



Tasmania Forestry Hub

Demand outlook for Tasmanian wood products

Summary report

June 2022



Foreword

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Acknowledgements:

Indufor would like to acknowledge the Tasmania Forestry Hub is supported and funded by the Commonwealth Government as part of the National Forest Industries Plan.

Indufor would also like to acknowledge all the support provided by the Tasmania Forestry Hub throughout this project, with special thanks to Simon Talbot, General Manager, and Penny Wells, Chair of the Hub.

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Date completed: 30 June 2022

Indufor project no.: A21-22006

Cover photo credits:

Tasmanian Oak at the Midway Point House. Photo credit: Adam Gibson (Tasmanian Timber).

Demand outlook for Tasmanian wood products

Tasmania's forests and forest products sector has been one of the central drivers of the Tasmanian economy for more than 100 years. However, it clearly recognises the world is continuing to change in many ways, and more than ever, the sector must continue to identify changes in demand, adapt to change and invest in the future. This demand study has been prepared to inform the forests and forest product sector in making investments for sustainable growth through to 2050 and beyond.

Australian forest sector supply chains are highly exposed to a range of international and domestic economic and societal pressures and expectations. Australia is a significant importer of a wide range of timber products, including many of which are domestically produced. These imports affect the pricing and product performance expectations of Australian timber products. The ongoing impacts of COVID-19, and geopolitical tensions across Europe, have shown the fragility of global supply chains, and the risks of exposure for countries dependent on imports.

Similarly, many timber products have direct competing products arising from non-forest manufacturing sectors, offering similar product performance. Australia is also a major exporter of wood products, competing in mainly Asian destination countries. *This economic dynamic means the forest sector in Tasmania currently operates within markedly volatile and uncertain global economic and social environments.*

More broadly, the world demands wood and wood products, and as the global population increases, demand for wood products from sustainably managed forests will continue to increase. This is evident in the outcomes from international climate change summits, such as COP26 in Glasgow, and in the World Business Council for Sustainable Development (WBCSD) *Vision 2050*, which sets out a roadmap to sustainable living for the global population.

The WBCSD vision identifies macrotrends and disruptors that are likely to shape the business environment; *including the expectation that societal awareness of the need to address climate change is expected to increase – which should provide opportunities for the forest sector to demonstrate how wood products and forests assist society to address climate emissions.* In addition, society will increasingly require demonstration of products' efficient and prudent use of natural resources, requiring the forest sector to readily and clearly articulate how resources are managed on a sustainable basis.

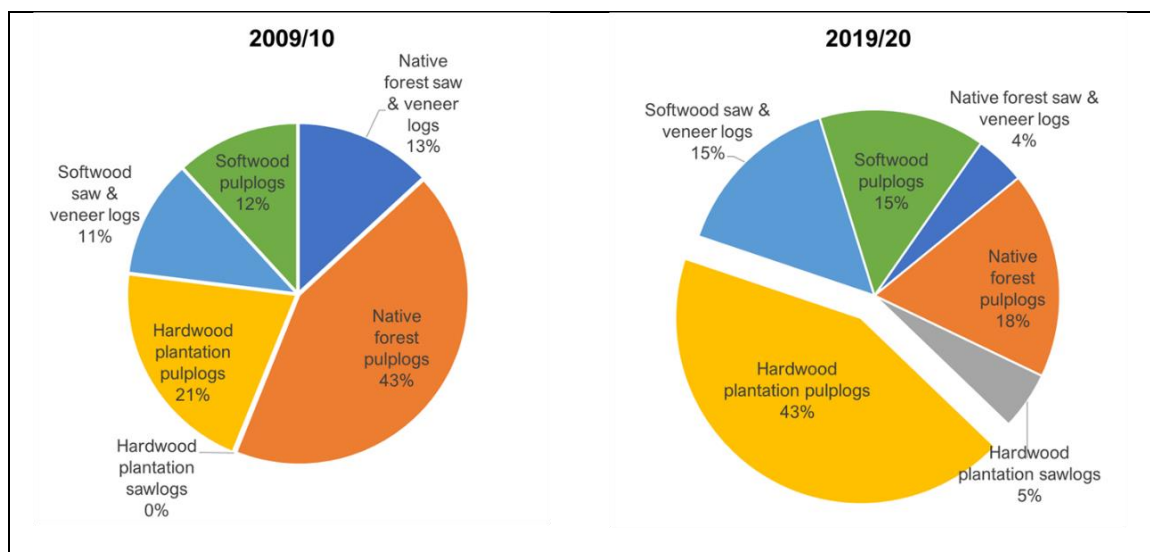
This situation presents the opportunity for Tasmania to build world-leading capability in forest management, and the processing and manufacturing of sustainable forest products, to create a more circular and resilient bioeconomy featuring innovative designs. Tasmania is well positioned to be at the forefront nationally, and globally, in producing a broad range of innovative, certified sustainable forest products for domestic and international markets. Tasmania has the forest resources, timbers with exceptional qualities, existing industry infrastructure, and renowned research & development capability.

