



Department of  
Premier and Cabinet

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Ms Jessica Bland  
McCullough Robertson Lawyers

Via email: [jbland@mccullough.com.au](mailto:jbland@mccullough.com.au)

10 March 2022

Dear Ms Bland

**FREEDOM OF INFORMATION REQUEST – REF NO. 2021/22-32**

I refer to your request dated and received by the department on 7 September 2021, in which you sought access to documents under the *Freedom of Information Act 1982* (Vic) (**the Act**). I note that on 19 November 2021, you agreed to limit the scope of this request to:

*Reports and briefs to Ministers dated between 1 January 2018 and 30 September 2019 that contain information regarding or relating to “Project Crane”; and*

*Reports and briefs to Ministers dated between 1 October 2018 and 30 September 2019 that contain or refer to any underlying data that was relied on by the Department or Mr Jennings in relation to the Victorian Forestry Plan.*

A search of department records identified 67 documents relevant to the terms of your request.

I have determined to grant you access in full to 8 documents, grant you partial access to three documents and refuse access in full to 56 documents.

Access has been refused to the documents on one or more of the following grounds:

Section 28(1)

Section 28(1) of the Act states that a document is an exempt document if it is—

- (a) the official record of any deliberation or decision of the Cabinet;
- (b) a document that has been prepared by a Minister or on his or her behalf or by an agency for the purpose of submission for consideration by the Cabinet;
- (ba) a document prepared for the purpose of briefing a Minister in relation to issues to be considered by the Cabinet;
- (c) a document that is a copy or draft of, or contains extracts from, a document referred to in paragraph (a), (b) or (ba); or

- (d) a document the disclosure of which would involve the disclosure of any deliberation or decision of the Cabinet, other than a document by which a decision of the Cabinet was officially published.

Eight documents have been exempted under section 28(1)(b) on the basis that they are documents prepared for the purpose of submission to the Cabinet.

Eight documents have been exempted under section 28 (1)(ba) as they were prepared for the purpose of briefing a Minister in relation to issues to be considered by the Cabinet.

Five documents have been exempted under section 28(1)(c) as they are drafts or contain extracts of documents prepared for the purpose of submission to the Cabinet.

Eighteen documents have been exempted under section 28(1)(d) as they disclose deliberations of the Cabinet.

### Section 30(1)

Section 30(1) of the Act states:

- (1) Subject to this section, a document is an exempt document if it is a document the disclosure of which under this Act—
  - (a) would disclose matter in the nature of opinion, advice or recommendation prepared by an officer or Minister, or consultation or deliberation that has taken place between officers, Ministers, or an officer and a Minister, in the course of, or for the purpose of, the deliberative processes involved in the functions of an agency or Minister or of the government; and
  - (b) disclosure would be contrary to the public interest.

Thirty-one documents to which this exemption has been applied are drafts or contain the advice, opinions and recommendations of departmental staff or third parties, as well as consultation and deliberation that has taken place between staff and/or third parties.

Disclosure of this material would be contrary to the public interest as it would inhibit the ability of agency officers to provide frank and candid advice, and would potentially reveal options considered but not ultimately adopted.

### Section 32(1)

Section 32(1) of the Act states:

- (1) A document is an exempt document if it is of such a nature that it would be privileged from production in legal proceedings on the grounds of legal professional privilege or client legal privilege.

This exemption has been applied to one document which contains legal advice which would be privileged from production in legal proceedings.

### Section 33(1)

Section 33(1) of the Act states:

- (1) A document is an exempt document if its disclosure under this Act would involve the unreasonable disclosure of information relating to the personal affairs of any person (including a deceased person).

The personal affairs information of a number of individuals contained in five documents have been exempted as disclosure is considered unreasonable.

### Section 34(1)(b)

Section 34(1)(b) of the Act states:

- (1) A document is an exempt document if its disclosure under this Act would disclosure information acquired by an agency or a Minister from a business, commercial or financial undertaking and the information relates to—  
...
  - (b) matters of a business, commercial or financial nature and their disclosure would be likely to expose the undertaking unreasonably to disadvantage.

Information acquired from business undertakings has been exempted from four documents as disclosure would be likely to expose the businesses unreasonably to disadvantage. The material to which this exemption has been applied is not generally available to the public and its disclosure would be likely to disadvantage the businesses in the competitive market.

Section 34(4)(a)(ii)

Section 34(4)(a)(ii) of the Act states:

- (4) A document is an exempt document if—
  - (a) it contains—
    - ...
    - (ii) in the case of an agency engaged in trade or commerce—information of a business, commercial or financial nature—

that would if disclosed under this Act be likely to expose the agency unreasonably to disadvantage.

Eight documents have been exempted on the basis they contain information of a business, commercial or financial nature. Disclosure of this material would undermine the competitive position of departments and the State more generally when engaging with the market, exposing departments unreasonably to disadvantage.

Section 35(1)(b)

Section 35(1)(b) of the Act states:

- (1) A document is an exempt document if its disclosure under this Act would divulge any information or matter communicated in confidence by or on behalf of a person or a government to an agency or a Minister, and—
  - (b) the disclosure of the information under this Act would be contrary to the public interest by reason that the disclosure would be reasonably likely to impair the ability of an agency or a Minister to obtain similar information in the future.

This exemption has been applied to one document within the scope of your request which contains material communicated in confidence. Disclosure of this document would be likely to inhibit the ability of the department to obtain similar information in the future.

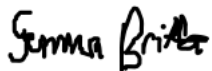
Material not relevant to your request has been removed in accordance with section 25 of the Act.

You have the right to seek a review of my decision by the Information Commissioner pursuant to section 49A(1)(a) of the FOI Act. An application for review must be lodged in writing within 28 days of this decision. The Office of the Victorian Information Commissioner's contact details are:

Office of the Victorian Information Commissioner  
PO Box 24274  
Melbourne VIC 3001  
Email: [enquiries@ovic.vic.gov.au](mailto:enquiries@ovic.vic.gov.au)  
Phone: 1300 00 6842 (1300 00 OVIC)  
[www.ovic.vic.gov.au](http://www.ovic.vic.gov.au)











Please contact me at [foidpc@dpc.vic.gov.au](mailto:foidpc@dpc.vic.gov.au) if I may be of assistance and quote reference number **2021/22-32**.

Yours sincerely



**Gemma Briffa**  
Freedom of Information and Privacy Officer

# ATTACHMENT 1 – STANDARD VEAC INVESTIGATION PROCESS

STAGE	RESPONSIBILITY
<b>Proposed Terms of Reference</b> Minister advertises proposed terms of reference for an investigation s15(2)(a) – the Minister must allow 28 days for notification period	Minister EECC and DELWP
	
Table statement specifying how comments on proposed terms of reference have been dealt with s16(2).	Minister EECC and DELWP
	
<b>Formal request for investigation</b> Minister formally requests VEAC to undertake the investigation with final terms of reference. s15(4). Table request within 7 sitting days, publish request within 7 days in the Government Gazette and internet s16(1)	Minister EECC and DELWP
	
<b>Business plan and budget</b> Within 30 days the Council must submit a business plan and budget for the investigation s17. The Minister must consult Council over the estimate of resources (s.18.4.a) and ensure DELWP makes the necessary resources available s17(4)	VEAC, Minister EECC and DELWP
	
<b>Community Reference Group (may be required for assessments)</b> Council establishes a Community Reference Group for the investigation s13(1)	VEAC
	
<b>Notice of Investigation</b> Notice of Investigation published and submissions called for – default is minimum 60 days s20, however the Minister can specify the period for submissions*	VEAC
	
<b>Discussion Paper</b> Discussion Paper published and submissions called for – default is minimum 60 days s21, however the Minister can specify the period for submissions*	VEAC
	
<b>Draft Proposals Paper</b> Council publishes Draft Proposals Paper including draft recommendations and calls for submissions for minimum 60 days s21, however the Minister can specify the period for submissions*	VEAC
	
<b>Final Report</b> The Council must submit report on completed investigation by the time specified in the request s23(1). Report must be tabled within 7 sitting days, publish within 7 days s23(5)	VEAC
	
Government response process initiated with relevant departments and agencies	DELWP
	
<b>Government response</b> By first sitting day after 6 months since the report was tabled, Minister tables a statement of the response to each recommendation, and within 7 days statement published in Government Gazette and on internet s25	Minister EECC and DELWP



Required steps in a streamlined 'assessments or advice' process  
\* This information needs to be specified in the Terms of Reference

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# QUANTUM

## MARKET RESEARCH

### Department of Premier and Cabinet Project Forest: Follow-Up Research Full Report

July, 2019  
Job No. DPC18732

# Contents page

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# Background and Methodology

# Background & Research Objectives

## Background

Following the 2017 decision by the Victorian Government to purchase the Heyfield timber mill, there has been speculation around the future of the forestry industry.

Recent media reporting has claimed the State Government is considering plans to announce the transition of logging native forests to plantation forests in the coming years. Any transition would impact jobs in forestry and related industries, along with communities in Eastern Victoria.

In 2018, Quantum conducted a series of focus groups to explore the current understanding and test potential message territories among the general community in relation to the upcoming announcement. The findings identified that:

- The cessation of logging was generally supported. The state's natural assets were believed to be worth protecting and the message of the State Government being future-focussed about the environment resonated.
- Secondary messaging needed to support the industry and how jobs will be transitioned.

## Research Objectives





Much has transpired since the original research was conducted, with a federal election result that surprised many. The State Government therefore sought to refresh its understanding of community proprieties when it comes to balancing the needs of the environment against local jobs and opportunities.

### **The research subsequently covered the following objectives:**

- The impact of personal scenarios / stories on the perceptions of what is important and priorities.
- Explore how the community respond to the proposal and whether case studies impact their reaction.
- A re-test against the narrative from 2018 to see if there has been any shift in circumstances (e.g. impacts of Adani, etc.)
- A drill-down into jobs and industry narrative and protecting local towns narrative.
- The use of case studies to illustrate the impact on individuals and how this may influence general views about the overarching policy and the response to it.
- The use of different references to the timber industry "surviving", "secure", "transforming / transformation".

# Methodology

*A mixed method approach was used to increase the robustness of the research.*

	Qualitative Phase	Quantitative Phase
	<ul style="list-style-type: none"> <li>12 Focus groups: <ul style="list-style-type: none"> <li>x2 Young couples / singles   x6 Families (mix of younger and older)   x4 Empty Nesters</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Online survey: <ul style="list-style-type: none"> <li>n=404 Victorian residents</li> <li>Mix of age / gender / living situation</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>Fieldwork dates: 9<sup>th</sup> – 10<sup>th</sup> July</li> <li>Length of focus groups: 90 minutes</li> </ul>	<ul style="list-style-type: none"> <li>Fieldwork dates: 9<sup>th</sup> – 12<sup>th</sup> July</li> <li>Length of survey: 10 minutes</li> </ul>
	<ul style="list-style-type: none"> <li>Focus groups conducted in Melbourne, Narre Warren, Geelong, Shepparton, Dandenong Ranges &amp; Maryborough (two focus groups per location).</li> </ul>	<ul style="list-style-type: none"> <li>Sample was structured as follows: <ul style="list-style-type: none"> <li>Melbourne: n=202</li> <li>Hume, Barwon South, Grampians, Loddon Mallee: ~n=50 per region <ul style="list-style-type: none"> <li>(n=202 total)</li> </ul> </li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>Participants were offered an incentive of a \$100 pre-paid EFTPOS card.</li> <li>This research was carried out in accordance with ISO 20252.</li> </ul>	<ul style="list-style-type: none"> <li>Industry screeners were applied.</li> <li>This research was carried out in accordance with ISO 20252.</li> </ul>

# Executive Summary

# Key Findings

(Qualitative and quantitative results)

# Societal issues and where the environment is perceived in the minds of Victorians

# The past 12 months have seen a shift in focus as Victorians list the environment and associated issues top priorities for Australia

What are the important things Australia needs to think about for the future?

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## 2018

### Empty nesters' most important issues:

- Education
- Employment
- Health
- Environment
- Safety
- Transport (especially regionally)

### Families' most important issues:

- Cost of living (housing affordability)
- Education
- Employment
- Health
- Environment
- Safety

### Young Singles most important issues:

- Education
- Cost of living (housing affordability)
- Environment
- Public Transport
- The economy and jobs
- Immigration

## 2019

### Empty nesters' most important issues:

- **Environment / water**
- Education
- Economic growth
- Immigration
- Health / mental health
- Jobs / manufacturing

### Families' most important issues:

- **Environment / sustainability**
- Education
- Jobs
- Cost of living / housing affordability
- Health
- Immigration

### Young Singles most important issues:

- **Environment / sustainability**
- Cost of living / housing affordability
- Education
- Waste
- Law and order
- Jobs

*"We have the potential to lead in so many of these areas, things like waste management, recycling... Australia really has the opportunity to be a leader here, and we have to keep the conversation going if we're going to have a place for our grandchildren to live in."*

– Empty Nester, Maryborough

*"Water. What a big issue. If we haven't got water, we haven't got anything... and I think the same goes for the environment, and finding ways to be sustainable. We're screwed if we don't act now and look after it."*

– Older family, Shepparton

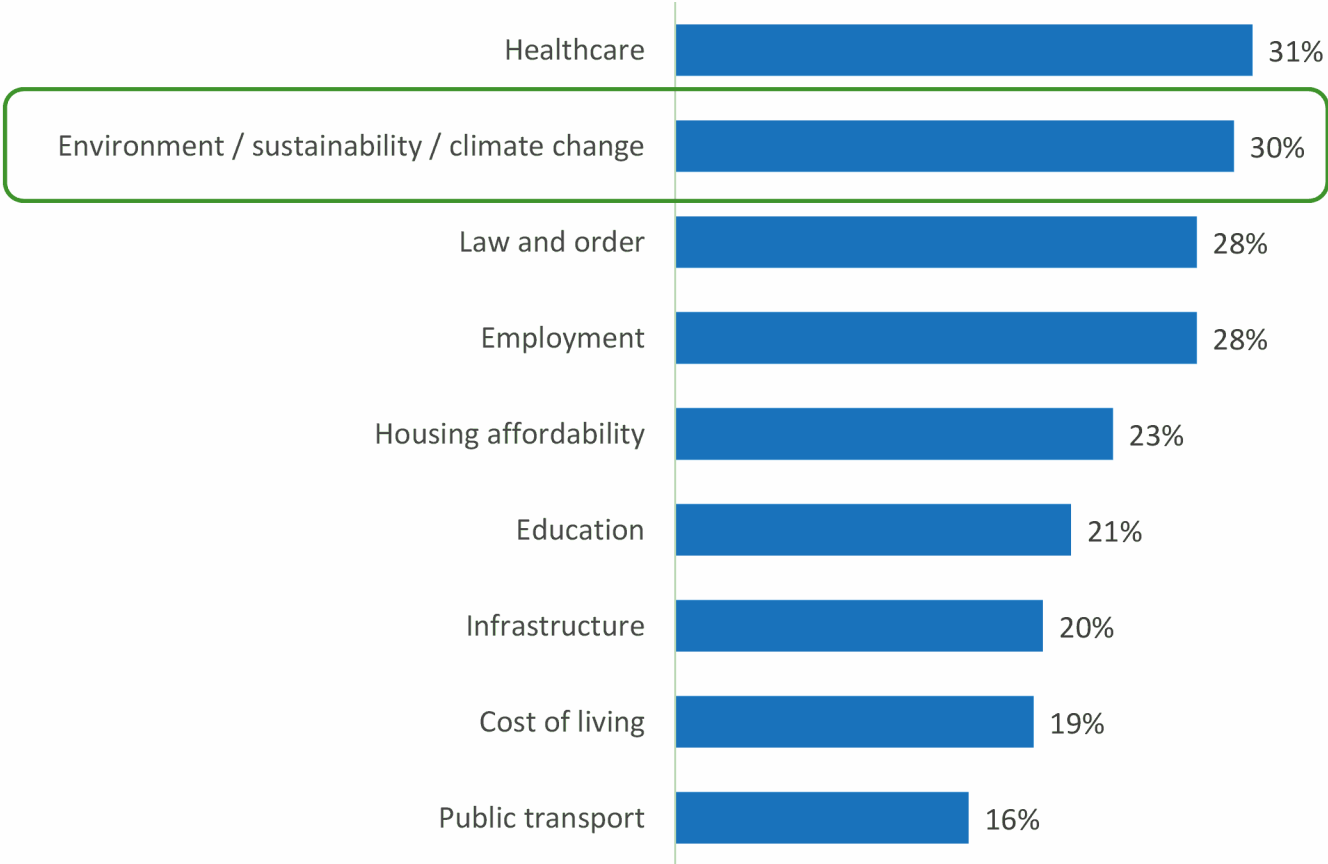
*"Finding sustainable ways to power and feed the country is the biggest challenge we are faced with right now. Sounds dramatic, but I do feel that if we don't strive to make some big changes soon, the generations that come after us will suffer because of our inaction."*

– Young single, South Melbourne

# When tested quantitatively, environmental issues continued to show-up as a primary concern

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## Australian priorities – spontaneous mentions:




























Q7. Thinking about Victoria and what's important to you personally, what do you believe are the top three things we should be prioritising in Victoria?  
Base: All respondents (n=404)

Excluded items with <10%

# The environment was listed as a significantly higher priority among those from the Hume region

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## Australian priorities – spontaneous mentions (by region):

Barwon South-West (n=52)	Grampians (n=50)	Hume (n=50)	Loddon Mallee (n=50)	Melbourne (n=202)
 Health care 38%	 Health care 35%	 <b>Environment</b> 52% ▲	 Employment 39% ▲	 Law and order 31% ▲
 Employment 35%	 Cost of living 35%	 Health care 27%	 Law and order 35%	 Health care 29%
 Law and order 35% ▲	 <b>Environment</b> 29%	 Employment 27%	 Health care 33%	 <b>Environment</b> 28%
 <b>Environment</b> 25%	 Employment 27%	 Cost of living 18%	 Infrastructure 31% ▲	 Housing affordability 27%
 Education 25%	 Housing affordability 21%	 Housing affordability 18%	 <b>Environment</b> 22%	 Employment 24%

Q7. Thinking about Victoria and what's important to you personally, what do you believe are the top three things we should be prioritising in Victoria?  
Base: All respondents (n=404)

# Concerns for the environment cover several bases – primarily around water conservation, sustainable energy solutions and waste reduction

Water conservation is a growing environmental concern across all group locations and cohorts.

## KEY ENVIRONMENTAL CONCERNS

### Young singles:

- **Recycling**
- **Waste reduction** (e.g. single-use plastics)
- **Sustainability across all industries** (e.g. techniques to be gentler on the environment)
- **Climate change**

*"Everything to do with the mountains of plastic and waste we are creating really worries me!"*

- South Melbourne

### Families:

- **Recycling**
- **Waste reduction** (e.g. single-use plastics)
- **Renewable / sustainable energy solutions**
- **Preserving natural resources**
- **Water conservation**

*"I think we are heading in the right direction when it comes to recycling and reducing our wastefulness, but we are still falling behind."*

- South Melbourne

### Empty nesters:

- **Water conservation**
- **Waste reduction** (e.g. single-use plastics)
- **Recycling**
- **Sustainable agricultural practices**
- **Climate change**

*"Water is a huge issue, especially out where we are. Our farmers went through hell this summer while Queensland saw tonnes of water pumped back out into the Ocean – what a waste of a resource! How we manage water across the country really needs to change."*

- Shepparton

# Perspectives on industry change and transition

# Industry change is thought of as being “natural” and “progressive”; support throughout the transition is only considered necessary if it is the government directly initiating the change

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Industry change and transition is seen to be necessary and reflective of progress / innovation.

*“Australia should be focusing on progression and change in the way we do business... we absolutely have the ability to be a leader in innovation. We could do more.”*

- South Melbourne

Top of mind mentions of recent industry transitions include changes observed in retail (e.g. store-front to online), agricultural (e.g. moving to more sustainable farming practices) and waste industries (e.g. plastic bag ban).

*“The first thing I think of [when I think about how industries have changed] is the plastic bag ban in groceries stores. What a fantastic initiative. Now we just need to do it with single use plastics!”*

- Narre Warren

Victorians don’t spontaneously mention industry transitions that have included government support. There is a general sense that industrial change is just part of the business world.

*“Change is just a normal part of business! Look at the retail industry... I mean, it sucks to see so many of our small retailers shutting down, but the fact is they are probably just all moving online and we don’t directly see that. And if they’re not finding ways to change, that’s on them - you have to make these transitions if you want to stay competitive in business.”*

- Dandenongs

Victorians feel the government’s involvement and support is typically only required if the change is a result of new government policy - or if the industry changes are perceived to directly (and significantly) affect their communities.

*“I can’t think of any instances where the government has provided much support. I guess the local council might be doing things in the background from time to time... I think when there’s big changes in industries we are really dependent on, like agriculture, the government should be doing more.”*

- Shepparton

# Sentiment toward Victorian Forests

# Victorians romanticise and are proud of Australia's native forests but feel they are threatened

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## Associations and sentiment towards Victorian forests

As observed in 2018, Victorians speak warmly about Victorian forests, conjuring up positive associations of time spent on walks, camping, natural beauty etc.



However, 2019 saw a spike in associations to bushfires and the subsequent destruction of native wildlife.



# Victorians feel the government's focus should be on preservation of native forests for future generations

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## Government's role with respect to Victorian forests:

### Remains largely unchanged since 2018:

- There is a belief that the government needs to focus on **preservation** and drive **awareness** and **education** to ensure that the national parks, forests and bushland are here for years to come.
- Victorians expect the Government to be future-focussed and preserve these experiences for the next generation.

*"There really needs to be more awareness and education out the on how to look after the forests... it makes me sad when I see so much trash lying around!"*

- Young family, Narre Warren



### 2019 NUANCE:

- In regional areas (Shepparton & Maryborough), there is a desire to see the government invest more in "proper management" of Victorian forests:
  - There is a perception that the Victorian government lacks proactive 'forest management', relating to practices like back-burning, cleaning (i.e. clearing waste), wasting wood that has been cut-down, etc.
  - Regional communities are extremely passionate about their native backyard and have high expectations when it comes to the government's role as a custodian.

*"The forests need better management. There's no one in there cleaning up all the undergrowth and it really puts us at risk of bushfires... there needs to be more proactivity on back-burning too – they honestly just need to invest more in the management side of things."*

- Empty nester, Shepparton

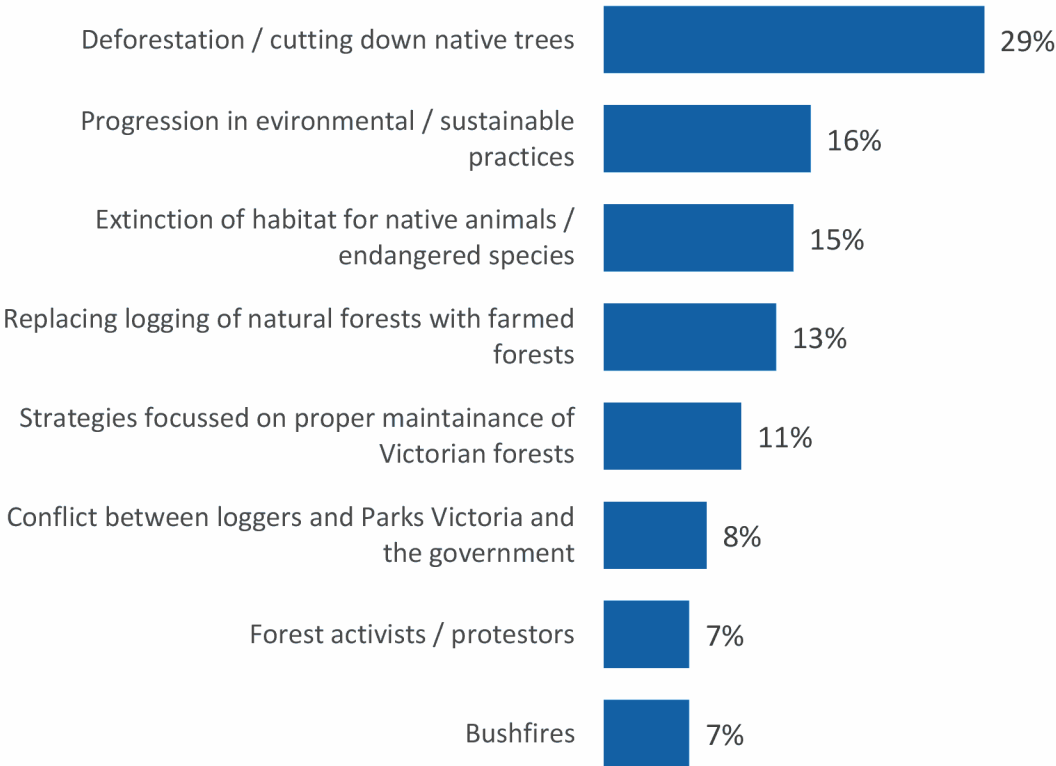
# Of the few who had recently heard something about Victorian forests, native deforestation received the most mentions

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79%

of all respondents said **they had not heard anything recently** regarding **Victorian forests**

But of the minority who had (21% / n=75), mentioned:



Excluded items with <5%

# Timber logging perceptions and attitudes

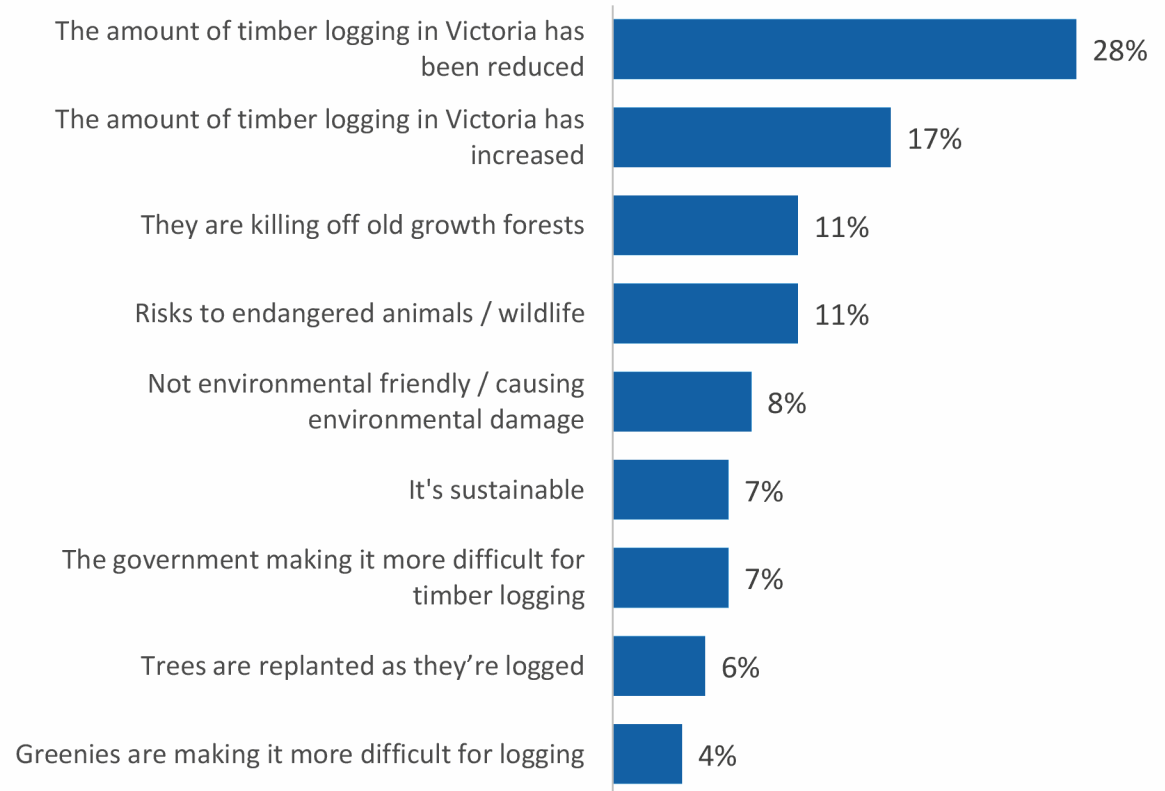
# While there was some confusion as to whether timber logging has reduced or increased, most were uninformed about the subject

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# 82%

of all respondents said **they did not know anything about timber logging in Victoria**

## But of the minority who had (18% / n=71), mentioned:



Q11. What, if anything, do you know about timber logging in Victoria?  
Base: All respondents (n=404)

# In line with what was observed in 2018, the general sentiment around the continuation of native logging is one of negativity

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There is a lack of awareness and understanding of logging

*"I don't know anything about the industry at all."*

*"I just know it as cutting down trees."*

*"I guess its very 'out of sight, out of mind' for me, so I don't know much about the topic."*

Victorians are surprised that native forests are still being logged

*"Why is it still happening!?"*

*"It sounds illegal... surely the destruction of native forests is a bad thing? I thought it would have stopped by now."*

*"Native logging doesn't sound like a positive thing to me. I can't imagine cutting down trees is an environmentally friendly action!"*

However there is an understanding that logging of some kind may be necessary

*"I guess its not a good thing, but you know, people need houses."*

*"We need to log, but within reason – its silly to go full greenie and forget about all the people who rely on the industry."*

*"I know its necessary but can native forests be logged in way that isn't going to screw up our ecosystem?"*

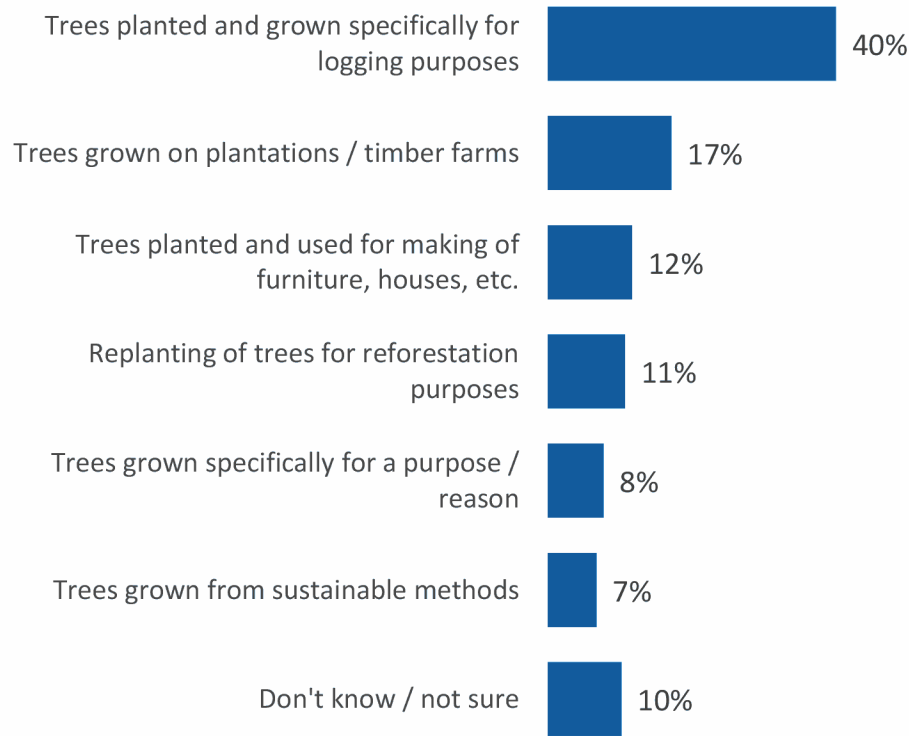
# One in two Victorians recognised the term “plantation wood”, and most understood that it refers to trees grown specifically for logging

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have heard of the term  
“plantation wood / timber”  
before.

