



Public Version

Australian Pine Log Price Index (Stumpage)

Updated to December 2022

Management Consulting



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Contents

1	About the Pine Log Index	4
2	Australian Pine Log Price Index	5
2.1	Summary	5
2.2	Small sawlogs	6
2.3	Intermediate sawlogs	7
2.4	Medium sawlogs	8
2.5	Large sawlogs	9
2.6	Preservation logs	10
2.7	Pulplogs	11
2.8	Salvage logs	12
2.9	Export sawlogs and export pulplogs	13
3	Index methodology	14
3.1	Scope	14
3.2	Price calculations	16
3.3	Comments on the structure of the Index	17

Disclaimer

Inherent Limitations

This report has been prepared as outlined in Sections 1 and 3. The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and, consequently no opinions or conclusions intended to convey assurance have been expressed.

The findings in this report are based on data provided by Forestry Corporation of NSW, HVP Plantations, the Forest Products Commission (FPC), and OneFortyOne Plantations ("the Grower Organisations"). Any projection to the wider softwood industry is subject to the level of bias in the method of sample selection.

No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by, the Grower Organisations consulted as part of the process.

KPMG is under no obligation in any circumstance to update this report, in either oral or written form, for events occurring after the report has been issued in final form.

The findings in this report have been formed on the above basis.

Third Party Reliance

This report is solely for the purposes set out in Sections 1 and 3 of this report and for the Grower Organisations' information, and is not to be used for any other purpose or distributed to any other party without KPMG's prior written consent.

This report has been prepared at the request of HVP Plantations in accordance with the terms of KPMG's engagement letter dated 18 December 2000 and subsequent agreements dated 20 December 2010, 31 March 2011 and 24 April 2014. Other than our responsibility to HVP Plantations, neither KPMG nor any member or employee of KPMG undertakes responsibility arising in any way from reliance placed by the Grower Organisations or a third party on this report. Any reliance placed is that party's sole responsibility.

1 About the Pine Log Index

The Australian Pine Log Price Index (“the Index”) is compiled by KPMG using data provided by Australian softwood growers. The Index documents changes in pine log prices achieved by large-scale commercial plantation owners selling common grades of plantation softwood logs to domestic processors.

KPMG updates the Index biannually, with the two reporting periods being January to June and July to December. The Index has a base period of January to June 1998.

KPMG acts as the independent Index manager and collects confidential data on log volumes and stumpage values for all sales, including long and short-term contracts and spot transactions, at the end of each reporting period. Quantity information on export sawlogs and export pulpwood is also provided.

The following report presents the result of the Index from **July to December 2022**. The prices for all classes of sawlogs, preservation logs and export sawlogs are reported in dollars per cubic metre (\$/m³). The prices for the pulplogs and export pulplogs are reported in dollars per tonne (\$/t).

Contributions to the Index are made by major growers who are involved in the growing and management of softwood plantations in southern and eastern Australia. Contributing growers have changed over the years. From December 2017 HQPlantations has not contributed to the Index. The Western Australian Forest Products Commission was added for the July to December 2018 report. The list of growers is shown in Table 1.

Table 1: Grower contributors

State	Grower organisation	Region
New South Wales	Forestry Corporation of NSW	Bathurst
		Tumut
South Australia	Onefortyone Plantations	Green Triangle
Victoria	HVP Plantations	Ballarat
		La Trobe
		Victoria NE
		Victoria SW
Western Australia	Forest Products Commission	Western Australia

2 Australian Pine Log Price Index

2.1 Summary

The following table summarises the Index data for the January – June 2022 and the July – December 2022 reporting periods. The Index is calculated on weighted average prices using the period of January to June 1998 as a base of 100.

For the period of **July to December 2022** the indices for intermediate and medium sawlogs rose by 29 and 26 points respectively. The small sawlog index increased by 20 points, while the large sawlog index rose 23 points. The preservation index fell by 21 points. The pulplog index increased by 26 points. The salvage index increased to 210 points, due to an increase in weighted average price.

Table 2: Summary of Index data. Refer to Table 3 for specification of log categories.

