

Impacts of log auctions on The Victorian native hardwood sawmilling industry



Prepared by URS Forestry for

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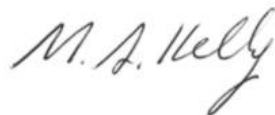
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This study aimed to assess the broad socio economic impacts of an auction based system for the pricing and allocation of native forest hardwood sawlogs. The introduction of an auction based system will result in structural adjustment of the hardwood sawmilling industry, which will have socio economic impacts on Victorian communities. The following points summarise the key findings of the study.

- VicForests is moving to an auction based system for the allocation and pricing of native forest hardwood sawlogs.
- There has been extensive structural change in the Victorian sawmilling industry over the last 10 to 15 years, primarily as a result of decreasing resource availability and government policies encouraging investment in value adding.
- Victoria's sustainable hardwood sawlog harvest yield has decreased from 920,000 m³ pa in 1997 to current estimates of 450,000 m³ pa.
- Over the last 10-15 years Victorian hardwood sawmills have made significant investments in value adding and are estimated to have moved from producing around 25% of sawn timber output as higher value dried product to around 60-70%.
- The hardwood processing industry in Victoria is estimated to directly generate a value of output of \$529 million per annum and employ more than 2,400 people. There were 37 hardwood sawmills in Victoria in 2004/05.
- The 15-year timber allocation licences introduced through Victoria's Timber Industry Strategy will expire between 2006 and 2010. The implementation of "5 year step down" transition supply contracts will see volumes committed under licences progressively decline up to 2014. The majority of log allocations will be based on auctions from 2012.
- Two online auctions have been held to date for the sale of hardwood logs. Both auctions have resulted in significant increases in log prices, with increases averaging around 150-160% of existing stumpages from administered prices, although only marginal volumes of logs have been sold. The auctions also offered shorter contract periods than the current 15 year timber supply licences. The average contract periods for the first and second auctions were 4.3 years and 5.9 years respectively.
- The additional income generated by VicForests as a result of the auction system is likely to reduce as longer term auction prices fall in line with viable processing costs. However, it is clear that the auction system will effectively transfer considerable income from the hardwood sawmilling sector to the government through VicForests.
- The introduction of auctions for log pricing and allocation can be expected to initiate significant structural adjustment in Victoria's native hardwood sawmilling industry. The process of structural adjustment will be determined by market forces but it is likely that sawmills will not be viable with average log prices equivalent to the current auction prices. Declining profitability through increasing costs will cause some sawmilling companies to exit the sector and result in a shift to processing in larger and more efficient processing facilities.
- While market based systems are effective in driving change, the mechanisms can have considerable impact on employment and income. A reduction in the number of sawmills would see a loss of income and employment from those areas and towns where smaller sawmills operate to those where larger sawmills are located.
- Scenarios developed to analyse the potential economic impacts of the log auction system show that the system is likely to cause a loss of income for smaller rural communities in Victoria of between

Key Findings

\$19 million to \$52 million per annum. On a state wide basis this income loss will be transferred to medium and larger sawmills but those communities in which sawmills close will suffer significant income loss. Communities in the Gippsland and North East regions will be most severely affected.

- The shift to more efficient processing facilities will also result in a net loss of employment overall as larger scale sawmills generally employ fewer people per cubic metre of output.
- Other factors in the structural adjustment process are likely to include a slow down in new investments as a result of increasing costs of finance, increased competition from hardwood sawmills in other states that have lower log costs and potential increased competition from imports.

Executive Summary

The introduction of an auction based system for the pricing and allocation of native forest hardwood sawlogs in Victoria is likely to lead to significant increases in costs of production for hardwood sawmills. The cost increases will stem from the higher prices paid for sawlogs, as evidenced in the two auctions held to date. In addition, heightened uncertainty for the processing industry will stem from shorter term log supply contracts as existing 15 year licences are phased out. This increased uncertainty will influence costs of production for sawmills as costs of finance increase due to higher perceived levels of risk applying to industry investments.

Increasing costs of production will lead to further structural adjustment in the hardwood sawmilling industry, following a decade in which there has already been considerable change. Promoting industry structural change appears to be an explicit aim of introducing a market based system for log pricing and allocation. The economic logic of the approach is that market based log pricing and allocation will lead to a more efficient industry because those sawmills that place the highest value on sawlogs will secure available sawlog supplies by paying the highest prices at auction.

The structural adjustment that will occur as the industry becomes more efficient will transfer income and employment from those communities where sawmill closures occur to other areas. It will also see a net loss of employment as processing moves to larger scale sawmills that generally employ fewer people per cubic metre of output. In addition, the recent further decline in sustainable harvest volume of D+ sawlogs in Victoria from 530,000 m³ per annum to 450,000 m³ per annum will reduce both income and employment across the sector.

The hardwood processing industry in Victoria is estimated to directly generate a value of output of \$529 million per annum and employ more than 2,400 people. The hardwood sawmilling industry extends across the state but in this study two broad regional groupings were considered – Gippsland and North East/Central Highlands which is where most of the industry is located. There were 37 hardwood sawmills located in these regions in 2004/05.

The introduction of log auctions will have the strongest impact on sawmills processing D+ logs, which are estimated to generate around \$153 million per annum of total output and employ 937 people. Taking indirect impacts into account the D+ hardwood sawmilling industry would generate annual income of around \$300 million per annum and generate employment of almost 1,900 people.

To demonstrate the structural adjustment likely to occur as a result of the log auction system two scenarios of adjustment were developed:

- Scenario 1 sees the number of hardwood sawmills reduced to 10, or around one quarter of the number of existing sawmills; and
- Scenario 2 sees the number of hardwood sawmills reduced to around half of current numbers (i.e. to 19 sawmills).

The impacts of the scenarios were estimated by comparing employment and income under each against current socio economic impacts of the industry.

Under Scenario 1 it is estimated that there is a direct loss of \$52 million per annum from closure of existing sawmills. While this income is transferred to other sawmills, individual towns affected by sawmill closures will suffer loss of income and employment. The biggest impact of sawmill closures is in the small communities of West Gippsland and in areas North and North West of Melbourne where there is a concentration of smaller sawmills that are likely to close. While there are income losses in East and Central Gippsland the majority of volume from sawmill closures is likely to be taken up by larger sawmills within the region.