## Of these (n=203), mentioned:



Excluded items with <5%

Q12. Have you ever heard of the term plantation wood / timber before?  
Q13. What is plantation wood / timber? | Asked only to those who said they had heard of the term at Q12.  
Base: All respondents (n=404)

# Native forest logging is generally perceived negatively; plantation logging is perceived more neutrally – a more practical option

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*These results are consistent with the focus group research conducted in 2018.*

## Native forests logging

- Victorians feel that native forests should be left untouched as they perceive that any disturbance may take many years to recover from.
- Concerns about touching nature forests include:
  - Endangerment of native flora and fauna
  - Lack of sustainability
  - Loss of native forests having a detrimental impact on climate change, so they need to be preserved
  - Loss of native forests for future generations / recreational activities.
- Regional Victorians held some concerns around effective management of bushfire risk if native forests cease to be logged.

*"I would think that native logging doesn't just cut down our trees but also hurts other native plants and obviously destroys habitats for our wildlife. I just don't think its necessary."*

VS.

## Plantation forest logging

- Most feel more positively towards plantation forests for logging as this is a targeted means of obtaining timber without reducing or harming natural forests.
- There is some concern that plantations may produce lower quality timber than that from native forests.
- There is a tendency to associate plantations with pine forests, which are known as empty and useless for any other purpose than timber. Subsequently, some voiced uncertainty as to whether increasing the number of these types of forests will do good for the environment in reality.
- Regional Victorians held concerns that plantation forests could increase risk of bushfire.

*"If we're growing trees for the sole purpose of being cut down, that doesn't bother me. But you need to have the land available to do that, right? And do pine plantations do any favours for our natural environment?"*

# “Logging” is the better known phrase and is seen as a negative activity among Victorians

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## Timber logging

- Logging has a more negative connotation than ‘harvesting’ – it tends to evoke images of ‘decimated lands’ where trees were previously.
- Timber logging is the common vernacular to describe the industry and the language that all Victorians, regardless of life-stage, relate to, use and understand. It is recommended that when considering how to phrase any messaging, that ‘timber logging’ both quickly and effectively conveys what is being announced and in conjunction with the use of the word ‘native’ is perceived negatively by Victorians.

*“Logging to me is just cutting down trees. That simple.”*

VS.

## Timber harvesting

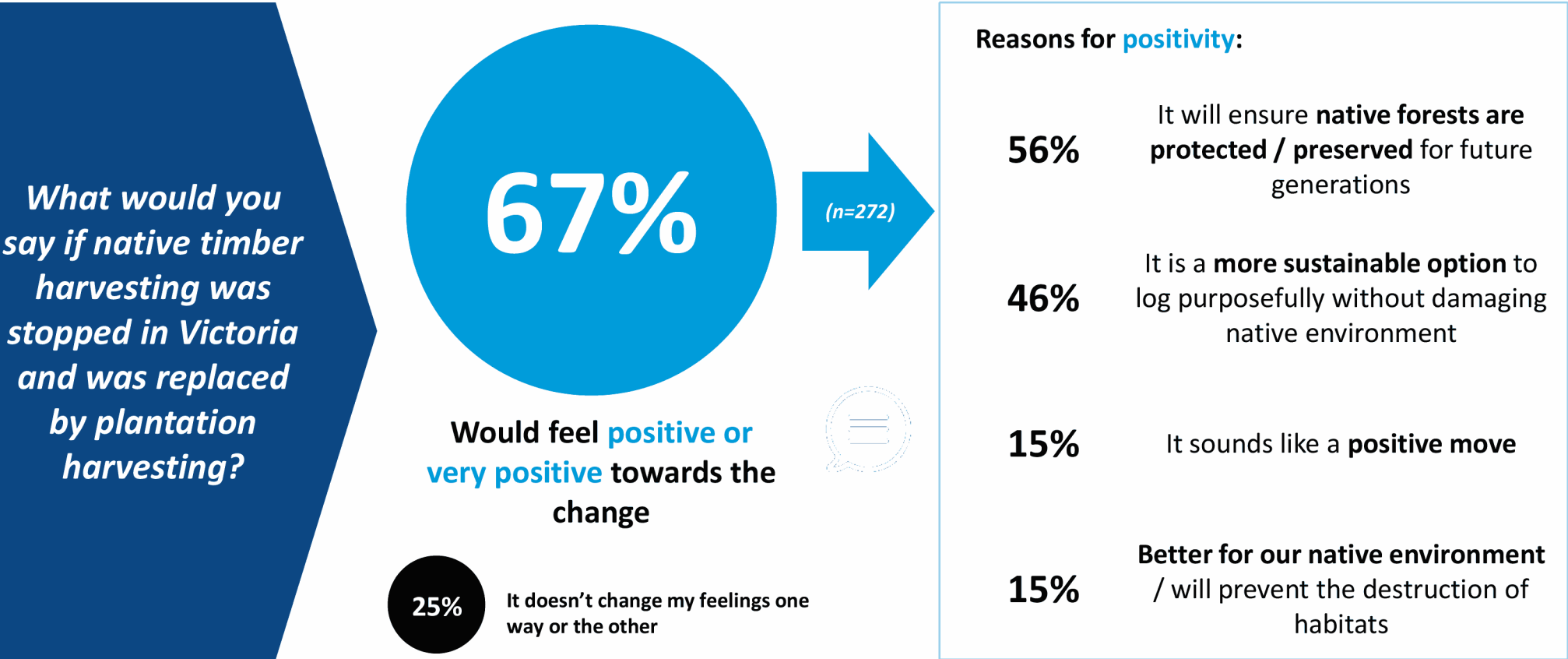
- Timber harvesting is perceived to be a more positive way of phrasing the issue, but there is still a substantial degree of uncertainty around its meaning. It may therefore be seen as sugar coating an unpleasant activity, and lead to negative perceptions.
- Harvesting as a phrase is less quickly and effectively understood (i.e. Victorians have to think about it). Some tended to interpret ‘harvesting’ as being more selective in nature, and not as devastating to native forests as logging. It tends to soften the industry, and we therefore do not recommend using this phrase.

*“I don’t really know what this means, but it sounds like a more selective logging process? Like, not just clear felling and wiping out everything.”*

# Testing core proposition

The majority of Victorians responded positively towards the proposition, feeling that the action was a more sustainable option, and would result in the preservation of native forests

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Q16. You indicated you would feel positive toward this change. Can you explain why?  
Base: All respondents (n=404)

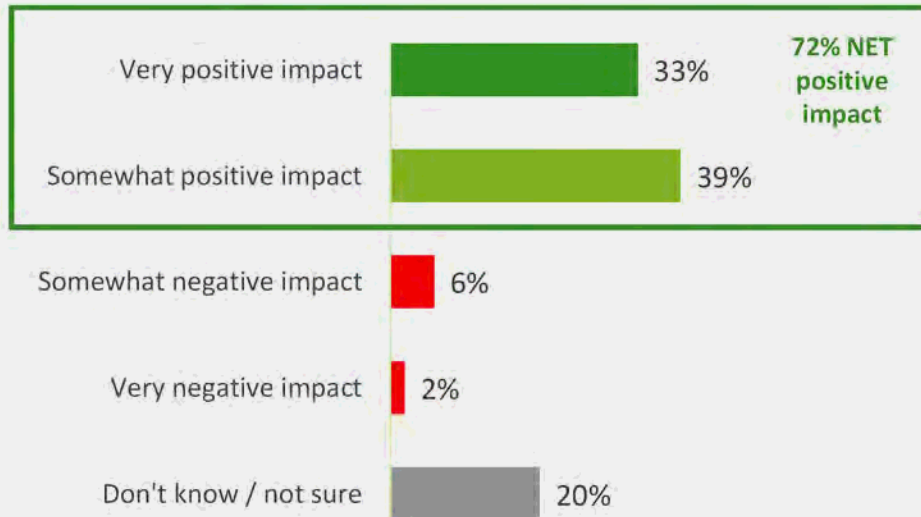
# The end of native timber harvesting would be seen by most as having a positive impact on the Victorian environment, however there was greater uncertainty of its impacts on local jobs

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*What would you say if native timber harvesting was stopped in Victoria and was replaced by plantation harvesting?*

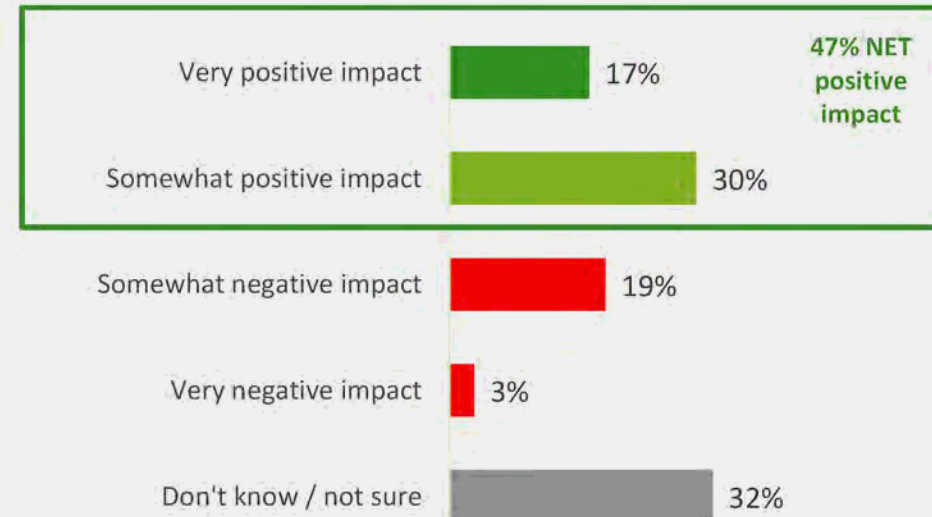
## Environmental perspective

What kind of impact on the **Victorian environment** might you expect from such a change?



## Jobs and industry perspective

What kind of impact on **Victorian jobs** might you expect from such a change?

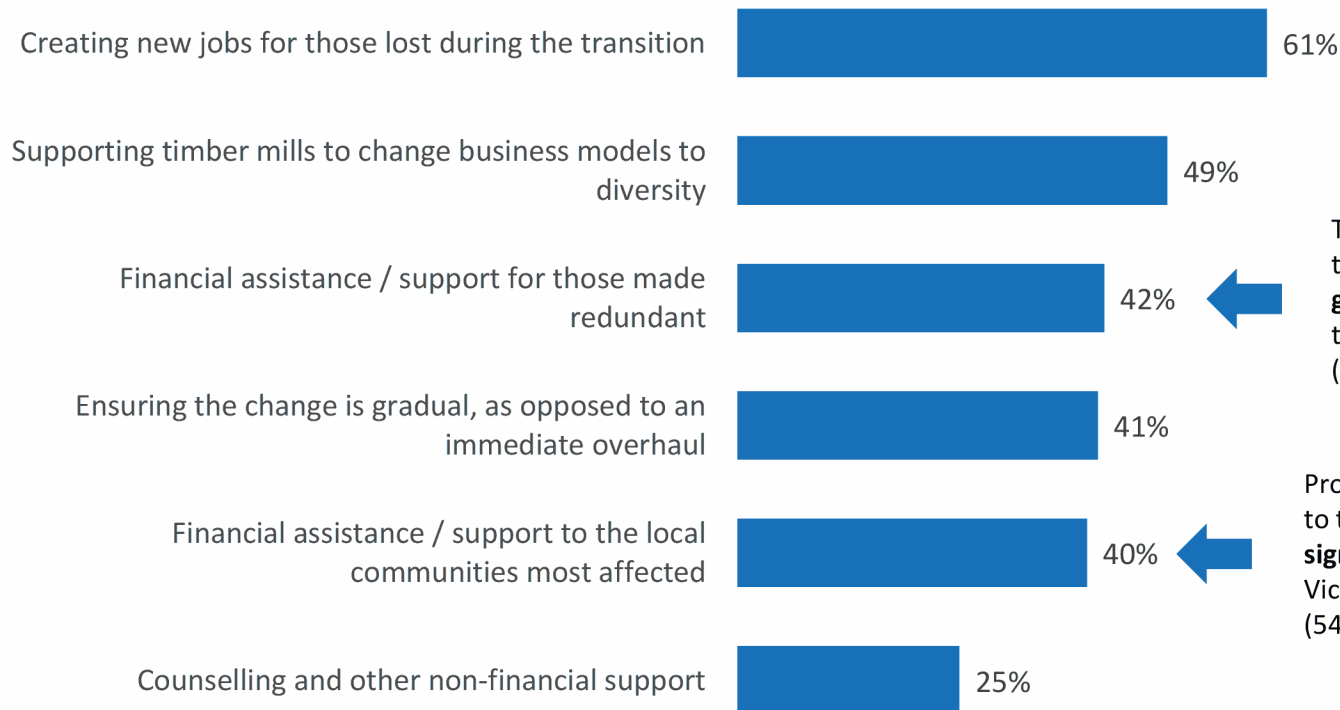


- Q17. Thinking about the statement above, what kind of impact on the Victorian environment might you expect from such a change?  
Q18. Still thinking about the statement above, what kind of impact on Victorian jobs might you expect from such a change?  
Base: All respondents (n=404)

# Ensuring that new jobs are created in the new industry was the top priority among Victorians

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## Supportive priorities during the transition:



The provision of financial assistance to those made redundant was a **significantly greater concern** among respondents from the Grampians (52%) and Loddon Mallee (58%) regions.

Providing financial assistance and support to the communities most affected was **significantly more of a priority** among Victorians residing in the Grampians (54%).

Q19. Which of the following would you most like to see happen if the changes outline above were carried out?  
Base: All respondents (n=404)

# When explored qualitatively, the idea of replacing native timber harvesting with plantation harvesting is generally well-received and supported - assuming that more detail will be provided

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## Overarching idea

*What would you say if native timber harvesting was stopped in Victoria and was replaced by plantation harvesting?*

- Victorians across the board generally support the idea predominantly because they perceive it is about protecting the natural environment and in turn protecting native flora and fauna.
- However Victorians desire more details around the flow-on effect of this direction.



## 2019 NUANCE:

- In regional areas (Shepparton & Maryborough), there was some concern among empty nesters about the impact of such an action on local jobs and those directly, and indirectly, involved in the industry. These participants were subsequently more sceptical of the “agenda” behind moving entirely towards plantation harvesting and needed more information.



## Common questions asked

*What does this mean for me? Will timber products become more expensive?*



*Where will the plantations be? Will they replace farmland?*

*Do we do a lot of native timber harvesting?*

*Can plantations grow timber that is comparable to that gained from native timber harvesting?*

*Is plantation harvesting environmentally friendly / sustainable?*

# The minority of negative responses were founded on the belief that the impacts of native logging were not that bad or exaggerated

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*What would you say if native timber harvesting was stopped in Victoria and was replaced by plantation harvesting?*



Would feel **negative** or **very negative** towards the change

(n=31)

## Reasons for **negativity**:

48%

Don't like the idea **because I don't feel it is needed**

23%

Plantations are not **environmentally friendly** or sustainable

15%

The **native forest grows back and rejuvenates** anyway



When quantitatively tested, jobs did not feature as a reason for negativity towards the proposition

Q16. You indicated you would feel negative toward this change. Can you explain why?  
Base: All respondents (n=404)

# Testing core proposition narratives

# Three core narratives were evaluated across the qualitative and quantitative phases of the research:

The order of these narratives were rotated in each group to remove order bias

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Tested qualitatively		Tested quantitatively
1. Environmental Narrative	2. Protecting Local Towns Narrative	3. Jobs and Industry Narrative
<p><i>Current levels of native forest logging are threatened by bushfires, climate change and the need to protect endangered animals like the Leadbeater’s possum and Greater Glider.</i></p> <p><i>Because of the effects of these factors and events, and to preserve our forests for future generations to enjoy, we need to transition out of harvesting native timber, even though this may mean the loss of jobs and economic activity for some regional towns.</i></p>	<p><i>A number of regional Victorian towns rely to a greater or lesser extent on native logging. However, recent reviews of the Victorian timber industry indicate that native forest logging is not secure.</i></p> <p><i>This means that jobs within these towns will eventually disappear as jobs will not be able to be maintained in native logging, putting the existence of these towns at risk.</i></p> <p><i>In transitioning from native to plantation logging, Government should step in to assist communities and provide financial assistance to make this change and support local jobs.</i></p>	<p><i>Some people think there isn't enough native forest left to log, so there is uncertainty for the future of the industry. Doing nothing would eventually result in job losses and timber mills closing due to lack of available native timber to harvest.</i></p> <p><i>Making the transition to plantation harvesting would not be without challenges; it would mean the loss of jobs and economic activity in some regional towns. Local businesses who rely on native timber may also suffer.</i></p> <p><i>There is a need to be proactive, and have a plan in place to transition to plantations, to ensure that the industry survives and is secured. This would involve:</i></p> <ul style="list-style-type: none"><li><i>Supporting timber mills to transition to do new things</i></li><li><i>Creating new jobs in other / new industries in local communities</i></li><li><i>Financial assistance for local communities to stimulate new employment opportunities</i></li><li><i>\$25,000 diversification package for businesses and individuals directly affected by the transition</i></li></ul>

Elements of the qualitative narratives were tested within the quantitative phase as statements.

# The environmental narrative is strongest but its current structure raises questions about jobs / impact on towns

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1.

## Environmental Narrative

*Current levels of native forest logging are threatened by bushfires, climate change and the need to protect endangered animals like the Leadbeater's possum and Greater Glider.*

*Because of the effects of these factors and events, and to preserve our forests for future generations to enjoy, we need to transition out of harvesting native timber, even though this may mean the loss of jobs and economic activity for some regional towns.*



Positives

- **Protection:** aligns with Victorians desires for Victorian Forests to be preserved for future generations.
- **Years to come:** makes them feel this is a positive change for the long-term future and from which future generations will benefit.
- **Native animals:** puts a name to the endangered species.



Concerns

- Felt that '**current levels of native forest logging is threatened by X**' is at odds with the need to move away from native logging for environmental reasons; it does not tie in well with the general sentiment that native logging is not a good thing.
- Mentioning "**the loss of jobs**" at the end is thought to be bad taste; it leads to too many unanswered questions and the perception that the message lacks transparency / "isn't telling the full story".



Questions

- What are the current levels of native forest logging? How many jobs rely on the industry?
- How many jobs would be lost? Why won't native logging jobs be replaced by new plantation harvesting jobs?
- How many towns would be impacted? Which regional towns?
- How long is the "transition" period?



Relevance

- Overall, the environmental narrative is credible and relevant across all group cohorts.
- Out of all the narratives this is the strongest – however it is not a 'stand alone' and requires the support of the other two narratives to build a robust announcement that is compelling for Victorians.



Likes



Concerns

# The sentiment towards protecting local towns narrative has not changed since 2018; it is seen as vague and raises questions, but overall participants support the need to make preservation of native forests a higher priority

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2.

## Protecting Local Towns Narrative

*A number of regional Victorian towns rely to a greater or lesser extent on native logging. However, recent reviews of the Victorian timber industry indicate that native forest logging is not secure.*

*This means that jobs within these towns will eventually disappear as jobs will not be able to be maintained in native logging, putting the existence of these towns at risk.*

*In transitioning from native to plantation logging, Government should step in to assist communities and provide financial assistance to make this change and support local jobs.*



Positives

- Appreciate the honesty in acknowledging that 'a number of regional Victorian towns rely on native logging'
- Like the clarity and honesty that 'jobs in these towns will disappear'.
- Like that this is proactive and there is a plan in place to transition, however the details of the transition are sought.
- The fact that "native forest logging is not secure" is believable.
- There is general support for the Government to 'step in to assist communities and provide financial assistance'.



Concerns

- The narrative is too vague; people want facts, statistics and the details behind the plan.
- Want to be assured that Government will work collaboratively with communities rather than imposing solutions on them.
- Some concern that this could be an expensive exercise – what other programs will lose funding to pay for this?



Questions

- How big will the impact be? Is it just a few towns or many?
- Will plantations be built near these towns to replace the jobs? If not, will people have to move a significant distance to keep their jobs? Will the Government help them to do that?
- How much time will communities have to transition?
- What happens to people who resist the change?



Relevance

- There is some cynicism as to whether affected towns will get sufficient and appropriate support.
- Despite this, overall sentiment was that protection of native forests was more important, and that job losses and changes within industry is sometimes the cost of being future-focussed. This sentiment is particularly strong among empty nesters.



Likes

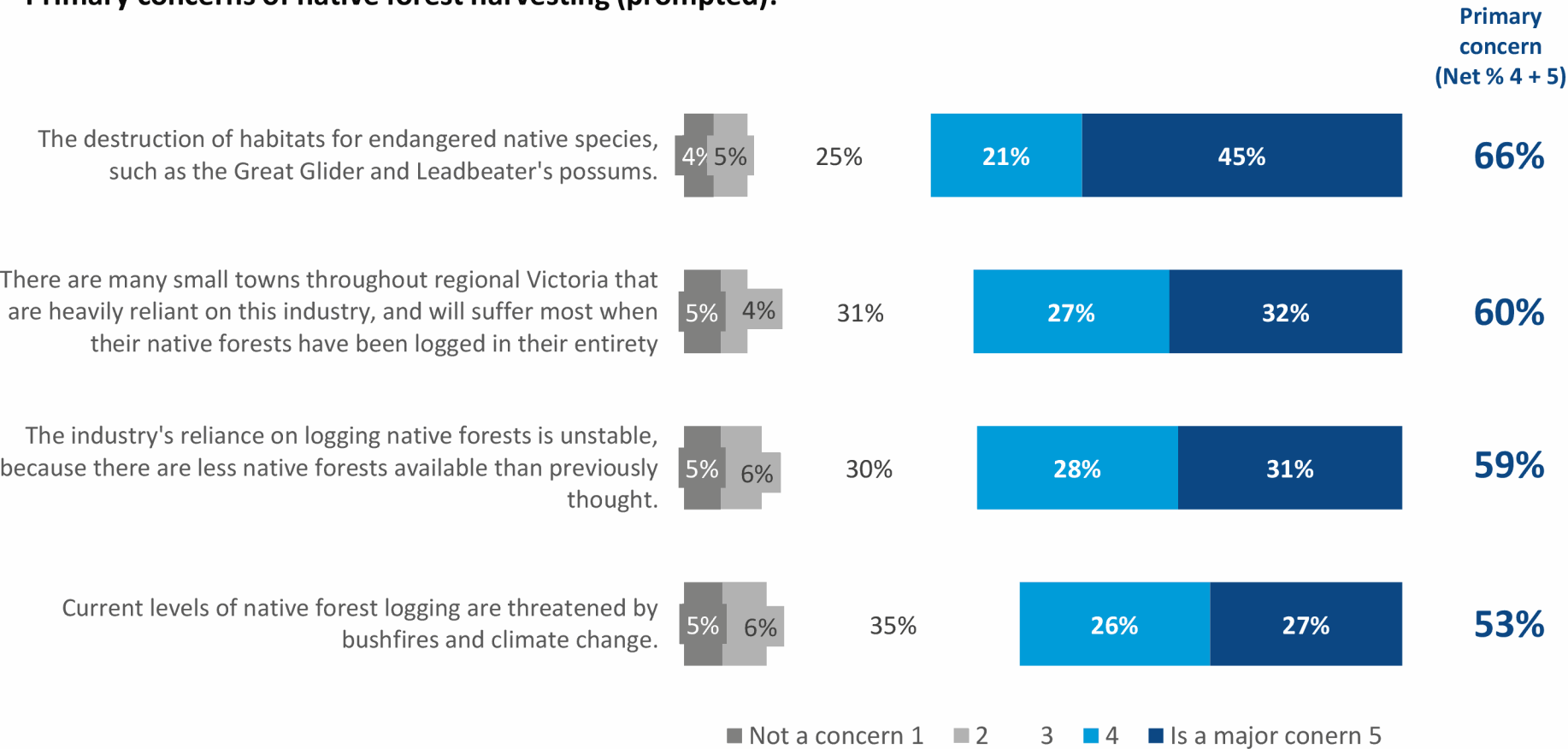


Concerns

# Messaging should lead with preventing the destruction of native forests

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## Primary concerns of native forest harvesting (prompted):



# The jobs and industry narrative is perceived as proactive but vague with a desire for more details about the proposed transition

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3.

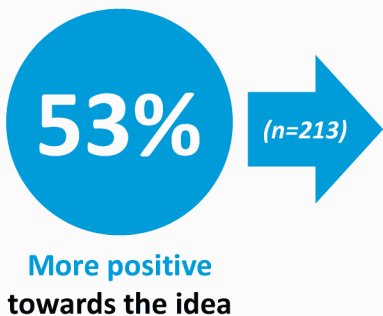
## Jobs and Industry Narrative

Some people think there isn't enough native forest left to log, so there is uncertainty for the future of the industry. Doing nothing would eventually result in job losses and timber mills closing due to lack of available native timber to harvest.

Making the transition to plantation harvesting would not be without challenges; it would mean the loss of jobs and economic activity in some regional towns. Local businesses who rely on native timber may also suffer.

There is a need to be proactive, and have a plan in place to transition to plantations, to ensure that the industry survives and is secured. This would involve:

- Supporting timber mills to transition to do new things
- Creating new jobs in other / new industries in local communities
- Financial assistance for local communities to stimulate new employment opportunities
- \$25,000 diversification package for businesses and individuals directly affected by the transition



This narrative was only tested within the quantitative phase of the research. Elements of the jobs and industry narrative were tested through the use of case studies within the focus groups.

### Reasons for positivity:

- |     |   |
|-----|---|
| 30% | I'm reassured that <b>support and assistance will be available for those who are impacted</b>   |
| 26% | Seems like a <b>progressive / positive idea</b>   |
| 15% | It means the <b>preservation of our native forests</b>  |
| 14% | It's a <b>good long-term strategy / shows the government is thinking about things long-term</b> |
| 10% | It will <b>create new / more jobs</b> eventually  |



My feelings haven't changed



Less positive towards the idea

Q21. After reading more about what would be involved in the transition from native timber harvesting to plantation timber harvesting, do you feel...?  
Q22. You indicated that you feel more positively toward this idea after reading more about it. Can you explain why? | Only asked to those who felt more positively at Q21 (n=213)  
Base: All respondents

# Case study messaging: evaluation

Evaluated within the 12 qualitative focus groups only

# Understanding the degree of impact and type of support offered to those affected determines the level of concern participants feel towards the proposition

Participants identified the most “concerning” stories as the ones they wanted to hear about.

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## Most concerned for...

Participants are most concerned for those whose employment / income is directly compromised by the transition, and are empathetic towards struggling families in impacted towns. These stories are characterised by uncertainty regarding the amount of support provided by the government.



CARL – OWNER DRIVER



SAM – TAKING ON NEW JOB OPPORTUNITIES



DAVE – SUPPORTED TO MOVE INTO LOCAL EMPLOYMENT



TOM AND KAREN – LOCAL RESIDENTS OF A TIMBER TOWN

## Somewhat concerned for...

Stories of those directly impacted by the transition, but perceived to be receiving a more appropriate level of support, were a lesser concern.



DARREN – MILL OWNER



FRANK – MILL WORKER RETIRING

## Little to no concern for...

Participants are least concerned for those indirectly impacted and whose businesses would largely continue as usual.



LINDA – FURNITURE MAKER

# Participants feel the government should provide varying “layers” of support based on the degree of impact

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Different types of support is thought to be required for different circumstances:

- **Employment assistance:** is seen as a key responsibility of the government to provide. This type of assistance could include free upskilling / training programs, assistance finding employment related to the industry, or a job placement within the new plantation timber harvesting industry.
- **Financial assistance:** cash-handouts are sometimes seen as “band-aid solutions” that only provide short-term relief. Subsequently, financial assistance is thought to be only applicable to those whose income has been directly jeopardised by the transition (e.g. loss of employment, loss of value on industry assets, etc.). In most circumstances, it should not stand alone.
- **Community support:** it is essential for the government to go into affected communities and work with locals directly to identify the specific resources required to aid long-term development. Empowering locals to support themselves is perceived to be a far more effective and future-focussed strategy than relying on cash-handouts alone.



# Case study evaluation

## SAM – TAKING ON NEW JOB OPPORTUNITIES



### SAM – TAKING ON NEW JOB OPPORTUNITIES

Sam left school young and has worked as a harvest and haulage operator for 15 years.

When he learnt that the government was moving away from native timber harvesting he attended seminars at his local mill to find out about retrenchment, redundancies and support services. He was nervous about losing his job because he has a family to support.

Sam registered with the worker in transition service and was provided with a case worker. His skills were also assessed for formal recognition of prior learning.

The early days after his retrenchment were stressful and his family was referred to a support service. Through the support of his case worker he gained a placement for a 6 week trial period as a DELWP land manager.

#### Type(s) of support required:

Financial, Employment, Community

#### Degree of concern:

High

#### Questions / concerns raised:

- What is the worker in transition service? What services does this include?
- What is the role of the case worker?
- Will Sam receive any financial compensation during any period of unemployment?
- What will happen to Sam after his 6-week trial?
- Is the trial a paid position?
- How long did it take Sam to get the trial?

#### Messaging take-outs:

- ✗ **Mentioning 'support services' without any explanation of what they do encourages scepticism.** A description of the service and its purpose should follow.
- ✗ The **'six-week placement'** left participants wondering what will happen to Sam beyond his temporary position – **it comes across as only a short-term solution.**
- ✗ **There is a degree of scepticism present, particularly among lower socio-economic environments, when it comes to dealing with case officers** (which are often a result of personal experience). Providing clarity on the degree of support their case officer will offer will reduce any apprehensiveness toward their involvement.
- ✓ Having Sam's **"skills assessed for formal recognition of prior learning"** suggests the **support being offered considers his situation holistically**; this is thought to be a more effective approach in securing employment opportunities.



Likes



Concerns

# Case study evaluation

## DAVE – SUPPORTED TO MOVE INTO LOCAL EMPLOYMENT



### DAVE – SUPPORTED TO MOVE INTO LOCAL EMPLOYMENT

Dave is a third-generation shift worker at the local timber mill which provides nearly 20 percent of the employment in his home town. He has considered leaving and trying his luck in the city, not wanting to stay and watch the demise of his town.

Dave decided to register with the **workers in transition service** and was **appointed a case worker** who discussed with him some potential local job opportunities. Through a career advice workshop and individual session, he was helped to decide what he might like to do.

Dave found a job in the office of a local bus company that had heard about the **employer payments package**. The role required basic computer skills and his case worker organised some tailored digital foundations skills training.

After applying for the position, he was assisted with resume, application and interview preparation. Dave was successful in being placed in a position with the bus company and received **post placement support**. He now sees his long term future as a resident of this region.



Likes



Concerns

Type(s) of support required:

Financial, Employment and Community support

Degree of concern:

High

Questions / concerns raised:

- What is the workers in transition service?
- What was included in the career advice workshop? Was this one-on-one?
- What is the employer payments package?
- Was the digital foundations skills training paid for?
- Has his income suffered significantly by moving to this new job?
- Has there been any show of support to the community to give Dave hope that his town will survive beyond the transition?
- Is Dave speaking to anyone else impacted in the industry?

Messaging take-outs:

- ✗ Mentioning “post-placement” support alone is seen as deliberately vague and lacks credibility. Be clear on the type of support (i.e. financial or otherwise) and avoid vague references to packages and services.
- ✓ Dave’s story provides more clarity on the role of the case officer than Sam, and is better received. Providing this degree of description around the role of the case officer is ideal.
- ✓ Participants resonate with the assistance Dave received in ‘updating his resume and interview preparation’. Emphasise stories that empower individuals with long-term solutions.

# Case study evaluation

## CARL – OWNER DRIVER



### CARL – OWNER DRIVER

Carl knew he was going to be a truck driver ever since he was in primary school. Like his dad and his grandad he has hauled logs up and down almost every road in Gippsland.

Unlike those before him, he's saved up to become an owner driver. With his own prime mover and a new \$55,000 log jinker trailer he's been starting to make some good money. But the news of the forestry transition left him worried.

Carl has heard of the transition package to support forestry and supply chain businesses. This will provide assistance to businesses in the industry, including grants for new business opportunities or to facilitate an exit from the industry.