Australian Pine Log Index									
	Domestic							Export	
	Small sawlog	Intermed. sawlog	Medium sawlog	Large sawlog	Preservation	Pulplog ¹	Salvage log	Sawlog (m ³)	Pulplog (tonnes)
Jan 22 – Jun 22									
Index	123	152	151	137	189	203	151		
Maximum \$	\$53.65	\$81.98	\$116.34	\$131.94	\$57.44	\$34.14	\$33.94		
Minimum \$	\$28.17	\$49.16	\$50.95	\$59.95	\$22.56	\$11.15	\$3.91		
Weighted Av. \$	\$39.49	\$67.07	\$92.48	\$98.53	\$35.43	\$21.47	\$27.32		
m ³	438,963	733,673	563,497	159,193	63,714	1,173,309	28,730	12,836	35,139
Jul 22 – Dec 22									
Index	143	181	177	160	168	229	210		
Maximum \$	\$60.96	\$100.33	\$129.89	\$154.98	\$53.06	\$43.93	\$43.94		
Minimum \$	\$39.46	\$61.99	\$71.21	\$68.95	\$18.28	\$14.38	\$3.06		
Weighted Av. \$	\$46.09	\$79.84	\$108.69	\$114.86	\$31.43	\$24.17	\$37.93		
m ³	471,462	805,319	550,400	123,713	57,047	1,234,136	23,325	3,755	27,407

¹ All pulplogs are measured in tonnes.

2.2 Small sawlogs

The charts in the remainder of Section 2 report on the Index values, volumes or weights and the maximum, minimum and weighted average prices for each class of log.

Small sawlogs are all logs suitable for sawmilling with a diameter of less than 24.0 centimetres small end diameter under bark.

There was a 20-point increase in the index, and the volume for small sawlogs increased from 438,963 m³ to 471,462 m³.

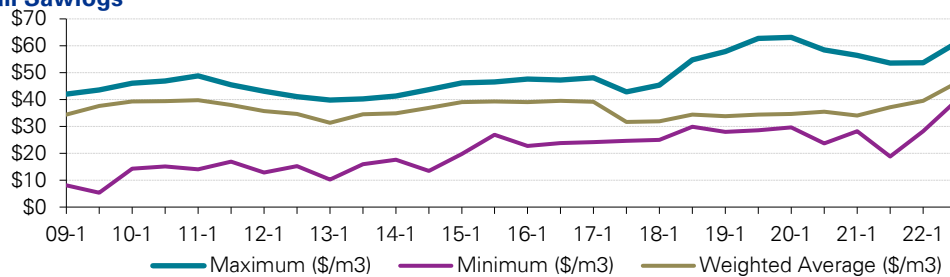
Number of average price changes

Increase ▲	7
Decrease ▼	1
Growers reporting sales	8

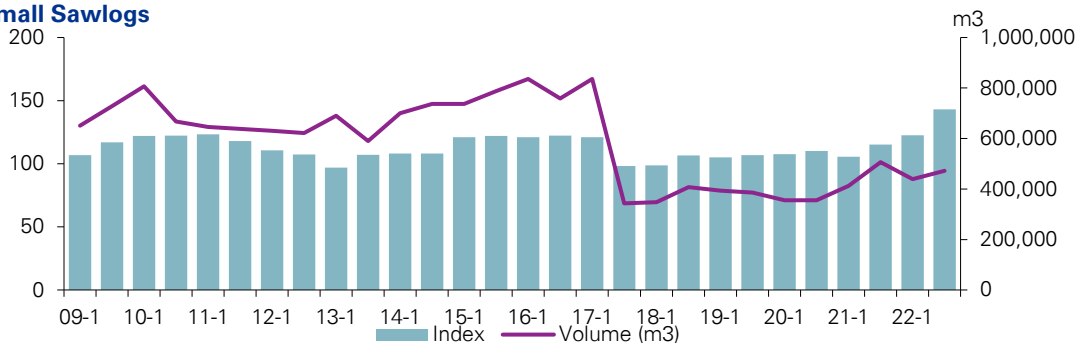
Reasons for changes greater than 10 percent

Changes greater than 10 percent	7
<i>Reported reason for change:</i> <ul style="list-style-type: none"> • Higher mill door prices from contract indexation and changed product mix producing higher stumpage • Pricing increase for small sawlog >10% • Increased mill door price stemming from annual price adjustments and price reset. • Increased net stumpage due to indexation and reduced haulage costs • Price increase • Contract indexation and product mix leading to slightly higher stumpage • Indexation and change in product mix producing higher mill door prices 	

Small Sawlogs



Small Sawlogs





2.3 Intermediate sawlogs

Intermediate sawlogs are all logs suitable for sawmilling. Their small end diameter under bark ranges from 24.0 centimetres to 31.9 centimetres.

