Australian Government

Department of Agriculture, Water and the Environment

House of Representatives Standing Committee on Agriculture and Water Resources

Inquiry into Timber Supply Chain Constraints in the Australian Plantation Sector

Submission from the Australian Government Department of Agriculture, Water and the Environment

August 2020

Contents

Introduction

The Australian Government Department of Agriculture, Water and the Environment welcomes the opportunity to provide this submission to the House of Representatives Standing Committee on Agriculture and Water Resources in response to its Inquiry into Timber Supply Chain Constraints in the Australian Plantation Sector.

This submission provides an outline of Australian Government intiatives to foster the development of Australia's forest industries, including through increasing Australia's wood supply. These initiatives include the National Forest Industries Plan, the establishment of Regional Forestry Hubs, and the proposed Plantation Development Concessional Loans. In addition, the Australian Government will develop a National Farm Forestry Strategy.

This submission addresses each of the terms of reference and includes data from the Australian Bureau of Agricultural and Economics and Sciences (ABARES) which is the department's science and economics research division. Among the bureau's responsibilities is the management of the National Forest Inventory (NFI) and the National Plantation Inventory (NPI).

The NPI is a program of the NFI through which data on Australia's industrial plantations is collected through an annual survey of growers, grower representatives and state and territory agencies. The survey records the total commercially managed plantation estate each year, and the area of commercially managed plantations newly established on land that had not previously been used for plantations. The NPI provides an annual update of industrial plantation areas in each state and territory, plantation log supply forecasts updated every five years, and other plantation information published by ABARES.

Further information on any aspect of this submission can be provided to the committee on request.

The nature of wood supply from Australia's plantation sector

- **including: Projected timber volumes available over the next 30 years and the potential grades of logs available.**

Information in response to this term of reference is derived from research undertaken by ABARES, in particular through the NPI which, as described above, collects data through an annual survey of growers, grower representatives and state and territory agencies.

Australia's plantation log supply reports, published by ABARES under the auspices of the NPI, present forecasts of sawlog and pulplog volumes available from softwood and hardwood plantations. The NPI program has collected data and reported on plantations established primarily for wood production in Australia since 1993. Comprehensive plantation log availability forecast reports are published every five years, with the most recent report – *Australia's plantation log supply 2015-2059* – published in 2016.

2019-20 bushfires

The 2019-20 summer bushfire season had a significant impact on the forestry sector. During the season, bushfires burnt across eastern and southern Australia, affecting large areas of both native forests and commercial plantations (Map 1). ABARES reports that, as of 28 April 2020, around 8.5 million hectares of forests were potentially affected by the bushfires, comprising 8.3 million hectares of native forests, 130,000 hectares of commercial plantations and 22,000 hectares of other forests. The impacts of the fires within the fire extent are variable, with some areas being burnt less severely than others (Whittle 2020).