#### Type(s) of support required:

Financial assistance and Community support

#### Degree of concern:

High

#### Questions / concerns raised:

- Can he use his log jinker trailer for other purposes? Will the government advise him of this, if he can?
- To what extent will he be compensated for his loss of income and loss of value on his industry asset(s)?
- Will he be able to transition his business into the new plantation industry?
- What is the transition package? What does it include?

#### Messaging take-outs:

- ✗ There was uncertainty about the degree to which Carl is /will be financially impacted.
- ✗ Mentioning 'transition packages' broadly is not enough to provide reassurance. The type of support, and the dollar or action attached to it, is essential to include (e.g. 'the transition package, which includes a \$25,000 pay-out and detailed advice on new business opportunities and strategies' etc.).
- ✓ The acknowledgment that "the news of the forestry transition left him worried" is considered realistic; it is seen as a more balanced (and therefore honest) representation of Carl's situation.



Likes



Concerns

# Case study evaluation

## TOM AND KAREN – LOCAL RESIDENTS OF A TIMBER TOWN



### TOM AND KAREN – LOCAL RESIDENTS OF A TIMBER TOWN

Tom and Karen couldn't afford to buy a home in the regional city where they grew up. Especially not one big enough for their three children. They moved to a small timber town seven years ago. Almost everyone here owes their jobs to the timber industry in some way. Tom owns the local milk bar and Karen is a part time teacher at the local school.

They have some great ideas for the local economic and community activities which will be used to support local development of the region.

Tom is unsure about their future but Karen is excited. She thinks new activities will bring more visitors and money into the region.

#### Type(s) of support required:

Community support

#### Degree of concern:

High

#### Questions / concerns raised:

- What are Karen's 'great ideas'? Does she have the resources to make them a reality?
- Is Karen alone in her fight for her community?
- Is the government going to speak directly to the people in this community?
- Will any of the native timber logging jobs in the community be replaced with plantation timber logging opportunities?

#### Messaging take-outs:

- ✓✗ Participants resonate with Karen's optimism and want to hear her story – but they feel she needs support from the government and other members of the community to get her ideas off the ground. Empowering individuals by aiding them with resources to drive development is seen as the most reassuring action the government can take.
- ✗ Participants are quick to empathise with Karen and Tom as a young family, but they hold concern for their livelihoods should residents be forced to move away.



Likes



Concerns

# Case study evaluation

## FRANK – MILL WORKER RETIRING

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### FRANK - MILL WORKER RETIRING

Frank left school at 15 when his dad said he was old enough to operate a saw. For over 40 years Frank has been a mill worker.

Frank has heard about the **training package on offer**. This will support workers from both directly affected and supply chain businesses affected by the industry closure.

After getting access to financial counselling Frank **decided to retire and keep living in his community**. He's **received a redundancy package from his employer as well as top up payments from the state government**.

#### Type(s) of support required:

Financial assistance, Community support

#### Degree of concern:

Moderate

#### Questions / concerns raised:

- *Frank is very young to be retiring. Will he have enough money to see him through?*
- *Was the financial counselling provided by the government, or did Frank have to pay for it out of his own pocket?*
- *What is the training package? What type of training is on offer?*
- *Why mention the training package if he doesn't end up using it?*
- *How much is the redundancy package worth?*
- *What kind of top-up payments is he receiving?*

#### Messaging take-outs:

- ✗ **Mentioning the 'training package' that is not fully explained or even utilised by Frank leads to confusion and cynicism** – participants are left wondering why it is mentioned at all.
- ✓ **Participants feel that Frank is in a better position than most in terms of financial support** – however, if payments and financial packages are mentioned, there is an expectation that details on the cost will follow. Doing so communicates transparency and a degree of accountability.
- ✗ There is **concern / scepticism about Frank's ability to retire** comfortably at such a young age (55).



Likes



Concerns

# Case study evaluation

## DARREN – MILL OWNER

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### DARREN - MILL OWNER

Darren never saw himself as a businessman but he fell into the job when his uncle become too old to run the family mill. He prides himself on being a good businessman **but with times being tough he hasn't turned a profit for three years.**

He has a contract to source products until 2021 but he's keen to consider an early exit from the industry, **especially by taking advantage of the plant and equipment support package.**

**He plans to use the \$25,000 from the diversification package** to get the business ready to wind up, and prepare for the next phase of his future.

#### Type(s) of support required:

Financial assistance

#### Degree of concern:

Moderate

#### Questions / concerns raised:

- *What is the plant and equipment support package? What is included?*
- *Why hasn't he turned a profit for three years?*
- *What is the diversification package? Was there anything else included besides the \$25,000 grant?*

#### Messaging take-outs:

- ✗ Questions were raised about why times have been tough over the past three years if Darren prides himself on being a good businessman – **is this a result of the native timber industry falling, or because he isn't actually a good businessman?** The former may be a way to suggest native timber harvesting has been coming to an end naturally.
- ✗ **Uncertainty about what would be included in the plant and equipment support package** – understanding this better could lead them to feel more or less concerned about Darren's situation.
- ✓ **Though participants appreciated a greater level of detail relating to the diversification package, care should be taken with the degree of specificity provided.** Questions were raised over the realistic assistance \$25,000 would offer a mill owner. Facts and figures are well-received, but care should be taken to provide them context.



Likes



Concerns

# Case study evaluation

## LINDA – FURNITURE MAKER

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### LINDA – FURNITURE MAKER

Linda took a punt shortly after graduating from design school. She started a business so she could work on her passion – making made-to-order timber furniture. Eleven people now work in her small factory in Dandenong, making medium grade office furniture and cabinetry.

Linda knows she'll still be able to get the timber she needs, but the extra cost of **importing** it will put pressure on the bottom line.

Type(s) of support required:

No support needed

Degree of concern:

Low

Questions / concerns raised:

- *Where will she be importing from? Will it be ethically sourced?*
- *Can't she just use other local timber?*

### Messaging take-outs:

- ✓ **Linda's situation raises few concerns.** Participants feel business will continue for her as per usual. Linda will be able to react to the change by raising her prices, indicating that she will not be significantly affected.
- ✗ **The idea of importing is not well-received.** There are concerns over where, and how ethically, the timber would be sourced. Participants generally disapprove of opting for imported products.



Likes



Concerns

# **Appendix I: Quantitative sample overview**

# Quantitative study

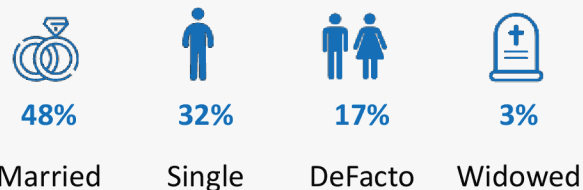
## Sample overview

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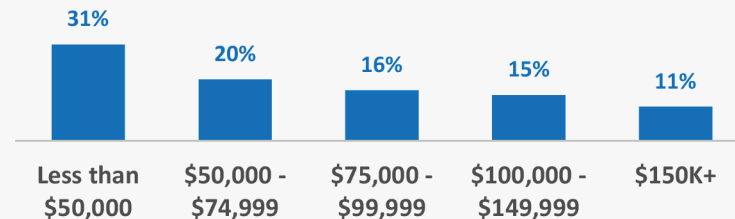
### Gender:



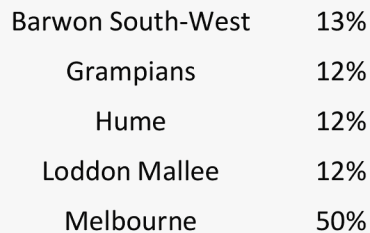
### Household:



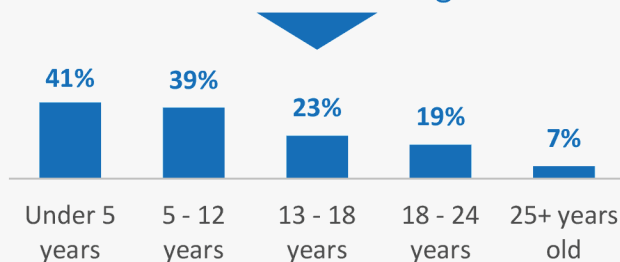
### Household income (before tax):



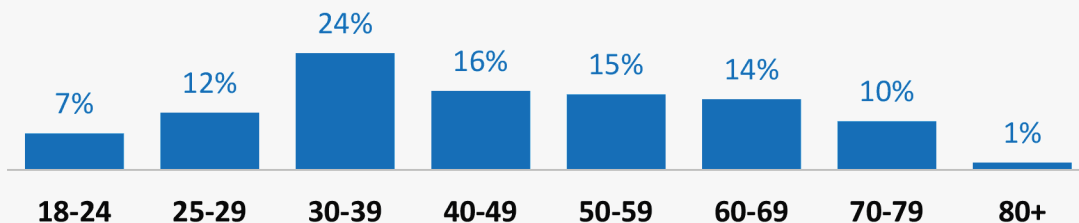
### Resident of:



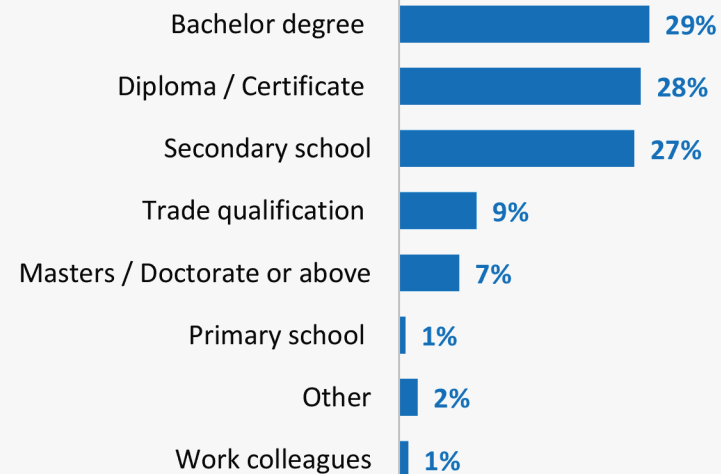
**36%** have children living at home



### Age:



### Household:



# **Appendix II: Discussion guides**

# Discussion guide: core proposal focus

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QUANTUM  
MARKET RESEARCH

## 19722 – DPC Project Forest Message Testing Focus Group Discussion Guide – Core Proposal Focus 90 minutes

*This is potentially a highly sensitive topic – an announcement will be made in coming weeks and we don't want to pre-empt it. Everything should be positioned as a hypothetical.*

*This discussion guide is to be used for Metro Melbourne, Dandenong Ranges, Narre Warren/Cranbourne.*

### Introduction

- Thank you for participating.
- Anonymity and confidentiality, independent research company.
- Video and/or audio recording.
- Frank and honest opinions are what we are looking for. Going to talk about your views. No right/wrong answers.
- Don't talk over others.
- Put mobile phones on silent.

### Introductions (5 minutes)

- To begin with, could you introduce yourself?
  - Where are you currently living?
  - ~~Lifestyle~~ / family?
  - Employment? Hobbies?
- What is most important to you right now?
  - What are you working towards?
  - Professionally? Spare time?
  - What are you particularly passionate about?

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### Important issues (15 minutes)

*Intent of this section is to understand the pressing issues Victorians perceive in relation to the future, and where environmental issues stand in the bigger scheme of things.*

- What are the important things that Australia needs to think about for the future? [LIST ON BOARD]
  - What do you see as the key areas we need to focus on?
  - What else?
- What level of priority would we put on each of these issues? Which are most and least important? [PLACE RANKING / SCORES ON ITEMS ON BOARD]
- If not already raised: What about the environment? Where does this fit in?
- Regarding the environment...
  - What concerns do you have?
  - What do you see as the key areas we need to focus on? Australia-wide? And what about in Victoria specifically? [START NEW LIST ON BOARD]
    - What needs to be done?
    - What impact do you think this will have on local communities? Positive / negative?
    - What are the key priorities here?
    - What difference is there for Victoria versus the rest of Australia?

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## Victorian forest and timber harvesting industry awareness (10 minutes)

MODERATORS: RANDOMISE ORDER OF TALKING ABOUT FOREST PROTECTION VS. TIMBER HARVESTING

### General awareness of forest protection

- When I say 'Victorian forests' what do you think of? What else?
- Tell me everything you know in relation to Victorian forests? What else? [Probe for positive and negative perceptions/associations]
- What if any have you heard about Victorian forests recently?
  - Where did you hear this?
- What, if anything, do you think needs to happen in relation to Victorian forests?
- What if anything is the Government focussed on when it comes to Victorian forests?
- And what should the government be focussed on?

### General awareness of timber harvesting

[Important to make note of specific language and words used]

- When I say 'timber logging' what do you think of? What else?
- What about 'timber harvesting'? Is it the same thing?
- Would you think of cutting down trees as timber logging or timber harvesting?
- What do you know about timber harvesting / logging in Victoria? What else? [Probe for positive and negative perceptions/associations]
- What, if anything, have you heard about Victorian timber harvesting industry? Where did you hear this?
- What about **plantation forests vs. native forest timber harvesting**?
  - First of all who knows what a plantation forest is? Can you explain it to me? Who didn't know about this? What about a native forest?
  - What do you think of each of these? [EXPLAIN WHAT **THESE MEAN** IF NECESSARY]
    - What's the difference between the two types of timber harvesting?
    - What about the types of wood? Probe on "Soft wood"
    - What about "old growth", what does this mean?

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- Have you heard anything about this?
- What are your opinions (if any) on harvesting plantation timber vs. native forest timber?
- What about in relation to what happens here in Victoria? Tell me about that.
- What, if anything, do you think needs to happen in relation to the Victorian timber harvesting industry?

## Overarching Concept (20 minutes)

**What would you say if native timber harvesting was stopped in Victoria and was replaced by plantation harvesting?**

Note: Looking for language use/resonance around the words – future, industry, jobs and communities

- What are the positives / negative? Why?
- Who do you think would be impacted by this change?
- What more would you want to know?
- Do you think this is a good idea or a bad idea? Why?
- Would you support this initiative personally? Why/why not?

### Environment/protection [HOLD UP ON A CARD AND READ TO GROUP]

**Current levels of native forest logging are threatened by bushfires, climate change and the need to protect endangered animals like the Leadbeater's possum and Greater Glider. Because of the effects of these factors and events, and to preserve our forests for future generations to enjoy, we need to transition out of harvesting native timber, even though this may mean the loss of jobs and economic activity for some regional towns.**

- What is your gut reaction to this statement?
- What makes that proposition acceptable? What makes you say that?
- Under what circumstances is it unacceptable? What makes you say that?
- What parts of this statement are most important to you? Which are least important? Why?
  - [ensure all elements of the statement are covered]
- What are your thoughts around the language used?
- How believable is this? Why?

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# Discussion guide: core proposal focus

Department of Premier and Cabinet  
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- Overall, do you think this justifies ending native logging? Why / why not?
- Is there anything else you would want to know? What's missing?
- What if I told you our native forests were impacted by bushfires. Should logging levels be maintained to support jobs and communities, or reduced to protect endangered animals?
- What if I said native forest logging has been falling steadily since 2000?
  - Is that a surprise?
  - What do you think has driven this change?
  - Is it ok if that change was driven by protecting endangered animals?
- Should logging be reduced to preserve forests for families to enjoy in the future through bushwalking, [4 wheel](#) driving, camping etc?

Protecting local towns [HOLD UP ON A CARD AND READ TO GROUP]

A number of regional Victorian towns rely on, to a greater or lesser extent, native logging. However, recent reviews of the Victorian timber industry indicate that native forest logging is not secure – in other words, the wood is simply running out. This means that jobs within these towns will eventually disappear as jobs will not be able to be maintained in native logging, putting the existence of these towns at risk. In transitioning from native to plantation logging, Government should step in to assist communities and provide financial assistance to make this change and support local jobs.

- What is your gut reaction to this statement?
- What parts of this statement are most important? Which are least important? Why?
- How believable is this? Why?
- Industry change can be difficult, particularly for small communities. Do you think the benefits of change outweigh the burden it may place on some communities? Why?
- What are the benefits of this action (if any)?
- How should the government assist in the transition?
- Is there anything else you would want to know?

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## Case studies (30 min)

MODERATORS: RANDOMISE ORDER OF CASE STUDIES

*I'll now take you through some of the arguments for transitioning from native timber harvesting to plantation harvesting, and would like to explore your reactions.*

[HAND OUT CASE STUDY AND ALLOW TIME TO READ]

- What is your gut reaction to this statement?
- How do you feel reading this statement?
- Is it believable based on what you have heard?
- Is the outcome fair?

[REPEAT FOR EACH CASE STUDY]

[ONCE ALL CASE STUDIES HAVE BEEN REVIEWED REINTRODUCE CORE PROPOSITIONS]

- I would now like you to work as a group and sort all of the things we have discussed today.
- Can you sort them into the most important to least important?
- Why have you put them in this order? [explore top 2-3 and bottom 1-2]

## Comparison of messaging (5 min)

- How has learning about individual people and how they are affected changed your views?
- Which one(s) had the most impact on your views? Why?
- Of anything we've discussed today/tonight are there any elements that seem particularly weak, or unconvincing? Why?
  - What more would you need to know for this to be a more compelling argument?
- Is there anything more you need to know if something like this was going to take place?

## Wrapping up (5 minutes)

- Overall, if you were in charge of implementing a plan to transition from native timber logging to plantation logging, what do you think it would be important for people like you to know?
  - What are the key things you think you would need to tell people?
- Is there any other feedback you would like to give before we wrap up?

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# Discussion guide: transition proposal focus

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19722 – DPC Project Forest Message Testing

## Focus Group Discussion Guide – Transition Proposal Focus

90 minutes

*This is potentially a highly sensitive topic – an announcement will be made in coming weeks and we don't want to pre-empt it. Everything should be positioned as a hypothetical.*

**This discussion guide is to be used for areas that have previously experienced transition including Geelong, Shepparton and Maryborough.**

### Introduction

- Thank you for participating.
- Anonymity and confidentiality, independent research company.
- Video and/or audio recording.
- Frank and honest opinions are what we are looking for. Going to talk about your views. No right/wrong answers.
- Don't talk over others.
- Put mobile phones on silent.

### Introductions (5 minutes)

- To begin with, could you introduce yourself?
  - Where are you currently living?
  - Lifestyle / family?
  - Employment? Hobbies?
- What is most important to you right now?
  - What are you working towards?
  - Professionally? Spare time?
  - What are you particularly passionate about?

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### Transition (20 minutes)

**Understand the challenges faced during transition, how did this affect communities and how was the transition managed.**

- Can you tell me a bit about how [location] has changed over the past twenty years?
  - What has changed for the good?
  - What about the bad?
  - How have these things/events shaped the community?
- What has driven these changes?
- Let's focus on the closure of specific industries (Automotive – Geelong, General Manufacturing – Shepparton, Agriculture processing – Maryborough –)?
  - What do you know about this?
- What impact did this have on the community?
  - What were some of the consequences?
  - What were some of the positive outcomes?
- How was/is the transition been/being managed?
  - What happened to the workers?
  - What support were they offered?
    - How well did this work?
- What else could have been done to support those impacted?
  - And what else do you think should have been done?
  - Who is responsible for these initiatives?

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## Important issues (5 minutes)

*Intent of this section is to understand the pressing issues Victorians perceive in relation to the future, and where environmental issues stand in the bigger scheme of things.*

- What are the important things that Australia needs to think about for the future? [LIST ON BOARD]
  - What do you see as the key areas we need to focus on?
  - What else?
- What level of priority would we put on each of these issues? Which are most and least important? [PLACE RANKING / SCORES ON ITEMS ON BOARD]

## Victorian forest and timber harvesting industry awareness (10 minutes)

MODERATORS: RANDOMISE ORDER OF TALKING ABOUT FOREST PROTECTION VS. TIMBER HARVESTING

### General awareness of forest protection

- When I say 'Victorian forests' what do you think of? What else?
- Tell me everything you know in relation to Victorian forests? What else? [Probe for positive and negative perceptions/associations]
- What if anything have you heard about Victorian forests recently?
  - Where did you hear this?
- What, if anything, do you think needs to happen in relation to Victorian forests?
- What if anything is the Government focussed on when it comes to Victorian forests?
- And what should the government be focussed on?

### General awareness of timber harvesting

*[Important to make note of specific language and words used]*

- When I say 'timber logging' what do you think of? What else?
- What about 'timber harvesting'? Is it the same thing?
- Would you think of cutting down trees as timber logging or timber harvesting?

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- What do you know about timber harvesting / logging in Victoria? What else? [Probe for positive and negative perceptions/associations]
- What, if anything, have you heard about Victorian timber harvesting industry? Where did you hear this?
- What about **plantation forests vs. native forest timber harvesting**?
  - First of all who knows what a plantation forest is? Can you explain it to me? Who didn't know about this? What about a native forest?
  - **What do you think of each of these?** [EXPLAIN WHAT THESE MEAN IF NECESSARY]
    - What's the difference between the two types of timber harvesting?
    - What about the types of wood? Probe on "Soft wood"
    - What about "old growth", what does this mean?
  - Have you heard anything about this?
  - What are your opinions (if any) on harvesting plantation timber vs. native forest timber?
  - What about in relation to what happens here in Victoria? Tell me about that.
- What, if anything, do you think needs to happen in relation to the Victorian timber harvesting industry?

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# Discussion guide: transition proposal focus

## Overarching Concept (15 minutes)

*What would you say if native timber harvesting was stopped in Victoria and was replaced by plantation harvesting?*

*Note: Looking for language use/resonance around the words – future, industry, jobs and communities*

- What are the positives / negative? Why?
- Who do you think would be impacted by this change?
- What more would you want to know?
- Do you think this is a good idea or a bad idea? Why?
- Would you support this initiative personally? Why/why not?
- What do you think are the key challenges in making this transition?
  - From your experience what is important?
  - What needs to be in place to make a smooth transition?

## Environment/protection [HOLD UP ON A CARD AND READ TO GROUP]

*Current levels of native forest logging are threatened by bushfires, climate change and the need to protect endangered animals like the Leadbeater's possum and Greater Glider. Because of the effects of these factors and events, and to preserve our forests for future generations to enjoy, we need to transition out of harvesting native timber, even though this may mean the loss of jobs and economic activity for some regional towns.*

- What is your gut reaction to this statement?
- What makes that proposition acceptable? What makes you say that?
- Under what circumstances is it unacceptable? What makes you say that?
- What parts of this statement are most important to you? Which are least important? Why?
  - [ensure all elements of the statement are covered]
- What are your thoughts around the language used?
- How believable is this? Why?
- Overall, do you think this justifies ending native logging? Why / why not?
- Is there anything else you would want to know? What's missing?

- What if I told you our native forests were impacted by bushfires. Should logging levels be maintained to support jobs and communities, or reduced to protect endangered animals?
- What if I said native forest logging has been falling steadily since 2000?
  - Is that a surprise?
  - What do you think has driven this change?
  - Is it ok if that change was driven by protecting endangered animals?
- Should logging be reduced to preserve forests for families to enjoy in the future through bushwalking, 4 wheel driving, camping etc?

## Protecting local towns [HOLD UP ON A CARD AND READ TO GROUP]

*A number of regional Victorian towns rely on, to a greater or lesser extent, native logging. However, recent reviews of the Victorian timber industry indicate that native forest logging is not secure. This means that jobs within these towns will eventually disappear as jobs will not be able to be maintained in native logging, putting the existence of these towns at risk. In transitioning from native to plantation logging, Government should step in to assist communities and provide financial assistance to make this change and support local jobs.*

- What is your gut reaction to this statement?
- What parts of this statement are most important? Which are least important? Why?
- How believable is this? Why?
- Industry change can be difficult, particularly for small communities. Do you think the benefits of change outweigh the burden it may place on some communities? Why?
- What are the benefits of this action (if any)?
- How should the government assist in the transition?
- Is there anything else you would want to know?

# Discussion guide: transition proposal focus

## Case studies (25 min)

MODERATORS: RANDOMISE ORDER OF CASE STUDIES

*I'll now take you through some of the arguments for transitioning from native timber harvesting to plantation harvesting, and would like to explore your reactions.*

[HAND OUT CASE STUDY AND ALLOW TIME TO READ]

- What is your gut reaction to this statement?
- How do you feel reading this statement?
- Is it believable based on what you have heard?
- Is the outcome fair?

[REPEAT FOR EACH CASE STUDY]

[ONCE ALL CASE STUDIES HAVE BEEN REVIEWED REINTRODUCE CORE PROPOSITIONS]

- I would now like you to work as a group and sort all of the things we have discussed today.
- Can you sort them into the most important to least important?
- Why have you put them in this order? [explore top 2-3 and bottom 1-2]

## Comparison of messaging (5 min)

- How has learning about individual people and how they are affected changed your views?
- Which one(s) had the most impact on your views? Why?
- Of anything we've discussed today/tonight are there any elements that seem particularly weak, or unconvincing? Why?
  - What more would you need to know for this to be a more compelling argument?
- Is there anything more you need to know if something like this was going to take place?
- From your experience what is missing?
  - Who else do you want to hear from? Why?
  - What else needs to be done to support the transition?

## Wrapping up (5 minutes)

- Overall, if you were in charge of implementing a plan to transition from native timber logging to plantation logging, what do you think it would be important for people like you to know?
  - What are the key things you think you would need to tell people?
- Is there any other feedback you would like to give before we wrap up?

# **Appendix III: Case studies**



#### DARREN - MILL OWNER

Darren never saw himself as a businessman but he fell into the job when his uncle became too old to run the family mill. He prides himself on being a good businessman but with times being tough he hasn't turned a profit for three years.

He has a contract to source products until 2021 but he's keen to consider an early exit from the industry, especially by taking advantage of the plant and equipment support package.

He plans to use the \$25,000 from the diversification package to get the business ready to wind up, and prepare for the next phase of his future.



#### FRANK - MILL WORKER RETIRING

Frank left school at 15 when his dad said he was old enough to operate a saw. For over 40 years Frank has been a mill worker.

Frank has heard about the training package on offer. This will support workers from both directly affected and supply chain businesses affected by the industry closure.

After getting access to financial counselling Frank decided to retire and keep living in his community. He's received a redundancy package from his employer as well as top up payments from the state government.



#### TOM AND KAREN - LOCAL RESIDENTS OF A TIMBER TOWN

Tom and Karen couldn't afford to buy a home in the regional city where they grew up. Especially not one big enough for their three children. They moved to a small timber town seven years ago. Almost everyone here owes their jobs to the timber industry in some way. Tom owns the local milk bar and Karen is a part-time teacher at the local school.

They have some great ideas for the local economic and community activities which will be used to support local development of the region.

Tom is unsure about their future but Karen is excited. She thinks new activities will bring more visitors and money into the region.



#### CARL - OWNER DRIVER

Carl knew he was going to be a truck driver ever since he was in primary school. Like his dad and his grandad he has hauled logs up and down almost every road in Gippsland.

Unlike those before him, he's saved up to become an owner driver. With his own prime mover and a new \$55,000 log jinker trailer, he's been starting to make some good money. But the news of the forestry transition left him worried.

Carl has heard of the transition package to support forestry and supply chain businesses. This will provide assistance to businesses in the industry, including grants for new business opportunities or to facilitate an exit from the industry.



#### LINDA - FURNITURE MAKER

Linda took a punt shortly after graduating from design school. She started a business so she could work on her passion - making made-to-order timber furniture. Eleven people now work in her small factory in Dandenong, making medium grade office furniture and cabinetry.

Linda knows she'll still be able to get the timber she needs, but the extra cost of importing it will put pressure on the bottom line.



#### SAM - TAKING ON NEW JOB OPPORTUNITIES

Sam left school young and has worked as a harvest and haulage operator for 15 years.

When he learnt that the government was moving away from native timber harvesting he attended seminars at his local mill to find out about retraining, redundancies and support services. He was nervous about losing his job because he has a family to support.

Sam registered with the worker in transition service and was provided with a case worker. His skills were also assessed for formal recognition of prior learning.

The early days after his retraining were stressful and his family was referred to a support service. Through the support of his case worker he gained a placement for a 6 week trial period as a DELWP land manager.



#### DAVE - SUPPORTED TO MOVE INTO LOCAL EMPLOYMENT

Dave is a third-generation shift worker at the local timber mill which provides nearly 20 percent of the employment in his home town. He has considered leaving and trying his luck in the city, not wanting to stay and watch the demise of his town.

Dave decided to register with the workers in transition service and was appointed a case worker who discussed with him some potential local job opportunities. Through a career advice workshop and individual session, he was helped to decide what he might like to do.

Dave found a job in the office of a local bus company that had heard about the employer payments package. The role required basic computer skills and his case worker organised some tailored digital foundations skills training.

After applying for the position, he was assisted with resume, application and interview preparation. Dave was successful in being placed in a position with the bus company and received post-placement support. He now sees his long term future as a resident of this region.

# **Appendix IV: Questionnaire**

5<sup>th</sup> July 2019

Project Forest – Follow-up Research

Job No.: 19722

**Quotas to be applied:**

- 50% Melbourne metro / 50% Regional Victoria (with even split across four geographic regions)
- Even splits across age (18 – 34 years, 35 – 54 years, 55+ years)
- 50/50 gender split
- 10 minutes in length

**Panel Provider: Pure Profile**

Emails distributed by: Panel provider

Aim to invite a nationally representative sample of respondents completing the screener (i.e. by age, gender and location within Vic)

**Introduction**

Thank you for taking part in this survey.

Today we will be speaking to you about your opinions about Victoria and Victorian communities – we would really appreciate your help. This survey should take no more than 10 minutes to complete.

All the answers you give will be kept confidential and anonymous. It's only your attitudes and opinions we are after and there will be no sales follow up as a result of your participation in the survey.

**Screener – 2 minutes**

The first few questions are to check if this survey is relevant to you.

**ASK ALL**

Q.1. How old are you? [SINGLE RESPONSE]

Under 18 .....	1	[TERMINATE]
18-24 .....	2	
25-29 .....	3	
30-39 .....	4	
40-49 .....	5	
50-59 .....	6	
60-69 .....	7	
70-79 .....	8	
80+ .....	9	

ENSURE EVEN SPLITS ACROSS AGE GROUPS: 18 – 34, 35 – 54, 55+

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OFFICIAL-SENSITIVE

**ASK ALL**

Are you... [SINGLE RESPONSE]

Male .....	1
Female .....	2
Other .....	3

**50/50 SPLIT****ASK ALL**

Q.3. What is your postcode? [SINGLE RESPONSE]

----

**CODE INTO VICTORIAN DPC OR DEWLP AREAS. QUOTAS AS FOLLOWS**

Melbourne .....	1	QUOTA: N=200
Hume .....	3	QUOTA: N=50
Barwon South .....	4	QUOTA: N=50
Grampians .....	5	QUOTA: N=50
Loddon Mallee .....	6	QUOTA: N=50
Other .....	7	TERMINATE

QUOTAS APPLIED ARE SOFT.