The increase in weighted average price in this reporting period led to an increase of 29-points in the index. Volume for intermediate sawlogs rose from 733,673m³ to 805,319m³.

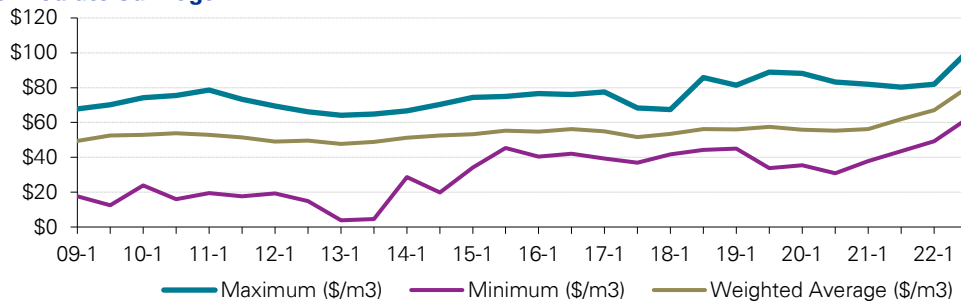
Number of average price changes

Increase 	8
Decrease 	0
Growers reporting sales	8

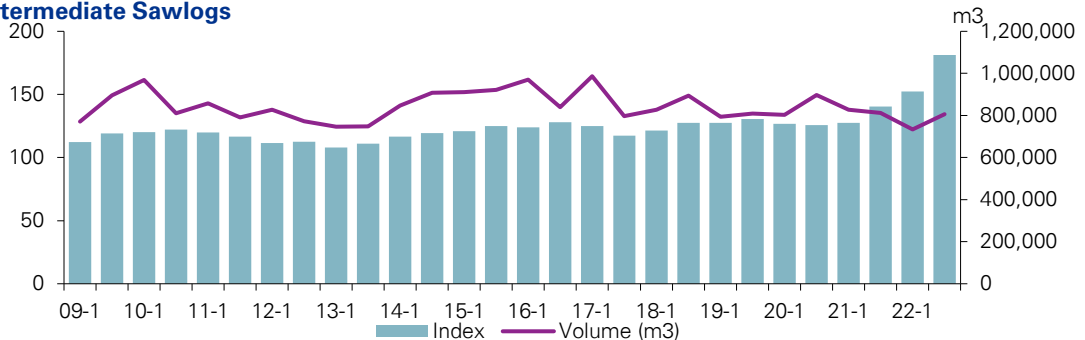
Reasons for changes greater than 10 percent

Changes greater than 10 percent	5
<i>Reported reason for change:</i> <ul style="list-style-type: none"> • Higher mill door prices from contract indexation and changed product mix producing higher stumpage • Increased mill door price stemming from annual price adjustments and price reset. • Increased net stumpage due to indexation and reduced haulage costs • Price Increase • Indexation and change in product mix producing higher mill door prices 	

Intermediate Sawlogs



Intermediate Sawlogs





2.4 Medium sawlogs

Medium sawlogs are all logs suitable for sawmilling with a diameter range between 31.9 centimetres and 43.9 centimetres small end diameter under bark.

The increase in average weighted price led to an index increase of 26 points. Volumes decreased from 563,497m³ to 550,400m³.