The direct employment impacts of sawmill closures under Scenario 1 would result in a loss of 415 jobs in affected towns. While the log volume is transferred to larger sawmills employment is unlikely to recover fully as the larger sawmills generally employ fewer people per cubic metre of timber produced. This scenario sees a net long term loss of employment across the state of 348 jobs.

Scenario 2 illustrates the impact of a smaller structural adjustment. The direct impact of sawmill closures on affected towns under this scenario is a reduction in income of \$19 million per annum. While this reduction is picked up by other sawmills, there is a net loss of around 260 jobs.

These scenarios are illustrative only as actual outcomes will depend on market forces and the strategies and actions of individual sawmills. However, they do illustrate that the log auction system will cause significant adjustment and result in socio economic losses, particularly in those towns where sawmills close. At the same time the government can expect to receive significant additional income from higher log prices.

The structural adjustment resulting from the log auction system comes on top a long history of change in the sector. There is a danger that further change, driven by the auction system together with further reductions in sustainable yield, will reduce the industry to a level whereby it is no longer able to attract ongoing investment or sufficient skilled people. The potential for this to occur may be exacerbated by increased competition in Victorian hardwood markets from Tasmanian sawmills that have much lower log costs than Victorian sawmills and possibly also imports. Such an outcome would clearly run counter to government policy and the industry's plan for the future. It would also incur significant socio economic costs for Victorian communities. Consequently it is recommended that VAFI seek from the state government:

- A commitment to closely monitor the outcomes of structural adjustment that will result from auction based log pricing and allocation. This should include monitoring the number of sawmill closures and impacts in small communities. It should also take account of the combined impact of reductions in sustainable harvest volumes and log auctions.
- Promotion of long term sustainable activities and policy settings that ensure the viability and vibrancy of rural communities in Victoria is not adversely affected by the log auction system. This should include both provision of structural adjustment assistance to communities that suffer socio economic losses as a result of sawmill closures, and commitment to fostering the long term viability of the native hardwood timber industry in Victoria.

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- Options for maintaining its commitment to long term sustainable yields of 530,000 m³ per annum under the *Our Forests Our Future* policy and the industry's Vision 2025. This will require a comprehensive understanding of resource availability and identification of strategies to ensure sustainable yields are maintained at commitment levels.
- An independent review of the auction system to ensure that its design does not lead to price outcomes that are inconsistent with sustainable market outcomes e.g. whether the existing approach to bidder qualification leads to undue competition from bidders lacking the requisite financial capacity to pay for logs purchased in the auctions and whether the current system of bidding allows some log buyers to bid up prices to unreasonable levels.
- Clarification of the way in which auction prices will inform administered prices.

1. Introduction

This study has been undertaken at the request of the Victorian Association of Forests Industries (VAFI) to provide an outline of the socio economic impacts of the introduction of an auction based system of pricing and allocation for native hardwood sawlogs in Victoria. It is generally expected that the introduction of log auctions will generate significant change in the sawmilling industry. In fact it appears that structural change is a major motivation for the introduction of auction based pricing and allocation for logs. This study aims to provide an outline of the nature and extent of that structural change.

The study has been based on desktop analysis utilising secondary data. In recent years there have been a number of studies of the socio economic impacts of the forest sector in Victoria and these have been used to develop a picture of the income and employment generated by the existing industry. The potential implications of structural adjustment have been estimated using two scenarios for structural adjustment and illustrating how these would alter the existing income and employment impacts of the native sawmilling industry. The purpose of this analysis is illustrative. Actual adjustment processes will depend on market factors as well as the strategies and actions of individual firms that cannot be predicted. Rather the scenarios illustrate the nature of impacts and particular areas that could expect to suffer adverse socio economic implications.

Section 2 of this report provides an overview of the history of the change and structural adjustment, which has already occurred in Victoria's native sawmilling sector. The various policies that have driven these changes are outlined, together with the industry's framework for future development.

The structure of the existing native sawmilling sector and its associated socio economic impacts are outlined in Section 3. The implications of the introduction of the log auction system and the expected structural adjustment that may follow are examined in Section 4. The two scenarios for the future structure of the sawmilling sector under the log auction system are developed in this section as are the likely socio economic impacts associated with each alternative presented.

Finally, Section 5 provides some recommendations for dealing with the identified impacts of the log auction system.

2. Changing industry environment

This section provides an overview of the context in which the native hardwood sawmilling industry operates in Victoria. It illustrates the extensive structural change which has already occurred in the industry and the major drivers of that change. The drivers include developments in government policy and changing markets. The key characteristics of the latest driver of structural change i.e. the log auction system, together with the industry's plans and approaches for its future development are also outlined.

o Victoria's native forests policies

In the 1980s and 1990s development of the native timber industry in Victoria was based around the Timber Industry Strategy. This strategy provided for the introduction of long term (15 year) licences for log supply to sawmills in return for investment in value added processing, in particular the development of kilns for drying timber and further processing. The strategy successfully drove high levels of new investment in the sector which in turn generated significant employment and income. It also complemented market changes whereby plantation grown pine timber was capturing traditional hardwood framing markets while hardwood sawn timber moved to higher value markets based on the superior appearance and strength characteristics of hardwood. Production of flooring has been particularly important in this process. Complementing these changes in the 1980s and 1990s was the ongoing development of ecologically sustainable management practices in native forests including the introduction of Forest Management Plans and the Code of Forest Practices.

As part of Commonwealth and State government forest policy the Regional Forest Agreement (RFA) process was implemented in the latter half of the 1990s. Five RFA's were developed in Victoria and these were signed between 1997 and 2000. The RFA's were intended to provide greater certainty and security in both forest conservation and timber resource supply. The outcomes of the RFA's in Victoria included a reduction in the sustainable harvest volume of D+ sawlogs from native forests of 10% from 1997 levels. Timber supply licences were reduced through funded buybacks as part of implementing the RFA process.