**ASK ALL**

Q.4. Do you OR anyone in your household work in any of the following industries? READ OUT

Advertising .....	1	TERMINATE
Journalism .....	2	TERMINATE
Market research .....	3	TERMINATE
Media .....	4	TERMINATE
Health or health insurance industry .....	5	CONTINUE
Government .....	6	TERMINATE
Marketing .....	7	TERMINATE
Education .....	8	CONTINUE
Forestry or related industries .....	9	TERMINATE
Environmental or conservation groups .....	10	TERMINATE
Unemployed .....	11	CONTINUE
None of these .....	12	CONTINUE

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OFFICIAL-SENSITIVE

Questionnaire

ASK ALL

Q.5. Are you OR anyone in your household a member of any of the following? [SINGLE RESPONSE] [RANDOMISE OPTIONS]

A political party .....	1	TERMINATE
An environmental group .....	2	TERMINATE
A charity or volunteer program .....	3	CONTINUE
A book club .....	4	CONTINUE
Local gym .....	5	CONTINUE
None of the above .....	99	CONTINUE

ASK ALL

Q.6. To what extent do you agree or disagree with the following statements? [SINGLE RESPONSE PER ROW]

	RANDOMISE STATEMENTS	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
A	I am extremely conscious of the environment and sustainability	1	2	3	4	5
B	I have become interested more recently in sustainability and the environment	1	2	3	4	5
C	Many people - including the news media - tend to exaggerate threats to the environment;	1	2	3	4	5
	most environmental problems tend to solve themselves in the long run	1	2	3	4	5
D	No matter how poor you start out, in this country everyone can work their way up	1	2	3	4	5
E	Young people today in Australia will not be able to live better than their parents	1	2	3	4	5
F	I believe the government plays a key role in managing our local economy	1	2	3	4	5
G	It is getting harder to find reliable employment in Victoria	1	2	3	4	5
H	Victoria's economic stability is improving	1	2	3	4	5
I	The increasing cost of living is noticeably taking a toll on my quality of life	1	2	3	4	5
J	Victorians today, regardless of where they reside, enjoy the highest standard of living that has ever existed	1	2	3	4	5
L	I worry about my job security	1	2	3	4	5

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OFFICIAL-SENSITIVE

ASK ALL

Q.7. Thinking about Victoria and what's important to you personally, what do you believe are the top things areas we should be prioritising in Victoria? [OPEN ENDS]


ASK ALL

Q.8. Still thinking about what's important to you personally, out of the list below, what are the top three things we should prioritise in Victoria? [RANK TOP THREE]

[RANDOMISE OPTIONS]

Employment / job opportunities .....	1
Education .....	2
Healthcare .....	3
Environmental initiatives .....	4
Law and order .....	5
Mental health services .....	6
Cost of living .....	7
Housing .....	8
Other (please specify) .....	9

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OFFICIAL-SENSITIVE

## Awareness and understanding of Victorian forest / logging industry

ASK ALL

Q.9. Which of the following topics, if any, have you heard news about recently in Victoria? [SELECT ALL THAT APPLY]

[RANDOMISE OPTIONS]

Environmental issues / initiatives .....	1
Investments in education and schools.....	2
Royal Commission on mental health .....	3
Crime rates.....	4
Victorian forests.....	5
Increasing cost of living.....	6
Changes to tax legislation .....	7
Species extinction .....	8
Royal Commission on aged care .....	9
Interest rate cuts .....	10
None of the above .....	99

ASK IF Q.9=1-10

Q.10. What, if anything, have you heard about Victorian forests recently? [OPEN END]

I have not heard anything / can't recall ..... 1

ASK ALL

Q.11. What, if anything, do you know about timber logging in Victoria? [OPEN END]

I don't know anything / not sure ..... 1

ASK ALL

Q.12. Have you ever heard of the term "plantation wood / timber" before? [SINGLE RESPONSE]

Yes ..... 1  
No ..... 1

ASK IF Q.12=1, SHOW AS DROP DOWN ON THE SAME PAGE

Q.13. What is "plantation wood / timber"? [OPEN END]

Don't know / can't say ..... 99

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ASK ALL

Q.14. How many people do you think are employed in the timber logging industry in Victoria?

--- [RECORD NUMBER]

Don't know / can't say ..... 99

## Reactions to core proposal

ASK ALL

Q.15. If you heard that 'harvesting of timber from native forests was to be stopped in Victoria, and replaced by plantation harvesting', would you feel...? [SINGLE RESPONSE]

Very positive towards the change ..... 1  
Positively towards the change ..... 2  
Negatively towards the change ..... 3  
Very negative towards the change ..... 4  
Indifferent, it doesn't change my feelings one way or the other ..... 5

ASK IF Q.15=1-4 [POSITIVELY=1-2 | NEGATIVELY=3-4] | SKIP IF Q15=5

Q.16. You indicated you would feel [positively / negatively] toward this change. Can you explain why? [OPEN END]

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## ASK ALL

Q.17. Thinking about the statement above, what kind of impact on the Victorian environment might you expect from such a change?  
[SINGLE RESPONSE] [SHOW STATEMENT ABOVE THE QUESTION TEXT: "NATIVE TIMBER HARVESTING IS TO BE STOPPED IN VICTORIA, REPLACED BY PLANTATION HARVESTING"]

Very positive impact ..... 1  
Somewhat positive impact ..... 2  
Somewhat negative impact ..... 3  
Very negative impact ..... 4  
Don't know / not sure ..... 99

## ASK ALL

Q.18. Still thinking about the statement above, what kind of impact on Victorian jobs might you expect from such a change?  
[SINGLE RESPONSE] [SHOW STATEMENT ABOVE THE QUESTION TEXT: "NATIVE TIMBER HARVESTING IS TO BE STOPPED IN VICTORIA, REPLACED BY PLANTATION HARVESTING"]

Very positive impact ..... 1  
Somewhat positive impact ..... 2  
Somewhat negative impact ..... 3  
Very negative impact ..... 4  
Don't know / not sure ..... 99

## Reactions to transition

### ASK ALL

Q.19. Which of the following would you most like to see happen if the changes outlined above were carried out?  
[MULTIPLE RESPONSE] [SHOW STATEMENT ABOVE THE QUESTION TEXT: "NATIVE TIMBER HARVESTING IS TO BE STOPPED IN VICTORIA AND REPLACED BY PLANTATION HARVESTING"]

Supporting timber mills to change business models to diversity ..... 1  
Creating new jobs for those lost during the transition ..... 2  
Ensuring the change is gradual, as opposed to an immediate overhaul ..... 3  
Financial assistance / support for those made redundant ..... 4  
Financial assistance / support to the local communities most affected ..... 5  
Counselling and other non-financial support ..... 6  
Other (specify) ..... 98  
Don't know / not sure ..... 99

### ASK ALL

Q.20. Logging of native forests in Victoria is defined as "forest harvesting" for timber. While the logging industry is an integral part of the Victorian economy, forest harvesting is not without consequences.

Below is a list of some of the impacts of forest harvesting. How much of a concern are they for you?



	RANDOMISE STATEMENTS	Not a concern				Is a major concern
A	The destruction of habitats for endangered native species, such as the Great Glider and Leadbeater's possums.	1	2	3	4	5
B	The industry's reliance on logging native forests is unstable, because there are less native forests available than previously thought.	1	2	3	4	5
C	There are many small towns throughout regional Victoria that are heavily reliant on this industry, and will suffer most when their native forests have been logged in their entirety.	1	2	3	4	5
D	Current levels of native forest logging are threatened by bushfires and climate change.	1	2	3	4	5

## ASK ALL

*Some people think there isn't enough native forest left to log, so there is uncertainty for the future of the industry. Doing nothing would eventually result in job losses and timber mills closing due to lack of available native timber to harvest.*

*Making the transition to plantation harvesting would not be without challenges; it would mean the loss of jobs and economic activity in some regional towns. Local businesses who rely on native timber may also suffer.*

*There is a need to be proactive, and have a plan in place to transition to plantations, to ensure that the industry survives and is secured. This would involve:*

- *Supporting timber mills to transition to do new things*
- *Creating new jobs in other / new industries in local communities*
- *Financial assistance for local communities to stimulate new employment opportunities*
- *\$25,000 diversification package for businesses and individuals directly affected by the transition*

Q.21. After reading more about what would be involved in the transition from native timber harvesting to plantation harvesting, do you feel...? [SINGLE RESPONSE]

More positive towards the idea ..... 1  
Less positive towards the idea ..... 2  
My feelings haven't changed ..... 3

ASK IF Q.21=1-4 [POSITIVELY=1 | NEGATIVELY=2] | SKIP IF Q.21=3

Q.22. You indicated you feel more [positively / negatively] toward this idea after reading more about it. Can you explain why? [OPEN END]

QUANTUM  
MARKET RESEARCH

Page 9

## Demographics

### ASK ALL

Q.23. What is the highest level of education you have completed? [SINGLE RESPONSE]

Primary school ..... 1  
Secondary school ..... 2  
Trade qualification ..... 3  
Diploma / Certificate ..... 4  
Bachelor degree ..... 5  
Masters / Doctorate or above ..... 6

### ASK ALL

Q.24. What is your annual household income, before tax? [SINGLE RESPONSE]

Less than \$50,000 ..... 1  
\$50,000-\$74,999 ..... 2  
\$75,000-\$99,999 ..... 3  
\$100,000-\$149,999 ..... 4  
\$150,000-\$199,999 ..... 5  
\$200,000-\$249,999 ..... 6  
\$250,000-\$299,999 ..... 7  
\$300,000-\$499,999 ..... 8  
\$500,000 plus ..... 9  
Not sure ..... 97

### ASK ALL

Q.25. Which of the following best describes you? [SINGLE RESPONSE]

Single ..... 1  
Married ..... 2  
~~DeFacto~~ ..... 3  
Widowed ..... 4

### ASK ALL

Q.26. Do you have children living at home with you? [SINGLE RESPONSE]

Yes ..... 1  
No ..... 2

QUANTUM  
MARKET RESEARCH

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ASK IF Q.26=1

- Q.27. How old is your child / children currently living at home with you? SR. READ OUT
- |                             |   |
|-----------------------------|---|
| Under 5 years.....          | 1 |
| 5 – 12 years.....           | 2 |
| 13 – 18 years.....          | 3 |
| 18 – 24 years.....          | 4 |
| More than 25 years old..... | 5 |

ASK ALL

- Q.28. Thank you for assisting us today. Is there anything else you'd like to mention?
- OPEN

# OLD GROWTH FOREST FIELD VALIDATION GUIDE



Forest, Fire and Regions Group – Monitoring, Evaluation and Research

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# 1. Introduction

In Victoria's forest management framework, old growth forest conservation is facilitated through a range of strategically applied criteria.

- In 1997, the Nationally Agreed Criteria for the establishment of a Comprehensive, Adequate and Representative (CAR) Reserve System for Forests in Australia was developed. The criteria for this reserve system were developed by an Intergovernmental Technical Working Group, established under JANIS, (the Joint Australian and New Zealand Environment and Conservation Council / Ministerial Council on Forestry, Fisheries and Aquaculture National Forestry Policy Statement (NFPS) Implementation Sub Committee).
- Founded under three main principles of comprehensiveness, adequacy and representativeness, the CAR reserve system is the primary mechanism within each Regional Forest Agreement (RFA) for the protection of old growth.
- The CAR reserve system comprises formal reserves (such as national parks), informal reserves within multiple use forest, and forests protected by application of operational prescriptions during the conduct of certain forest management activities (such as the retention of forest buffers associated with temporary and permanent waterways as part of the conduct of timber harvesting operations).
- The primary regulatory instrument for the conduct of timber harvesting operations and the application of operational prescriptions is the *Code of Practice for Timber Production 2014* (the Code). The Code outlines the environmental standards for planning and conducting commercial timber harvesting operations. Incorporated into the Code are the *Management Standards and Procedures for timber harvesting operations in Victoria's state forests 2014*. They provide more detailed operational prescriptions for timber harvesting operations in Victoria's state forests and are also mandatory. Old growth forest is protected by one of these prescriptions (Table 1).

In view of these mechanisms, to adequately protect old growth forest or to ensure that old growth forest is adequately represented in Victoria's reserve system, it needs to be mapped. To be accurately mapped, it requires validation in the field. As such, this old growth validation document describes how old growth forest is defined in the Victorian context and presents a model validation methodology for its identification and delineation in the field.

## 2. Policy context

### National Forest Policy Statement

In 1992, the National Forestry Policy Statement (NFPS) was published to provide an agreed national response to the management of native forests and to avoid potential conflicts between different levels of government. The Commonwealth, and all State and Territory Governments subsequently came together to develop a strategy for the ecologically sustainable management of Australia's forests.

### Regional Forest Agreements Act

The RFA's were enacted at the Commonwealth level with the passing of the Regional Forest Agreements Act 2002 (Cth). The Act 'provides legislative support and commitment to the outcomes of Regional Forest Agreements' and 'commits the Commonwealth unequivocally to the outcomes achieved in the 10 RFAs concluded' (DAFF 2002).

### Regional Forest Agreements

RFA's are intergovernmental agreements that effectively accredit Victoria's forest management system, including the CAR reserve System, regional forest management plans and the Code of Practice for Timber production, as satisfactorily managing equivalent requirements under the Environmental Protection and Biodiversity Conservation Act (EPBC) and Export Control Act.

Victoria and the Commonwealth entered into five RFAs between February 1997 and March 2000. The RFAs are an outcome of the NFPS, which have been given a legislative context by the *Regional Forest Agreements Act 2002*. The key objectives of this Act, relevant to Victoria's forest management system, were to give effect to certain obligations of the Commonwealth under RFAs and to give effect to certain aspects of the NFPS.

RFAs are 20-year plans for the sustainable management and conservation of native forests. They represent agreements between the Commonwealth and respective State Governments on the proposed management of forests within the region, based on joint assessments of:

- environmental values, including old growth, wilderness, endangered species, national estate values and world heritage values;
- indigenous heritage values;
- economic values of forested areas and forest industries;
- social values (including community needs); and
- principles of ecologically sustainable management.

### Forest Management Plans (FMP)

Between 1992-2011, 10 regional Forest Management Plans (FMPs) were developed in consultation with various biological and ecological experts and local communities. These plans represent the primary instrument for forest management within the designated regions. It is important to note that these FMPs haven't been updated since they were created and thus, do not reflect changes to supporting legislation and policy, or contemporary values, planning approaches and challenges associated with public land management.

## Code of Practice for Timber Production

Since ratification by the Victoria Parliament in 1989, the Code of Forest Practices for Timber production has been revised and reviewed multiple times to account for advances in scientific knowledge and improvements in timber harvesting operational practices. Old growth is defined by this code, in terms of growth stage, disturbance and crown cover proportion. The current old growth definition is outlined in Section 3.2.

## Management Standards and Procedures (MSP) s

The Management Standards and Procedures for timber harvesting, roading and regeneration in Victoria's State forests were introduced in 2009. They outlined technical standards and provide additional direction and clarification on issues relating to prescriptions in the Code, FMPs and Action Statements. Specifically, with reference to fixed zoning within the Forest Management Areas (FMAs), the following CAR Reserve conservation targets<sup>1</sup> apply to old growth forest (Table 1).

**Table 1. Old growth forest regional CAR Reserve System targets (DEPI 2014)**

Forest Management Area (FMA)	CAR Reserve System targets for old growth
Central Highlands	<p>Include in Special Protection Zone (SPZ) all stands of old growth forest in State forest that are greater than 5 ha in area from Wet Forest, Montane Wet Forest, Damp Forest, Montane Damp Forest, Riparian Forest, Sub-alpine Woodland and non eucalypt Ecological Vegetation classes (EVCs).</p> <p>60% of the current assessment of old growth forest in the Montane Dry Woodland, Heathy Dry Forest and Heathy Woodland EVCs in conservation reserves and SPZ.</p>
East Gippsland	<p>Give preference to core areas that are substantially<sup>2</sup> undisturbed and which also help fulfil conservation guidelines for other values (such as Sooty Owl, Long-footed Potoroo and representation of EVCs or old growth forest).</p> <p>All viable examples of rare or depleted (generally less than 10% of the extant distribution) old growth forest EVCs wherever possible should be incorporated into conservation reserves or the SPZ.</p> <p>60% of the current assessment of old growth forest within EVCs, should be incorporated into conservation reserves or the SPZ.</p>
Gippsland and North east	<p>All viable examples of rare or depleted (generally less than 10% of the extant distribution) old growth forest EVCs wherever possible should be incorporated into conservation reserves or the SPZ.</p> <p>60% of the current assessment of old growth forest in EVCs should be incorporated into conservation reserves or the SPZ.</p>

The only prescription related to old growth forest in the Code is contained within section 4.4.4 of the MSPs related to the Central Highlands FMAs, whereby all modelled old growth 'Ash' forest as represented within MOG2009 is to be buffered by 100m and excluded from timber harvesting.

1. CAR Reserve conservation targets and criteria adopted from JANIS. They are regionally applied to achieve the CAR Reserve targets.

2. Consideration of threshold for substantially undisturbed. NSW used >50% of plots

## 3. Old growth

### 3.1 Status of data

As part of the RFAs, a comprehensive regional assessment (CRA) process commenced in the mid to late 1990s, whereby Victoria assessed which of its public forest areas met the definition of old growth forest. Using a range of input datasets to model forest growth stages, species composition (vegetation classifications) and forest condition, the result was mapped areas representing the location and extent of old growth forests. These have been updated numerous times since their initial development to account for subsequent potential impacts of disturbance events.

While most of Victoria's large contiguous areas modelled as old growth forest remain protected within dedicated conservation reserves or informal reserve, there are remnant and more isolated patches of forest modelled as potential old growth forest within areas available to timber harvesting. Subsequently, it is essential to map the current distribution of old growth forest, to ensure that there is sufficient in the CAR reserve system as well as to facilitate the adequate planning by timber harvesting operations for those areas not within formal reserves.

### 3.2 Old growth definition

Old growth forest in the Victorian context is defined in the Code of Practice for Timber Production 2014. This definition is referred to as the code and is used as a regulatory instrument within the Victorian Government (i.e., Department of Environment, Land, Water and Planning (DELWP), VicForests). The old growth forest definition according to the Code of Practice for Timber Production 2014, is based on the definition put forward by Woodgate *et al.* 1994 and is outlined below.

*"Forest which contains **significant amounts** of its **oldest growth stage** in the upper stratum – usually senescing trees – and has been subjected to any disturbance, the effect of which is now negligible. For a stand to qualify as old growth, the **regrowth** growth stages, if present, must be sparse (less than 10% of the total crown cover of the stand). **Negligibly disturbed** forest is that in which disturbance is known to have occurred, but the disturbance is unlikely to have altered the structure (growth stage and crown cover) or the usual species composition which characterises a given vegetation class; or if the alteration did occur in the past, it is no longer measurable."*

#### Disturbance

Disturbance results in significant change in the structure and/or composition of a forest (e.g. a change resulting in the normal growth pattern being significantly reduced). Disturbance can result from natural physical events such as fire, flood or wind throw; from mortality events caused by insect attacks or disease outbreaks; and, from human activity such as harvesting and thinning. With respect to old growth, *disturbance is known to have occurred, but the disturbance is unlikely to have altered the structure (growth stage and crown cover) or the usual species composition which characterises a given vegetation class; or if the alteration did occur in the past, it is no longer measurable*. Consequently, indicators of disturbance in old growth validation work could be subtle.

#### Growth Stage

Five stages of morphological development of eucalypt species that can be recognised in the field have been described by Jacobs (1955), as juvenile, sapling, pole, mature and over mature. Woodgate *et al.* (1994) refined these growth stage descriptions through the additions of two more stages; early mature and late mature, as described in Table 2.

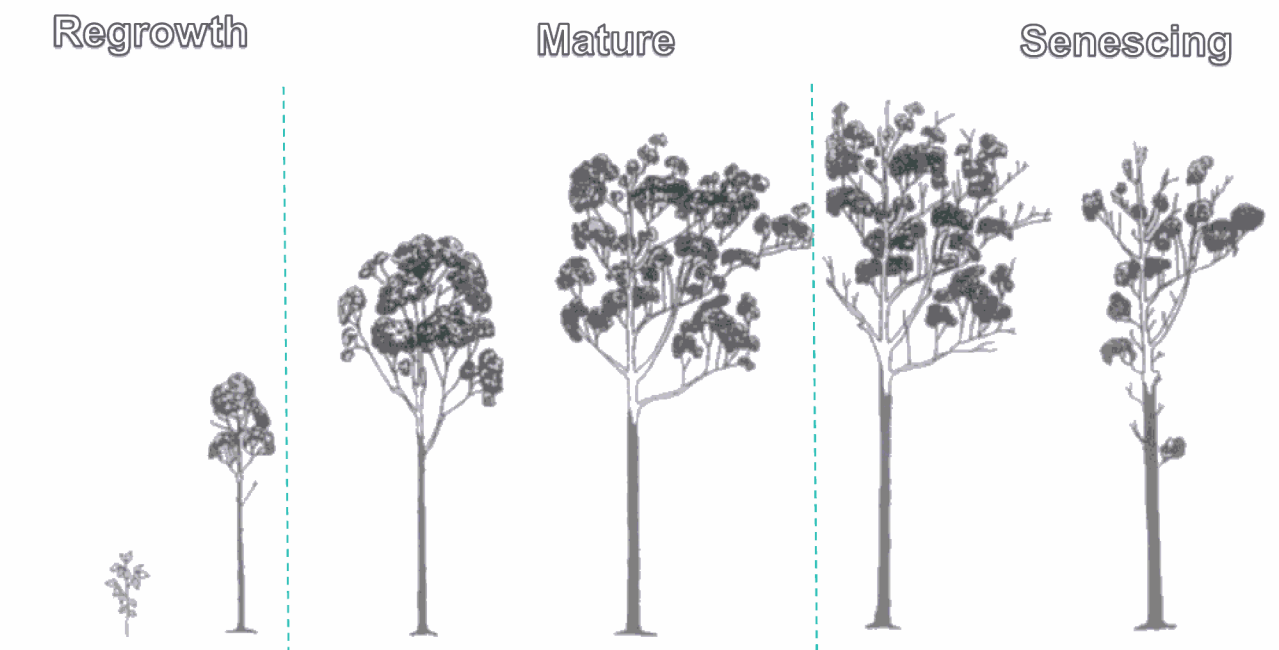
**Table 2. Growth Stage Definitions (Woodgate *et al.* 1994)**

Growth Stages	Comment on Growth Stages of the dominant canopy tree (Eucalypt)
Regeneration (Sapling)	All leaves have a juvenile form and grow on the main stem.
Regrowth (Pole)	<b>Regrowth stage</b> is characterised by a strongly developed main stem. Semipermanent branches growing on the main stem below the upper crown develop from some of the competing branches of the sapling stage, and the leaves are mostly mature. A young eucalypt enters this stage after it has gained a certain height, and the age at which it enters this stage is dependent on site quality
Mature (Includes Early Mature and Older Mature)	<b>Early mature stage (younger)</b> - large permanent 'shaping' branches which form the framework of the crown.  <b>Mature stage (older)</b> - persists for a long time and although branches thicken, height and crown spread may change very little over this time in dense stands. As branches grow further from the main trunk and lose their apical dominance, epicormic shoots develop from dormant buds on the top and sides of the shaping branches closer to the main trunk.
Senescing (Late Mature & Overmature)	<b>Late mature stage</b> - the tree may develop large numbers of 'bayonets', dead branches from deceased leaf-bearing units, warts and burls, and some dead shaping branches.  <b>Overmature stage</b> - characterised by declining crown leaf area. As major shaping branches are shed, epicormic growth develops from the trunk, to replace the lost leaf area, but which is never as persistent as the permanent shaping branches. The trunk and shaping branches are eventually weakened by fungal attack, causing shaping branches and often the top of the tree to fail and break. The trunk or tree bole is characteristically covered in burls and bumps.

To facilitate the mapping of forests structure through Aerial Photograph Interpretation (API), Woodgate *et al.* (1994) amalgamated these seven stages into three; regrowth, mature and senescing. The relationship between the three growth stage classifications for typical mixed species eucalypts is illustrated in Table 3 and Figure 1.

**Table 3. Relationship between growth stage classifications (Adapted from NSW DEC 2004)**

Simplified Growth Stage Woodgate <i>et al.</i> (1994)	Minor Growth Stage Woodgate <i>et al.</i> (1994)	Growth Stage Jacobs (1955)
		Juvenile
Regrowth	Sapling	Sapling
	Pole	Pole
Mature	Early Mature	Mature
	Mature	
Senescing	Late Mature	Over mature
	Over mature	



**Figure 1. Typical Eucalyptus growth stages (Woodgate *et al.* 1994)**

For the Ash-type forest, Figure 2 demonstrates that they exhibit slightly different crown forms (i.e., showing more apical dominance), including 'advanced regrowth' stage beyond the 'pole stage', still within the 'regrowth' growth phase, but not yet considered ecologically mature (<120 years of age). However, both growth stage progressions (Figure 1 and Figure 2) are not reliable for 'non-jacobsian' type<sup>3</sup> forest EVCs. Please refer to Section 3.3 regarding EVCs.

Many forest stands contain more than once growth stage in the canopy and in these cases, the relative proportion of each growth stage is assessed. For the CRA for the Central Highlands during the initial RFA, five categories of relative abundance of different growth stages were used.

- Absent
- Sparse
- Sub-dominant
- Co-dominant
- Dominant

3. These types are an issue in lower elevation, low site quality sites. It is anticipated that stratification by EVCs will facilitate a more accurate assessment

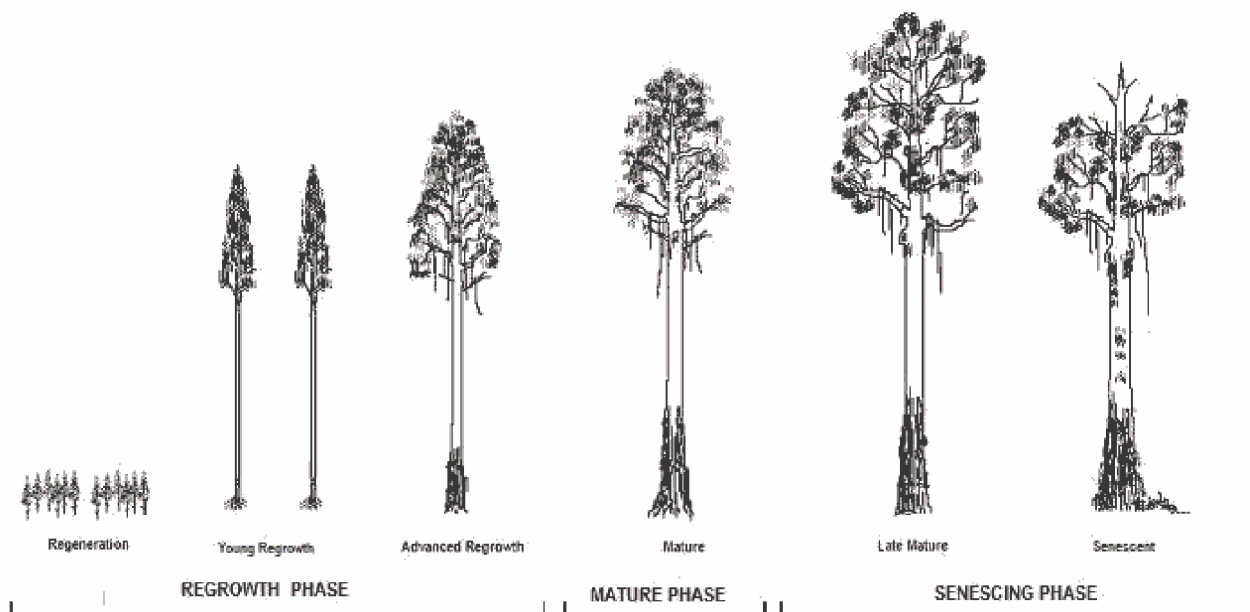


Figure 2. Typical Ash-type eucalypt forest growth stages

### Comprehensive Regional Assessment (CRA) for initial RFA

A CRA of old growth was undertaken for the initial RFA in the 1990s. This involved the integration of growth stage information and a disturbance assessment. Old growth forest status was identified for each vegetation class according to the old growth forest definition, which satisfies the below criteria:

- Contains senescent trees present in the upper canopy (at least 10% of total crown cover for the stand)
- Has regrowth present in sparse proportion (less than 10% of crown cover) and
- Has negligible or no disturbances identified

As a result, forest was assigned old growth status on the basis of the classifications in Table 4. These old growth assignments are Victorian specific and can vary from state to state.

Table 4. Assignment of old growth forest status (CRA RFA 1994)<sup>4</sup>

Growth Stage			Disturbance Class		
Senescent	Mature	Regrowth	Undisturbed	Negligible	Significant
Dominant		>10%	-	-	-
		<10%	Old growth	Old growth	-

4. This was the old growth assignment in the Comprehensive Regional Assessment for the Central Highlands for the initial RFA  
[http://www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/vic-central-highlands/regional-assessment/tables/vic\\_cent\\_summ\\_june97.pdf](http://www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/vic-central-highlands/regional-assessment/tables/vic_cent_summ_june97.pdf)

Co-dominant		>10%	-	-	-
		<10%	Old growth	Old growth	-
Sub-dominant		>10%	-	-	-
		<10%	Old growth	Old growth	-
Sparse/Absent		>10%	-	-	-
		<10%	Old growth	Old growth	-
Mature	Dominant	>10%	-	-	-
		<10%	Negligibly disturbed forest	Negligibly disturbed forest	-
Regrowth		>10%	-	-	-

Where dominant = >50% of crown cover, co-dominant = 30-50% of crown cover, sub-dominant = 11-30% of crown cover, sparse/absent = <10% of crown cover.

### 3.3 Identification of Old Growth Forest in the Field

Consideration of EVC, disturbance and growth stage are critical to identification of old growth in the field. However, it is important to note, that despite the list of possible disturbance indicators and the threshold relating to regrowth, it is essential that field personnel have substantial experience in identifying old growth.

#### Disturbance rules

According to the old growth definition, for a stand to be considered old growth, the past effects of any disturbance must be negligible. This is determined in the field by examining for disturbance indicators, outlined in Table 6.

#### Growth stage rules

According to the old growth definition, for a stand to be considered old growth, the regrowth growth stage, if present, must occupy less than 10% of the total crown cover of the stand. The assessment of growth stage in the field is primarily an assessment of the vigour and structure of the tree crown.

#### EVCs

Due to varying sensitivity of vegetation types to disturbance as well as their differing responses to age and senescence, it is necessary to consider EVC in the validation process. The Victorian modelled old growth dataset (MOG2009), encompasses 120 unique EVC values across the state. This document aims to facilitate the validation of old growth forests across all EVCs. As noted previously, growth stage progressions (Figure 1 and Figure 2) are not reliable for 'non-jacobsian' type forest EVCs. For example, the non-Jacobsian forest EVCs, usually on low site quality, tend to demonstrate regular crowns while they are senescing, while regular crowns in a Jacobsian forest EVC (high site quality) represent the mature phase.

#### Area

When identifying and validating a 'stand' of old growth forest, a range of minimum areas (minimum patch sizes) will be considered, namely 1-ha, 3-ha and 5-ha. For management purposes, minimum area thresholds

of trees are required to be considered 'a stand' of old growth forest. This is opposed to old growth elements, where individual mature or senescing trees are present at lesser densities over a smaller area.

## 4. Methodology

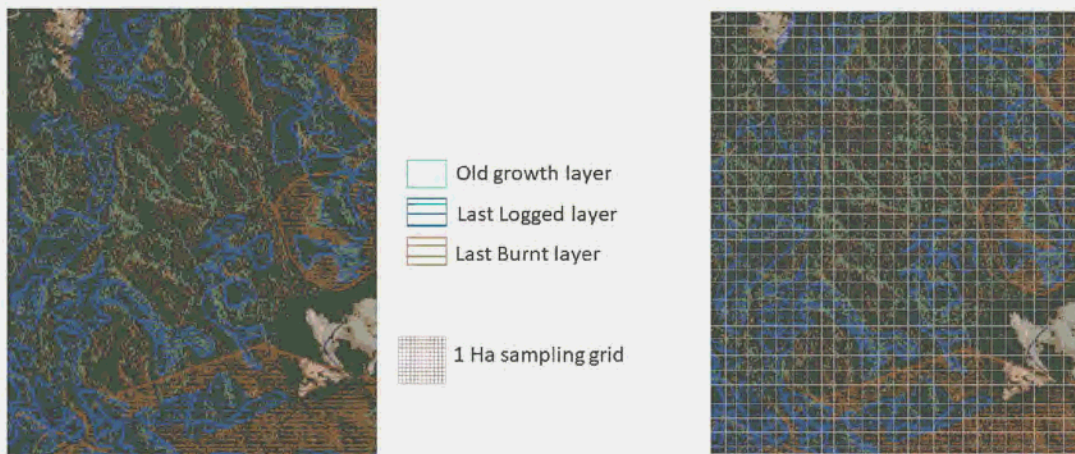
The methodology encompasses a range of assessments, both desk and field based.