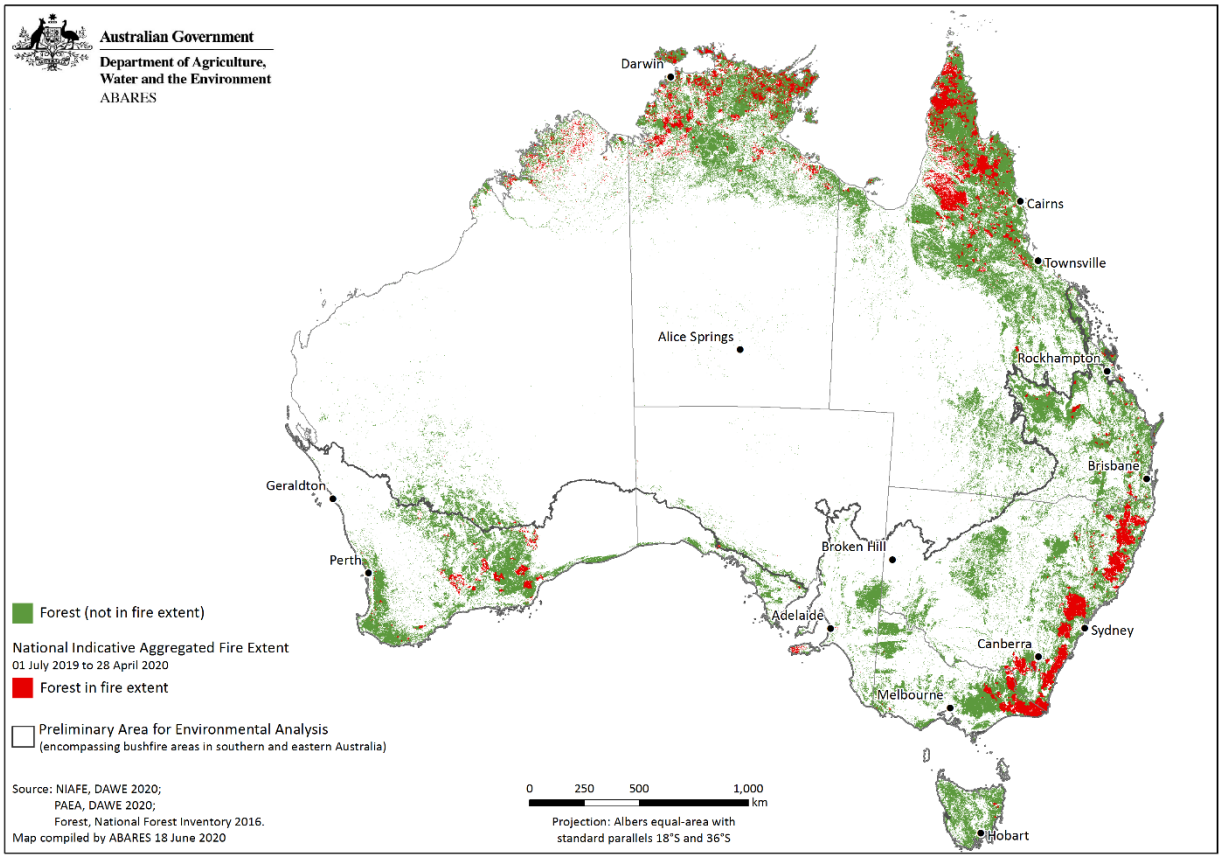
Production native forests

According to ABARES, at the national level, around 2.0 million hectares of multiple-use public native forests (20 per cent of Australia's total multiple-use public native forests) and 1.5 million hectares of private native forests (3.6 per cent of Australia's private native forests) fell within the extent of the fires.

Commercial plantations

ABARES also notes that while the area of plantations in the fire extent is much smaller than that of native forests, it represents a significant proportion of Australia's commercial plantation estate. Furthermore, plantations generate a much greater volume of wood, on a per hectare basis, so even a small area of plantations impacted by the fires could have significant implications for log supply.

Map 1 Fire extent



The plantation log availability forecast from this report will have been significantly impacted from the effects of the 2019-20 bushfires on the commercial plantation estate. The uncertainty around the extent of damage to commercial plantations from the bushfires is compounded by the potential duration and severity of the COVID-19 pandemic, and means that the impacts on log availability are highly uncertain. These impacts will be accounted for in the 2019-20 plantation log availability report scheduled to be released during 2020-21.

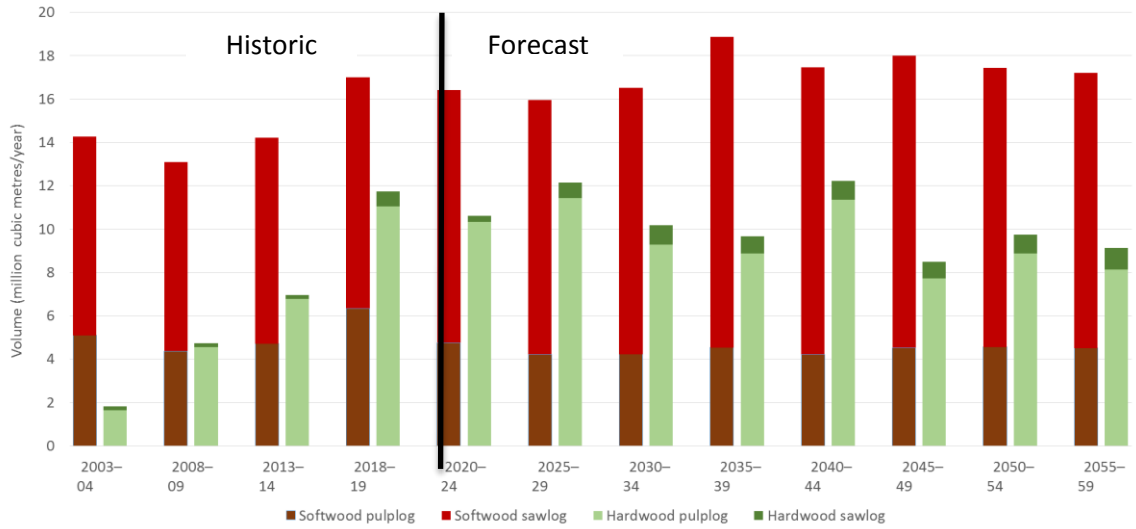
Future log availability and demand

Log availability is forecasted for high- and low-quality sawlogs and pulplogs from hardwood and softwood plantations. The forecast log availability from 2020-24 to 2055-59 is the annual average merchantable volume potentially available from Australia's commercial plantation estate for each five-year period.

Forecasts of log availability from the existing plantation estate are based on *Australia's plantation log supply 2015-2059* report (ABARES 2016). Forecasts are presented for hardwood and softwood plantations nationally and by NPI region based on forecasts supplied by plantation owners and managers and ABARES-modelled forecasts.

The results are presented in Figure 1, and discussed below.