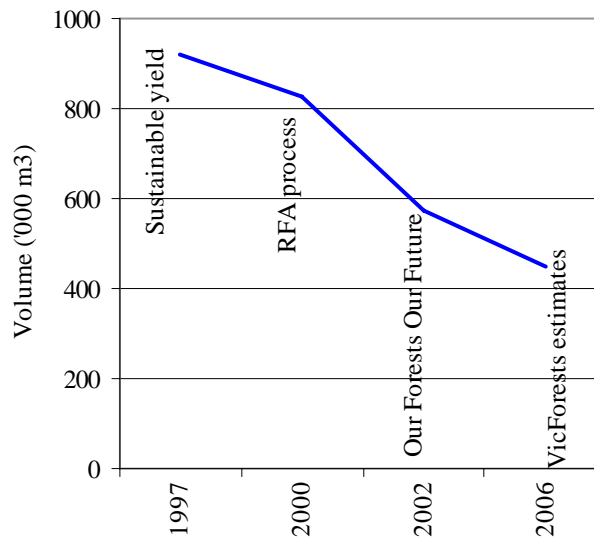
Following implementation of the RFA's, a timber resource review was undertaken in 2001 as part of the Licence Renewal Project. This review identified that sustainable harvest levels were lower than the levels set in the RFA's and also illustrated that a considerable quantity of sawlog resource previously included in sustainable yield forecasts could not be accessed using current techniques or was considered non commercial. Subsequently, in 2002, the Victorian government implemented the *Our Forests Our Future* policy which reduced licence levels by about 30% to around 570,000m³ per annum of D+ sawlogs. However, actual supply volumes have only been around 530,000 m³ per annum.

The *Our Forests Our Future* policy aimed to facilitate structural adjustment resulting from the reduced volume of sawlogs available through the implementation of an \$80 million industry program. The structural adjustment mechanisms included a Voluntary Licence Reduction Program (VLRP) and contractor and timber worker exit packages, as well as transition programs for affected rural communities. Under the VLRP businesses could voluntarily sell their licence volumes to the government.

Implementation of *Our Forests Our Future* also included the establishment of VicForests to separate the commercial log selling and regulatory functions of government as well as providing for the introduction of a market based system of log pricing and allocation. VicForests was established in August 2004 as an independent government owned trading enterprise with responsibility for the sale of wood from public native forests in Victoria. The volume of timber available for sale by VicForests is established under an allocation order from the Minister for the Environment for a 15 year period. VicForests receives timber rights through five year timber release plans approved by DSE and has responsibility for sustainable harvesting, sale of the resources and all post harvest rehabilitation and regeneration works.

VicForests has recently announced further reductions in sustainable yield levels following its own review of timber resource availability and the Government’s timber rights order allocation estimates. This review has resulted in a reduction in the estimated sustainable yield of D+ sawlogs to 450,000 m³ per annum. This results from a 10% reduction in sustainable volume following the alpine fires of 2003, prior over harvesting of D+ sawlogs and a further 10% reduction following a review of DSE’s assumptions and methodology for resource estimation. Figure 2-1 summarises the declining sustainable harvest volumes of D+ sawlogs in Victoria over the last decade and illustrates that volumes available from 2006 are around half of what they were a decade ago.

Figure 2-1: Victoria’s sustainable harvest levels



Source: DSE (2002)

2.1 Market changes

As Victoria’s native forest sustainable yield has decreased over time through the implementation of the government policies described above, the State’s hardwood timber markets have also undergone significant change. Historically, Victoria’s hardwood sawlog processing industry was primarily concerned with the production of unseasoned structural timber for home building. However, over the last

15 years or so hardwood framing has been substituted by plantation softwood, market demand for high value hardwood products such as flooring has increased, and government policies have required a commitment to hardwood value adding. As a result, an increasing number of hardwood sawmills have invested in new processing equipment and have repositioned their businesses to access markets for higher value, kiln dried hardwood products both within and outside Victoria. Over the last 10-15 years Victorian hardwood sawmills are estimated to have moved from producing around 25% of sawn timber output as higher value dried product to around 60-70%.

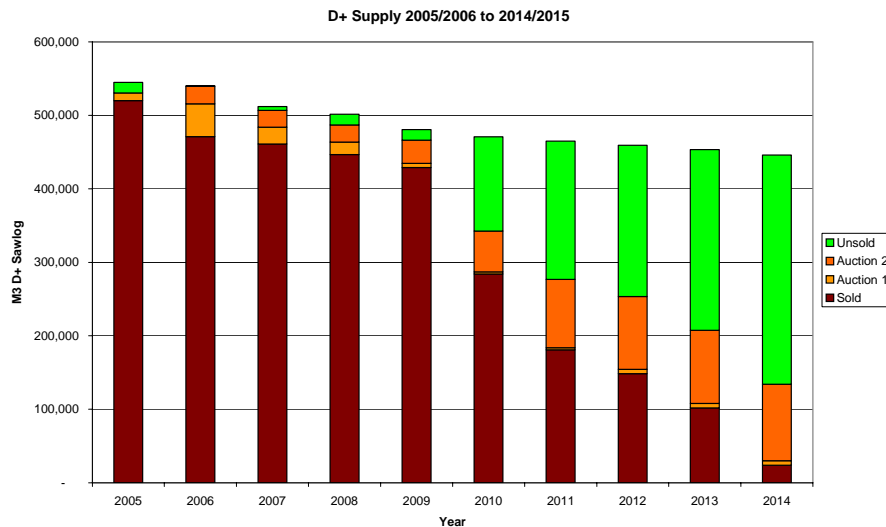
There is a growing emphasis in Australia and internationally for timber products to be sourced from forests which are managed sustainably and responsibly. A number of forest management certification systems are gaining increasing recognition in Australia and over time this is likely to result in increasing pressure in Victorian timber markets.