### 4.1 Pre-assessment

#### Stratification

Prior to any field visit, stratification of the proposed sampling site is to be undertaken. Typically, this process is undertaken in a GIS environment, to facilitate the overlaying of various spatial layers, as outlined in Figure 3. In ArcGIS, the following are overlaid:

- The old growth spatial layer to be validated<sup>5</sup>.
- Disturbance layers (Under the old growth definition, areas that have been subject to logging disturbance are ineligible)
  - Fire history
    - Fire intensity
    - Old growth susceptibility to fire<sup>6</sup>
  - Logging history
- EVC layer<sup>7</sup>
- Roothing



**Figure 3. Stratification example and grid overlay**

#### Plot Selection

- 
5. The areas classified as OG are to be validated. The areas classified as not OG are also to be validated.
  6. This dataset doesn't exist, however, if in the future it does, then it would be important to stratify by
  7. On the basis of this layer, the BAF will be determined

Subsequent to the overlaying of the above spatial layers, a systematic selection of sampling plots is required. This is facilitated by the overlay of a 1-hectare (100m x 100m) grid.<sup>8</sup>

Firstly, plots are classified as i) core, ii) edge or iii) low, which relates to their position in the old growth patch. As shown in Figure 4, all plot assessment is undertaken at the grid centroid.

- Core plots are located where there is >100m of modelled old growth surrounding the grid centroid in all directions.
- Edge plots are located where there is <100m of modelled old growth surrounding the grid centroid in all directions
- Low plots are located where only a small amount of modelled old growth is within the 1-hectare grid cell

Plots are subsequently selected, with their centroid coordinates documented.

## 4.2 Sampling Strategy

The outline of steps and decisions to be made in the field are outlined in Figure 5. Navigate to the centroid/s documented during plot selection and begin with a disturbance assessment of the plot (Table 6; Figure 10).

The progressive assessment steps, outlined in Figure 5, are described below. They have been formulated specifically to validate modelled old growth and non-modelled old growth areas. That is, to check if the;

- i. Modelled old growth is an actual patch of old growth and/or
- ii. For modelled non-old growth that has been incorrectly modelled and does contain patches of old growth

This process is of critical importance if the area (i.e., a modelled non-old growth area, containing old growth) is planned for harvest.

---

8. The use of a systematic grid prevents the doubling sampling between plots and is the best option for mapping forest structure and disturbance within a patch. It also facilitates the extrapolation of structure and disturbance in the survey area (pers. comm. Nitschke 2019)

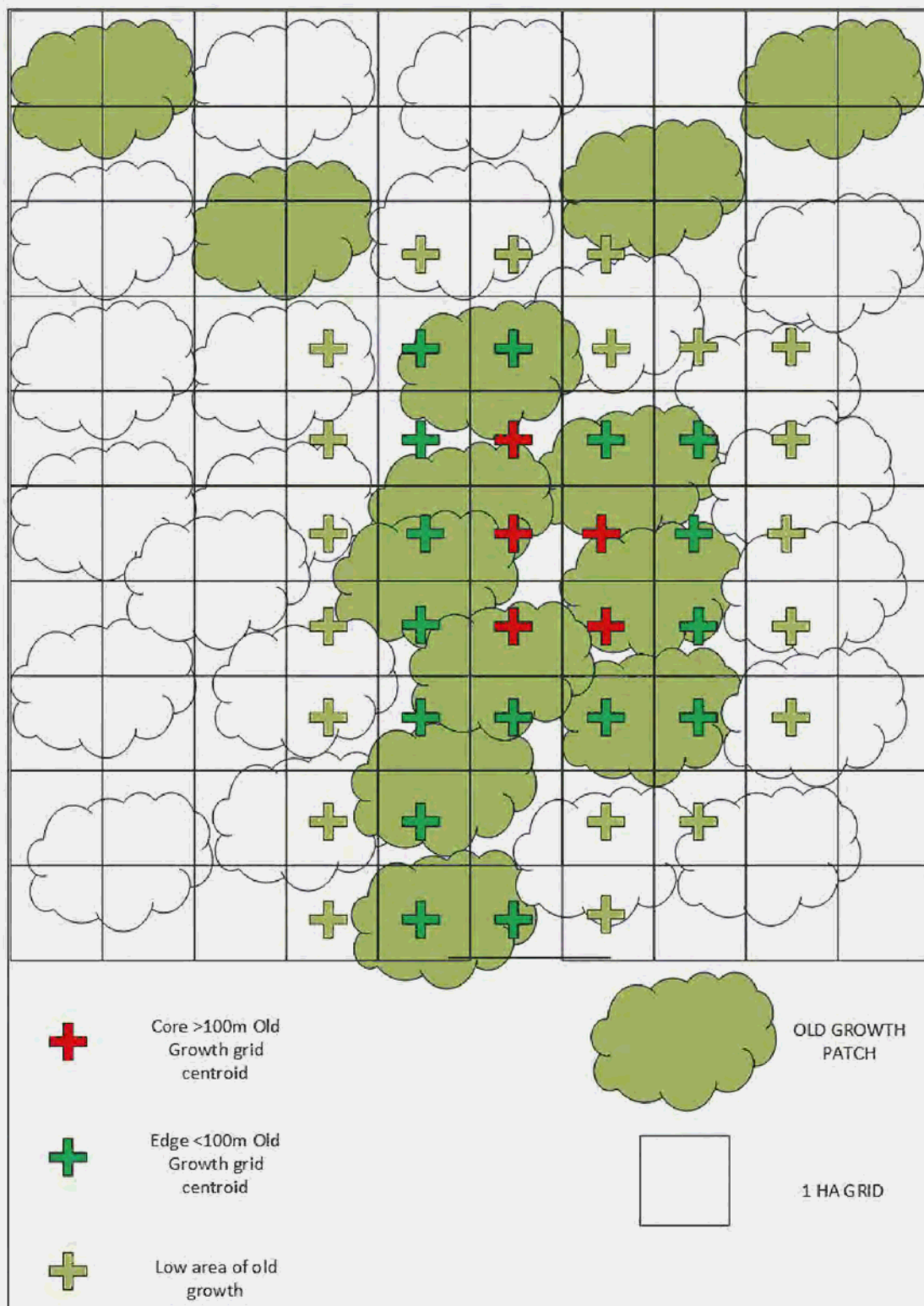


Figure 4. Old growth plot placement according to modelled old growth distribution

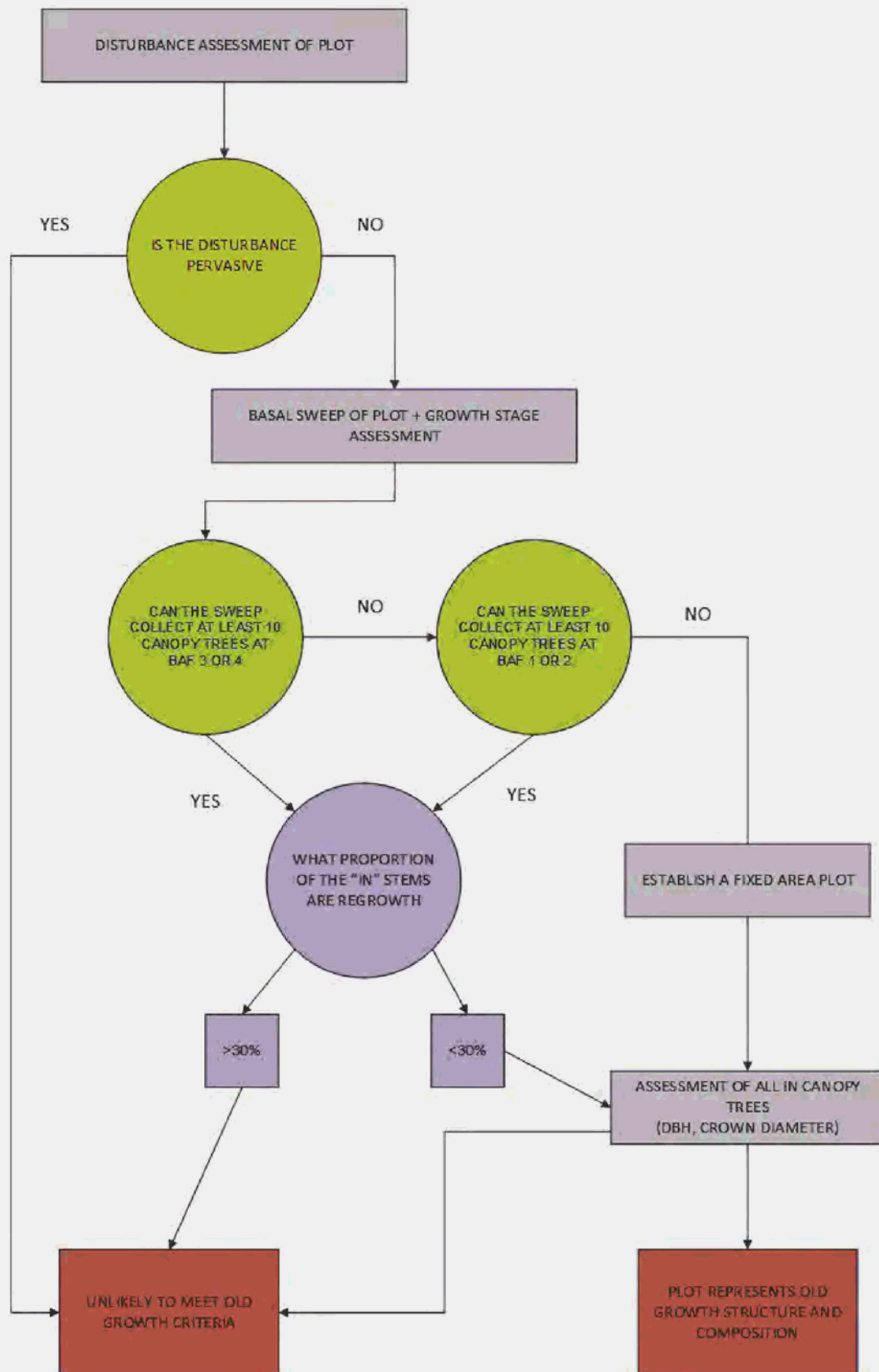


Figure 5. Plot assessment decision tree

### Step1: Disturbance Assessment of plot

This involves observations of disturbance to be recorded. If the disturbance is pervasive, this is noted, and no further assessment is undertaken. The assessment of disturbance in both fixed area and variable area plots is described in Section 4.4.

### Step 2: Basal area sweep of plot and growth stage assessment

Using a BAF of 3-4, a sweep is undertaken of the plot. This provides information on the amount of basal area of each plot within each growth stage. Only those trees that form a dominant or co-dominant canopy are considered (including dead standing trees<sup>9</sup>). For each IN tree, its growth stage is also determined (i.e., regrowth, mature, senescent, dead).

If there are less than 10 trees within the sweep, undertake the sweep again, using a BAF of 1-2. If a BAF of 1-2 fails to collect 10 trees, then a fixed area plot is to be established. Within the fixed area plot, the assessment of all IN trees is to be undertaken (i.e., [Step 4](#)).

### Step 3: Proportion of regrowth

If a minimum of 10 trees are collected by the sweep, a determination of the proportion of the IN stems that are regrowth is made. If the proportion of regrowth IN stems are greater than 30%, then it is unlikely that the plot will meet old growth criteria. However, if the proportion of regrowth IN stems are less than 30%, then an assessment of all the IN trees within the variable area plot is to be undertaken.

### Step 4: Assessment of IN trees

The assessment of IN trees in both fixed area and variable area plots is described in Section 4.4.

## 4.3 Sampling intensity

The intensity in which plots will be sampled across the grid<sup>10</sup> (at centroids) will be a function of the threshold at which the presence of old growth is considered a patch (i.e., 1-Ha, 3-Ha, 5-Ha). This is demonstrated in Figure 6, where an old growth patch is overlaid with the 1-ha grid, the grid centroids marked as well as the 1-Ha, 3-Ha and 5-Ha boundaries. Figure 7 outlines the steps involved in validating an old growth patch according to the three thresholds.

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<sup>9</sup> This is an important consideration during the basal sweep due to tree death being the next stage after senescence

<sup>10</sup> It is also common place to sample at the grid intersections

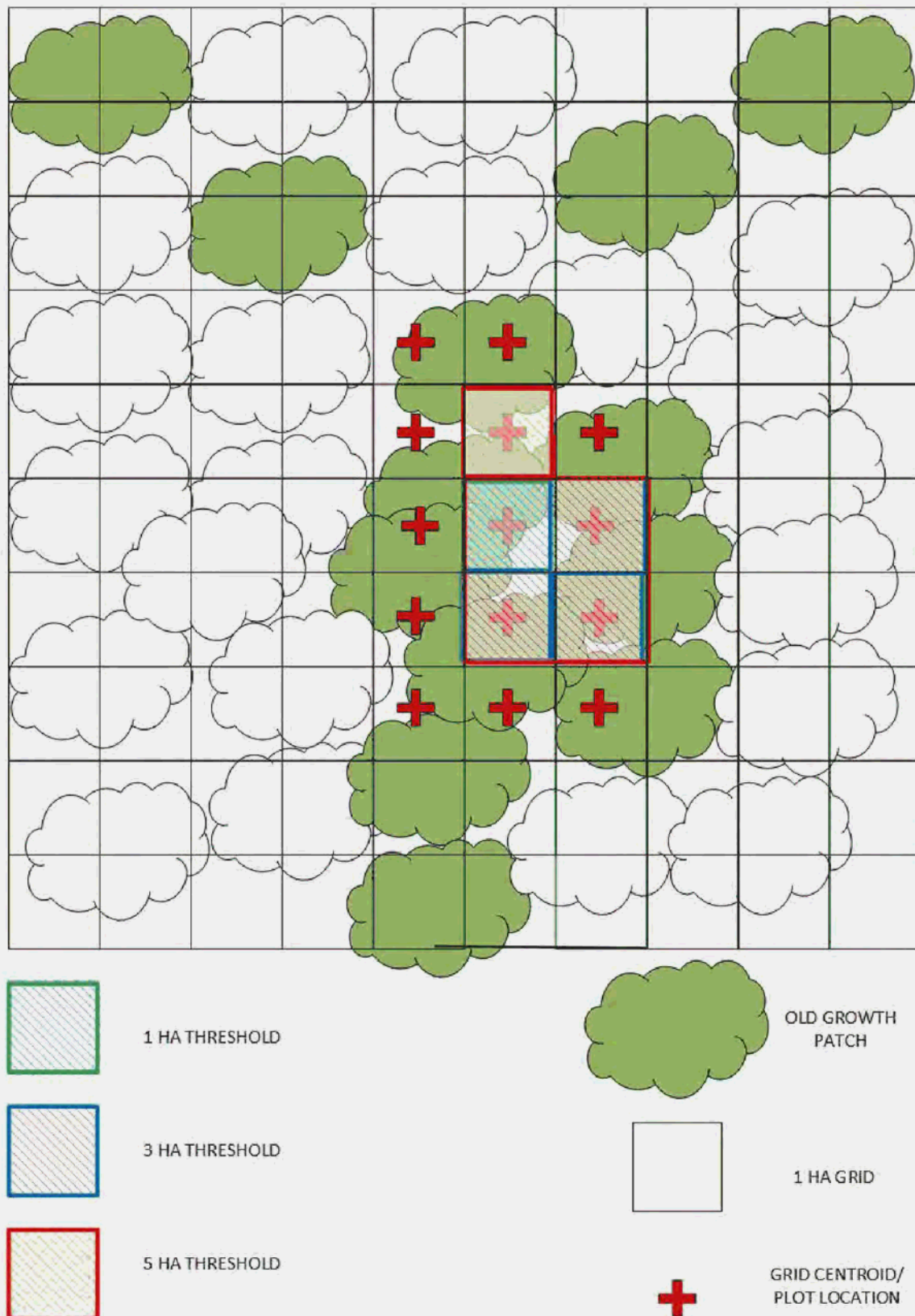


Figure 6. Example of proposed plot placement according to grid centroids for 1 hectare patch, 3 hectare patch and 5 hectare patch thresholds

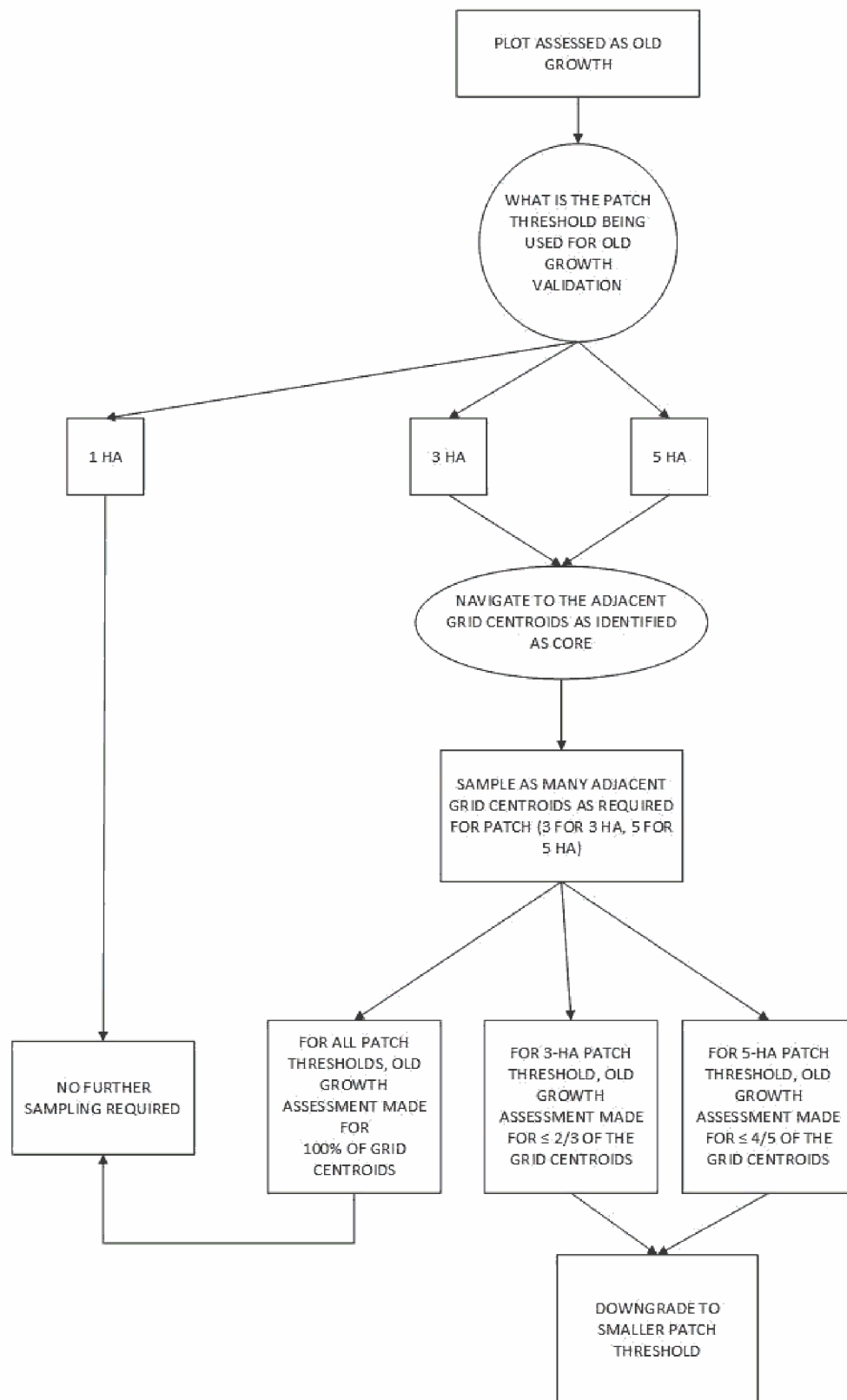


Figure 7. Sampling intensity decision tool based on old growth patch thresholds

## 4.4 Field Assessment

All data captured in the field will be recorded in the VFMP\_DC application, described in Section 7. Codes for respective fields are indicated by <>.

### TREE ASSESSMENT

This section describes the collection of measurements for trees with a dominant or co-dominant canopy. Measurements of DBH, species, location, growth stage and height are mandatory measurements for each tree.

#### General measurements

##### 1. Identify Trees:

Temporarily mark plot centre or point where sweep is taken. Start from magnetic north, with all living (standing or fallen) and dead (standing only) trees with a dominant or co-dominant canopy. Measure trees in a clockwise order.

##### 2. Tree Species

For all trees with a dominant or co-dominant canopy, assign a tree species in <SPP>. To change the lookup list of species, change the lookup type <L>, this will provide filtered lists by bioregion, and or locality. For each unidentifiable species, follow the procedures outlined in *Plant Identification Procedures* to collect specimens and to record ancillary information such as height, shape, bark type and branching angle. Create a temporary descriptive name that is unique to each specimen collected tag it as a temporary name in <N>. This name should include two or more descriptors, for example, "Smooth barked Euc buds in 3". Once a specimen is collected and a temporary name assigned, the name can be re-used on the *Large Tree Plot Form* each time the same unknown tree is detected. Enter "UNKNOWN" or 'Genus' spp. for dead trees that are unable to be identified to species level.

##### 3. Tree Location

For all trees with a dominant or co-dominant canopy, record a distance to the nearest 0.1m and bearing to the nearest magnetic degree from the sample point location to the point of germination of the tree in <DIST> and <BEA>.

##### 4. Tree Diameter

For all trees with a dominant or co-dominant canopy, measure the diameter at breast height (DBH) in millimetres (mm) to the nearest mm, according to the diagrams provided in the Figure 8. The following rules apply:

- Determine breast height on the uphill side of each tree (defined as the highest point of mineral soil or humus layer at the base of the tree). From this side of each tree, using a height pole or 1.3m stick, locate the breast height at 1.3 m up the stem (or 1.3 m along the stem axis where the stem is curved or leaning).

- Measure the diameter at this point using a diameter measuring tape, around the outside of bark and making no allowance for missing bark. Loose bark is brushed away or the tape pulled firmly around it. This is recorded in <DBH1>.
- Where a fork, branching, bump or abnormal swelling occurs at 1.3 m, measure the diameter at equal distances above and below the swelling/fork, where the stem is no longer affected. Record the lower of the split DBH measurements in <DBH1> and the upper measurement in <DBH2>.
- If the diameter cannot be measured at 1.3m, ensure an appropriate comment is made in <NOTE1-15>, and a photo is recommended to assist during re-measurement or for later interpretation (with its ID recorded in <PHOTO>).

#### 5. Tree count

Count all trees occurring in the sub-dominant canopy.

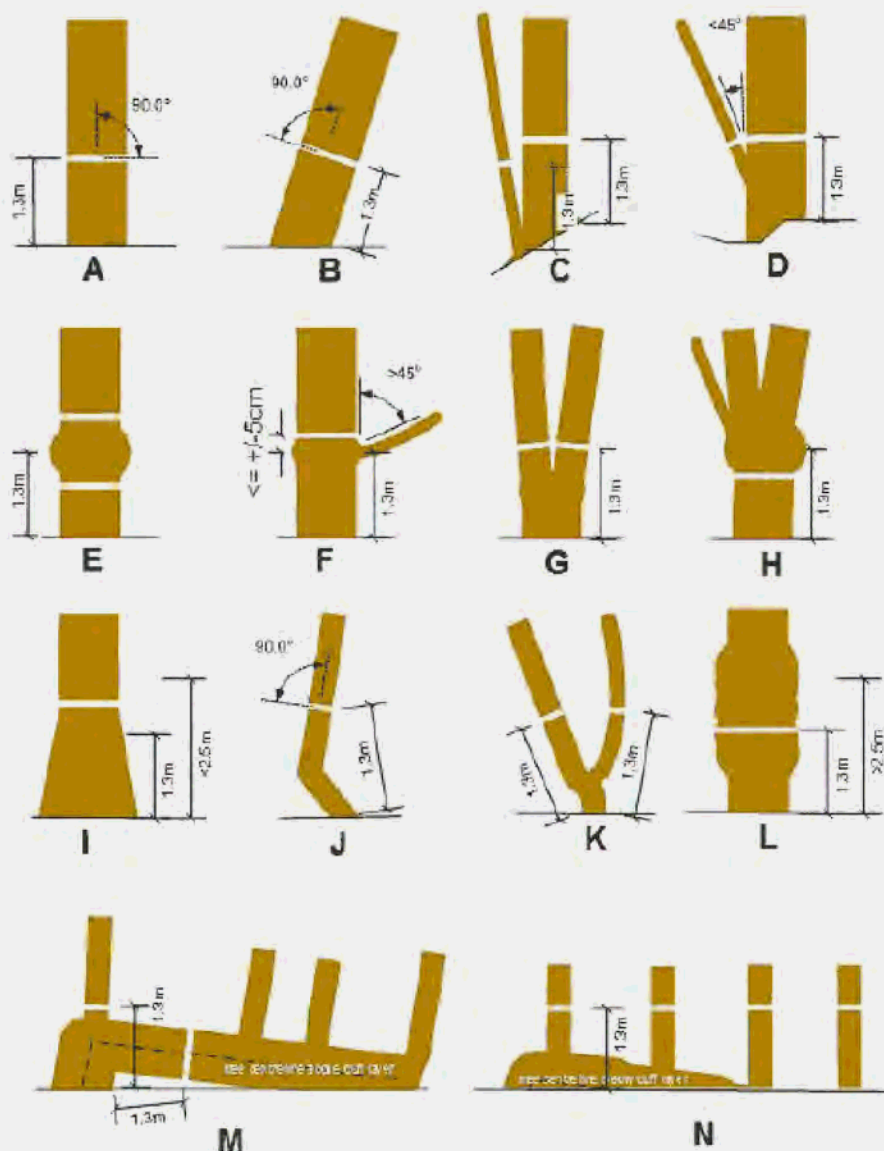


Figure 8. Examples of DBH measurements

An explanation and codes used for the DBH measurements, shown in Figure 8 is provided in Table 5.

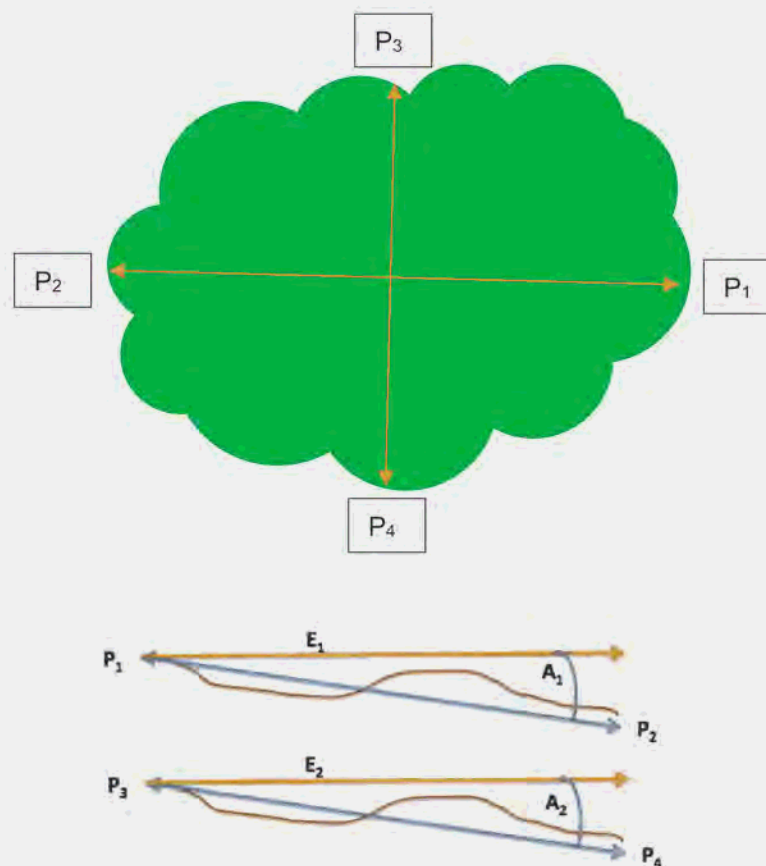
**Table 5. DBH Measurement codes and their descriptions**

DBH Measurement Code	Description
A	1.3m above ground level, 90 degrees to the tree axis.
B	leaning tree, 1.3m on the inside of the lean.
C	sloping ground, taken on the up hill side. For lignotubers or coppicing stems, the point at which the stem has originated on the original stump is considered the point of germination, not the original stump, therefore the DBH height is considered to the up hill side of that point. If the minor leader is 10cm dbh or greater, measure as a separate large tree. If less than 10cm dbh, include in small tree count, if inside the small tree plot.
D	uneven ground, taken on the higher side. If the minor stem originating below 1.3m is 10cm dbh or greater, and is less than 45 degrees from vertical, measure as a separate large tree. If less than 10cm dbh and less than 45 degrees, include in small tree count, if inside the small tree plot. If unsure as to whether the branch is a leader or not, measure it as a tree (comment and photo recommended).
E	large swelling, record the averaged diameter of two measurements taken at equal distances from breast height on either side of the swelling. Equal distances might not always be possible due to other irregularity, in which case distance moved up and down the stem should be roughly equal (i.e. not greater than 30cm different e.g. move up 70cm, down 50cm = only 20cm different so OK). If the minor leader is 10cm dbh or greater, measure as a separate large tree. If less than 10cm dbh, include in small tree count, if inside the small tree plot.
F	small swelling, single diameter taken if moving < +/-5cm from breast height. In contrast to (C), if the minor branch less 45 degrees from vertical, do not assess as a separate tree. If unsure as to whether the branch is a leader or not, measure it as a tree (comment and photo recommended).
G	forked below breast height, two diameters are taken each being considered a separate tree.
H	fork at breast height, single diameter taken where practical below fork (comment and photo recommended).
I	excessive butt flaring or buttressing at breast height, single diameter taken where practical above (comment and photo recommended), unless it extends >2.5m then considered part of normal tree growth and a single measure taken at 1.3m (L).
J K	small bent and crooked stems showing breast height measured 1.3m in a straight line from the base of the tree
L	swelling begins below 1.3 m and extends greater than 2.5 m, the swelling is considered part of normal tree growth and a single measure at 1.3 m.
M,N	are down live trees with tree-form branches growing vertical from main bole: when a down live tree, touching the ground, has vertical (less than 45 degrees from vertical) tree-like branches coming off the main bole, first determine whether or not the pith of the main bole (averaged along the first log of the tree) is above
M	or below the duff layer (N). If the general pith line of the main bole is above the duff layer, use the same forking rules specified for a forked tree as shown in (M). If the general pith line of main tree bole is below the duff layer, ignore the main bole, and treat each tree-like branch as a separate

tree; take DBH and length measurements from the ground, not necessarily from the top of the down bole. However, if the top of the main tree bole curves out of the ground towards a vertical angle, treat that portion of that top as an individual tree originating where the pith leaves the duff layer, as shown by (N).

## 6. Tree crown diameter

For all trees with a dominant or co-dominant canopy, measure the diameter in the north-south and east-west directions, as illustrated in the Figure 9.  $E_1$  and  $E_2$  represent the horizontal distances between  $P_1$  and  $P_2$  and  $P_3$  and  $P_4$ , respectively. Note that the widest spread does not have to go through the trunk.



**Figure 9. Axis method of tree crown measurement (where  $P_1$ ,  $P_2$ ,  $P_3$ , and  $P_4$  represent the points at the extensions of the crown). The lower part of this diagram illustrates that the paths from  $P_1$  to  $P_2$  and  $P_3$  to  $P_4$  are slope distances. The orange lines are the horizontal distances we seek.**

- Locate the longest crown spread by following the drip-line around the crown marking the spots on the ground directly beneath the ends of the longest extension. In the diagram these points are labelled  $P_1$  and  $P_2$ .
- Circle around 90 degrees to the path of  $P_1$  to  $P_2$  and find the longest crown extension. Mark the ends of this second extension. In the diagram, they are  $P_3$  and  $P_4$ .
- If the ground is level, measure the distance on the ground between  $P_1$  and  $P_2$ , and similarly for  $P_3$  and  $P_4$ , using a vertex hypsometer.