Figure 1 Forecast log availability



Source: ABARES 2016, *Australia's plantation log supply 2015-2059*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, December. CC BY 3.0.

Log availability forecasts

Total log availability over the period 2020 to 2059 is forecast to fluctuate between 26.5 million cubic metres and 29.7 million cubic metres per year (Figure 1).

The majority of the decline in total log availability towards the end of the projection period is because the expected yield from hardwood plantations is forecast to decline as plantations of low commerciality are not replanted and some lease agreements with landholders are not renewed.

Softwood plantation forecasts

Softwood plantation log availability in the 2020-24 period is forecast to average around 16.4 million cubic metres a year (Figure 1), around 0.6 million cubic metres less than the actual volume harvested in 2018-19.

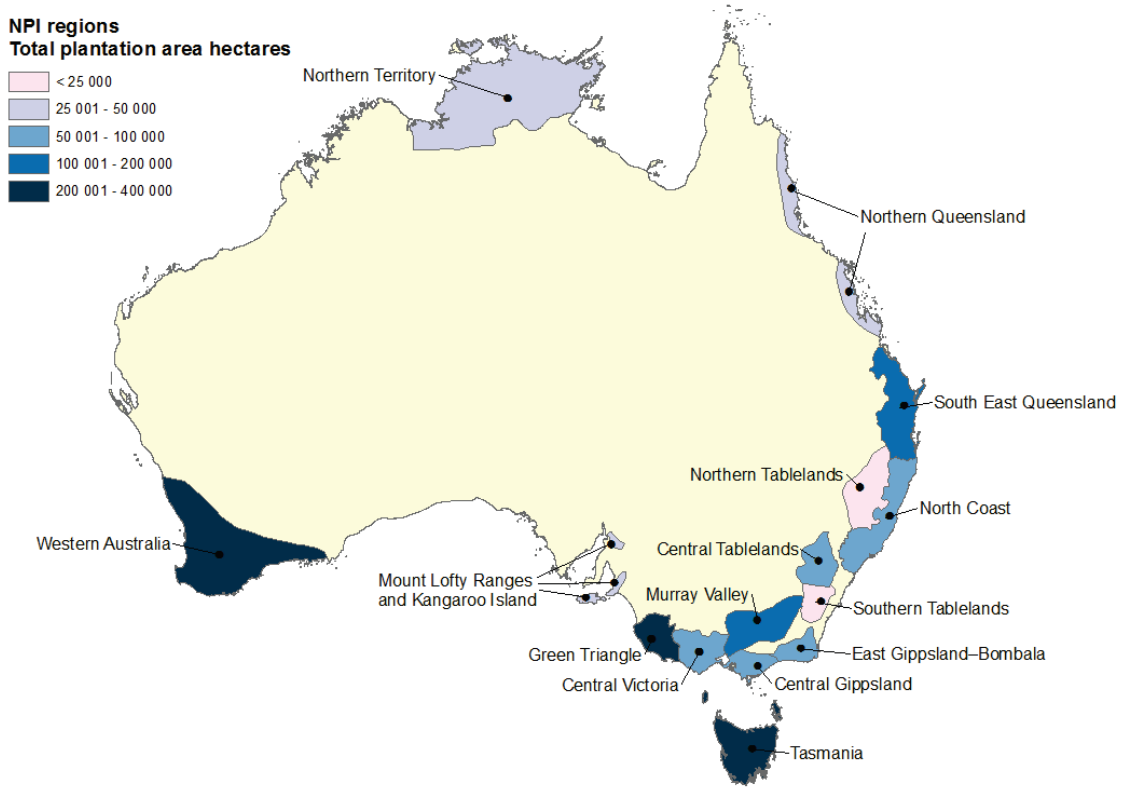
Production of softwood sawlogs was around 10.7 million cubic metres in 2018-19. Softwood sawlog availability is forecast to increase to around 11.7 million cubic metres a year for 2020-24, and peak at around 14.3 million cubic metres a year in the 2035-39 period.

The major softwood sawlog-producing regions are the Green Triangle, crossing south-east South Australia and western Victoria, accounting for 29 per cent of forecast softwood sawlog availability for the 2020-24 period; south-east Queensland, with 18 per cent of forecast softwood sawlog availability; and the Murray Valley, with 16 per cent of forecast softwood sawlog availability (Map 2). Each of the plantation regions identified on Map 2 has forecasts for softwood and hardwood sawlog and pulplog volumes (ABARES 2016).

Production of softwood pulplog was around 6.3 million cubic metres a year in 2018-19. Softwood pulplog availability is forecast to decline to around 4.8 million cubic metres per year for the 2020-24 period. The softwood pulplog availability is forecast to average around 4.4 million cubic metres per year over the remaining periods to 2055-59.

Most plantation softwood pulplog availability is forecast to be produced in the Green Triangle, Murray Valley and Tasmania regions. In the 2020-24 period the Green Triangle and the Murray Valley will have around 28 per cent and 24 per cent, respectively, of the total national softwood pulplog availability and Tasmania will have around 14 per cent.