The challenge now for Tasmania is investment is required over the next five years to realise significant benefits over the following 25 years to 2050.

The changing profile of Tasmania's forestry sector

This study is focused on demand for Tasmania's forest products, currently encompassing sawn timber, wood panels, engineered wood products, and paper and paperboard – which are produced from logs harvested from native forests, hardwood plantations and softwood plantations. This log production mix has changed dramatically in the past decade (Figure 1); most notably through the significant increase in hardwood plantation logs (predominantly pulplog grade), and an associated reduction in native forest log production. These supply perspectives are important to guide consideration of future product potential and ensuring that sectoral aspirations to meet market demands can be supported by supply inputs.

Figure 1 Tasmania's log production and supply, by source, 2009/10 & 2019/20



Source: ABARES

Current and future products

Tasmania's future forest economy will likely comprise a mix of traditional and new and emerging forest products (Figure 2 and Figure 3, respectively); which if realised, would diversify the sector portfolio of economic opportunities.

This demand study has found strong signals and evidence of demand growth across most of Tasmania's wood product groups, with a few exceptions. The positive demand outlook for Tasmania's current products, and the emerging & future products considered in this review, are generally underpinned by:

- the core attributes of the Tasmanian timber products;
- forecast growth in Australia's population and gross domestic product through to 2050;
- supply scarcity for log production and wood products produced in Tasmania and other states - most notably native forest hardwood timbers, but also plantation wood managed for structural timber and engineered wood product applications; and
- policy drivers at both the national and state level, supporting the use and procurement of 'renewable' wood products, from sustainably managed forests.

Tasmania's flagship products from managed native forests, Tasmanian Oak and Blackwood, are highly sought-after products, but their growth potential will be limited by constraints on supply over the next 10-20 years. Conversely, there is burgeoning supply from hardwood plantations, which can underpin innovative product development and potentially transformational industry changes. Below are examples of the key products under consideration in this study.

The macro-trends nationally and globally will support long-term demand across most wood products if Tasmania can maintain international competitiveness. Wood products with distinctive properties, or those that can be customised in their application, and/or produced close to the market, are expected to see strong demand over time.

Demand outlook

This outlook for demand is illustrated in the following forecasts, for total sawn timber consumption (Figure 4) and wood-based panels consumption (Figure 5). Tasmania's opportunity to meet increased demand will arise from supply scarcity in other states and depend largely on its capacity to compete with imports of comparable and substitute products.

Figure 2 Selected current products for Tasmania

Hardwood and softwood sawn timbers are expected to continue to be mainstays of Tasmanian forest products, with flagship Tasmanian Oak and Blackwood products, and softwood timber contributing to Australia's increasing demand for structural products.



Hardwood veneer is produced in Tasmania for plywood and LVL products (mostly manufactured outside Tasmania) for more than a decade and produces relatively small quantities of decorative veneers from Blackwood and other special species timbers.