- If the ground is not level, calculate the horizontal distance  $E_1$  equivalent to the distance  $X = P_1 P_2$  and  $E_2$  equivalent to  $Y = P_3 P_4$  using the formulas below. (See lower part of the diagram.)

$$E_1 = X \cos A_1$$

$$E_2 = Y \cos A_2$$

Calculate the average of  $E_1$  and  $E_2$ . If  $S$  = the average spread, then

$$S = \frac{E_1 + E_2}{2}$$

- In the lower part of the diagram, the ground is shown as sloping downward from left to right. However, the formulas work regardless of the direction of slope.

#### 7. Growth stage Assessment<sup>11</sup>

For all trees with a dominant or co-dominant canopy, determine growth stage based on an assessment of the vigour and structure of the tree crown. A growth stage assessment key (Figure 11) can be used to assist identification of growth stages in the field. The crown types depicted in the assessment key are illustrated in Figure 12. For those trees approaching a threshold, the procedure outlined in Figure 13 is recommended to assist in the assessment of growth stage in the field.

- Assess growth stage
- Count all trees with a sub-dominant canopy and record.

Since the determination of growth stage is undertaken through visual inspection, it is advisable that it is determined during the initial basal sweep.

#### 8. Disturbance Assessment

Where disturbance is present in the plot, the Contractor Field Crew should:

- Identify the type(s) or agent of disturbance from the list of disturbance indicators (Table 6)
- State whether disturbance indicator is clumped or dispersed within the plot
- Estimate the extent of each tree disturbance as the proportion of forest on the Sample Point Location Plot that has been disturbed (expressed as either ground area, density or standing volume affected)

Table 6 lists the disturbance types and agents. A plot may have been subjected to more than one disturbance event – all types, proportions and severities of disturbance should be recorded. Where older

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11. If a regrowth, mature or senescent tree isn't present within the plot area, then record as a null score.

logging (OL) and fire (FR) are present, a quantitative assessment may be undertaken. This may be guided by Figure 10. Furthermore, the response of a tree to disturbance, in terms of its crown structure and subsequent implications for growth stage assessment, are also considered in the disturbance assessment (Consult Figures 11-13). It is also important to note the difference between retracting a crown due to age and a retracting crown due to insect, disease or fire damage, i.e. significant wildfire may have damaged crown and crown will display 'characteristics' similar to that of a sensing crown form, but the tree will not actually be mature or 'late mature'.

**Table 6. Disturbance Indicators**

Disturbance Code	Site Characteristics present within the Circular plot	Distribution Clumped/Dispersed <sup>12</sup>	Quantitative <sup>13</sup>
RL	<b>Recent Logging</b> Evidence of recent logging activity within the last 10 years denoted by bare earth, snig tracks, log dumps, logging debris. Due to the recent nature of disturbance there is little or no regrowth present and often large open areas and associated canopy gaps.		NA
OL	<b>Older Logging</b> <ul style="list-style-type: none"> <li>Visible evidence of older logging activity such as stumps, log dumps and/or constructed snig tracks which have not occurred within the last ten years. Can cover a range of logging intensities and intervals since last logging.</li> <li>'Older logging' should include only stumps &gt; 40 cm diameter IF there is visible disturbance to the canopy in the form of canopy gaps. A threshold figure of 2-5 stumps per hectare, as a guide for minimally disturbed old growth forest. The pattern of stumps (i.e., boundary and roadside effects, firewood and fire safety felling) is also important to consider.</li> </ul> <p>PLUS</p> <ul style="list-style-type: none"> <li>Regrowth clusters or native pioneers or woody weeds. This indicator therefore must be a combination of stumps &gt; 40cm diameter PLUS gaps AND clusters or regrowth OR thick regeneration of native pioneers and weeds.</li> </ul>		<u>Logs</u> <b>Presence/Absence</b>  <u>Stumps</u> Presence/Absence  <u>Regrowth</u> <b>Regrowth clusters</b> Present (P) Absent (A)
DR	<b>Drought</b> Evidence of water-stress leading to partial or complete defoliation and tree dieback.		NA

12. For the larger patches, the distribution of disturbance may result in patches still qualifying as old growth.

13. Not all the disturbance indicators require a quantitative assessment.

AG	<b>Animal Grazing</b> Evidence of animal grazing include the partial or full browsing of trees canopies. If present in young regrowth, there may be evidence of branches and trunks being bent or snapped.		NA
WT	<b>Windthrow</b> Trees which have fallen over or have snapped because of severe wind exposure. Most common in cases where forest trees have experienced a drastic change in exposure due to the removal of vegetation through harvesting or catastrophic fire.		NA
IA	<b>Insect Attack</b> Evidence of leaf damage including feeding tracks, folding, skeletonising and gall formation. Leaves and buds on growing shoots partly or completely eaten. Partial to complete defoliation.		NA
ST	<b>Ringbarked or dead standing trees (stags)</b> Includes ringbarked trees and trees affected by dieback or where canopy gaps are present, cross-cut logs. Do not include natural death, if possible.		N/A
GR	<b>Grazing Infrastructure</b> This must include the presence of fencelines, yards, dams or other watering points and does not include only the presence of cattle, their tracks or camps. There must be a noticeable and significant impact on the structure (presence of gaps and regrowth) and floristics of the forest stand.		NA
TR	<b>Transport Infrastructure</b> This includes constructed tracks that have required the removal of canopy trees resulting in linear strips of regrowth clusters of native pioneers or woody weeds. Includes snig tracks/roads/rail or tramway formations and Landings/loading ramps.		NA
LS	<b>Landslide/slip</b> A scar in the landscape created by ground movement. Landslides can include the movement of rocks, debris or earth down a slope.		NA
FR	<b>Fire</b> Evidence of fire disturbance includes charring and scorch.		<u>Canopy</u> Canopy Disruption (1) No canopy disruption (2) <u>Understorey</u> Understorey disruption (1) No understorey disruption (2)

			<b><u>Maturity of Regrowth<sup>14</sup></u></b> OG maturity (1) Non-OG maturity (2)  <b><u>Floristic composition<sup>15</sup></u></b> Pre-fire (1) Post-fire (2)
ST	<b>Storm (General)</b> Evidence to suggest storm damage include broken branches and trees snapped off above ground. Lightning strike evidence includes blown off bark		NA
FL	<b>Flooding</b> Evidence of flooding include the presence of temporary surface water, watermarks on tree trunks and floating debris which has become hung up in vegetation at the height of inundation.		NA
SE	<b>Soil erosion</b> Evidence of substantial soil transport due to wind, water, or ice; by down-slope creep of soil and other material under the force of gravity; or by living organisms, such as burrowing animals, in the case of bioerosion.		NA
PA	<b>Pathogen</b> Difficult to determine without expert advice because symptoms can mimic other disturbance agents like drought or insect attack. Evidence to support the claim of damage by a pathogen includes foliage wilt, branch dieback, leaf yellowing, leaf curling, fungal fruiting bodies (mushrooms) on tree and the presence of lesions.		NA
OT	<b>Other</b>		NA

14. As the effects of fire on the floristics are often relatively short-term, the forest was assumed to be eligible for consideration as old-growth forest when two conditions were satisfied: firstly, the resultant regrowth had matured sufficiently to satisfy the growth stage criteria of the old-growth forest definition; secondly, the floristic composition had returned to the pre-fire condition.

15. As the effects of fire on the floristics are often relatively short-term, the forest was assumed to be eligible for consideration as old-growth forest when two conditions were satisfied: firstly, the resultant regrowth had matured sufficiently to satisfy the growth stage criteria of the old-growth forest definition; secondly, the floristic composition had returned to the pre-fire condition.

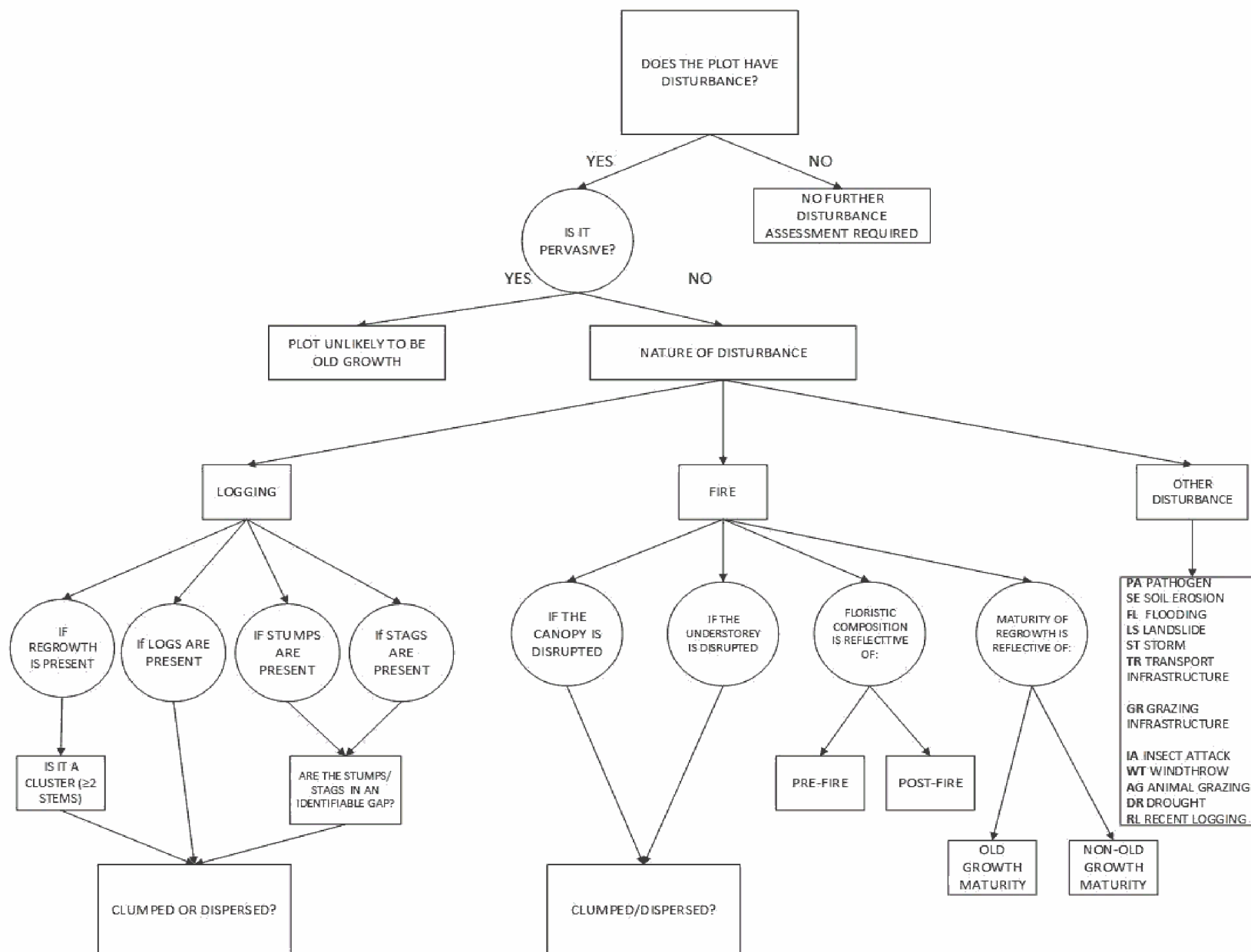


Figure 10. Identification of disturbance and its distribution within the plot

## 5. Analysis

On the basis of the measurements recorded during the field assessment, the following analysis is undertaken. The results are used to determine the relative crown cover (%) of the regrowth, mature and senescent components of the stand.

### 5.1 Variable area plot

For each variable area plot, the basal area for each tree is calculated, then used to calculate the stems per hectare for that particular tree. The stems per hectare are then summed for each plot.

Basal area of each tree  $i$  ( $BA_{Tree\ i}$ )

$$BA_{Tree\ i} = 0.00007854 \times DBH\ i^2$$

Stems per hectare (SPH)

The individual contribution of a tree  $i$  of size  $BA\_tree\_i$  to the number of stems per hectare ( $SPH_{Tree\ i}$ ) is:

$$SPH_{Tree\ i} = \frac{BAF}{BA_{Tree\ i}}$$

SPH for the plot

The SPH for the plot is then computed by summing the contribution of all individual  $SPH_{Tree\ i}$  in the variable radius plot.

$$SPH_{plot} = \sum_{i=1}^n SPH_{Tree\ i}$$

### 5.2 Fixed area plot

A fixed area plot was employed when the sweep, regardless of BAF failed to collect at least 10 IN canopy trees. The following metrics were calculated from the field data.

Stocking Rate

9. Establish the stocking rate of trees per hectare

$n$  = No. of Trees in plot area ( $m^2$ )

$N$  = No. of Trees per hectare

$$N = \frac{10,000(m^2)}{\text{Circular plot size } (m^2)} \times n$$

where N=Stocking rate

Correct the stocking rate for null scores recorded by multiplying the correction factor from Table 14 in the Appendix<sup>16</sup>. For example, if no mature trees were recorded in the plot area, there will be a null score for mature trees.

### 5.3 Crown Area

Crown Area per hectare is calculated separately for each of the regrowth, senescent and mature components of the stand. For each sample point,

$$CA = \pi r^2$$

Where CA is crown area, r represents the quadratic mean<sup>17</sup> of all the crown radius measurements taken within the plot.

$$CA \text{ per Hectare} = a \times N$$

Where a is the mean of all the crown area taken within the plot.

### Relative Crown cover (%)

Calculate the relative crown cover percentage of each of the regrowth, mature and senescent components.

$$\text{Relative Crown Cover \%} = \frac{\text{Component (i) CC}}{\text{Component (i) CC} + \text{Component (ii) CC} + \text{Component (iii) CC}}$$

Where Component (i), (ii) and (iii) CC may represent Regrowth, Mature or Senescent Crown Cover per hectare.

16. Null records are expressed as a ratio of null counts to total counts.

17 The quadratic mean of crown radius can be computed as the crown radius for a hypothetical tree of mean crown area. Reasons of consistency between DBH and basal area measurements is a reason why quadratic mean diameter is used instead of arithmetic mean diameter in forestry.

## 5.4 Growth stage

In order for DELWP to test multiple definitions of old growth, the relative levels of attributes need to be recorded so that the varying definitions and the consequences of those definitions may be tested. The growth stage ratios, relating to regrowth, early mature, late mature and senescent (Table 7) are validated using the tree crown measurements recorded in the field and subsequently calculated in Section 5.1-5.3. These growth stage ratios account for the compositional variation of a forest stand that together, may represent regrowth, mature or senescent.

**Table 7. Attribute codes for growth staging**

Relative Crown Cover (%)				Total Crown Cover
Regrowth (R)	Early Mature (EM)	Late Mature (LM)	Senescent (S)	
<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	100%

Where *a*, *b*, *c*, *d* represent the percentage crown cover for each of the growth stages.

Growth stage is expressed in assessment bands of 10% tranches. Broadening these tranches facilitates the development of thresholds to test other future definitions relating to;

- Old growth forests
- Emerging old growth forest (e.g., Regrowth <10%, Mature >70%)
- FSC definition
- Other definition

Early Mature (EM) and Late Mature (LM) growth stages, represented by *b* and *c* respectively (Table 8).

**Table 8. Lookup table for the derivation of revised successional growth stages using site survey results of growth stage and disturbance level**

Growth stage as derived by site survey				Disturbance level as derived by site survey	Revised successional growth stage at the site
R	EM	LM	S		
10%	<i>b</i>	<i>c</i>	>30%	Negligible	Candidate old growth
10%	<i>b</i>	<i>c</i>	10-30%		
10-30%	<i>b</i>	<i>c</i>	>30%		
10%	<i>b</i>	<i>c</i>	>30%	Significant	Disturbed old

forest					
10%	b	c	10-30%		
10-30%	b	c	<10%		
10%	b	c	>30%	Negligible	Mature forest
10-30%	b	c	10-30%		
10-30%	b	c	10%		
10%	b	c	>20%	Significant	Disturbed mature forest
10-30%	b	c	10-30%		
10-30%	b	c	10%		
>30%	b	c	NULL	Greater than 30% regrowth	Young forest

## 5.5 Disturbance

In the analysis of disturbance, it is critical to determine whether the disturbance is still having an impact on the structure and function of the forest. The determination of thresholds may facilitate this. However, regardless of thresholds, it is important to map the spatial occurrence of the disturbance as to identify if the disturbance is clumped or dispersed within the patch. For large patches this may mean areas still qualify as old growth. Furthermore, it is also important to consider plot thresholds and patch thresholds.

More testing is required with respect to thresholds. For example, if 6 plots have 15% regrowth due to a stump and gap then at the patch level this is 9% regrowth. If this is clumped then you have area no longer classified as old growth but if this was dispersed, the patch would still be considered old growth. As a result, the two approaches therefore lead to two different outcomes.

## 6. Validation Outputs

Once the validation exercise has been completed, various outputs can be derived. Initially, the validation of old growth will focus on the following.

### 6.1 Pre-harvest check

In order to check whether the modelled old growth is an actual patch of old growth, the assessment of a number of plots is necessary (Section 4). Once the assessment has been undertaken, the validation outcome can be presented as in Table 9. This demonstrates, for example, if there were 5 plots assessed, 3 of them were assessed to agree with the modelled old growth layer, while 2 didn't agree. This agreement analysis would be sufficient to prompt further investigation into those plots that were misclassified.

**Table 9. Agreement analysis example for old growth validation**

Plot ID Number	Class determined from Reference source (Field)	Class claimed on Classified map (Modelled old growth)	Agreement?
1	Old Growth	Old growth	Yes
2	Non-old growth	Old growth	No
3	Old growth	Non-old growth	No
4	Old growth	Old growth	Yes
5	Non-old growth	Non-old growth	Yes

### 6.2 Accuracy Assessment

Another validation outcome is the error matrix (Table 10). This demonstrates where, for example, a total of 30 plots were sampled. Those plots shaded grey in the error matrix were classified correctly (as either old growth or non-old growth) by the modelled old growth layer, as evidenced by the field data. Those plots that haven't been shaded grey were misclassified. The total accuracy is determined by the following formula.

$$Accuracy_{Total} = \frac{15 + 10}{30} \times 100 = 83\%$$

**Table 10. Error matrix example for old growth validation**

	Class types determined from reference source (Field)			
Class types determined from Classified Map (Modelled old growth)		Old growth	Non-old growth	Totals
	Old growth	15	2	17
	Non-old growth	3	10	13
	Totals	18	12	30

However, total accuracy doesn't reveal if the error was evenly distributed between classes or whether some classes contained more errors than others. In order to obtain a more comprehensive insight into the accuracy of the classification (modelled old growth), particularly if more than two cover types are considered (i.e., old growth, non-old growth, late mature, regrowth), additional accuracy assessments should be undertaken. These are known as the User's Accuracy and the Producers' Accuracy.

#### Users Accuracy

Users Accuracy corresponds to errors of commission, where cover types are included erroneously in another category (e.g., non-old growth included in old growth). Table 11 highlights those cells involved in the calculation of users accuracy for old growth.

**Table 11. Error matrix example for old growth validation (Users Accuracy)**

	Class types determined from reference source (Field)			
Class types determined from Classified Map (Modelled old growth)		Old growth	Non-old growth	Totals
	Old growth	15	2	17
	Non-old growth	3	10	13
	Totals	18	12	30

$$Accuracy_{Users\ OG} = \frac{15}{17} \times 100 = 88\%$$

$$Accuracy_{Users\ Non-OG} = \frac{2}{17} \times 100 = 12\%$$

#### Producers Accuracy

Producers Accuracy corresponds to errors of omission, where cover types are omitted erroneously from the category they should be in (e.g., old growth not mapped as old growth but as non-old growth). Table 12 highlights those cells involved in the calculation of producer's accuracy for old growth.

**Table 12. Error matrix example for old growth validation (Producers Accuracy)**

	Class types determined from reference source (Field)			
Class types determined from Classified Map (Modelled old growth)		Old growth	Non-old growth	Totals
	Old growth	15	2	17
	Non-old growth	3	10	13
	Totals	18	12	30

$$Accuracy_{Producers\ OG} = \frac{15}{18} \times 100 = 83\%$$

$$Accuracy_{Producers\ Non-OG} = \frac{3}{18} \times 100 = 17\%$$

Table 13 provides a summary of the Users and Producers accuracy for each cover type.

**Table 13. Summary error matrix example for old growth validation**

	Class types determined from reference source (Field)				USERS ACCURACY
Class types determined from Classified Map (Modelled old growth)		Old growth	Non-old growth	Totals	
	Old growth	15	2	17	88%
	Non-old growth	3	10	13	12%
	Totals	18	12	30	
PRODUCERS ACCURACY		83%	17%		TOTAL:83%

Additional validation outputs may be considered, dependent on the nature and scale of the validation exercise.

## 7. Data Capture

The VFMP\_DC (Victorian Forest Monitoring Program Data Capture) application has been custom made using the Dataplus Professional data collection software suite to collect VFMP survey data. This provides an effective electronic data capture component that can be used either in the field or on a desktop for data entry.

The system is designed around the hierarchical architecture. This optimises the data entry around the workflow to minimise double entry and screen space on the handheld computers. Electronic data capture (EDC) allows rigorous data entry validation checks through lookup lists, range limits and cross-field validation. The user should familiarise themselves with the level structure to navigate themselves to the correct data entry level quickly.

Trials of this validation methodology have utilised both paper and the VFMP-DC. Further development of data capture technology, specifically for the validation of old growth is currently underway.

## 8. References

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## 9. Appendix

### 9.1 Reference Data

**Table 14. Correction Factor (CF) for Null Records**

No./NT	CF	No./NT	CF	No./NT	CF	No./NT	CF
0.01	0.97	0.26	0.57	0.51	0.33	0.76	0.15
0.02	0.94	0.27	0.59	0.52	0.32	0.77	0.14
0.03	0.92	0.28	0.55	0.53	0.31	0.78	0.13
0.04	0.89	0.29	0.54	0.54	0.31	0.79	0.13
0.05	0.87	0.30	0.53	0.55	0.30	0.80	0.12
0.06	0.85	0.31	0.52	0.56	0.29	0.81	0.11
0.07	0.84	0.32	0.51	0.57	0.28	0.82	0.11
0.08	0.82	0.33	0.50	0.58	0.28	0.83	0.10
0.09	0.80	0.34	0.49	0.59	0.27	0.84	0.10
0.10	0.78	0.35	0.48	0.60	0.26	0.85	0.09
0.11	0.77	0.36	0.47	0.61	0.25	0.86	0.08
0.12	0.75	0.37	0.46	0.62	0.24	0.87	0.08
0.13	0.74	0.38	0.45	0.63	0.23	0.88	0.07
0.14	0.72	0.39	0.44	0.64	0.22	0.89	0.06
0.15	0.71	0.40	0.43	0.65	0.22	0.90	0.06
0.16	0.69	0.41	0.42	0.66	0.21	0.91	0.05
0.17	0.68	0.42	0.41	0.67	0.20	0.92	0.04
0.18	0.67	0.43	0.40	0.68	0.19	0.93	0.03
0.19	0.65	0.44	0.39	0.69	0.18	0.94	0.03
0.20	0.64	0.45	0.37	0.70	0.18	0.95	0.02
0.21	0.63	0.46	0.36	0.71	0.17	0.96	0.02
0.22	0.62	0.47	0.36	0.72	0.17	0.97	0.01
0.23	0.61	0.48	0.35	0.73	0.16	0.98	0.01
0.24	0.59	0.49	0.34	0.74	0.15	0.99	
0.25	0.58	0.50		0.75			

**Table 15. Technical requirements of old growth forests (Woodgate *et al.* 1994).**

Characteristics	Technical Requirements
Primary characteristics	The definition was based on the two primary characteristics of old-growth forest: growth stage and disturbance level. It was developed so that old-growth forest could be delineated and mapped in practice.
Forest	Forest, for the purpose of the Victorian studies, was defined as woody vegetation with a potential height generally greater than 5 m and with a crown cover generally greater than 10%.
Crown Cover	Crown cover was defined as the percentage of the site (or stand of forest) covered by the vertical projection of the periphery of the tree crowns in the upper stratum. Crowns were considered to be opaque.
Growth Stages	<ul style="list-style-type: none"> <li>It was assumed that old-growth forests attained their oldest, naturally achievable growth stage(s) combination for a particular site under a contemporary regime of 'natural' disturbance which in Victoria is generally fire disclimax.</li> <li>More than one growth stage (senescing, mature or regrowth) could be present in the upper stratum. The oldest growth stage was the senescing growth stage and it must be present as a dominant, codominant or subdominant component of the stand. When present in these proportions the senescing growth stage was considered to significantly influence the ecological processes of the stand (for example, growth of younger trees, development of hollows and nutrient cycling).</li> <li>The morphology of the senescing growth stage in many eucalypts was characterised by declining crowns and dead or dying branches, although these and other characteristics varied between species.</li> <li>'Dominant', 'co-dominant' and 'subdominant' referred to the area occupied by the crowns of a given growth stage in the upper stratum of the stand. They did not refer to the vertical structure through the profile of the crown. (They broadly occupied &gt; 50%, 30-50% and 11-50% respectively of the crown cover of the stand.)</li> <li>If regrowth stages were present, they must be 'sparse' (generally less than 10% of the crown cover) in the upper stratum for the stand to qualify as old growth forest. More regrowth than this was considered to indicate a greater than negligible disturbance or a younger stand.</li> </ul>
Ecological vegetation classes and forest types	The morphological (physical) characteristics that identify each growth stage were considered to vary with ecological vegetation class (floristic composition and environmental attributes) and forest type (dominant species and structure), both of which are influenced by environmental site quality. For this reason the old-growth condition manifests itself in different ways, so forest was stratified by ecological vegetation class and forest type.
Disturbance	All forests were assumed to have had some form of disturbance. Undisturbed forest was forest for which there was no record of disturbance, although wildfires almost certainly occurred in the past. Negligibly disturbed forest was forest for which disturbance was known to have occurred, but the disturbance was considered unlikely to have altered the structure (growth stage combination or crown cover density) or the usual floristic composition of species for that vegetation class; or, if any alteration did occur in the past it was no longer measurable. Disturbances could be natural (for example, wildlife) or anthropogenic (for example, agricultural clearing, timber harvesting, grazing and mining). In the context of this study, and without records that enabled a systematic search, disturbances induced by indigenous people before Europeans, were also being treated as natural.
Intangibles	Old-growth forests have considerable characteristics which were not directly addressed by this definition. including grandeur, antiquity, naturalness and aesthetics. Although this was not assessed in the studies, disturbances were considered to influence the intangible characteristics of forest and to determine their values within the old-growth forest domain.
Old Growth Forest Dynamics	Significant anthropogenic disturbances were considered to cause long-term changes to forest structure and floristics. Although such forests may not fulfil the old-growth forest definition after one cycle of regeneration and senescence, they may do so after several cycles provided they were not significantly disturbed in the meantime. The definition thus recognized the dynamic nature of old-growth forest and allowed for forests to be recruited into, or excluded from, the old-growth domain with time.