Map 2 National Plantation Inventory regions



Source: ABARES 2016, *Australia's plantation log supply 2015-2059*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, December. CC BY 3.0.

Note: Log availability forecasts for each NPI region are available and can be provided on request.

Hardwood plantation forecasts

Hardwood plantation log availability for the 2020-24 period is forecast to be around 10.6 million cubic metres a year, around 1.1 million cubic metres less than the actual volume harvested in 2018-19. The decreased hardwood log availability in the 2020-24 period is due to volatility in the availability of hardwood pulplogs as a result of assumed harvesting and replanting schedules. Any shortfall of logs is expected to be managed by plantation growers and owners through rescheduling their harvesting.

Total national hardwood plantation sawlogs availability is a small proportion (9 per cent) of the forecast total hardwood plantation log availability. Hardwood sawlog availability is forecast to be around 293,000 cubic metres a year in the 2020-24 period, peaking at around 994,000 cubic metres a year in the 2055-59 period. Sawlog estimates include peeler logs, high-grade and low-grade sawlogs and posts and poles.

Most of the hardwood plantations managed for sawlogs are in Tasmania and the North Coast New South Wales region. For the 2020-24 period, Tasmania and the North Coast regions are forecast to be the main areas of hardwood plantation sawlog availability, with an annual average of around 117,000 and 53,000 cubic metres, respectively, available for log harvest.

Hardwood pulplog production was 11.0 million cubic metres in 2018-19 and pulplog availability is forecast to peak at an annual average of 11.4 million cubic metres in the 2025-29 period, with a second peak in 2040-44. Hardwood sawlog (including veneer) production was 686,000 cubic metres in 2018-19 and sawlog availability is forecast to peak to around 994,000 cubic metres on average over the 2055-59 period.

The majority of hardwood pulplog plantations are located in three regions which are all Regional Forestry Hubs – Western Australia, the Green Triangle and Tasmania.

- Western Australia's hardwood pulplog availability is forecast to decline to around 2.6 million cubic metres per year in the 2030-34 period, then decline further to around 2.0 million cubic metres per year in the 2055-59 period.
- In the Green Triangle, hardwood pulplog availability is forecast at 2.1 million cubic metres per year in the 2020-24 period, then decline to a low of 1.7 million cubic metres per year in the 2035-39 period.
- Tasmania's hardwood pulplog availability is forecast to peak at over 4.3 million cubic metres per year for the 2025-29 and 2040-44 periods.

Forecast assumptions

ABARES assumed that a proportion of existing hardwood plantations will not be replanted but the forecasts do not account for other factors that may have a bearing on future volume and quality of log availability from the existing plantation estate. These factors include changes to silvicultural practices, which may improve growth rates; climate impacts which may affect tree growth rates; bushfires; and competitiveness of existing wood-yielding plantations with other land uses.

Log availability forecasts are inherently uncertain because of the variability of natural resources, market cycles and the unpredictability of natural events such as bushfires. Therefore, forecasts of log availability are estimates only, and care must be taken not to extrapolate these forecasts to the operational level.

The effects of the 2019-20 bushfires and the compounding effects of the potential duration and severity of the COVID-19 pandemic on Australia's commercial plantation estate will be accounted for in the 2019-20 plantation log availability report scheduled to be released during 2020-21.

The plantation wood supply available for domestic softwood processors

including:

- **Current and future demand for logs for domestic processors; and**
- **Any shortfall in current processing industry demand for logs.**