Cross laminated timber is an engineered wood product that has seen rapid growth in demand around the world. Predominantly made from softwood sawn timber in other countries, Tasmania is at the forefront of manufacturing hardwood CLT, from plantation resources.



Newsprint paper has been produced in Tasmania from softwood plantation fibre for over 80 years. Globally, newsprint consumption has declined over time with the rise of digital communication, and many producers are now transitioning to other wood fibre-based products.



Figure 3 Emerging and future products for Tasmania

Laminated veneer lumber (LVL) is one of the most widely used EWPs in Australia, with significant levels of product substitution with hardwood and softwood solid timber products continuing to expand, particularly in structural applications in Tasmania and other states.



Oriented strand board (OSB) is an alternative to plywood and used extensively around the world as a structural panel in construction. Global demand continues to increase. It is predominantly made from softwood fibre but can be made from hardwood or a mix of fibres.



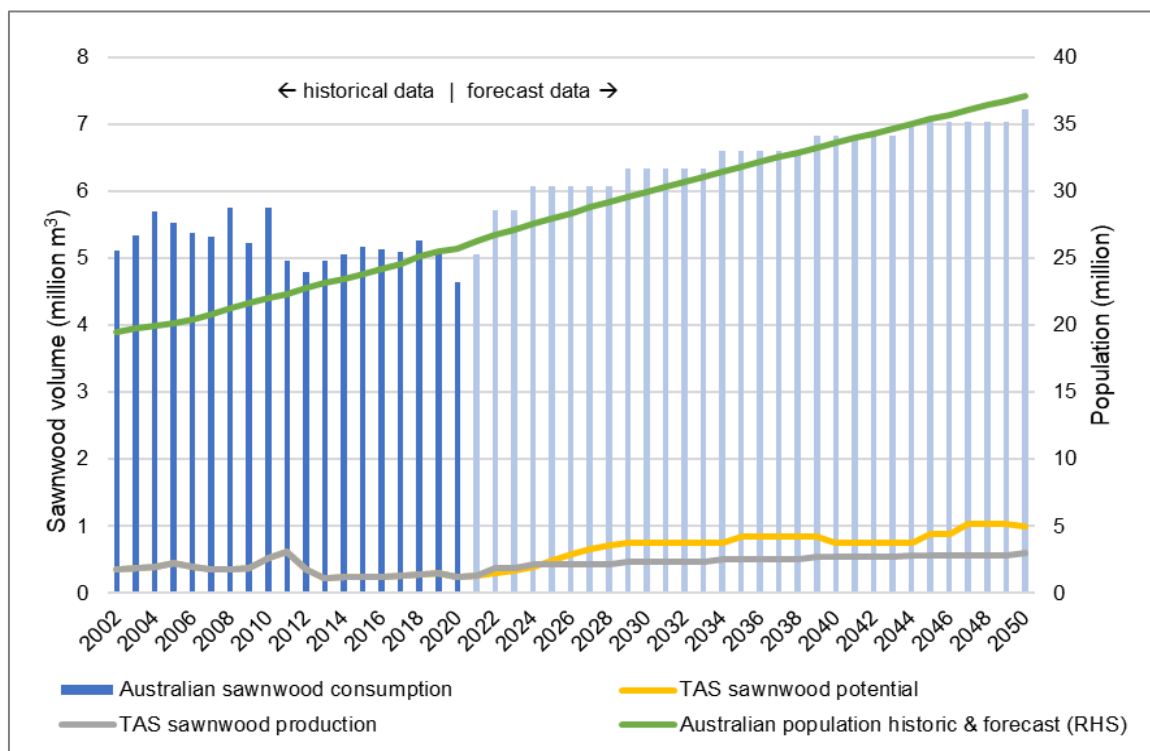
Bioenergy has many forms, and Tasmania has some conventional forms of use, including combustion in boilers to produce heat energy, and production of wood pellets. Policy settings are driving increased demand for bioenergy if it can compete with other renewable sources.



New bioproducts such as bioplastics and nanocellulose products are emerging around the world, generally as post-pulp production materials, and in biorefineries with an increasing range of products and potential. Currently there is no biorefinery for wood products in Tasmania.