2.2 Log auctions

Following its establishment, VicForests decided on online auctions as the means of delivering market based systems for pricing and allocation of native forest sawlogs. The 15 year timber supply licences granted in the 1990s expire between 2006 and 2010. Rather than move directly to a fully auction based system as licences expire VicForests has implemented “5 year step down” transition supply contracts to licence holders that will see volumes committed under licences/contracts progressively decline up to 2014 with the bulk of commitments ceasing in 2010-2012. This means that it will be 2015 before the log sale system is completely auction based. The majority log allocations will be based on auctions from 2012. Figure 2-2 illustrates this situation.

Consequently the auction system is currently predominantly selling forward volumes that will become available as existing licences expire. Prices nominated in successful bids will be adjusted to account for movements in inflation over time. VicForests is also assessing means of having auction price outcomes inform price setting mechanisms for log volumes supplied under existing long term licences. Two online auctions have been held to date.

Figure 2-2: VicForests commitments, auction volumes sold and remaining unsold auction volumes of D+ sawlogs to 2014



Source: VicForests

The first auction was completed on 3 April 2006 and was for a total of 174,000 m³, with a weighted average contract period of 4.3 years, for varying periods between 2006 and 2015. It resulted in significant increases in log prices, averaging around 150-160% of the existing stumpages resulting from administered prices.

The second online auction was completed on 26 June 2006 and was for a total of 680,000 m³, with a weighted average contract period of 5.9 years, covering varying periods between 2006 and 2015. VicForests has stated that the price outcomes for the second auction were even higher for most types of logs that in the first auction (actual stumpage prices from the second auction are not available).

The design of the online auction system enables log buyers to bid in a number of rounds. Lots offered in the auction vary by volume, length of allocation, log grade and location of harvesting. Bids are made on the basis of delivered log costs but are awarded on the basis of stumpage value, each mill having a unique delivered log price on which bidding for each lot is based. The second auction introduced a system whereby bidders were able to bid on combinations of lots rather than on just single lots. Buyers were able to create their own “combination lots” under the system.

Under the auction rules, bidders are required to pre-qualify to take part in the auction. Key factors taken into account in this process include evidence of financial viability (with self-imposed bidding limits) and demonstrated ability to process the logs in Victoria. Log processors that have received industry exit packages under government initiatives to assist adjustment in the native timber industry in Victoria are not eligible to register for the auctions for two years from that time.

The introduction of the log auction system is expected to lead to ongoing structural adjustment in the sawmilling sector and there are indications that this is already occurring with a number of sawmills

apparently unable to meet the financial commitments required to take up their volumes and/or deciding to exit the industry.

2.3 Vision 2025

Recognising the inevitability of ongoing structural change in the native hardwood sawmilling sector and the market opportunities for value added hardwood sawn timber VAFI has developed *Vision 2025*, a strategy for addressing issues in the forestry industry and moving ahead to create an industry of economical, environmental, social and governance sustainability. Vision 2025 aims to engage stakeholders, identify critical issues to industry sustainability and define a timeframe and milestones to achieve a successful and healthy industry. Priority actions identified in the strategy are to:

- Engage with government and other key stakeholders to develop integrated industry/environmental/social benefit;
- Obtain credible independent third-party forestry certification;
- Increase community understanding of and support for sustainable commercial forestry; and
- Seek to increase the amount of resource available and the value obtained from it.

3. Socio economic impacts of the Victorian sawmilling industry

This section provides a picture of the existing structure of the Victorian native hardwood sawmilling sector and the socio economic impacts it generates. The existing socio economic impacts provide a basis for illustrating the type of adjustments that will occur as a result of structural changes stemming from the introduction of log auctions.

3.1 Current industry structures

VicForests sold 675,250m³ of sawlog (D+ and E grade) and 1,250,800m³ of pulpwood in 2004/05. Of the sawlog volume, ash species accounted for about 60% of sales, and mixed species 40% of sales. This generated revenue of around \$40 million with a profit of around \$13 million (VicForests Annual Report 2004/05 – includes resource revaluation of \$2.2 million). Of the total sawlog harvest volume around 530,000 m³ was D+ sawlogs.

3.1.1 Regional concentrations

The log auction system is likely to have the largest impact on processors of D+ sawlogs. This study has therefore focussed its assessment on the impacts on those sawmills that process these logs. There are also a number of regional bases on which the native forest industry in Victoria can be divided e.g. by Forest Management Areas, Local Government Areas and various regional groupings. Two broad regional groupings are considered in this study – Gippsland and North East/Central Highlands. Restricting the analysis to these regions was driven by limitations of available data. There were 37 sawmills processing sawlogs in these two regions in 2004/05. Table 3-1 shows the structure of the processing industry in these regions.