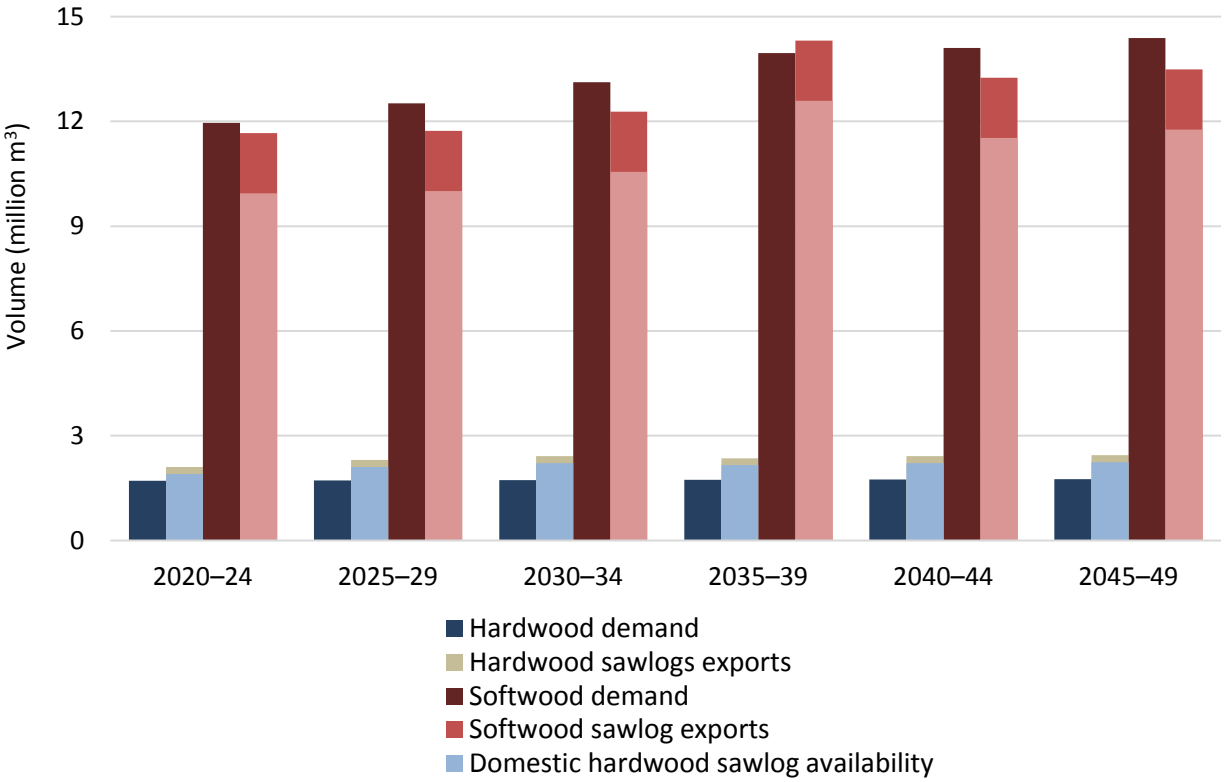
Information in response to this term of reference is derived from research undertaken by ABARES, in particular through the NPI which, as described above, collects data through an annual survey of growers, grower representatives and state and territory agencies.

Log equivalent demand and availability

The log equivalent demand and availability forecasts are from the ABARES report *Economic potential for new plantation establishment in Australia: outlook to 2050* (Whittle et al 2019). These forecasts are based on the log availability forecasts above and on the volume of logs exported from Australia in 2015-16. The log equivalent demand and availability for hardwood logs includes logs sourced from plantations and native forests. Log equivalent demand for hardwood and softwood timber products is derived by converting the quantity of final wood products into a sawlog or pulplog equivalent volume.

Forecasts are presented in Figure 2 and are discussed below.

Figure 2 Domestic annual sawlog availability and log equivalent demand



Source: Whittle et al 2019, *Economic potential for new plantation establishment in Australia: outlook to 2050*, ABARES research report, Canberra, February. CC BY 4.0.

Future availability of **hardwood sawlogs** from plantations and native forests will likely be sufficient to meet domestic log equivalent demand.

ABARES forecasts a shortfall in the volume of **softwood sawlogs** available to the domestic market. If exports of softwood sawlogs remain at 2015-16 levels, then the total volume of sawlogs available to the domestic market is forecast to fall short of demand by 2.6 million cubic metres per year between 2045 and 2049 (Figure 2).

With continuing growth in demand for softwood sawlogs, modelling work published by ABARES estimates that the domestic log availability shortfall could increase to 3.4 million cubic metres per year between 2050 and 2054 (see Whittle et al 2019).

To provide context to these figures, if this shortfall in domestic log availability was to be covered entirely by domestic supply, an additional 200,000 to 250,000 hectares of new softwood plantations would be required by 2050 to meet an annual deficit of 3.4 million cubic metres per year (based on an assumed growth rate of 13.5 to 17.0 cubic metres of sawlogs per hectare). This represents an expansion of the current softwood plantation area of between 19 and 24 per cent.

Demand for wood, including for new products, is expected to grow significantly. The National Forest Industries Plan notes that the forest sector has projected that Australia needs to establish approximately 400,000 hectares of new plantations over the next decade to meet this demand.

In the absence of additional investment in softwood plantation establishment, any increase in softwood sawlog demand would be met by increased imports of final wood products or product substitution. The industry will favour imports over domestic production where the costs of meeting demand through imports are less than the costs of domestic production.

Forecast assumptions

The forecasts used in the published ABARES reports were derived using the Forest Resource Use Model (FORUM) framework developed by ABARES[1]. FORUM uses comprehensive ABARES datasets on the forestry sector – including logs harvested, processing infrastructure, forest areas, and log availability from native forests and plantations. This ensures that the model accounts for real world biophysical and infrastructure constraints in determining optimal plantation investment.

However, FORUM has several limitations that should be considered when interpreting the results. For example, many regions, log types and wood products have been aggregated in this analysis because of data limitations. As a result, the modelled allocation of logs, residues and products will often differ from reality. ABARES calibrates model outputs to current market conditions, but this process is approximate. Additionally, model projections are contingent on assumptions around future log availability, wood product demand and prices.