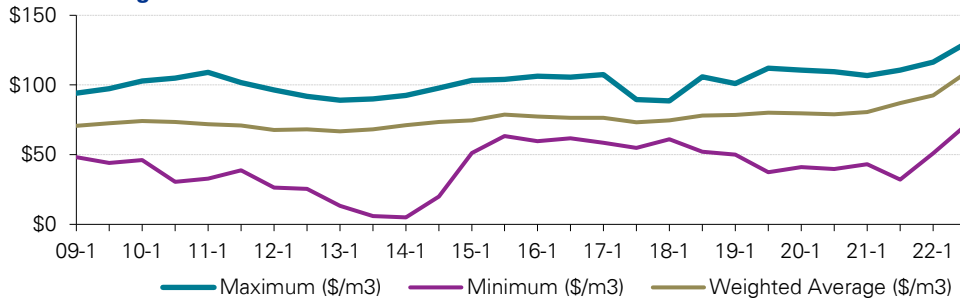
Number of average price changes

Increase 	8
Decrease 	0
Growers reporting sales	8

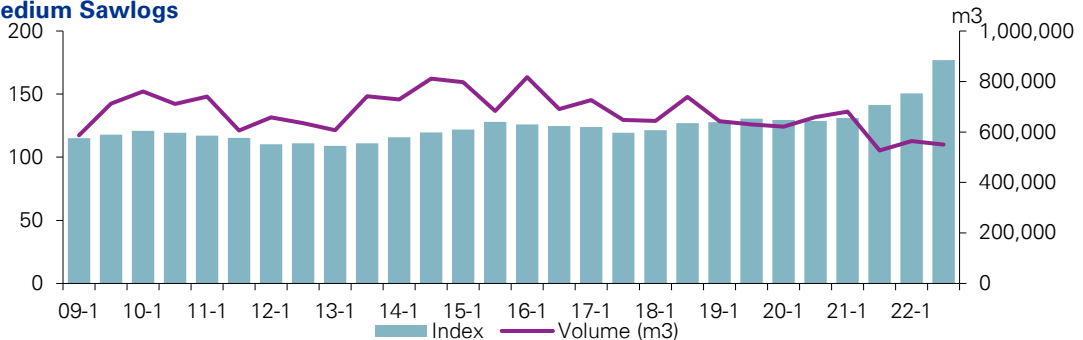
Reasons for changes greater than 10 percent

Changes greater than 10 percent	6
<i>Reported reason for change:</i> <ul style="list-style-type: none"> • Higher mill door prices from contract indexation and changed product mix producing higher stumpage • Increased mill door price stemming from annual price adjustments and price reset. • Different product mix and contract indexation leading to higher prices and stumpage • Increased net stumpage due to indexation and reduced haulage costs • Pricing Increase • Indexation and change in product mix producing higher mill door prices 	

Medium Sawlogs



Medium Sawlogs





2.5 Large sawlogs

Large sawlogs are all sawlogs suitable for sawmilling with a diameter greater than 43.9 centimetres small end diameter under bark.

The increase in the overall weighted average price in this reporting period resulted in a 23-point increase in the index remaining. Large sawlog volume fell from 159,193m³ to 123,713m³.

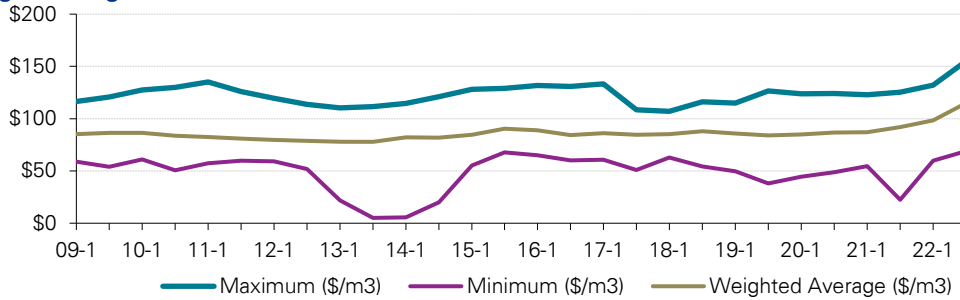
Number of average price changes

Increase 	8
Decrease 	0
Growers reporting sales	8

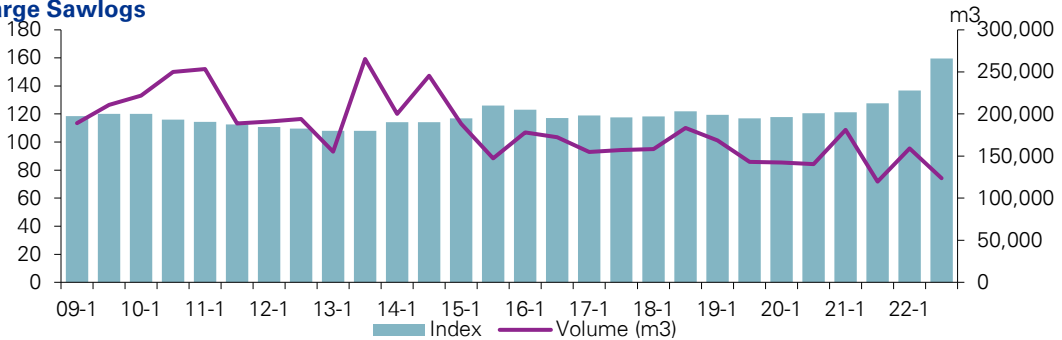
Reasons for changes greater than 10 percent