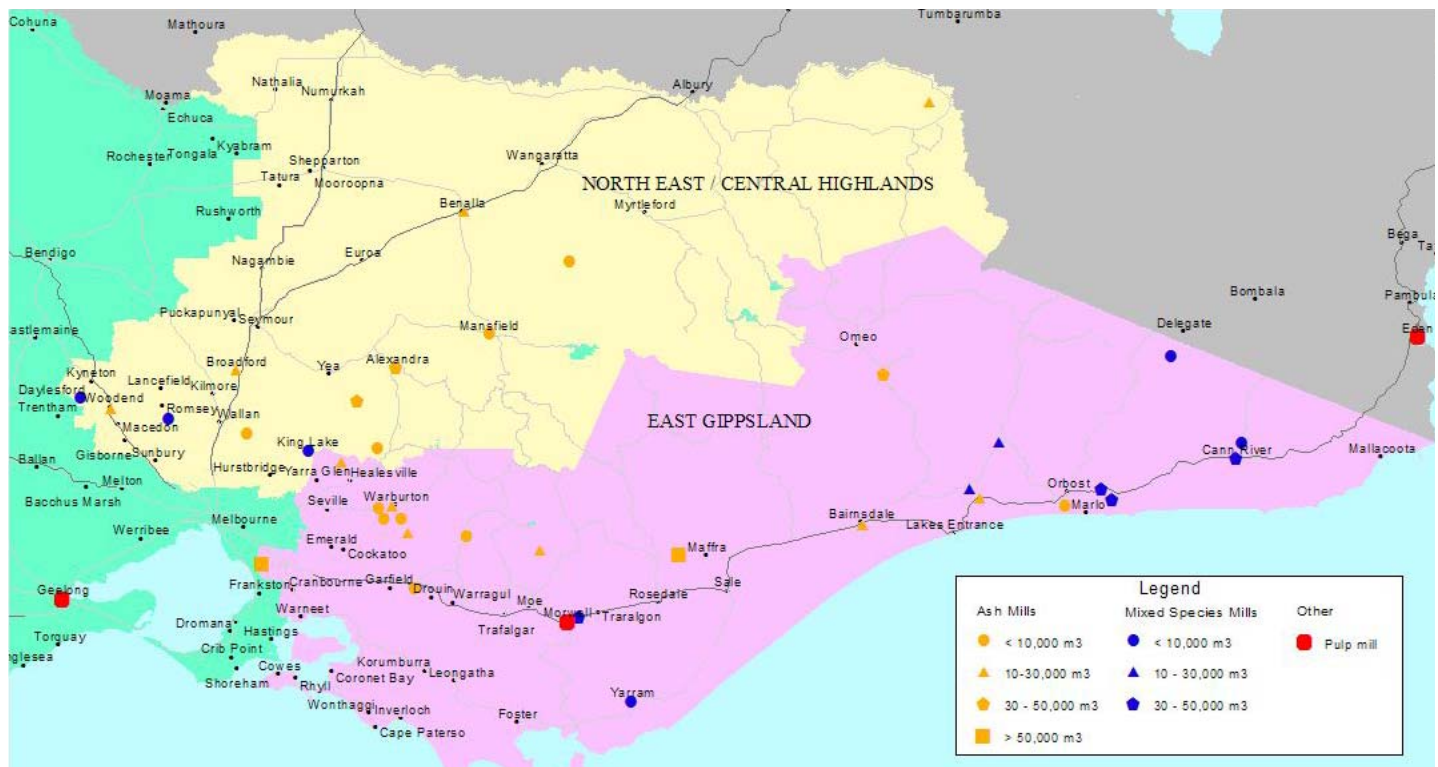
Table 3-1: Total number of sawmills by region volume of D+ sawlogs processed and

Region	Sawmill type	Number of sawmills*	Proportion of D+ sawlogs processed in Gippsland & NE
Gippsland	Ash <10,000 m ³	6	69%
	Ash 10-30,000 m ³	6	
	Ash 30-50,000 m ³	1	
	Ash >50,000 m ³	2	
	Mixed <10,000 m ³	3	
	Mixed 10-30,000 m ³	2	
	Mixed 30-50,000 m ³	4	
Total number saw sawmills Gippsland region		24	
North East/Central Highlands	Ash <10,000 m ³	4	31%
	Ash 10-30,000 m ³	4	
	Ash 30-50,000 m ³	2	
	Mixed <10,000 m ³	3	
Total number sawmills North East/Central Highlands region		13	
Grand Total		37	

* includes sawmills processing E grade logs

The Gippsland region had 24 sawmills that processed around 70% of all D+ sawlogs harvested in the two regions. The North East/Central Highlands region had 13 sawmills that processed around 30% of harvest volume of D+ sawlogs. Figure 3-1 illustrates the wide geographic spread of native forest processors across regional Victoria.

Figure 3-1: Victorian native hardwood log processors



3.1.2 Sawn timber products

Investment in value adding production that has occurred in the Victorian native hardwood sector has seen a large increase in the volume of production of dried appearance and structural products across the state. It is estimated that in 2004/05 around 70% of all timber produced was dried with only around 30% of volume now being sold as green timber. While ash producers moved to value added products before mixed species sawmills, new investment by mixed species producers in recent years has expanded their production of dried timber products.

The majority of mixed species are processed by Gippsland sawmills. In Gippsland, about 42% of products are mixed species. The North East/Central Highlands region produces a higher proportion of ash species and also a higher proportion of dried products than in Gippsland. However, Gippsland sawmills process around 370,000 m³ per annum compared to 160,000 m³ per annum in the North East/Central Highlands.

3.1.3 Other processors

About 1.2 million m³ of pulp logs are sold by VicForests each year. The three major buyers of this timber are Australian Paper for the manufacture of pulp and paper at its Maryvale sawmill, Midway and South East Fibre Exports, who export woodchips from the ports of Geelong and Eden respectively.

The E grade log market is dominated by one major processor who makes pallets but there are a number of other sawmills that also process some E grade logs.

3.2 Income and employment generated by the Victorian hardwood sector

The forest products industry in Gippsland and the North East/Central Highlands is estimated to produce a total value of output of \$529 million per annum (Table 3-2). Australian Paper, in Gippsland, accounts for a significant proportion of this value and the contribution of the D+ hardwood sawlog industry is estimated to be in the order of 30% of the total value of output (\$160 million per annum). Ash species contribute a larger proportion to total value of output due to the higher volume of ash products and because a higher proportion of ash species is sold as dried timber.

Table 3-2: Value of output by region and species

	Value of output		
	Ash	Mixed species	Region Total
Gippsland	\$326 M	\$136 M	\$462 M
North East/Central Highlands	\$63 M	\$4 M	\$67 M
Value output/m³	\$403*	\$284*	
Total value of output			\$529 M
Value of production from D+ hardwood sawlogs	\$105 M	\$48 M	\$153 M

Source: Value of output: Cameron (2005)

Notes:

*Value of output for each species is an estimate only based on proportion of each species produced and average of VicForests administered timber prices. These values include E-grade and pulpwood logs. The value of output for D+ sawlogs is estimated on average sales prices at sawmill gate of around \$800/m³ for dried timber and \$450/m³ for green timber. Mixed species have a lower value as a higher proportion of this species is sold as green timber.

Over 2,400 people are directly employed in hardwood processing facilities in Gippsland and the North East/Central Highlands regions, including around 1,100 people in sawmills (Table 3-3). Additional people are employed in harvesting and haulage and forest management operations. As the log auction system will not result in a reduction in log harvest levels, the impact on overall harvest and haulage and forest management employment is expected to be negligible and has not been considered specifically in this report. However, it should be noted that VicForests is currently implementing a “mill door” sales structure and that may have implications for the harvest and haulage sector.