**Table 16. Description of growth stages based on branch and crown formations (NSW DEC 2004)**

Forest Growth Stage	Tree Growth stage	Description
Regrowth	Juvenile stage	<ul style="list-style-type: none"> <li>all leaves have a juvenile form and grow on the main stem.</li> <li>as the seedling exceeds around 60cm in height, second and third order branches develop.</li> </ul>
	Sapling stage	<ul style="list-style-type: none"> <li>the crown is made up of small branches that are shed from the bottom of the crown as the tree gains height.</li> <li>competing branches vying for dominance form a crown of many small branches, of roughly the same size, which is typically pointed in profile; narrow, conical and compact.</li> <li>the leaves may be a combination of juvenile, intermediate and mature forms.</li> </ul>
	Pole stage	<ul style="list-style-type: none"> <li>strongly developed main stem with a crown of small branches; lower crown branches are retained for a longer period than at the sapling stage.</li> <li>these semi-permanent branches (growing on the main stem below the upper crown) become larger than sapling stage branches, grow like modified saplings and retain foliage in terminal bundles; leaves are mostly mature.</li> <li>crown is still apically dominated (pointed), with the majority of branches lying at an acute angle to the main stem and overall height still increasing.</li> <li>a young eucalypt enters this stage after it has gained a certain height, and the age at which it enters this stage is dependent on site quality.</li> </ul>
	Advanced Regrowth	<ul style="list-style-type: none"> <li>trees of 80-120 years of age can still have strong apical dominance, especially in Ash species and tall open forest species (messmate for example). This is beyond 'pole stage' but not yet considered 'mature'.</li> </ul>
Mature	Early mature stage	<ul style="list-style-type: none"> <li>crown is no longer apically dominated.</li> <li>larger, stronger, permanent 'shaping' branches develop laterally and form the framework of the crown.</li> <li>semi-permanent branches grow not only from the main stem but also from these permanent branches.</li> <li>the tree approaches maximum height during this stage.</li> <li>crown still substantially primary or with first order branches, whereby nearly all leaf bearing units are found at the end of shaping branches</li> </ul>
	Mature stage	<ul style="list-style-type: none"> <li>the longest period in the tree's life.</li> <li>persists for a long time, and, although branches thicken, height and crown spread may change very little over this time in dense stands.</li> <li>as branches grow further from the main trunk and lose their apical dominance, secondary or epicormic shoots develop from dormant buds on the top and sides of the shaping branches closer to the main trunk.</li> <li>the crown is made up of many individual leaf bundles.</li> <li>there may be some branch death and breakage (i.e. death or dropping of 1/4 or more of 1 or 2 shaping branches), but branch death and breakage does not become major.</li> </ul> <p>the crown achieves maximum size towards the end of the mature stage.</p>
Senescing	Late mature stage	<ul style="list-style-type: none"> <li>this stage begins when most of the crown is made up of epicormic crown units and the rate of loss of structural branches begins to exceed</li> </ul>

	<p>the rate of crown redevelopment from epicormic shoots.</p> <ul style="list-style-type: none"> <li>• retaining most of the shaping branches with large numbers of 'bayonets' (dead branches from deceased leaf-bearing units), but there is also a general increase in the occurrence of dead lower order branches and may be some dead or broken shaping branches.</li> <li>• hollows are more common from the greater numbers of crown breaks and larger branches breaking.</li> <li>• warts and burls begin to form on the trunk.</li> </ul>
Over-mature stage	<ul style="list-style-type: none"> <li>• characterised by declining crown leaf area i.e. overall retraction of the leaf bundles from the previous extent of the crown.</li> <li>• as the crown retracts the foliage is made up of leaf bundles from smaller epicormic branches leaving the larger branches carrying less and less foliage.</li> <li>• as major shaping branches are shed, epicormic growth develops from the trunk, to replace the lost leaf area, but which is never as persistent as the permanent shaping branches.</li> <li>• the trunk and shaping branches are eventually weakened by fungal attack, causing many</li> <li>• shaping branches and often the top of the tree to fail and break leaving a crown of broken or dead larger branches.</li> <li>• the trunk or tree bole is characteristically covered in burls and bumps and hollows are common.</li> </ul>

**Table 17. General features of growth stages (adapted from Woodgate et al. 1994 and DEC 2004)**

<b>Broad stage</b>	<b>Regrowth</b>		<b>Mature</b>		<b>Senescent</b>	
<b>Field growth stage (Woodgate et al. 1994)</b>	<b>Sapling</b>	<b>Pole</b>	<b>Early Mature</b>	<b>Mature</b>	<b>Late Mature</b>	<b>Over Mature</b>
<b>Main axis</b>	Dominant	Prominent	Not prominent	Lost	Lost	lost
<b>Crown outline</b>	Very pointed	Pointed	Rounded	Flattened	Irregular	Very irregular
<b>Height</b>	Rapid increase	Rapid increase	Slow increase	No change	Slight decrease	Distinct decrease
<b>Total Leaf Area</b>	Very small	Small to medium	Medium to large	Large	Medium to large	Small to medium
<b>Leaf Area change</b>	Rapid increase	Rapid increase	Slow increase	No increase	Slow decrease	Rapid increase
<b>First order branches</b>	Very small, extending	Small to medium, extending	Large, extending	Large, stable	Large, broken	Mostly fallen
<b>First order branch angle</b>	Acute, uniform	Acute, uniform	Acute, distal arching	Variable, arching from trunk	Variable, arching from trunk	indistinct
<b>Primary branch crown units</b>	Not evident	Whole crown	Most of crown	Branch extremities	Few	none
<b>Epicormic crown units</b>	None	None	Few, at branch bases	Base and middle of branches	Most of crown	Whole crown
<b>Dead branch frequency</b>	Very common in lower crown	Common in lower crown	Few through crown	Few through crown	Common through crown	Very common through crown
<b>Dead branch size</b>	Very small	Small	Small	Small to medium	Small to large	Small to large
<b>Branch hollows</b>	None	None	None	Few, very small	Common, small to medium	Abundant, small to large
<b>Tree vigour</b>	Very vigorous	Very vigorous	Very vigorous	Vigorous	Not vigorous	moribund

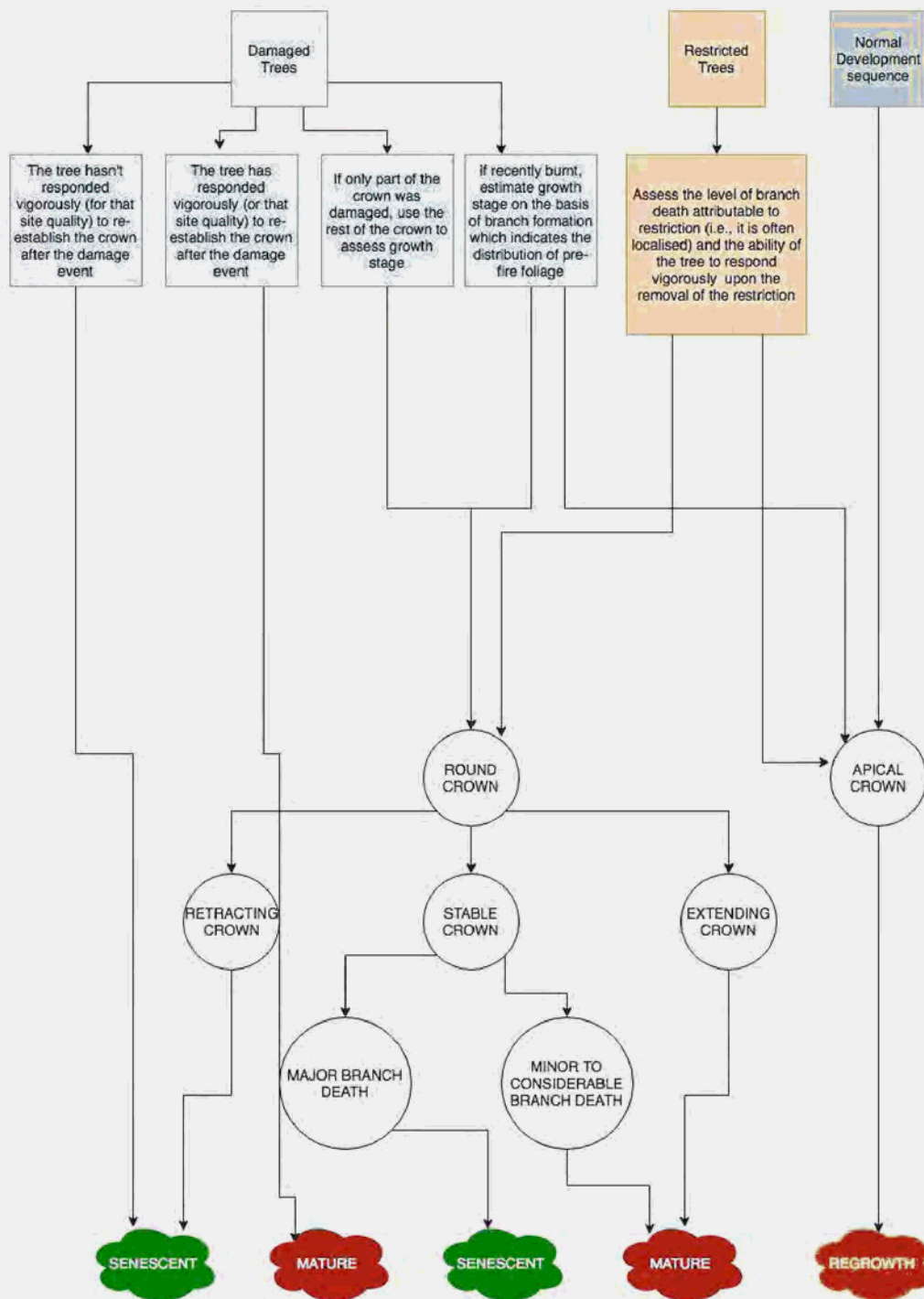
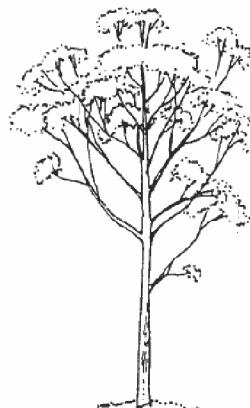


Figure 11. Growth stage assessment key to aid in the identification of growth stage in the field  
(Adapted from NSW DEC 2004)

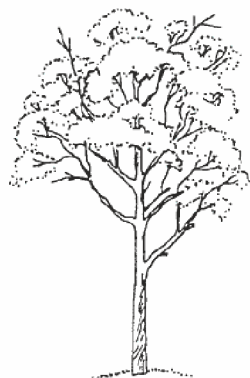
### Extending crown

Healthy leaf bundles at the end of branches with lateral extension of the crown still occurring



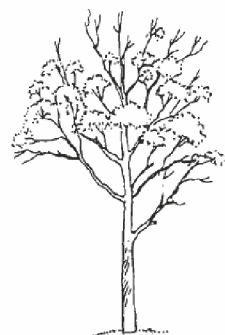
### Stable crown

Width and height of crown stable (leaf bundle at same distance as dead tips, with fluctuation of the crown as branches die and are replaced by new crown units). Includes crowns that have an even balance of extending and retracting crown elements.



### Retracting crown

Crown extent is contracting, resulting from a greater increase in branch death due to accelerated structural decay and an overall decline in leaf area. Leaf bundles are located well inside the dead tips of 3 or more branches.



**Figure 12. Crown types and extension in generalised pyrophytic tree species (Adapted from NSW DEC 2004)**

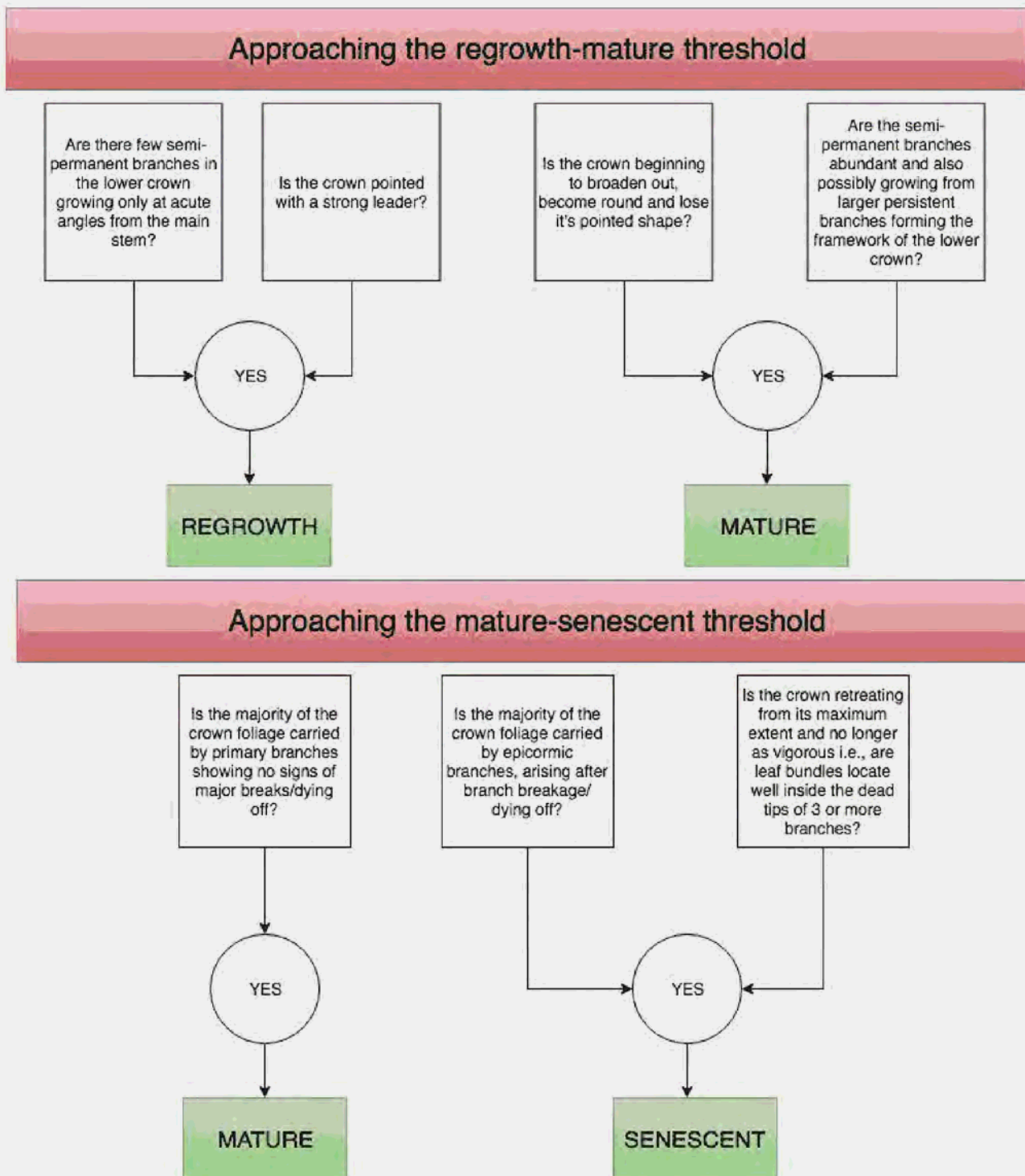


Figure 13. Thresholds for growth stage boundaries

## 9.2 Acronyms

**Table 18. List of Acronyms**

Acronym	Explanation
API	Aerial Photography Interpretation
ARI	Arthur Rylah Institute
CAR	Comprehensive, Adequate and Representative
CRA	Comprehensive Regional Assessment
DBH	Diameter at Breast Height
DSE	Department of Sustainability and Environment
EVC	Ecological Vegetation Community
FMA	Forest Management Area
FPC/PFC	Foliage Projected Cover/Projected Foliage Cover
JANIS	Joint Australian and New Zealand Environment and Conservation Council/Ministerial Council on Forestry, Fisheries and Aquaculture, National Forestry Policy Statement Implementation Sub Committee
MER	Monitoring Evaluation and Research
MOG	Modelled Old Growth
MSP	Management Standards and Procedures
NFPS	National Forest Policy Statement
RFA	Regional Forest Agreement
SOP	Standard Operating Procedure
SPZ	Special Protection Zone
VFMP	Victorian Forest Monitoring Program

## 9.3 Definitions

**Table 19. List of Definitions**

Atypical crown form	Refers to those tree species displaying non Jacobsian developmental characteristics.
Crown	The leaf bearing branches of a tree.
Crown form	The shape or outline of a crown as detected from API. Generally described as being apical (pointed), regular (round) or irregular.
Crown cover	The vertical projection of the periphery of tree crowns (crowns assumed to be opaque) within a designated area. Crown Cover was estimated in terms of percentage classes of apical, regular or irregular crowns as a proportion of total crown cover.
Ecological Vegetation Classes	The standard unit for classifying vegetation types in Victoria. EVCs are described

(EVC)	through a combination of floristics, lifeforms and ecological characteristics, and through an inferred fidelity to particular environmental attributes
Extending crown	Crown containing healthy leaf bundles at the end of branches and where expansion of the crown is still occurring.
Growth Stage	An estimate of the maturity of a tree based on assessments of indicators of relative age such as tree height, crown form, crown shape and vigour and presence of dead branches. Growth stages were classified under three groups; regrowth, mature and senescent.
Jacobsian	Tree species or forest types for which the classic signs of development and senescence (Jacobs 1955) of the crown are detectable from API.
JANIS criteria	Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and representative Reserve System for Forests in Australia prepared by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-Committee.
Non - Jacobsian	Tree species or forest types for which the classic signs of development and senescence (Jacobs 1955) of the crown are not detectable from API.
Pyrophytic	Vegetation adapted to fire (including eucalypts, brush box and turpentine).
Primary branches	The major or forming branches of the crown that branch from the main stem of the tree, above the height of crown break. Also known as first order branches.
Secondary branches	Branches arising from primary branches whether by normal bifurcation, or by epicormic resprouting from a primary branch (equivalent to second order).
Stable crown	Crowns having a stable width and height of the crown.
Structural attributes	Characteristics of old-growth forest such as large, live old trees, large standing dead trees or stags, large fallen logs on the forest floor, deep litter layers, multiple strata and a complex understorey.
Typical crown form	Refers to those species displaying Jacobsian developmental characteristics.
Retracting Crown	Crown extent is contracting due to an increase in branch death and declining leaf area.

# Future role for VicForests

13 May 2019

# Government's relationship with VicForests

Department of Premier and Cabinet  
RELEASED UNDER THE FOI ACT

**Information asymmetry between VicForests and Departments** creates a dependency on VicForests data and capabilities that can be difficult to access without breaching confidentiality surrounding Government deliberations



This dependency leaves Government exposed to risk that VicForests develops a **reluctance to share information** that is required for the development and implementation of effective forestry policy



**VicForests' new role in plantation management** is consistent with but not explicitly outlined in VicForests' Order in Council and is currently envisaged to be time-limited. An explicit Government decision rather than incremental change may be required to provide certainty



# Current roles and commitments of VicForests

Department of Premier and Cabinet  
RELEASED UNDER THE FOI ACT

## Roles



Contract management



Forest information and  
analysis



Community and  
environmental  
services



Plantation management

## Commitments

Sawlog obligations to customers  
(expiring 2020, 2024)

Pulplog obligations to AP  
(expiring 2030)

# Subsuming some VicForests functions into Departments could solve some issues while creating other challenges

Department of Premier and Cabinet  
RELEASED UNDER THE FOI ACT

Government taking on functions such as **forest information and analysis** and **community and environment services** could mitigate some of the issues identified, but...

This could create a duplication of roles, capabilities and resources that could lead to inefficient outcomes overall

It is important to maintain appropriate separation of policy, regulatory and commercial aspects of forestry

# Decisions for Government

Department of Premier and Cabinet  
RELEASED UNDER THE FOI ACT

Short-term

Should information/analysis  
and environmental roles be  
subsumed into Departments?



Medium-term

Does VicForests have an  
ongoing plantation role?

Yes

No

2030

## **Operational**

Larger plantation  
functions are awarded to  
VicForests directly  
*or* as part of a  
competitive process

*or*

## **Contract management**

VicForests manages third-  
party plantation contracts

VicForests ceases  
operations

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# ECONOMIC & GOVERNMENT REVENUE IMPACTS

Australian Paper

# AUSTRALIAN PAPER

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Prepared for Australian Paper

17 January 2017

16011 Australian Paper EI

# ECONOMIC AND GOVERNMENT REVENUE IMPACTS

## EXECUTIVE SUMMARY

Australian Paper is a vertically integrated manufacturer of pulp, paper, envelopes and stationery. The organisation is Australia's only manufacturer of office and printing papers, bag, sack, lightweight packaging and industrial papers, and is also a major supplier of Kraft liner board and the largest envelope manufacturer in Australia.

The Western Research Institute (WRI) was commissioned by Australian Paper to measure its impact on the national, state and regional economies in 2015. The economic impacts were assessed using primary data provided by Australian Paper. National, state and regional input-output tables were developed and analysed using marginal coefficients. The impacts were measured in terms of gross domestic, state and gross regional product, household income and full-time equivalent (FTE) jobs. The results are summarised below.

### Overall Impact of Australian Paper

When flow-on effects are taken into account, the combined economic impacts of Australian Paper operations and capital expenditure contributed:

- \$911 million in gross domestic product,
- \$494 million in household income; and
- 5,786 FTE jobs.

The economic impact of Australian Paper in the Australian and Victorian economy in the 2015 calendar year is shown in the table below.

Overall Aggregated Impacts Australian Paper	Value Added \$m	Household Income \$m	Employment FTE Jobs
<b>Australia (including flow-on)</b>	\$911.2	\$494.7	5,786
<b>% of Australia</b>	0.1%	0.1%	0.1%
<b>Victoria (including flow-on)</b>	\$819.1	\$440.6	5,576
<b>% of Victoria</b>	0.2%	0.3%	0.2%

- In Victoria, Australian Paper's overall impact is estimated to have contributed (including flow-on effects);
- \$819 million in gross state product;
- \$440 million in household income; and
- 5,576 FTE jobs.

# AUSTRALIAN PAPER

The main industry sectors, as defined in the 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC), benefiting from the flow-on of Australian Paper operations, in terms of full-time equivalent (FTE) employment, were:

- Transport, postal and warehousing (483 FTE);
- Personal and other services (397 FTE);
- Professional, scientific and technical services (363 FTE);
- Retail trade (360 FTE); and
- Wholesale trade (289 FTE).

## Overall Impact of the Maryvale Mill

The economic impacts of the Maryvale Mill operations and capital expenditure on Australia, Victoria, and the Latrobe Valley are shown in the table below.

Overall Impacts Maryvale Mill	Value Added \$m	Household Income \$m	Employment FTE Jobs
Australia (including flow-on)	\$753.4	\$359.6	4,305
Total (Incl. flow-on)	\$741.8	\$353.2	4,234
% of Victoria	0.2%	0.2%	0.2%
Total (incl. flow-on)	\$451.9	\$216.5	2,387
% of Latrobe Valley	6.8%	7.9%	5.5%

In Australia, Maryvale Mill is estimated to have contributed:

- \$753 million in gross domestic product;
- \$359 million in household income; and
- 4,305 FTE jobs when flow-on effects were taken into account.

In Victoria, Maryvale Mill is estimated to have contributed:

- \$741 million in gross state product in Victoria;
- \$353 million in household income; and
- 4,234 FTE jobs when flow-on effects were taken into account.

# ECONOMIC AND GOVERNMENT REVENUE IMPACTS

In the Latrobe Valley<sup>1</sup> region, the Maryvale Mill contributed:

- \$451 million in gross regional product;
- \$216 million in household income; and
- 2,387 FTE jobs when flow-on effects were taken into account.

The main industry sectors that benefitted from flow-on employment in the Latrobe Valley region, as a result of the Maryvale Mill, were:

- Agriculture, Forestry and Fishing (197 FTE);
- Electricity, gas, water and waste services (182 FTE);
- Personal & Other Services (135 FTE);
- Health and community services (126 FTE); and
- Transport, Postal and Warehousing (125 FTE).

## Overall Impact of Preston Operations

The economic impacts of operations and capital expenditure of Preston operations nationally and in Victoria are shown in the table below.

Overall Impacts Preston Operations	Value Added \$m	Household Income \$m	Employment FTE Jobs
Victoria (including flow-on)	\$178.3	\$9.1	109

In Victoria, Preston Operations is estimated to have contributed:

- \$178 million in gross state product in Victoria;
- \$9 million in household income; and
- 109 FTE jobs to the state economy.

<sup>1</sup> Latrobe Valley Region encompassing the statistical areas level 3 of Baw Baw, Latrobe Valley and Wellington as requested by Australian Paper.

# AUSTRALIAN PAPER

## Overall Impact of the De-Inking Plant

The economic impact of the De-Inking Plant (DiP) operations and capital expenditure on the national, state and regional economies is shown in the table below.

Overall Impacts De-Inking Plant	Value Added \$m	Household Income \$m	Employment FTE Jobs
Victoria (incl. flow-on)	\$71.5	\$17.2	218
Latrobe Valley (incl. flow-on)	\$49.1	\$6.6	82
% of Latrobe Valley	0.7%	0.2%	0.2%

In Victoria, DiP operations and capital expenditure contributed:

- \$71 million in gross state product;
- \$17 million in household income; and
- 218 FTE jobs in Victoria

In the Latrobe Valley region, the De-Inking Plant operations and capital expenditure contributed an estimated:

- \$49 million in gross regional product;
- \$6 million in household income; and
- 82 FTE jobs in the Latrobe Valley region.

The main industry sectors impacted by the flow-on from the DiP operations in terms of FTE employment in the Latrobe Valley region were:

- Personal and other services (4 FTE);
- Electricity, gas, water and waste services (3 FTE);
- Health and community services (2 FTE);
- Retail trade (2 FTE); and
- Hospitality Services (3 FTE).

## ECONOMIC AND GOVERNMENT REVENUE IMPACTS

### Contribution to Government Revenue

Australian Paper has provided WRI with data and information regarding contributions to government revenue. Australian Paper contributed approximately \$156 million in government payments (excluding indirect taxes or flow-on effects) in 2015. This amount is split across the following contributions:

- personal GST was \$4.6 million;
- employee withholding amounts was \$41.6 million;
- superannuation tax was \$1.7 million;
- fuel excise was \$0.76;
- EPA and licensing was \$0.73;
- property rates and taxes were \$1.8 million;
- import duties were \$0.08;
- payroll tax was \$7.4 million;
- fringe benefit tax was \$1.4 million;
- WorkCover payments were \$0.25;
- Government purchases were \$44.5 million;
- HVP rates were \$1.5 million; and
- Gas, calcium carbonate and starch inputs were \$49.6 million.

Australian Paper contributed a total of \$452 million in taxes (includes indirect taxes and flow-on effects) for the year 2015 and produced a total of 600,433 tonnes of paper. Australian Paper's national contribution to government revenues is equivalent to \$753 per tonne or \$1.88 per ream of paper produced, and in terms of state contributions \$732 per tonne or \$1.83 per tonne in Victoria.

# AUSTRALIAN PAPER

## INTRODUCTION

Australian Paper is a vertically integrated manufacturer of pulp, paper, envelopes and stationery. The organisation is Australia's only manufacturer of office and printing papers, bag, sack, lightweight packaging and industrial papers, and is also a major supplier of Kraft liner board and the largest envelope manufacturer in Australia.

Australian Paper has engaged WRI in past projects to measure the organisation's economic impacts in 2012 and 2013. The company now wishes to update these findings to understand the economic impact of its Preston operations, Maryvale Mill, and De-Inking Plant (DiP) for the 2015 calendar year. Specifically, the scope of the work required WRI to prepare an assessment of the:

- Economic impacts on Australia from Australian Paper's overall total of operations and capital expenditure;
- Economic impacts on Australia from Maryvale Mill's operations and capital expenditure;
- Economic impacts on Victoria from Australian Paper's overall operations, Maryvale Mill, Preston and DiP operations and capital expenditure;
- Economic impacts on the Latrobe Valley region from the Maryvale Mill and DiP operations and capital expenditure.

In addition, the report examines Australian Paper's economic contribution to Government revenue in terms of direct inputs such as payroll and associated employment withholding taxes, fuel excise, environmental and resources procurement (water and timber products). Included in the study is the estimation of contribution to HVP rates, total Australian Paper fuel excise for timber transport and the contribution to government revenue from gas, calcium carbonate and starch inputs. Contributions to government revenues have been calculated in terms of indirect and flow-ons nationally and for the state of Victoria.

# ECONOMIC AND GOVERNMENT REVENUE IMPACTS

## METHODOLOGY

The economic impacts were assessed at the national, state and regional level. Modelling was undertaken through input-output analysis, which provides a detailed picture of the structure of an economy at a point in time, and can be used to estimate the contribution or impact of a particular sector of the economy or an individual organisation including flow-on or multiplier effects. The impacts are measured in terms of gross domestic, gross state and gross regional product, household income and full-time equivalent jobs. All impacts are expressed in either dollar terms or full-time equivalent employment terms and as a percentage of the national or relevant state or regional economy.

### Constructing the Tables

The input-output table for this project was extracted from the Australian Bureau of Statistics (ABS) 2012-13 national input-output table using the Generation of Regional Input-Output Tables (GRIT) technique. The national table was adjusted to represent Victoria using detailed ABS data from the 2014-15 publications State Accounts (ABS cat no. 5220.0) and Labour Force, Australia, Detailed Quarterly (ABS cat. no. 6291.0.55.003). Subsequently a regional table was built for the Latrobe Valley Region (aggregation of SA3 regions) using total employment data sourced from the 2011 ABS Census and the proportion FTE and growth rates calculated from the ABS Labour Force Catalogue, Employed Persons by Region, Sex & Industry, using the most appropriate Labour Force Region data (ABS Cat. No. 6291.0.55.003). These adjustments provide base tables for the 2014-15 financial year.

The GRIT technique derives regional input-output tables from the national input-output table using location quotients and superior data, such as primary survey data (in this case, information regarding the operations of Australian Paper as well as regional employment and income data), at various stages in the construction of the tables. Appendix 1 provides more detail about input-output analysis.

### Geographical Scope

Australian Paper’s economic impact for Maryvale Mill and De-inking Plant operations were assessed at the state level and at the regional level where the Maryvale Mill and De-inking Plant are located. For the purpose of this report the Latrobe Valley region is the aggregation of statistical area level 3 regions from the Australian Statistical Geographical Standard (ASGS). Table 1 outlines the definitions of broader regions discussed in this report for the Gippsland and Latrobe Valley regions.

The Latrobe Valley region has been defined by Australian Paper as the aggregation of Baw Baw, Latrobe Valley and Wellington statistical area level 3.

**Table 1: Broader Region Definitions**

Broader Regions	Statistical Area Level	State within which the Latrobe Valley region is located
Latrobe Valley	Baw Baw (SA3)	Victoria
	Latrobe Valley (SA3)	
	Wellington (SA3)	

# AUSTRALIAN PAPER

## Data collection

The national input-output table includes only one sector for all Pulp, Paper and Converted Paper Product Manufacturing. In order to estimate the economic contribution of Australian Paper operations, WRI was supplied with detailed information about the company's expenditure, location of expenditure, employment, and revenues. This information was used to construct a new sector in the input-output table representing the operations of Australian Paper. The original Pulp, Paper and Converted Paper Product Manufacturing sector was then deflated by the proportion represented by Australian Paper's output.

## Revenue

Revenue data was supplied by Australian Paper and was allocated to the region from which it paid i.e. within the relevant state or statistical area or from outside the local area. Revenue was allocated to industry sectors utilising the same method conducted in the 2012 study. Any income made within the area of interest is considered to be 'local' and revenue received outside of the local area is deemed to be an export to the region.

## Wages and Salaries

Human resource information including number of full-time employees (FTE) and associated wages and salaries for the calendar year 2015 was supplied by Australian Paper.

## Other Expenditure

Australian Paper has supplied information regarding other expenditure made during 2015 by type and location where the purchase was made. Expenditure was allocated to industry category utilising the same method conducted in the 2012 study. Any expenditure made within the region being modelled is considered to be 'local' and anything made outside of this area is deemed to be an import to the region.

## Capital Expenditure

Australian Paper has supplied information regarding capital expenditure during 2015 by type of expenditure and the location where the purchase was made. This one off capital expenditure was treated as a final demand impact in the relevant tables.

# ECONOMIC AND GOVERNMENT REVENUE IMPACTS

## Impact Analysis

### Industry Significance

Input-output tables are frequently used to provide estimates of the significance of a particular industry or organisation in terms of its contribution to the economy. This is done by examining the effects of the organisation shutting down and ceasing all economic activities. This method provides an estimate of the level of economic activity that can be attributed to that particular organisation, in this case Australian Paper.

### Final Demand Impacts

The final demand impact analysis calculates the impacts (measured by output, value added, household income and employment) across all sectors in response to changes in industry final demands. Specifically, expenditure was allocated to the relevant sectors to give the estimated impacts of this expenditure including both initial and flow-on effects.

## Reporting

The economic impact of Australian Paper operations including Preston, Maryvale Mill, the De-Inking Plant and warehousing operations has been reported as the sum of:

- Initial impacts: defined as the value of the immediate changes in the respective region as a result of the Australian Paper operations; and
- Flow-on impacts: defined as the value of changes in the regional economy in the course of an additional round of spending after the initial impact occurred.

The impact of Australian Paper on each of the study areas was estimated in terms of:

- Value added: the amount by which the value of an article is increased at each step of its production, exclusive of its initial cost. Value added is equal to gross output minus intermediate inputs and is equivalent to the contribution to gross regional product (GRP - the local equivalent of gross domestic product). That is, value added is the difference between the costs of production (excluding the compensation of employees, gross operating surplus, taxes and imports) and the value of sales turnover. Value added sums the value added components of production through the supply chain, while initial expenditure includes multiple counting of expenditure through the supply chain. Value added is the most reliable measure of the actual value of production.
- Income: measuring the benefit received by regional households from economic activity. It typically refers to compensation of employees but can also include income in return for productive activity such as the gross mixed income of unincorporated enterprises, gross operating surplus on dwellings owned by persons, and property income receivable and transfers receivable such as social assistance benefits and non-life insurance claims.
- Full-time equivalent employment: a measure of the workload of an employed person in a given location that makes workloads comparable across different types of employment (part-time, full time and casual).

# AUSTRALIAN PAPER

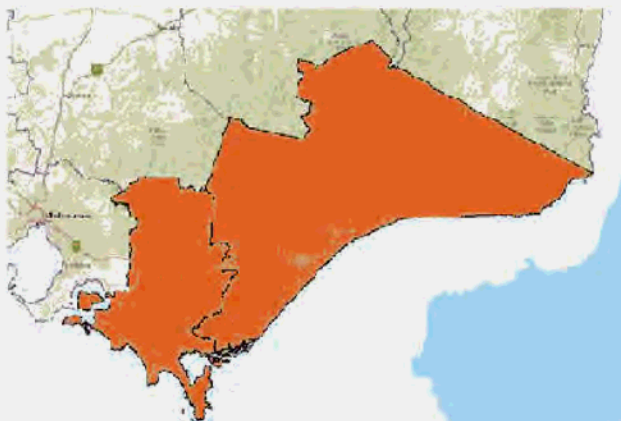
## Comparison with previous studies

Direct comparison between the results found in this economic impact assessment of Australian Paper and its entities and previous studies should be treated with caution for a number of reasons including:

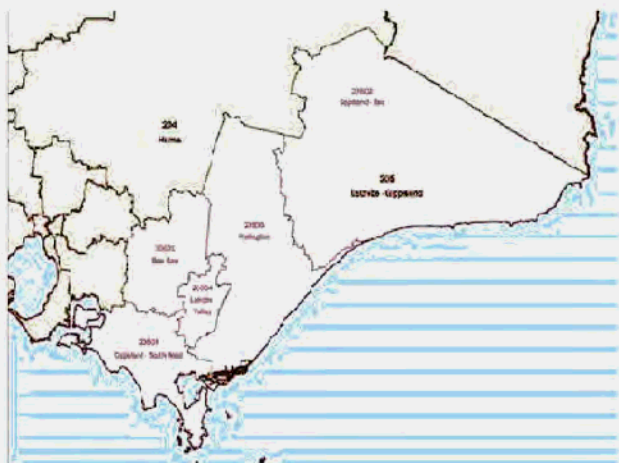
- The assessment undertaken for the 2011 calendar year used 2007-08 national input output table as the base as well as National and State Accounts for 2010-11. The current assessment for the 2015 calendar year used the 2012-13 national input-output tables as the base as well as the 2014-15 National and State Account;
- Advances in economic modelling procedures; and
- The previous study used the Australian Standard Geographical Classification (ASGC) developed by the Australian Bureau of Statistics (ABS) to define the statistical divisions at the regional level. In July 2011 this was changed and the Australian Statistical Geographical Standard (ASGS) was implemented. The implication here is that the statistical area of the Gippsland region in the past report was the sum of East Gippsland and Gippsland whereas in this study the combined area is now called Latrobe-Gippsland. There is minimal difference between the ASGC and the ASGS, however some minor impacts on comparability could be expected. See Figure 1 below and Figure 2 overleaf for graphical representation.

