




# Plantation Productivity

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2025 Analysis

Part of the research collaboration between Forest and Wood Products Australia (FWPA) and the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)



**Update and compare** plantation productivity across the National Plantation Inventory (NPI) regions using Mean Annual Increment (MAI).

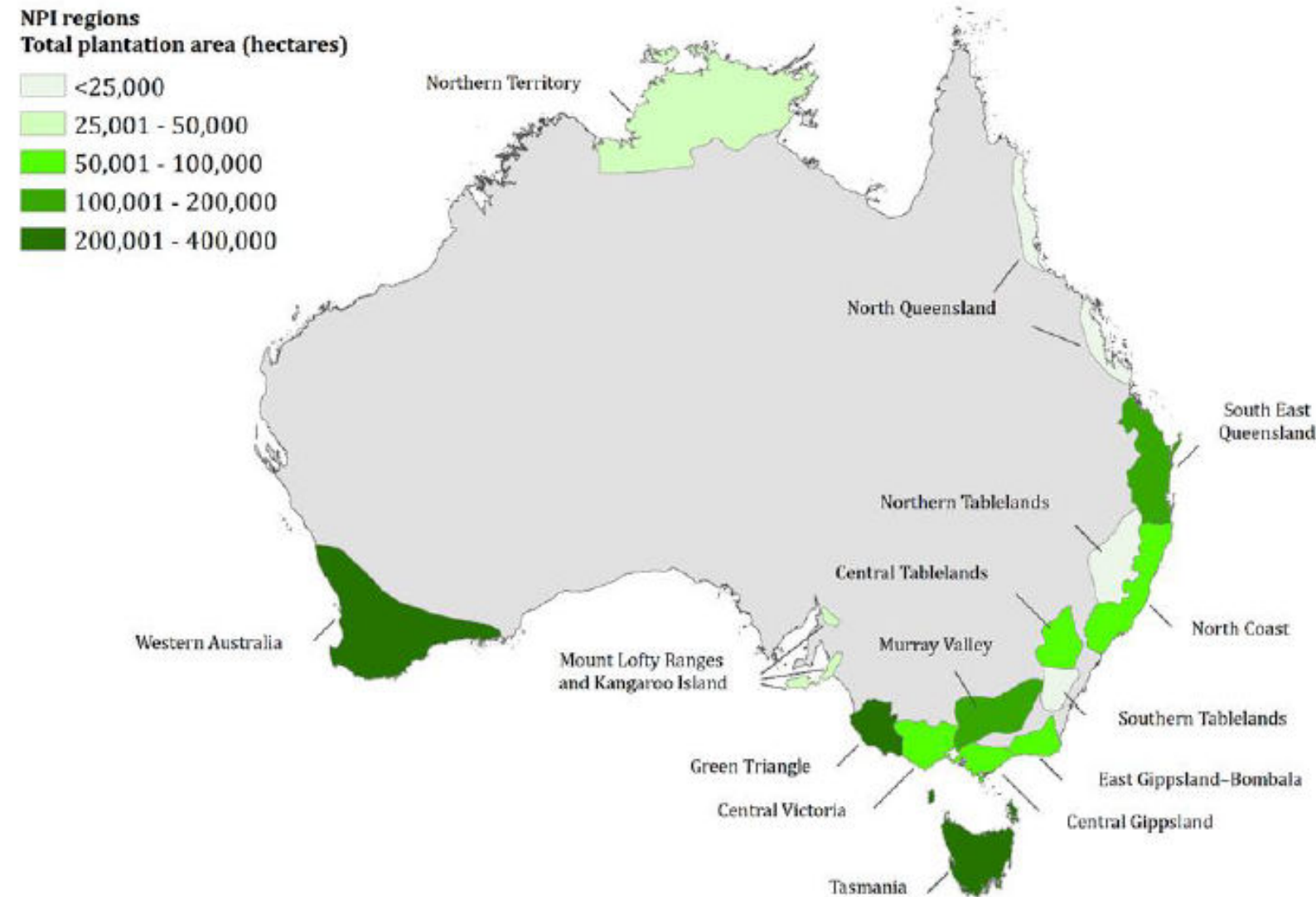
MAI is the average annual volume growth of a tree or stand of trees over its entire age.

**Data collection** from the survey and consultations with 20 medium and large growers and 4 industry bodies.

**Key findings** include changes in log production and productivity in the plantation sector, the factors driving these changes, and tools to mitigate and adapt to risk profiles.

# Softwood plantations

Map 1 NPI regions provide a grouping of similar forestry regions for analysis



For Softwood plantations in almost all NPI regions - the 2024 indicative MAI estimates are as high or higher than the 2011 indicative MAI estimates

In 2024, the indicative MAI in four regions exceeds 21 m<sup>3</sup>/ha/year, which is also higher than the levels recorded in 2011.

These regions are the Green Triangle, Murray Valley, Tasmania, and Central Gippsland.

Other NPI regions showing higher indicative MAI in 2024 than in 2011 include East Gippsland, Central Victoria, the Northern Tablelands, and North Queensland.

Pinus Radiata is the most common plantation species in the country. In warmer, more humid tropical regions, the species include Southern Pine and Hoop Pine.

# Hardwood plantations

Historical data for hardwood plantations has several limitations and challenges. Many plantations follow longer sawlog regimes and have not yet completed a full rotation. As a result, the indicative MAI reflects anticipated yields rather than realised yields.

## **Hardwood pulplog MAIs have increased in several regions**

Western Australia has the largest growing region for hardwood pulplog, followed by the Green Triangle and Tasmania.

The indicative MAI was varied between regions.

## **Growing regions were The Green Triangle and Tasmania**

The indicative MAI for the Green Triangle grew from 17 to 18 m<sup>3</sup>/ha/year.

Tasmania was also growing from 15 to 20 m<sup>3</sup>/ha/year.

Hardwood pulplog plantations are more susceptible than softwoods to rainfall fluctuations and drying trends due to their higher water requirements.

# Productivity improvements driven by silviculture, genetics, research and innovation

Collaborative industry research and development has been important for improving or maintaining growth rates in the plantation forestry sector. Growers highlighted the benefits of having an industry-led research and development organisation, such as Forest and Wood Products Australia (FWPA) and CSIRO, for developing the industry.

Improved silviculture techniques	Genetic improvements
R&D that drives productivity improvement	Harvesting & mill technology
Emerging markets create opportunities	Adapt and respond to climate change and risks



Improved plantation productivity



# Changing operating conditions are a risk to plantation productivity



**There are physical risks to production associated with plantation productivity.**

Immediate effect risks such as bushfire, pests, disease, and animals on trees.  
Longer-term risks, such as climate change, encompass changes in both average temperatures and rainfall.



**Growers understand risks associated with regulation and social license.**

Follow best practice in water licensing arrangements and agricultural or residential buffers.  
Manage public perceptions around clearfall activities and plantation forestry to maintain social licence.



**Growers actively manage risks to the supply of skilled labour.**

Growers noted the importance of labour to their current and future production and profitability potential.  
Growers also noted the importance of ongoing training and recruitment efforts to ensure a steady supply of skilled labour.