in 2000 to 807,000 hectares in 2006.

Plantations produce about two-thirds of Australia's log supply; that proportion has been increasing steadily for several years because native forest supply has declined while plantation supply has increased. Based on current plantings:

- softwood sawlog and pulpwood supply is expected to plateau by 2010
- hardwood pulpwood supply will increase substantially by 2010, providing increased opportunities for exports and paper manufacture
- the supply of hardwood sawlogs from plantations is considerably lower than the supply from native forests and, while increasing, is expected to remain considerably lower for many years.

Non-wood forest products

A number of non-wood native forest species are subject to commercial harvesting regimes, some of which are significant in terms of quantity and value. Approaches to assessing the sustainability of the Australian non-wood forest product sector are being developed. Adaptive management plans are in place for native species subject to significant harvesting with the aim of ensuring their long-term viability.

Further reading

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