The framework does not assess some potential future market opportunities and assumes that current technologies will remain in place.

The competitiveness of log pricing between domestic and export market

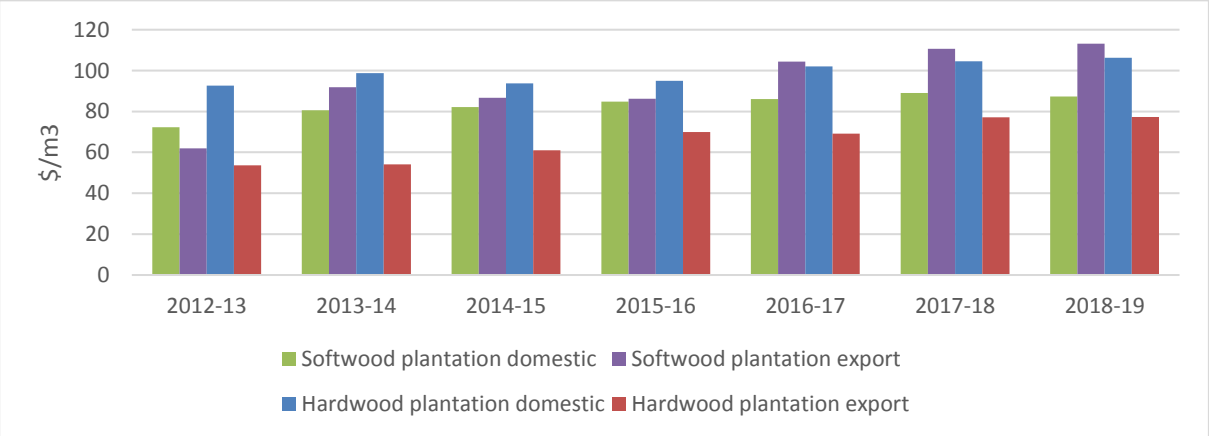
Information in response to this term of reference is derived from research undertaken by ABARES.

Australia's domestic and export prices

Australian domestic softwood sawlog prices have increased by 21 per cent since 2012-13 to an average of $106/m^3 in 2018-19 while softwood export prices have increased by 82 per cent to an average of $113/m^3 over the same period (Figure 3). The export of softwood roundwood has increased from 728,000 cubic metres in 2008-09 to 3.53 million cubic metres in 2018-19. The increase in demand for softwood sawlog has mainly been driven by China.

The domestic price for hardwood plantation sawlogs has increased by 14 per cent from 2012-13 to $106/m^3 in 2018-19 while export prices have increased by 44 per cent to $77/m^3 over the same period. The sawlogs exported from hardwood plantations are of lower quality than domestic sawlogs.

Figure 3 Domestic and export log prices



Source: ABARES.

[1] A discussion of the FORUM framework is included in Whittle et al 2019, *Economic potential for new plantation establishment in Australia: outlook to 2050*, ABARES research report, Canberra, February. CC BY 4.0. See Chapter 2. agriculture.gov.au/sites/default/files/abares/documents/PlantationEstablishmentOutlook2050_v1.0.0.pdf

The term of log supply contracts needed to support the processing sectors

The department makes no comment on the terms of log supply contracts. Generally, contract terms will be a matter for growers and processors negotiated according to their respective needs.

A related matter is the pricing of logs. Governments have stated this is a matter for the market. At the Forestry Ministers Meeting in June 2018, for example, Australian and state ministers agreed that governments should generally not intervene in the log export trade to avoid distorting the market. This statement was made because of concerns expressed about the impact that log exports were having on domestic processors at the time in some parts of Australia. The government has made clear that its aim is to grow the availability of timber, thus growing supply within Australia for domestic processing and export.

While making no comment on the term of a contract, the department recognises that secure long-term contracts can be mutually beneficial to both growers and processors. The long-term nature of forestry means that a secure long-term contract will encourage growers to plant trees in the confidence that there will be a market for them at the time of final harvest, as well as for the thinnings that are harvested in the intervening years. Processors will have the confidence to invest in technology on the basis of a secure contracted wood supply.

To enhance industry confidence, in September 2018 the Australian Government released the National Forest Industries Plan which provides support for Australia's forest industries. This plan, for example, provides for the establishment of nine Regional Forestry Hubs which are centred on existing softwood plantation and processing regions with significant capacity for growth:

- North East New South Wales
- Central West NSW
- South West Slopes of NSW and Victoria
- Green Triangle of SW Victoria and SE South Australia
- Gippsland Victoria
- South East Queensland
- North Queensland
- South West Western Australia
- North/North West Tasmania.