Changes greater than 10 percent	5
<i>Reported reason for change:</i> <ul style="list-style-type: none"> • Higher mill door prices from contract indexation and changed product mix producing higher stumpage • Increased mill door price stemming from annual price adjustments and price reset. • Contract indexation leading to higher mill door prices and higher stumpage • Increased net stumpage due to indexation and reduced haulage costs • Indexation and change in product mix producing higher mill door prices 	

Large Sawlogs



Large Sawlogs





2.6 Preservation logs

Preservation logs are those sold to domestic treatment plants for use as poles, rails and posts. Posts generally form the majority of sales by volume. The broad range of products contributes to the index volatility within this category.

The decrease in average weighted price led to an index decrease of 21 points. The reported sale volumes fell from 63,714m³ to 57,047m³.

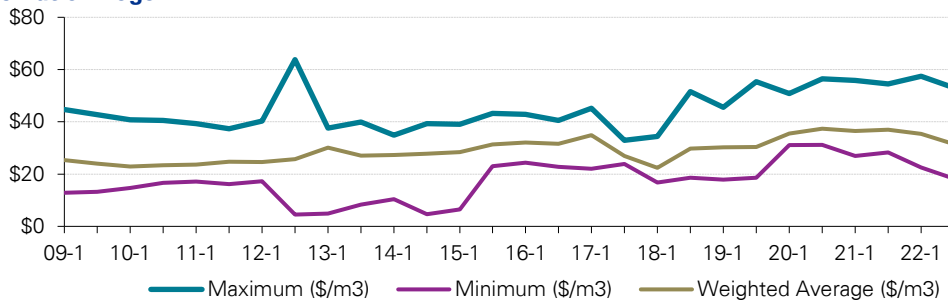
Number of average price changes

Increase 	1
Decrease 	5
Growers reporting sales	6²

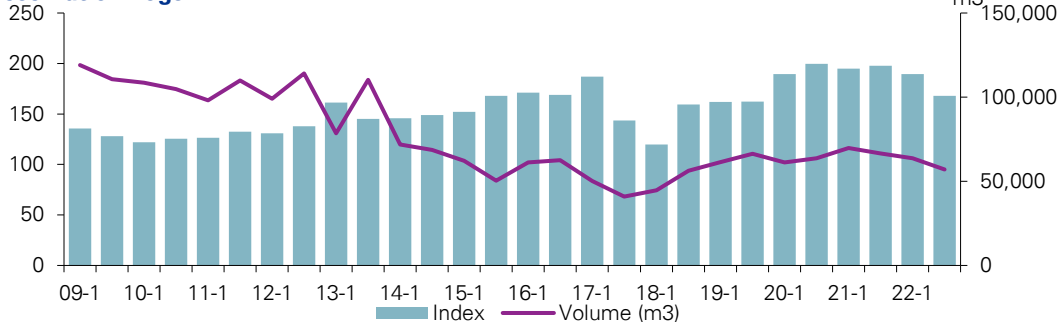
Reasons for changes greater than 10 percent

Changes greater than 10 percent	4
<i>Reported reason for change:</i> <ul style="list-style-type: none"> • Lower mill door pricing and product mix driving lower stumpage revenue • Higher harvesting costs in first thinning operations. • Pricing Increase & reduced haulage distance • Higher harvest costs leading to slightly lower stumpage • No sales in current period 	

Preservation Logs



Preservation Logs





² One grower who reported supply in the previous period did not report supply in the current period.

2.7 Pulplogs

Pulplogs are defined as logs sold to domestic manufacturers of pulp and paper, fibre-based panels and other such products. Pulplogs or chiplogs destined for export in raw form or clearly sold on basis of an export pricing regime are excluded from this category.