Table 3-3: Employment at processing facilities by region and species

	Employment at sawmills (D+ logs)		Employment at sawmills (E-grade logs)	Sawmill total	Employment at pulpwood facilities	Total employment
	Ash	Mixed species				
Gippsland	349	282	121	752		
North East/Central Highlands	267	39	32	338	1323 [^]	2,413
Total	937		153	1090		

[^]This figure includes 1,200 employees at the Australian Paper Maryvale paper mill. This plant also utilises softwood logs and hence only a small number of these positions are actually attributable to the hardwood industry.

Source: Industry estimates

3.2.1 Flow on impacts of the hardwood processing sector

Spending and employment by the forest products industry has significant flow-on effects. This is the multiplier effect which generates additional output, employment and household incomes from spending by companies that receive revenue from forestry activities, and by households that receive income from forest industry employment. Based on a typical income and employment multiplier of two, the forest industry in Gippsland and North East/Central Highlands regions is estimated to generate about \$1.05 billion and generate employment for 4,638 people.

The direct and indirect income and employment effects have an important influence on the health and vibrancy of local communities across the regions of Victoria. The importance of the timber industry to particular communities is generally proportional to the relative contribution of the industry compared to other sources of income. This contribution can be significant, and often has a long, generational history. The nature of the benefits of the industry to communities typically includes:

- New enterprise development;
- The provision of infrastructure and services such as health and education;
- The contribution of forest industry employees' and contractors' families in local communities;
- Sponsorship of recreational facilities and events; and
- The provision of fire-fighting services within the region (BRS 2005).

4. Structural adjustment and log auctions

This section examines the structural adjustment that is expected to occur as a direct result of the log auction system. The impacts of that adjustment are estimated through the development of scenarios for structural adjustment.

The changing policy environment and ongoing reductions in sustainable harvest volumes over the last decade have had a number of implications for the hardwood industry. Most notably the industry has receded in size, assisted to some degree by government exit packages. However, at the same time a fairly rapid shift to value adding has resulted in increased value of output and regional employment.

Further reductions in sustainable harvest from current levels of around 530,000 m³ to around 450,000 m³ of D+ sawlogs is expected to result in further structural adjustment of the industry. This will be compounded with the structural adjustment impacts that result from the log auction system described in the following sections.

4.1 Implications of auctions

The introduction of auctions for log pricing and allocation can be expected to initiate significant structural adjustment in Victoria's native hardwood sawmilling industry. The structural adjustment will result from the fact that log supply will be allocated on the basis of willingness to pay so that those producers who value logs the most (the most efficient producers) will secure the available log supply. In economic terms this is a desirable outcome but it will also result in some processors exiting the industry. This will reduce employment and income in the regions in which sawmills close.

The delivered cost of logs is the most significant component of sawn timber costs of production. As noted in Section 2.2, the two online auctions held to date have resulted in prices for D+ sawlogs that are much higher than existing prices. The auction system has increased log costs through increased stumpages. It also appears likely that average haulage distances (and so costs) may increase with the introduction of auctions.

Currently, the higher auction log prices only apply to marginal volumes of logs sold. Existing processors still have licence and contract entitlements that are subject to administered prices. The lower level of administered prices means that average log costs are still consistent with viable sawmilling operations. However, it should be noted that VicForests is currently investigating options for auction prices to "inform" administered log prices.

Sawmills will not be viable with average log prices equivalent to the current auction prices. Consequently, it is expected that over time auction prices will decline to be more consistent with viable long term average log prices. However, these longer term averages are likely to be higher than existing administered prices.

In addition to log price increases, the auctions will result in average tenure for log volumes that will be shorter than the 15 year timber supply licences the industry has held over the last decade or so. While it

can be argued that 15 year licences are in excess of typical pay back periods for sawmill investments, a decline in tenure can be expected to increase uncertainty and lead to perceptions of increased risk to lenders, and consequently higher financing costs.

4.2 Auction impact scenarios

Increasing costs associated with the introduction of the auction system are expected to drive structural adjustment in the hardwood sawmilling sector. As already noted the actual process of structural adjustment will be determined by market forces but it is likely that declining profitability through increasing costs will cause some sawmilling companies to exit the sector. In particular, it is expected that smaller sawmills with higher cost structures will find it most difficult to deal with significant increases in processing costs and would be the most likely to exit.

Other factors in the structural adjustment process are likely to include a slow down in new investments as a result of increasing costs of finance, increased competition from hardwood sawmills in other states that have lower log costs and potential increased competition from imports. In particular, it is likely that Tasmanian producers who have significantly lower log costs and produce ash species could capture an increased market share in Victoria. Australia's annual trade deficit in forest products grew from \$1.87 billion in 2003/04 to \$2.02 billion in 2004/05.

The combination of these factors is expected to result in fewer hardwood sawmills in Victoria but with higher average processing volumes. It is also likely that this process will occur over the next 5-10 years as volumes under existing licences and contracts expire and are sold under the auction system.

To illustrate the types of impacts that could be expected over this period two scenarios have been developed. Scenario 1 examines the case where the number of sawmills in Gippsland and the North East/Central Highlands regions is reduced to 10 or fewer sawmills, around one quarter of the number currently operating. Scenario 2 examines a lesser adjustment whereby the number of sawmills is around half of existing numbers.

The outcomes of each scenario are described in the following sections. These outcomes are illustrative only and should not be interpreted as applicable to individual sawmills. As already noted market forces and individual company strategies and circumstances will determine actual outcomes. However, they do illustrate the likely extent of structural adjustment that will flow from the auction system. It should also be noted that both scenarios assume that the total volume of logs sold in Victoria (450,000 m³ per annum) is unaffected by the structural change.

The reduction in the number of sawmills would see a loss of income and employment from those areas and towns where smaller sawmills operate to those where larger sawmills are located. On top of this regional loss there is also likely to be an overall reduction in employment because of the higher levels of output per employee commonly found in larger sawmills.