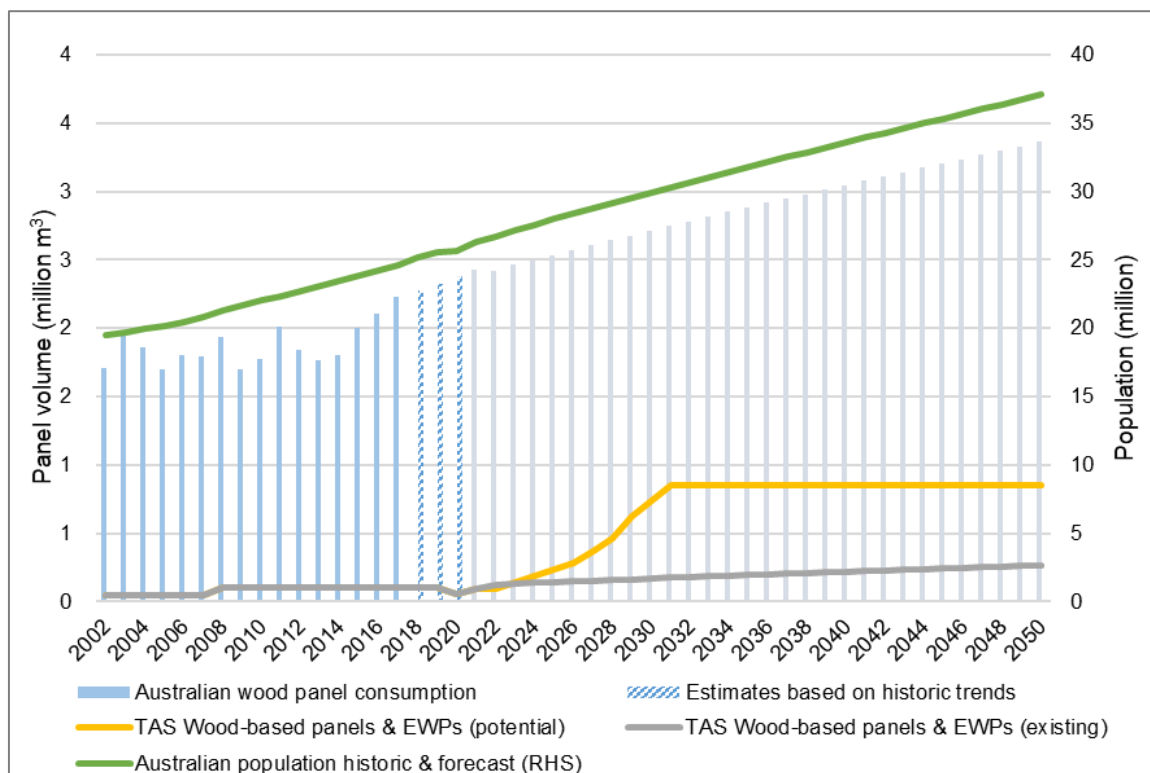


Figure 4 Australia's population growth and sawn timber consumption, with forecasts



Source: ABARES; ABS (historic population data and population projections); Indufor modelling of forecast potential

Figure 5 Australia's population growth and wood panels consumption, with forecasts



Source: ABARES; ABS (historic population data and population projections); Indufor modelling of forecast potential