The demand for wood is being increased by technological advances that are unlocking an array of new uses of materials derived from trees, and increasing recognition of the high order environmental outcomes that wood offers compared with competing products. The National Forest Industries Plan notes that the forest sector has projected that Australia needs to establish approximately 400,000 hectares of new plantations over the next decade to meet this demand. These newly emerging uses are expected to introduce additional processors, each seeking secure and affordable wood supply, including for manufacturing:

- engineered wood products
- the construction of high-rise buildings entirely out of wood
- food additives
- pharmaceutical and medical applications
- biofuels derived from wood that can replace fossil fuels
- wood plastics that can be turned into anything from car components to recyclable plastic bags.

Opportunities to increase Australia's wood supply, including identifying and addressing barriers to plantation establishment

The goal of the National Forest Industries Plan is that a billion new plantation trees be established by industry to meet Australia's future needs for wood and wood fibre. Consistent with this, industry has identified a need to expand Australia's planted forest area by 400,000 hectares (AFPA 2018). This would comprise 300,000 hectares of new softwood plantations, and 100,000 hectares of farm forestry plantings.

The National Forest Industries Plan to grow the industry is supported by:

- Plantation Development Concessional Loans.
- The development of a Farm Forestry Strategy.
- Access to Emissions Reduction Fund (ERF) farm forestry and plantation methodologies to enable forestry to fully participate in the ERF initially in the five forestry regions with additional work being undertaken to assess new areas.

To support the delivery of this goal of a billion new plantation trees, the Australian Government is focusing on the following activities within the Regional Forestry Hubs:

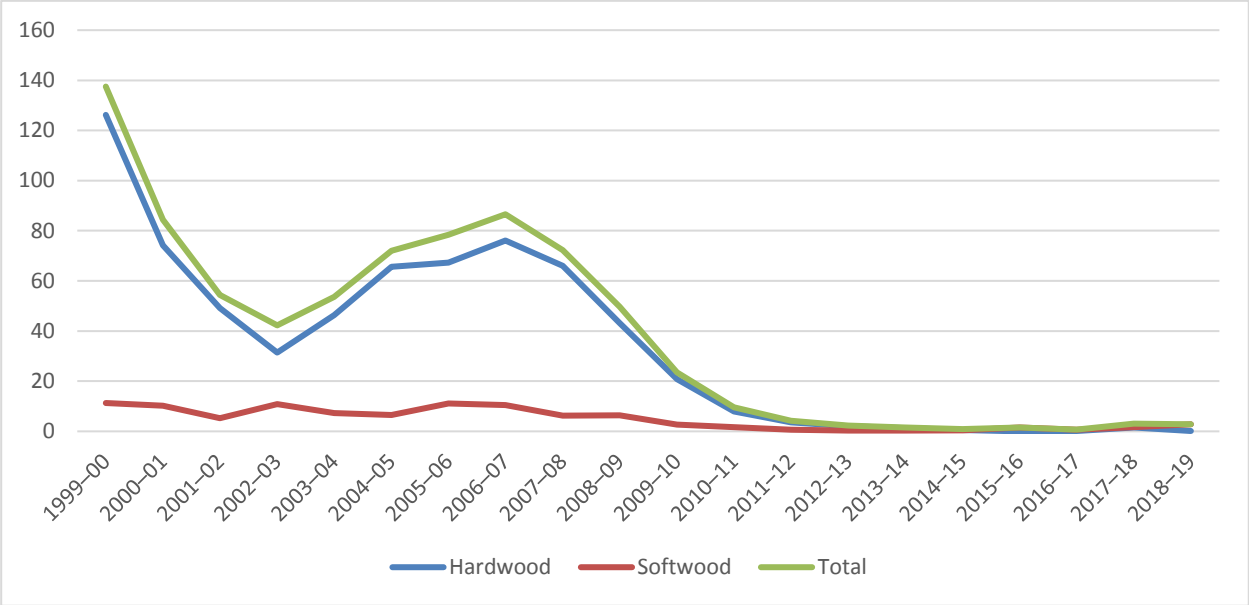
- Driving plantation growth by creating Regional Forestry Hubs[2], with a focus on existing softwood plantation and processing regions – the hubs will identify new plantation opportunities, ensuring the right trees are planted in the right places, adding value to existing infrastructure and processing capability, and maximising community participation.
- Delivering the policy mechanisms and on-ground support within the hubs, which will give farmers the confidence needed to participate in profitable farm forestry ventures.
- Reducing barriers to forestry expansion and supporting the planting of more trees, with a strong focus on the hubs.
- Using forestry resources smarter, to help industry extract greater value from all our forest products.
- Growing community understanding of forestry, to build public support for sustainable forestry activities in Australia.

Each Regional Forestry Hub has existing concentrations of wood supply resources, significant existing processing and/or manufacturing operations, established domestic and/or international transport links, and strong potential for growth. Each hub is working with industry, state and local governments, and other key stakeholders to undertake strategic planning, technical assessments and analyses to support growth in the forest industries in their region.

One part of the plan discussed barriers to plantation expansion. It notes that the area of Australia's plantation estate – currently just under 2 million hectares – has not grown in size in the last 10 years, and the area of new plantings has been very low (Figure 4).