4.2.1 Scenario 1

Under this scenario the number of hardwood sawmills in the Gippsland and North East/Central Highlands regions is reduced from 37 to 10 (Table 4-1). Structural adjustment of this magnitude would see the transfer of significant volumes of logs from small and medium sized sawmills to larger sawmills, which would need to invest to increase scale of production. There will be challenges in achieving substantial investment as sawmills face higher costs of logs, less resource security due to decreasing contract tenures and increased risk, and increasing costs of investment finance.

Table 4-1: Scenario 1 - sawmill closures

Region	Sawmill type	Current number sawmills	Scenario 1 sawmill closures	Scenario 1 sawmills remaining
Gippsland	Ash <10,000 m ³	6	6	0
	Ash 10-30,000 m ³	6	4	2
	Ash 30-50,000 m ³	1	0	1
	Ash >50,000 m ³	2	0	2
	Mixed <10,000 m ³	3	3	0
	Mixed 10-30,000 m ³	2	2	0
	Mixed 30-50,000 m ³	4	1	3
Total number sawmills Gippsland region		24	16	8
North East/Central Highlands	Ash <10,000 m ³	4	4	0
	Ash 10-30,000 m ³	4	4	0
	Ash 30-50,000 m ³	2	0	2
	Mixed <10,000 m ³	3	3	0
Total number sawmills North-East/Central Highlands region		13	11	2
Grand Total		37	27	10

Income and employment effects

It is estimated that the closure of sawmills under Scenario 1 would see a loss of direct income generated by those sawmills that close of \$52 million per annum and an immediate loss of around 415 jobs. While from a state wide perspective income lost by sawmills that close would be picked up by other sawmills, not all jobs lost would be replaced elsewhere. This is because larger sawmills are more efficient and employ fewer people per cubic metre of log processed than smaller sawmills, and because the future employment analysis is based on a sustainable harvest of 450,000 m³ which is significantly lower than harvest volumes in recent years.

Under this scenario, long term state wide employment in sawmills processing D+ logs is estimated to fall from current levels of about 937 to about 592. This is based on the following assumptions:

- Future harvest will be around 450,000 D+ logs;
- On current ratios, about 70% is processed in Gippsland and 30% in North East/Central Highlands;

- About 75% of processing will occur in large sawmills and about 25% will occur in medium sized sawmills; and
- Large sawmills employ 1.25 person per 1000m³ processed and medium sawmills employ 1.5 people per 1000m³ processed.

Table 4-2 shows the break up of employment and value of output losses on a regional basis. In the Gippsland region there would be no absorption of jobs lost upon sawmill closures. This is a consequence of the recent reduction in sustainable harvest volumes as well as higher levels of productivity in the larger sawmills. As mentioned previously however, loss of value of output would be transferred to other sawmills and in the longer term would be maintained or even increase on a cubic meter basis should the proportion of higher value products produced increase. Loss of value of output was estimated by assigning a value of output to sawmills based on the volumes and types of products they produce and then assuming a proportion of sawmills close.

Table 4-2: Scenario 1 - employment impacts in D+ sawmills

	Current employment (no)	Immediate employment loss (no)	Long term employment loss (no)	Long term employment level (no)	Immediate value of output loss from closed sawmills
Gippsland	631	220	217	414	\$31M pa
North East/ Central Highlands	306	180	128	178	\$21M pa
Total	937	400	348	592	\$52M pa

Regional impacts

As noted above, the structural adjustment associated with log auctions will lead to significant losses for those regions where sawmills close. The type of affects that could be expected across the regions are described in Table 4-3.

Table 4-3: Areas and towns likely to be adversely affected by structural adjustment under Scenario 1

Area	Likely effects	Value of output loss to region
East Gippsland	Most mixed species processing will continue to occur in East Gippsland. There will be some transfer of value of output within towns in East Gippsland, but most current value of output from mixed species will be retained within the region. There will be some loss of value of output from ash production in East Gippsland towns.	\$6 million value output will be transferred to other regions from rural towns that suffer sawmill closures such as Nowa Nowa and Newmeralla (includes value from E-grade sawlog products).
West Gippsland to North West Melbourne (Longwarry to Woodend)	There are a number of small sawmills in West Gippsland and the areas to the north and north west of Melbourne. These areas are likely to lose value of output as most of these smaller sawmills close.	Net loss in value of output to other regions is estimated to be around \$23 million

4.2.2 Scenario 2

Scenario 2 considers a more moderate structural adjustment of the hardwood sawmilling sector. Under this scenario, the number of hardwood sawmills in the Gippsland and North East/Central Highlands regions is reduced from 37 to 19 (Table 4-4). All small sawmills processing under 10,000m³ per annum and some medium sized sawmills would close. There may be some investment by remaining sawmills to increase capacity to absorb excess resource. However, the level of investment, if any, is dependent on the extent of sawmill closures. Some existing excess processing capacity coupled with further reductions in sustainable yield may allow resources made available from sawmill closures to be absorbed by remaining sawmills without the need for significant investment.

Table 4-4: Scenario 2 - sawmill closures

Region	Sawmill type	Current number sawmills	Scenario 2 sawmill closures	Scenario 2 sawmills remaining
Gippsland	Ash <10,000 m ³	6	6	0
	Ash 10-30,000 m ³	6	0	6
	Ash 30-50,000 m ³	1	0	1
	Ash >50,000 m ³	2	0	2
	Mixed <10,000 m ³	3	3	0
	Mixed 10-30,000 m ³	2	2	0
	Mixed 30-50,000 m ³	4	0	4
Total number sawmills Gippsland region		24	11	13
North East/Central Highlands	Ash <10,000 m ³	4	4	0
	Ash 10-30,000 m ³	4	0	4
	Ash 30-50,000 m ³	2	0	2
	Mixed <10,000 m ³	3	3	0
Total number sawmills North East/Central Highlands region		13	7	6
Grand Total		37	18	19

Income and employment effects

It is estimated that the closure of sawmills under Scenario 2 would see a loss of direct income generated by those sawmills that close of \$19 million per annum and an immediate loss of around 173 jobs. As in Scenario 1, income lost by those sawmills that close would be picked up by other sawmills. However, because less log volume is transferred none of the jobs lost are absorbed by other sawmills which take up excess capacity. In the longer term reductions in sustainable yield lead to further job losses. Under this scenario, long term state wide employment in sawmills processing D+ logs is estimated to fall from current levels of about 937 to about 677. This is based on the following assumptions:

- Future harvest will be around 450,000 D+ logs;
- On current ratios, about 70% is processed in Gippsland and 30% in North East/Central Highlands;
- About 50% of processing will occur in large sawmills, about 25% in medium sawmills and about 25% in small sawmills; and
- Large sawmills employ 1.25 person per 1000m³ processed, medium sawmills employ 1.5 people per 1000m³ processed and small sawmills employ around 2 people per 1000m³ processed.