The index increased by 26-points with a slight increase in weighted average price. Reported sales volume increased from 1,173,309m³ to 1,234,136m³.

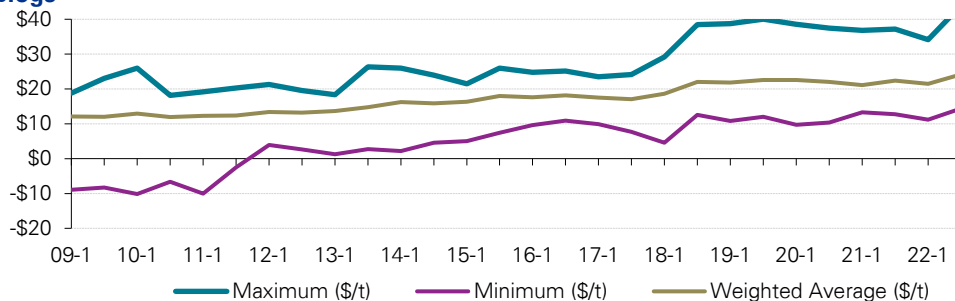
Number of average price changes

Increase 	6
Decrease 	1
Growers reporting sales	7

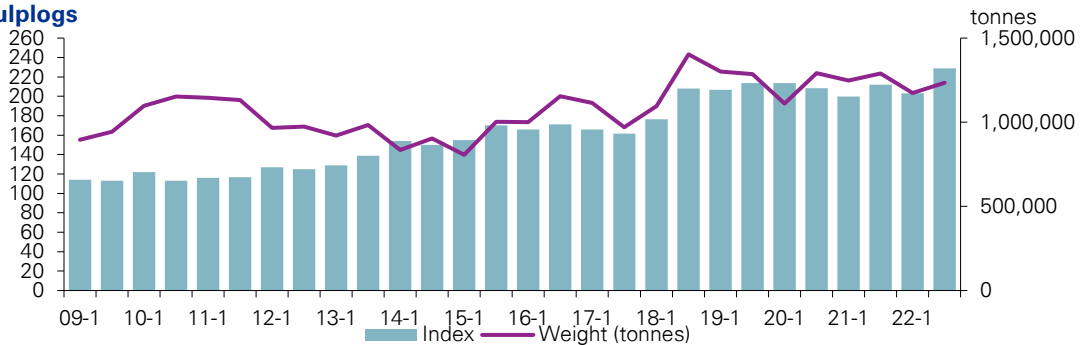
Reasons for changes greater than 10 percent

Changes greater than 10 percent	5
<i>Reported reason for change:</i> <ul style="list-style-type: none"> • Higher mill door prices from contract indexation driving higher stumpage • Higher prices from contract indexation leading to higher stumpage • Reduced haulage distances and contractor costs against mill door price • Pricing Increase • Higher haulage cost and slightly higher harvest cost driving lower stumpage 	

Pulplogs



Pulplogs





2.8 Salvage logs³

Salvage logs represent all logs excluded from the other log classes on the basis of price and wood quality. Salvage logs may include break/edge tree logs, damaged logs, one-off spot sales, industrial logs, odd lot volumes of other species and short logs (less than industry standard minimum length) of any diameter. Logs are included in this category so as to not distort the general data set and keep the rest of the categories clean.

The Index considers stumpage prices for various sizes of product classified as salvage logs. Its outcomes are based on the weighted average price of logs of any diameter included as a salvage product.

The index increased from 151 points to 210 points. There was an increase in the maximum and weighted average prices. However, there was a slight decrease in the minimum price. The reported sales volumes decreased from 28,730m³ to 23,325m³.