[2] Regional Forestry Hubs can examine opportunities for the hardwood sector in their respective regions.

Figure 4 Area of new plantations established ('000 ha) 1999-2000 to 2018-19



Source: Gavran 2020, *Australian forest and wood products statistics datasets*, ABARES technical report, Canberra, July, CC BY 4.0.

One of the barriers identifed in the plan relates to the water requirements in the Emissions Reduction Fund (ERF) farm forestry and plantation methodologies. To address this concern, in April 2020 the government tabled amendments to the Carbon Credits (Carbon Farming Initiative) Rule 2015. The government has also committed to review other legislation, policies and processes where it is identified that they may be unintentionally restricting plantation expansion.

Expanding Australia's plantation estate will help address a supply shortfall forecast by ABARES. ABARES forecasts that potential log availability from Australia's commercial plantation estate will decrease from an annual average of 29.7 million cubic metres in the 2015-19 period, to an annual average of 26.3 million cubic metres a year for the 2055-59 period. This expected decline will coincide with an expected increase in demand.

However, as noted earlier (p4), the majority of the decline in total log availability towards the end of the projection period is because the expected yield from hardwood plantations is forecast to decline as plantations of low commerciality are not replanted and some lease agreements with landholders are not renewed.

Plantation development concessional loans

In support of the plan's goal for a billion new plantation trees to be planted, the government has stated that it will also introduce Plantation Development Concessional Loans to encourage foreign and domestic investment in plantation establishment. This $500 million new capital investment could result in up to 150,000 hectares of new plantations. Loans will be prioritised for new plantation development that delivers a sustainable resource and, over time, will support the growth of regional economies and communities. The loans will be administered by the Regional Investment Corporation.

Farm forestry

The government is developing a National Farm Forestry Strategy in cooperation with states and territories and industry. The National Forest Industries Plan recognises that farmers will play a vital role in meeting the goal of a billion new trees, with farm forestry being integrated into the existing commercial supply chains.

The aim of the strategy is to transform farm forestry as a commercial, timber-supplying enterprise by investigating aggregation tools, data needs, mapping and business models and navigating the challenges of changing land use. It will aim to help farmers explore opportunities for expanding farm forestry, creating future wood and fibre supplies, improving links with the forest industries, and increasing economic returns for farmers.

Planting new trees in commercial plantations and through farm forestry will provide greater certainty and confidence for Australia's forest industries, and will drive investment, innovation and jobs growth.

The National Farmers' Federation has stated that it will work with the Australian Forest Products Association to see farm forestry tree plantings become a larger part of Australia's farm landscape. Such plantings will supplement the primary agricultural purposes of many farms, and help tree growing play a bigger part in Australia's agricultural landscape.

To assist with the development of the strategy, the government – through ABARES – has commenced an inventory of farm forestry resources on private land to determine their potential to supply wood for the processing sectors. The results of this inventory will be available during 2020-21.

Emissions reduction fund

The National Forest Industries Plan committed the Australian Government to review the water requirements in the Emissions Reduction Fund (ERF) farm forestry and plantation methodologies to enable forestry to fully participate in the ERF. The government subsquently released a consultation paper in February 2020 (DISER 2020) which sought comments on a proposed mechanism to reduce the regulatory burden for plantation forestry and farm forestry projects under the ERF.

Following this consultation, in April 2020 amendments to the Carbon Credits (Carbon Farming Initiative) Rule 2015 were tabled in Parliament. These amendments enable plantation forestry and farm forestry projects in higher rainfall areas to proceed with registration under the ERF if located in an area where tree planting is unlikely to materially impact water availability. The changes will initially be applied in areas covered by the five pilot Regional Forestry Hubs:

- North East New South Wales
- South West Slopes of New South Wales and Victoria
- The SE South Australian section of the Green Triangle (the SW Victorian section is still under consideration)
- South West Western Australia
- North/North West Tasmania.

AFPA has said 'The announcement will pave the way for tens of millions of new trees to potentially be planted over the coming decade as these activities will now be supported through the Government’s Climate Solution Fund' (AFPA 2020).

The amendments to the the Rule aim to encourage further investement in plantations and an incentive for plantation expansion, with some in industry saying this will enoucourage millions of dollars of investment in plantation expansion. Industry has advocated for these amendments for several years, and the 'water rule' had been consistently identified as the biggest impediment to plantation expansion.

The amendments enable the minister responsible for the ERF, currently the Minister for Energy and Emissions Reduction, to add more regions, including ones outside Regional Forestry Hubs.

Make any recommendations around any code of conduct or management mode that could assist in addressing any problems identified by the work of this committee

It is noted that a code of conduct is generally something for which industry would be expected to take responsibility. In 2017, the Australian Government released an *Industry Codes of Conduct Policy Framework* (The Treasury 2017). The framework indicates that the government would only prescribe a code in very limited circumstances where there is a compelling case for intervention, supported by robust evidence.

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