Table 4-5: Scenario 2 - employment impacts in D+ sawmills

	Current employment (no)	Immediate employment loss (no)	Long term employment loss (no)	Long term employment level (no)	Value of output loss from closed sawmills
Gippsland	631	108	157	474	\$13M
North East/ Central Highlands	306	65	103	203	\$6M
Total	937	173	260	677	\$19M

Regional impacts

Under Scenario 2, loss of value of output will be experienced at a local or town level but the impact on a wider scale will be reduced by other sawmills taking up the volume from sawmills that close. While smaller sawmills will close there will remain a sufficient distribution of sawmills across all regions to maintain overall value on a regional basis. The impact of loss of value of output in particular towns will depend on the relative contribution of the sawmilling industry to the town compared to other sources of income and employment. This is generally quite large so it could be expected that the closure of sawmills will see a number of small towns have their viability threatened.

5. Looking forward

This section considers implications of the expected structural adjustment and makes some recommendations to assist the industry in maintaining the valuable contribution it makes to sustainable production and socio economic development in regional Victoria.

5.1 Implications of structural adjustment

The alternative scenarios of structural adjustment illustrate that the introduction of auction based pricing and allocation for hardwood sawlogs in Victoria is likely to cause considerable socio economic disruption for the sawmilling industry and the local communities in which it operates. This illustrates that while market based systems are effective in driving change, the mechanisms can have considerable impact on employment and income.

The two scenarios in this analysis illustrate that the log auction system is likely to cause a loss of income for smaller rural communities in Victoria of between \$19 million to \$52 million per annum. On a state wide basis this income loss will be transferred to medium and larger sawmills but those communities in which sawmills close will suffer significant income loss. The recent reduction of around 100,000 m³ per annum in sustainable yield will see state wide losses in income and employment that will exacerbate losses from structural adjustment driven by the log auction system. Based on current value of production and number employed, the reduction in sustainable yield could be expected to reduce the value of output from hardwood sawmills by around \$20 million per annum and cause the loss of 145 jobs.

The move to having all log pricing and allocation determined by auctions will take place over the next decade. This may mean that sawmill closures and the consequent loss of income, employment and associated socio economic losses suffered by towns and regions where sawmills close will happen incrementally. This “death by a thousand cuts” situation may allow the true costs of structural adjustment to be hidden in other changes. While this type of adjustment scenario may make the change more politically palatable, it still results considerable loss to affected communities. Accordingly, it will be important to monitor the impacts of sawmill closures over time.

The intention of VicForests to use auction prices to “inform” administered prices creates another source of uncertainty for sawmills. This means that current existing licence/contract holders face considerable financial risk if administered prices were to be increased on the basis of the auction prices.

Increasing log prices will also see a considerable increase in income for VicForests. Based on current auction prices the additional revenue generated by VicForests from auctions of D+ logs could be in excess of \$10 million per annum. While this additional income is likely to reduce as longer term auction prices fall in line with viable average processing costs it is clear that the auction system will effectively transfer considerable income from the hardwood sawmilling sector to the government. It would be reasonable to expect the government of Victoria to re-invest some of this return back into those towns and regions that suffer socio economic losses from structural adjustment and to compensate the sawmilling industry for losses from reductions in the sustainable harvest volume that are less than what had been communicated to the industry as part of the *Our Forests Our Future* policy.

The structural adjustment resulting from the log auction system comes on top a long history of change in the sector. There is a danger that further change, driven by the auction system together with additional reductions in sustainable yield will reduce the industry to a level whereby it is no longer able to attract ongoing investment or sufficient skilled labour. Such an outcome would clearly run counter to the government's policy and the industry's future plan for the future. It seems that the economic framework for adjustment being applied to the forest sector is not similarly applied to benefits and costs of managing increasing areas of forest reservations, particularly when the potential impacts of bush fires and costs of management are considered. In this light it would appear reasonable that the government examine options for maintaining its commitment to an annual sustainable yield of 550,000 m³ under the *Our Forests Our Future* policy.

5.2 Recommendations

In response to the potential socio economic losses and community disruption that is expected to result from the introduction of log auctions it is recommended that VAFI seek from the state government:

- A commitment to monitoring closely the outcomes of structural adjustment that will result from auction based log pricing and allocation. This should include monitoring the number of sawmill closures and impacts in small communities. It should also take account of the combined impact of reductions in sustainable harvest volumes and log auctions.
- Promotion of long term sustainable activities and policy settings that ensure the viability and vibrancy of rural communities in Victoria is not adversely effected by the log auction system. This should include both provision of structural adjustment assistance to communities that suffer socio economic losses as a result of sawmill closures, and commitment to fostering the long term viability of the native hardwood timber industry in Victoria.
- Options for maintaining its commitment to long term sustainable yields of 530,000 m³ per annum under the *Our Forests Our Future* policy and the industry's Vision 2025. This will require a comprehensive understanding of resource availability and identification of strategies to ensure sustainable yields are maintained at commitment levels.
- An independent review of the auction system to ensure that its design does not lead to price outcomes that are inconsistent with sustainable market outcomes e.g. whether the existing approach to bidder qualification leads to undue competition from bidders lacking the requisite financial capacity to pay for logs purchased in the auctions and whether the current system of bidding allows some log buyers to bid up prices to unreasonable levels.
- Clarification of the way in which auction prices will inform administered prices.

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