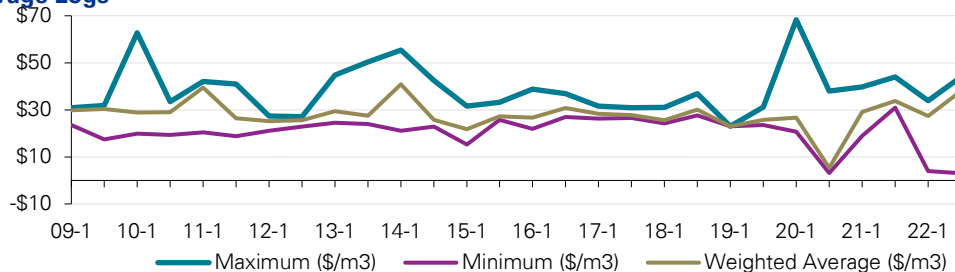
Number of average price changes

Increase 	2
Decrease 	1
Growers reporting sales	3

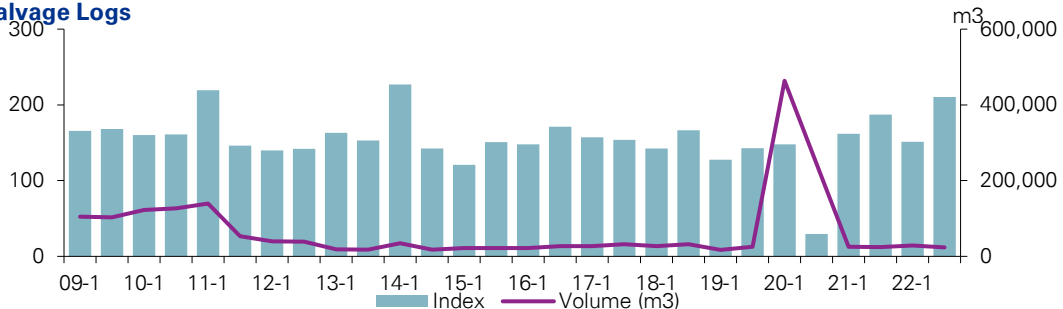
Reasons for changes greater than 10 percent

Changes greater than 10 percent	3
<i>Reported reason for change:</i>	
<ul style="list-style-type: none"> • Pricing increase >10% • Increased mill door price stemming from annual price adjustments and price reset. • Lower stumpage due to slightly higher delivery costs 	

Salvage Logs



Salvage Logs



³ Changes in this category have to be viewed with caution due to the limited number of reporting growers.

2.9 Export sawlogs and export pulplogs

Reported total sales⁴ for export sawlogs by volume have decreased by **71 per cent** while the tonnages for export pulplogs decreased by **22 per cent** since the previous reporting period.



⁴ Sawlogs are measured in cubic metres and pulplogs in tonnes.

3 Index methodology

KPMG coordinates the preparation of the Index for each six-month period ending 30 June and 31 December. This involves the collection of data from each participating Grower Organisation and the preparation of this report.

The Index data represents aggregated information from all contributing growers and includes the weighted average price; price per cubic metre; price range; price index (based on the period January to June 1998, which is set at 100); and total volume or weight of each Index product sold over the period.

KPMG calculates for each log class the:

- maximum price;
- minimum price;
- weighted average price; and
- change in the index.

These calculations are on the basis of input data provided by growers. KPMG does not audit or express any opinion on that data.

Each contributing organisation is asked to provide explanations for changes in price greater than 10 percent. These explanations have been summarised in section 2 of this report.

The Index's intent is to preserve the confidentiality of individual growers' prices and quantities.

3.1 Scope

The Index includes sales of all plantation grown softwood species, principally comprising Radiata Pine.

3.1.1 Products reported

The product groups reported in the Index are defined in Table 3.

Table 3: Product groups reported in the Australian Pine Log Price Index

Log class	Index product	Unit	Description
Sawlog Class 1	Small sawlog	\$/m ³	All logs suitable for sawmilling with diameter <24.0 cm sedub.*
Sawlog Class 2	Intermediate sawlog	\$/m ³	All logs suitable for sawmilling with diameter range 24.0 cm – 31.9 cm sedub.
Sawlog Class 3	Medium sawlog	\$/m ³	All logs suitable for sawmilling with diameter range >31.9 cm – 43.9 cm sedub.
Sawlog Class 4	Large sawlog	\$/m ³	All logs suitable for sawmilling with diameter >43.9 cm sedub.
Pulplog	Pulplog	\$/tonne	All logs sold to domestic manufacturers of pulp and paper, woodchip/flake-based panels and other such products. Export pulplogs or chiplogs are excluded.
Preservation log	Preservation log	\$/m ³	All logs sold to domestic timber treatment plants including rails, poles and posts.
Salvage log	Salvage log	\$/m ³	All logs excluded from the above products generally on the basis of price and wood quality. Price is the weighted average for all sizes of all products – i.e. one price only for salvage log.
Export sawlog	Export sawlog	m ³	All grades and sizes of unprocessed logs sold as export sawlog. Total quantity only, price is not recorded.
Export pulplog	Export pulplog	tonne	All grades and sizes of unprocessed logs sold as export pulplogs, excluding logs processed for export woodchip. Total quantity only, price is not recorded.