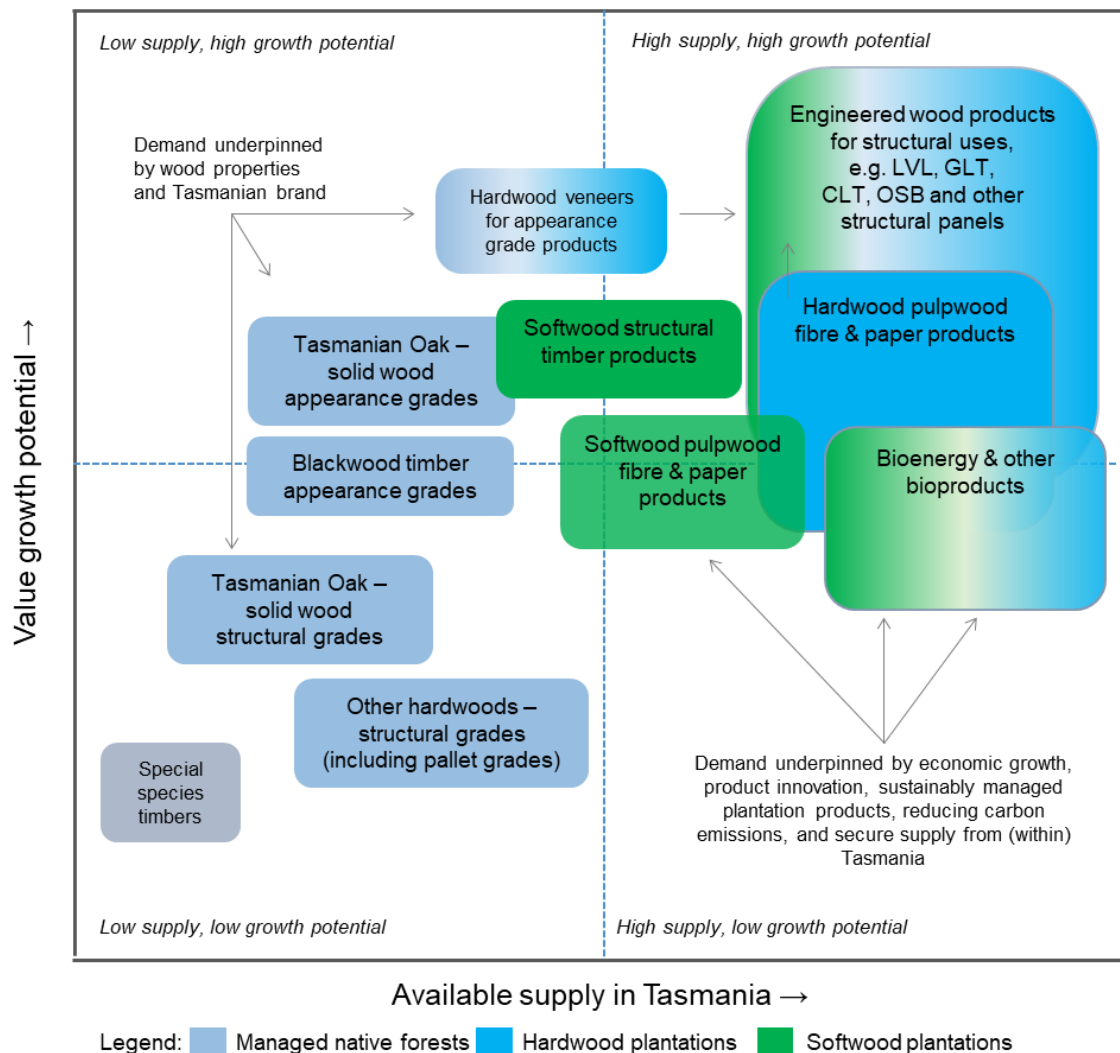
A summary of the demand outlook for selected forest products is listed below (Figure 6).

Figure 6 Overview of demand outlook for selected forest products

Selected products	Assessment of demand	Key considerations regarding the demand opportunity for Tasmanian forest products
Sawn timber - hardwood	↑↑ High	• Supply scarcity
Sawn timber – softwood	↑↑ High	• New housing starts
Panels – plywood	↑↑ High	• Highly competitive markets
Panels – MDF	↑ Moderate	• Highly competitive markets
Panels – particleboard	- Stable/mature	• Highly competitive markets
EWP – OSB	↑ Moderate	• Highly competitive markets; low domestic demand
EWP – LVL & I-Joists	↑ Increasing	• Highly competitive markets
EWP – CLT & GLT	↑↑ High	• Uncertainty in scale of regional markets
Paper – packaging	↑↑ High	• Rapid changes in markets and industry
Paper – newsprint	↓ Declining	• Digital revolution
Exports – plantation logs	↑↑ High	• Competitive markets
Exports – plantation fibre	↑↑ High	• Competitive markets and fibre yields
Bioenergy & biocomposites	↑ Increasing	• Clear policy signals; new technologies, emerging markets

The relative positioning of the demand outlook for these products is represented in the context of the supply potential to 2050 (Figure 7). This profile highlights the increasing scope and scale of opportunities for plantation-based products, notably engineered wood products.