*sedub = small end diameter under bark

3.1.2 Products excluded

Data from the sale of the following products is excluded from the Index:

- pruned clearwood logs – logs that achieve a premium stumpage over “normal” sawlogs, reflecting the value and the cost of growing;
- plantation hardwood and native forest products; and
- small volumes of species and products unrepresentative of the defined Index products.

3.2 Price calculations

The Australian Pine Log Price Index is calculated on the weighted average net stumpage achieved by the plantation owner inclusive of all licence fees and charges relating to log value.

$$\text{Net stumpage price of each Index Product} = \text{Total Revenue} / \text{Total Quantity}$$

Growers report stumpages to the Index manager. A stumpage price can be set, or calculated using a mill door price.

1. Stumpage sales:

Net stumpage is set periodically by the seller in agreement with the buyer and represents the value of the standing tree.

2. Mill door sales or sales resulting from “unusual” operations (e.g. where the grower has subsidised cable harvesting for particular operational reasons):

Net stumpage is defined as delivered sale price less transport and harvesting costs.

The growers encourage use of the Index by interested parties; however, all parties should be aware that no attempt has been made to account for variations in factors that influence log value. Such factors primarily relate to additional costs incurred by the plantation owner or log processor. Examples include:

1. The impact of wood quality variation both within and between species, including stem form, wood density, branching characteristics and the inherent level of defects in the wood at a given location. All of these factors will affect mill performance and processed product quality, and hence influence the value recovery from a particular plantation.
2. Log size variations impact on harvest costs, transport costs, sawn recovery and processing costs.
3. Harvest costs may be affected by soil type, topography, climate, piece size, species, scale of operation, harvest equipment requirements and harvest contract terms and conditions.
4. Log transport costs may vary due to distance, road conditions, topography (effect on transport time), piece size (impact on load and unload costs), equipment configuration/payload and transport contract terms and conditions.
5. Finished product transport costs will vary primarily according to the distance between the processing plant and markets, which impacts on log value.
6. Differences between products harvested from thinnings and clearfell operations, in terms of both extraction cost and value of products recovered.
7. Any unusual additional costs for example licence or access fees.

8. The impact of variations in log sales contract terms and conditions on resource value such as the value of long-term resource security or the marginal cost impact of short-term competitive sales.

3.3 Comments on the structure of the Index

Readers should be aware of the following potential anomalies that could influence movements in the Index:

1. Each grower's sawlog centre diameter class sizes may not precisely match the Index sawlog small end diameter sizes. As the Index defines precise data groups, each grower needs to adapt existing internal categories to fit the Index requirements.
2. The Index includes products sold to the domestic market only. Export sale prices are currently not included for either sawlogs or pulplogs.
3. There are risks of minor variations in the calculation method between contributing organisations. However, based on the assumption that the adopted methodology appropriately represents the sales value for each period; is applied consistently each period; and remains consistent and representative over time, these risks are assumed to be not material. To assure compliance, an audit process could be introduced but this would be very costly, and its benefits may not outweigh its costs.
4. Any diversity of species included may distort the resulting Index data. Index log product categories need to be grouped on comparable end use.
5. Mill door prices are not included. It is expected that in some regions the proportion of mill door sales will increase and this may need to be addressed. Future developments to the Index may also show mill door prices, which will be of interest to roundwood purchasers.
6. Log measurement methods are currently not documented by all growers. It is suggested that both the large and small ends of each log be measured under bark, and the average be applied as the half log diameter. Where logs are not individually measured, weights and sample measurements are used to convert these to an equivalent volume and prices by diameter class.
7. There is concern that the size 1 class (<24 cm), as a minimum sedub (small end diameter under bark) is not specified. This minimum sedub will vary for each grower and can range from 12 centimetres to 20 centimetres. There is a high degree of variability in prices because of the high degree in variability in log sizes accommodated by this size category.

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