Figure 7 Demand outlook for a selected range of forest products in Tasmania



Investment opportunities for Tasmania

Within Tasmania, there is a strong industry focus on encouraging further domestic processing and investment within state, while at the same time reducing greenhouse gas emissions, through carbon sequestration and storage as well as emissions avoidance. In addition, there are clear policy signals that support these objectives.

Expected log availability through to 2050 is effectively arising from plantation trees in the ground today and recognising existing viable processing arrangements. In this context, this study has focused primarily on forests products that are currently being exported from Tasmania, notably roundwood logs and primary processed products. An analysis of 'redirection' options led to identifying the following domestic processing opportunities for Tasmania, representing a modest proportion of total current exports. Several of these opportunities are already being pursued or assessed by the sector, through current feasibility studies or key industry projects underway.

1. Establishing a specialised sawmill for high quality hardwood plantation material and available regrowth material, with modern finger-jointing and laminating capability (*indicatively, 100,000+ m³/year log intake, situated in the Northwest region*)
2. Upscaling CLT production using products arising from processing high-medium grade hardwood plantation logs, to establish scale and international competitiveness for innovative products (*indicatively, 100,000+ m³/year log intake, in Northwest region*)
3. Upscaling specialist veneer production, (notably sliced veneer), to increase capacity for capturing feature properties of Blackwood & Tasmanian Oak as well as special species timbers (*indicatively, 10,000+ m³/year log intake*)
4. Upscaling rotary veneer production facilities for range of panel substrates and plywood applications, and potentially hardwood LVL production, where Tasmanian hardwoods would have a competitive advantage in terms of feature or additional performance ratings (*indicatively, 80-90,000+ m³/year log intake*)
5. Pallet production using lower grade hardwood plantation and regrowth material, to complement higher grade options and meet market demand (*indicatively, 100,000 m³/year log intake, potentially in Southern forests*)
6. Exploring scope for establishing new reconstituted board/plant, e.g., ESL, LSL or OSB, to add value to available hardwood and softwood chip material (*indicatively, 200,000 - 300,000+ m³/year log intake, in Northwest or Northeast region*)
7. Continue support for further expansion of softwood processing facilities, over the longer term, with CLT and glulam production, for increasing efficiency and competitiveness - maximising value-adding utilisation of softwood logs within Tasmania in preference to exports (*indicatively, up to an additional 200,000 m³/year log intake, around current supply*)
8. Bioenergy & bio-composite materials using residues from domestic processing & forest residues – *indicatively small scale at the enterprise level (e.g., within existing facilities as already evident within Tasmania) or a larger scale regional hub or biorefinery for more specialised products (e.g., biorefinery producing multiple bioproducts with fibre or black liquor inputs (e.g., >100,000 m³/year) from across industry.*

Key enablers for these projects include a significant shift in silvicultural management regimes, particularly in the hardwood plantation estate, to increase the proportion of high-grade logs for sawing, peeling and other applications, to enable a long-term supply for increased value adding to 2050. Realising a substantive proportion of the demand growth potential for Tasmanian forest products will also require ongoing, dedicated investment in research and development, to support forest product innovation, across the range from high value structural and appearance grade products to bioplastics and other bioproducts. Tasmania is at the forefront of this in Australia, with its regional hub for the National Institute of Forest Products Innovation and programs such as the University of Tasmania's Centre for Sustainable Architecture with Wood. However, additional, ongoing investment in these types of programs will be required to support the identification of product development opportunities and market development opportunities.



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