## ECONOMIC AND GOVERNMENT REVENUE IMPACTS

**Figure 1: Australian Standard Geographical Classification prior to 2011**



**Figure 2: Australian Statistical Geographical Standard 2011**



All results reported are estimates based on data provided by Australian Paper and the adopted modelling methodology.

# AUSTRALIAN PAPER

## THE ECONOMIC IMPACT OF AUSTRALIAN PAPER

### 1. AUSTRALIAN PAPER

#### Australian Impacts

Aggregating the impacts of operations and capital expenditure in 2015, Australian Paper contributed \$911 million to gross domestic product and 5,786 FTE jobs nationally when flow-on effects were taken into account.

In 2015, Australian Paper operations and capital expenditure contributed 0.1 per cent of gross domestic product, 0.1 per cent of household income and 0.1 per cent of FTE employment in the Australian economy when flow-on effects were taken into account.

Table 2 summarises these impacts below.

**Table 2: Economic Impact of Australian Paper in Australia, 2015**

Aggregated Impacts Australia	Value Added \$m	Household Income \$m	Employment FTE Jobs
Australia (including flow-on)	\$911.2	\$494.7	5,786
% of Australia	0.1%	0.1	0.1%

Overall, the operations and capital expenditure of Australian Paper, including flow-on effects, contributed to the Australian economy in 2015:

- \$911 million in gross domestic product;
- \$494 million in household income; and
- 5,786 FTE jobs;

The main industry sectors impacted by the flow-on from Australian Paper in terms of FTE employment in nationally are:

- Transport, postal and warehousing (483 FTE);
- Personal and other services (397 FTE);
- Professional, scientific and technical services (363 FTE);
- Retail trade (360 FTE); and
- Wholesale trade (289 FTE).

# ECONOMIC AND GOVERNMENT REVENUE IMPACTS

## Victorian Impacts

Aggregating the impacts of operations and capital expenditure in 2015, Australian Paper contributed \$819 million to gross product, \$440 million in household income and 5,576 FTE jobs in Victoria when flow-on effects are taken into account.

In 2015, Australian Paper operations and capital expenditure contributed 0.23 per cent of gross state product, 0.25 per cent of household income and 0.23 per cent of FTE employment in the Victorian economy.

These impacts are summarised in Table 3 below.

**Table 3: Economic Impact of Australian Paper in the Victorian Economy, 2015**

Aggregated Impacts Victoria	Value Added \$m	Household Income \$m	Employment FTE Jobs
<b>Victoria (including flow-on)</b>	\$819.1	\$440.6	5,576
<b>% of Victoria</b>	0.2%	0.3%	0.2%

## Production Value

The Western Research Institute (WRI) has calculated the economic impact of Australian Paper operations at the production level in terms of per tonne and per ream of paper produced in the calendar year 2015. Table 4 below shows the positive impact from purchasing Australian made paper products:

**Table 4: Australian Paper per tonne and per ream of paper produced, 2015**

Production Value Australia	Value Added \$	Household Income \$
<b>Australian total per tonne of paper produced</b>	\$1,449	\$787
<b>Australian total per ream</b>	\$3.62	\$1.97

One tonne of paper produced contributes \$1,450 in gross domestic product and \$787 to wages and salaries for Australian households. For every 110 tonne of paper produced by Australian Paper this goes on to support 1 full-time equivalent job in the economy.

One ream of paper contributes \$3.62 in gross domestic product into the Australian economy, and \$1.97 in wages and salaries to households.

# AUSTRALIAN PAPER

## 2. MARYVALE MILL

### Australian Impacts

Table 5 below summarises the aggregated economic impacts of Maryvale Mill's operational and capital expenditure made on the national economy. In 2015, the Maryvale Mill contributed \$753 million in gross domestic product, \$359 million in household income and 4,305 full-time equivalent jobs in Australia when flow-on effects are included.

**Table 5: Economic Impact of Maryvale Mill Operations and Capital Expenditure on Australia, 2015**

Aggregated Impacts Australia	Value Added \$m	Household Income \$m	Employment FTE Jobs
<b>Total Impact (Including Flow-on)</b>	\$753.4	\$359.6	4,305

### Victorian Impacts

Maryvale Mill's aggregated impacts contributed \$741 million to gross state product, \$353 million in household income and 4,234 FTE jobs in Victoria when flow-on effects are taken into account.

In 2015, Maryvale Mill operations and capital expenditure contributed 0.2 per cent of gross state product, 0.2 per cent of household income and 0.2 per cent of FTE employment in the Victorian economy when flow-on effects were taken into account.

Table 6 summarises the aggregated economic impact of Maryvale Mill operations and capital expenditure in Victoria for the 2015 calendar year.

**Table 6: Economic Impact of Maryvale Mill Operations and Capital Expenditure on Victoria, 2015**

Aggregated Impacts Victoria	Value Added \$m	Household Income \$m	Employment FTE Jobs
<b>Total Impact (Including Flow-on)</b>	\$741.8	\$353.2	4,234
<b>% of Victoria</b>	0.2%	0.2%	0.2%

### Latrobe Valley Regional Impacts

Maryvale Mill's aggregated economic impacts for the Latrobe Valley region contributed \$451 million in gross regional product, \$216 million in household income and 2,387 full-time equivalent jobs to the local economy.

Table 7 overleaf summarises the aggregated impacts and the equivalent contributions as a percentage of the Latrobe Valley economy. Maryvale Mill's economic impact contributes 6.8 per cent of Latrobe Valley gross regional product, 7.9 per cent of household income and 5.5 per cent of jobs to the local economy in 2015.

# ECONOMIC AND GOVERNMENT REVENUE IMPACTS

**Table 7: Economic Impact of Maryvale Mill Operation and Capital Expenditure on the Latrobe Valley region, 2015**

Aggregated Impacts Latrobe Valley	Value Added \$m	Household Income \$m	Employment FTE Jobs
<b>Latrobe Valley (including Flow-on)</b>	\$451.9	\$216.5	2,387
<b>% of Latrobe Valley</b>	6.8%	7.9%	5.5%

The main industry sectors that benefitted from flow-on employment in the Latrobe Valley region, as a result of the Maryvale Mill, were:

- Agriculture, Forestry and Fishing (197 FTE);
- Electricity, gas, water and waste services (182 FTE);
- Personal & Other Services (135 FTE);
- Health and community services (126 FTE); and
- Transport, Postal and Warehousing (125 FTE).

# AUSTRALIAN PAPER

## 3. DE-INKING PLANT (DIP)

### Victorian Impacts

DiP’s aggregated impacts contributed \$71 million to gross state product, \$17 million in household income and 218 FTE jobs in Victoria when flow-on effects are taken into account.

Table 8 below summarises the aggregated economic impact of DiP operations and capital expenditure in Victoria for 2015.

**Table 8: Economic Impact of DiP Operations and Capital Expenditure on Victoria, 2015**

DiP Aggregated Impacts Victoria	Value Added \$m	Household Income \$m	Employment FTE Jobs
Victoria (including Flow-on)	\$71.5	\$17.2	218

### Latrobe Valley Regional Impacts

DiP’s aggregated operational and capital expenditure impacts contributed \$49 million to gross regional product, \$6 million in household wages and 82 FTE jobs to the Latrobe Valley economy when flow-on effects are taken into account.

Table 9 below summarises the aggregated economic impact of DiP operations and capital expenditure in the Latrobe Valley region for the 2015 calendar year, included is DiP’s operational and capital expenditure contribution represented as a proportion of Latrobe Valley’s economy. DiP contributes 0.7 per cent to gross regional product, 0.2 per cent to household income and 0.2 per cent of FTE employment to the Latrobe Valley economy when flow-on effects are taken into account.

**Table 9: Economic Impact of DiP Operations and Capital Expenditure on the Latrobe Valley Region, 2015**

DiP Aggregated Impacts Latrobe Valley	Value Added \$m	Household Income \$m	Employment FTE Jobs
Latrobe Valley (including Flow-on)	\$49.1	\$6.6	82
% of Latrobe Valley Economy	0.7%	0.2%	0.2%

The main industry sectors impacted by the flow-on from the DiP operations in terms of FTE employment in the Latrobe Valley region were:

- Personal and other services (4 FTE);
- Electricity, gas, water and waste services (3 FTE);
- Health and community services (2 FTE);
- Retail trade (2 FTE); and
- Hospitality Services (3 FTE).

## ECONOMIC AND GOVERNMENT REVENUE IMPACTS

### 4. PRESTON OPERATIONS

Located in Preston in the northern suburbs of Melbourne, Australian Paper's Preston manufacturing facility is the largest envelopes and stationery manufacturer in Australia. Using paper sourced largely from Australian Paper owned paper mills, Preston has the capability to manufacture 2.1 billion envelopes per year servicing the mailing needs of Australian businesses through custom designed, commercial and retail mailing products.

The economic contribution of operations based in Preston has been estimated based on operational and capital expenditure made in the calendar year 2015. Impacts have been measured at the state level.

#### Victorian Impacts

Table 10 below shows the aggregated economic impacts of Preston operations and capital expenditure in Victoria for the year 2015. Contributions were \$178 million in gross state product, \$9 million in household income and 109 full-time equivalent jobs to the Victorian economy when flow on effects are taken into account.

**Table 10: Economic Impact of Preston Operations and Capital Expenditure on Victoria, 2015**

Preston Aggregated Impacts Victoria	Value Added \$m	Household Income \$m	Employment FTE Jobs
<b>Victoria (including Flow-on)</b>	\$178.3	\$9.1	109

The main industry sectors impacted by the flow-on from Preston operations in terms of FTE employment in the state of Victoria were:

- Transport, postal and warehousing (15 FTE);
- Professional, scientific & technical services (6 FTE);
- Retail trade (6 FTE);
- Accommodation, cafes and restaurants (4 FTE); and
- Finance and insurance (4 FTE).

# AUSTRALIAN PAPER

## CONTRIBUTION TO GOVERNMENT

Australian Paper is a significant contributor to the revenues of government. In this analysis, WRI has examined the data provided by Australian Paper and has provided calculations that represent the contribution to government revenues by each ream of paper produced for the calendar year 2015.

In order to account for flow-on effects to the broader economy, associated with taxes paid and expenditure by Australian Paper, its employees and contractors, WRI has used multipliers generated from the economic impacts previously presented in this report.

### **Estimates of government revenue per ream of paper manufactured by Australian Paper**

WRI has included the following items in the calculation of government revenue per ream of paper (due to operational expenditure):

- Salaries and wages in Australian Paper, as well as salaries and wages in the rest of the economy;
- Superannuation paid to Australian Paper employees, plus superannuation paid in the rest of the economy;
- Personal GST paid by Australian Paper employees plus personal GST paid as a result of indirect effects;
- Excises paid by Australian Paper and outside contractors;
- Payroll tax and fringe benefit taxes paid by Australian Paper and by other firms as a result of indirect effects;
- Property rates and taxes, EPA and other licenses, and import duties;
- Purchases of inputs (water, timber, gas, calcium carbonate and starch) from government owned bodies; and
- Rates paid to HVP.

Australian Paper contributed approximately \$156 million in government payments (excluding indirect taxes or flow-on effects) in 2015.

### **Calculations by WRI**

A due diligence report was undertaken in 2013 of Australian Papers contribution to government revenues per ream of paper by WRI. WRI has followed a similar approach in calculating the effects associated with expenditure by workers/employees of government owned bodies, where Australian Paper sources its inputs. In the due diligence report this was achieved by considering income taxes paid by these workers and employees (assumed to be 30 per cent of taxable income), taxes on superannuation contribution (the latter assumed to be 11 per cent of salaries/wages), and associated flow on effects (based on government sector multiplier of 2.26).

WRI has examined additional government revenues per ream of paper attributable to capital expenditure by Australian Paper for the corporate and IT division, Preston operations, Shoalhaven, Maryvale Mill and De-inking Plant. The estimates were based on salaries and wages data provided by Australian Paper, and assumptions about personal GST as a proportion of salaries and wages (assumed to be similar to operation

## ECONOMIC AND GOVERNMENT REVENUE IMPACTS

expenditure case), income tax (30%), superannuation contributions (9%), and household income multiplier (3.49). Due to the likely use of contract labour in capital expenditure, payroll taxes, FBT and WorkCover payments were not included in calculations. Similarly to operational expenditure, company GST was not considered either.

The direct and flow-on taxes occurring for operations and capital expenditure in Australia and Victoria are calculated and presented in Tables 11 and 12.

### **Compensation of employees**

Australian Paper provided WRI with wages and salary data for all employees and staff for the calendar year 2015. The value of wages and salaries was \$132.96 million.

### **Personal GST**

According to the Due Diligence Analysis undertaken by WRI in July 2013 the following assumptions have been made in calculating personal Goods and Service Tax (GST) attributable to expenditure by its employees and workers:

- Disposable income was 70 per cent of the total value of wages and salaries (i.e. was equivalent to wages and salaries net income tax);
- 50 per cent of the disposable income of its employees and workers was expended on items that attract GST, i.e. certain items, such as mortgage repayments, were excluded from GST calculation; and
- The GST rate is 10 per cent of the value of expenditure on items attracting GST.

Australian Paper has supplied total wage and salary data of its employees and workers. Personal GST attributable stands at \$4.65 million for the 2015 calendar year.

### **Employee Withholdings**

Australian Paper has supplied all data relating to the amount of Pay As You GO (PAYG) withheld for 2015. The total value of PAYG contributed to the Federal Government by Australian Paper was \$41.6 million.

### **Superannuation Contributions and tax liability**

Australian Paper has provided superannuation data for the 2015 calendar year. Australian Paper contributed \$11.8 million in superannuation to its staff and employees. A total of \$1.77 million was paid in superannuation tax for the year 2015, indicating a superannuation liability tax rate of 15 per cent.

### **Fuel Excise**

Australian Paper has provided estimates of the amount of diesel consumed in 2015 for the purpose of logistics etc. Data from the Australian Tax Office regarding fuel excise rates and fuel tax credit rates was used to calculate the net taxation revenue generated per litre of fuel used. In total, it was estimated that in 2015 Australian Paper indirectly contributed approximately \$764,746.50 in fuel excise payments, net of fuel tax credits.

## AUSTRALIAN PAPER

### **Income tax**

Australian Paper has supplied actual wages paid and actual Pay As You Go (PAYG) Withholding tax liability information for the 2015 calendar year. WRI has calculated the income tax rate to be 31.3 per cent for all of Australian Paper, including Preston Mill, Maryvale Mill and De-Inking Plant operations.

### **Environmental Protection Agency (EPA) and other licenses**

Australian Paper has provided WRI with data relating to information on the EPA and other licenses obtained during the 2015 calendar year. The total value of expenditure on licenses in 2015 was \$727,864.

### **Property rates and taxes and import duties**

Australian Paper has provided WRI with data relating to expenditure made towards land taxes paid and local government rates. The total value of expenditure on these items in 2015 came to \$1.85 million.

The value of import duties paid in the 2015 calendar year was \$88,400.

### **Payroll tax, fringe benefit tax, and WorkCover payments**

Australian Paper has provided WRI with actual figures of payroll tax, fringe benefit tax and WorkCover payments made in the 2015 calendar year:

- The value of payroll tax was \$7.47 million;
- The value of fringe benefit tax was \$1.43 million; and
- The value of WorkCover payments was \$0.25 million.

### **Purchases from government and government-owned organisations**

Australian Paper has provided WRI with expenditure data relating to purchases of timber and timber products from VicForests (\$39.57 million), and water purchased from Gippsland Water (\$4.93 million) in the 2015 calendar year giving a total value of \$44.5 million made in purchases from government and government-owned organisations.

### **Gas, calcium carbonate and starch inputs**

Australian Paper has provided expenditure amounts relating to natural gas purchases (\$29.29 million), calcium carbonate (\$10.02 million) and starch inputs (\$10.34 million) giving a total value of \$49.66 million in the 2015 calendar year.

### **HVP Plantation rates**

Melbourne based Hancock Victorian Plantation (HVP) is one of Australia's largest private plantation companies. HVP's mission is to, "manage the plantation estate in a safe and sustainable way to optimise the return to our investors, whilst balancing the needs of our employees, customers and local communities".<sup>2</sup>

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<sup>2</sup> Hancock Victoria Plantation (HVP), <http://www.hvp.com.au/about-hvp/> accessed 12.9.16

## ECONOMIC AND GOVERNMENT REVENUE IMPACTS

Australian Paper has provided the actual annual HVP rates bill for Gippsland where Australian Paper purchases 64 per cent of the annual wood harvest is \$1.5 million for the calendar year 2015.

### Capital Expenditure

Australian Paper has provided capital expenditure made in 2015. Estimated labour and material components totalled \$29.5 million with labour consisting of \$7 million and materials at \$22.5 million.

### Multipliers

Multipliers measure the relationship between the direct and indirect contributions of each industry at regional or economy wide levels and indicate the relative magnitude of the flow-on effects of each industry compared to the direct effect of that industry (i.e. a multiplier of 1.5 indicates that for every \$1 of direct impact there will be \$0.50 in flow-on effects).

With regard to multipliers:

- In the calculation of government revenue per ream of paper, WRI has used household income and wages multiplier in quantifying the indirect effects of Australian Paper operations;
- The indirect effects were not included for purchases of water, timber and inputs of gas, calcium carbonate and starch. The application of a multiplier to these items would be essentially double counting; and
- For items such as payroll tax, fringe benefit tax (FBT) and company GST, the applied multiplier should be smaller than the multiplier applied to salaries and wages (approximately 50 per cent of the original household multiplier). This is due to a significant number of suppliers in the first round, industrial support and consumption induced category will be small operations that do not pay fringe benefits tax, payroll tax or much company GST.

### Conclusion

Including indirect effects, WRI has determined the estimated government revenue contribution by Australian Paper nationally to be \$452 million. This is equivalent to a given value of \$753 per tonne or \$1.88 per ream of paper in 2015.

The value of contributions to government revenue made in Victoria is calculated to be \$439 million or equivalently \$732 per tonne or \$1.83 per ream of paper produced.

Ninety seven per cent of government revenue contributions (including indirect effects) from Australian Paper is made locally reinforcing the value of Australian Paper's impact to the state of Victoria.

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**Table 11: Calculations of government revenue per ream of paper- Australia, 2015**

Contribution to Government Revenues- Australia	Expenditure by Australian Paper (\$mIn)	Taxes paid (\$mIn)	Indirect effects (\$mIn)	Taxes (due to indirect effects), \$mIn	Total paid to government (\$mIn)
Salaries and wages	139.98	43.73	486.71	146.01	189.75
Superannuation	12.43	1.86	36.42	5.46	7.33
Personal GST		5.80		20.21	26.01
Payroll tax		7.47		13.02	20.49
FBT		1.44		2.51	3.95
Workcover		0.26			0.26
Property rates and taxes		1.06			1.06
Import duties		0.88			0.88
EPA and other licenses		0.73			0.73
Materials	22.56	2.26	26.78	2.68	4.93
	Australian Paper Inputs		Outside contractors		
Transport costs			60.54		
-Fuel costs (*)	2.95		20.28		
-Fuel excise (net) \$/litre	0.40	0.76	-	4.55	5.31
VicForest Timber Products	39.58	11.87	89.44	26.83	78.28
Superannuation (VicForests)	-	0.65	-	1.48	2.13
Gippsland Water	4.93	1.48	11.15	3.34	9.76
Superannuation (Gippsland Water)	-	0.08	-	0.18	0.27
HVP Plantation Rates	1.50	0.45	3.39	1.02	2.97
Gas, Calcium Carbonate and Starch inputs	49.67	14.90	112.24	33.67	98.24
<b>TOTAL</b>					<b>452.34</b>
				Paper produced (tonnes)	600,433
				Government revenue per tonne	\$753.35
				Government revenue per ream	<b>\$1.88</b>
Company GST		64.06		111.66	
Household income multiplier = 3.49 The household income multiplier applicable to inputs (VicForests, Gippsland Water) = 2.260 Multiplier applicable to Payroll, FBT and company GST = 1.74 Income tax = 30% Superannuation contribution = 9% Contribution tax = 15% Personal GST is calculated based on a proportion					

ECONOMIC AND GOVERNMENT REVENUE IMPACTS

Table 12: Calculations of government revenue per ream of paper-Victoria, 2015

Contribution to Government Revenues- Victoria	Expenditure by Australian Paper (\$mIn)	Taxes paid (\$mIn)	Indirect effects (\$mIn)	Taxes (due to indirect effects), \$mIn	Total paid to government (\$mIn)
Salaries and wages	133.51	40.054	464.16	139.25	179.30
Superannuation	11.86	1.778	34.75	5.21	6.99
Personal GST		5.570		19.42	24.99
Payroll tax		7.104		12.38	19.49
FBT		1.370		2.39	3.76
Workcover		0.155			0.15
Property rates and taxes		1.063			1.06
Import duties		0.884			0.88
EPA and other licenses		0.728			0.73
Materials	22.52	2.252	26.72	2.67	4.92
	Australian Paper Inputs		Outside contractors		
Transport costs			60.54		
-Fuel costs (*)	2.95		20.28		
-Fuel excise (net) \$/litre	0.40	0.76	-	4.55	5.31
VicForests Timber Products	39.58	11.87	89.44	26.83	78.28
Superannuation (VicForests)	-	0.65	-	1.48	2.13
Gippsland Water	4.93	1.48	11.15	3.34	9.76
Superannuation (Gippsland Water)	-	0.08	-	0.18	0.27
HVP Plantation Rates	1.50	0.45	3.39	1.02	2.97
Gas, Calcium Carbonate and Starch inputs	49.67	14.90	112.24	33.67	98.24
TOTAL					439.23
				Paper produced (tonnes)	600,433
				Government revenue per tonne	\$731.51
				Government revenue per ream	\$1.83
Company GST		55.64		96.99	
Household income multiplier = 3.49 The household income multiplier applicable to inputs (VicForests, Gippsland Water) = 2.260 Multiplier applicable to Payroll, FBT and company GST = 1.74 Income tax = 30% Superannuation contribution = 9% Contribution tax = 15% Personal GST is calculated based on a proportion					

# AUSTRALIAN PAPER

## CONCLUSION

Australian Paper made a significant contribution to the national economy, with the Victorian and regional economy of Latrobe Valley experiencing the greatest impacts in 2015.

### National

At the national level, Australian Paper contributed the following from operational and capital expenditure in 2015 when flow-on effects are taken into account:

- \$911 million in gross domestic product;
- \$494 million in household income; and
- 5,786 full-time equivalent jobs.

Maryvale Mill operations and capital expenditure contributed nationally:

- \$753 million in gross domestic product;
- \$359 million in household income; and
- 4,305 full-time equivalent jobs.

### Victoria

At the Victorian level Australian Paper's overall operations and capital expenditure contributed:

- \$819 million in gross state product;
- \$440 million in household income; and
- 5,576 full-time equivalent jobs.

Maryvale Mill operations and capital expenditure contributed to Victoria:

- \$741 million in gross state product;
- \$353 million in household income; and
- 4,234 full-time equivalent jobs.

Preston operations and capital expenditure contributed:

- \$178 million in gross state product;
- \$9 million in household income; and
- 109 full-time equivalent jobs.

The De-Inking Plant operations and capital expenditure contributed:

- \$71 million in gross state product;
- \$17 million in household income; and

## ECONOMIC AND GOVERNMENT REVENUE IMPACTS

- 218 full-time equivalent jobs.

### Latrobe Valley

At the Latrobe Valley regional level in 2015 the Maryvale Mill operations and capital expenditure impacts contributed:

- \$451 million in gross regional product;
- \$216 million in household income; and
- 2,387 full-time equivalent jobs.

DiP operations and capital expenditure impacts contributed regionally:

- \$49 million in gross regional product;
- \$6 million in household income; and
- 82 full-time equivalent jobs.

Furthermore, in comparison to the 2012 report it was estimated that the proposed recycling plant operations would contribute 0.13 per cent to the gross regional product of Gippsland-Latrobe Valley region. Australian Paper's De-Inking Plant operations contributed in 2015 an estimated 0.74 per cent in gross regional product exclusively to the Latrobe Valley region.

Australian Paper made significant contributions to government revenues both at the federal and state level in the 2015 calendar year.

Australian Paper contributed approximately \$156 million in direct government receipts (excluding indirect tax effects) this consisted of payments of employee withholding taxes, superannuation tax, payroll tax, property rates and taxes, import duties, EPA and licensing fees, purchases from VicForests and Gippsland Water, HVP rates and flow-on government revenues from gas, calcium carbonate and starch inputs. When including personal GST and indirect tax effects this equates to \$753 per tonne or \$1.88 per ream of paper produced nationally.

# AUSTRALIAN PAPER

## APPENDIX 1: INPUT-OUTPUT ANALYSIS

Input-output tables are part of the Australian national accounts. An input-output model provides a very detailed picture of the structure of an economy at a particular point in time. It includes all the transactions that occur during a specific period, usually one year.

The rows of an input-output table show the disposal of the output of an industry to itself and to other industries as well as final demand categories (e.g. exports and household consumption); and

The columns show the origin of inputs into production, whether they are intermediate inputs (i.e. intra- and inter-industry purchases) or primary inputs (e.g. labour and capital).

The main use of input-output tables is economic impact analysis, where the tables are used to estimate the benefits generated by new initiatives on each and every sector of an economy. For example, if there is a change in the purchasing or sales pattern of any industry, the flow on, or multiplier, effects on upstream industries can be calculated. An input-output table is also very useful for estimating the direct and indirect contribution of final demand, as with the expenditure associated with Australia Paper Operations.

One of the main attractions of input-output models is their relative ease of use and the level of detail obtained concerning the structure of the economy. The Australian Bureau of Statistics (ABS) notes the usefulness of input-output tables:

*“Input-output tables provide detailed information about the supply and disposition of commodities in the Australian economy and about the structure of, and inter-relationships between, Australian industries. Detailed data on supply and use of commodities, inter-industry flows and a range of derived data, such as input-output multipliers, are provided for economic planning and analysis, and construction of models for forecasting purposes.” (ABS Introduction to Input-Output Multipliers, Cat. 5246.0)*

The application of input-output analysis to estimate the economic impact of Australian Paper operations on Australia, Victoria and Gippsland region involves four basic steps:

- Construction of appropriate national, state and regional input-output tables;
- Analysis of the value of expenditure by type (expenditure by visitors and by the facility) and origin (local, imported and total);
- Assessment of final demand impacts from these expenditure categories; and
- Using marginal coefficients to overcome the problem of over-estimation associated with linear coefficients.

The input-output table for this project was extracted from the Australian Bureau of Statistics (ABS) 2012-13 national input-output table using the Generation of Regional Input-Output Tables (GRIT) technique. The national table was adjusted to represent Victoria using detailed ABS data from the 2014-15 publications State Accounts (ABS cat no. 5220.0) and Labour Force, Australia, Detailed Quarterly (ABS cat. no. 6291.0.55.003). Subsequently a regional table was built for the Latrobe Valley Region (aggregated SA3 areas within the Gippsland-Latrobe SA4) using total employment data sourced from the 2011 ABS Census and the proportion FTE and growth rates calculated from the ABS Labour Force Catalogue, Employed Persons by Region, Sex & Industry, using the most appropriate Labour Force Region data (ABS Cat. No. 6291.0.55.003). These adjustments provide base tables for the 2014-15 financial year.

## ECONOMIC AND GOVERNMENT REVENUE IMPACTS

The GRIT technique derives regional input-output tables from the national input-output table using location quotients and superior data, such as primary survey data, at various stages in the construction of the tables. The GRIT procedure was developed by Associate Professor Guy West and Professor Rod Jensen of the University of Queensland and is the most widely used method of constructing regional input-output tables in Australia. The GRIT method is also widely used in America and Europe.

Note:

An iterative 3 step process<sup>3</sup> was applied to calculate the growth rates applied to the SA4 data this included:

- Selecting the most appropriate SA4 (Gippsland – Latrobe) region.
- Determining an aggregate growth rate based on 4 quarter averages for the relevant periods.
- Identifying abnormally high or low growth rates and adjusted based on an analysis of other data in the time series.

GRIT uses a series of non-survey steps to produce a prototype regional table from the national table, but provides the opportunity at various stages for the insertion of “superior data”, in this case data on expenditure obtained for the various components of each event. The system is “variable interference” in that the analyst is able to determine the extent to which they interfere with the mechanical processes by introducing primary or other superior data.

The GRIT system is designed to produce regional tables that are:

- Consistent in accounting terms with each other and with the national table;
- Capable of calculations to a reasonable degree of holistic accuracy; and
- Capable of being updated with a minimum effort as new data becomes available.

The final input-output tables were balanced using the RAS technique. The RAS technique is a bi-proportional iterative adjustment method designed to modify a base input-output matrix to fit new row and column totals. The rows and columns are simply adjusted proportionally to the new row and column totals in turn, and the cycle repeated until the actual row and column totals converge to the specified values. After the tables are balanced they are checked to ensure that the final tables are consistent and to identify any large discrepancies.

### Marginal Coefficients Model

One of the main limitations of input-output tables is the assumption of linear coefficients. To address this problem and the associated problem of overestimation, the input-output analysis undertaken for the Australian Paper operations incorporates the marginal coefficients model which attempts to overcome the limitations of traditional input-output analysis by removing the assumption of linear coefficients for the household sector. As is well documented in literature, the household sector is the dominant component of multiplier effects in an input-output table so using marginal income coefficients for the household sector only provides a more accurate estimate of the multiplier effects and provides results closer to those of a

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<sup>3</sup> This same process was applied when constructing the Latrobe Valley regional table from an aggregation of SA3 regions Baw Baw, Latrobe Valley and Wellington.

## AUSTRALIAN PAPER

computable general equilibrium (CGE) model. This provides more accurate estimates of the significance of impacts associated with Australian Paper operations, than would be possible with traditional input-output analysis.

The impacts are measured in terms of industry value added, gross regional product, household income and full-time equivalent jobs. All impacts are measured in either dollar terms or full-time equivalent employment terms and as a percentage of the regional economy.

### Industry Significance

Input-output tables are frequently used to provide estimates of the significance of a particular industry or organisation in terms of its contribution to the economy. This is done by examining the effects of the organisation shutting down and ceasing all economic activities. This method provides an estimate of the level of economic activity that can be attributed to that particular organisation, in this case the Pulp, Paper and Converted Paper Product Manufacturing industry. The Industry Significance approach was used to model the operations of Australian Paper.

Operational data was used to construct a new sector in the input-output table representing the Pulp, Paper and Converted Paper Product Manufacturing within respective economies. Adjustments were made to the original Pulp and Paper Manufacturing sector to reflect this division.

### Final Demand

The impact of operational expenditure for warehousing and one-off capital expenditure was estimated as a final demand impact. Specifically, their expenditure was allocated to the relevant sectors to give the estimated impacts of this expenditure including both initial and flow-on effects.

### Location quotients

Since expenditure items may not be produced locally, a location quotients matrix was applied in the model. This process effectively removes a proportion of total expenditure that represents expenditure made on imports into the relevant region.

*Note: In calculating the economic impact of Australian Paper operations it should be noted that the Australian Bureau of Statistics applies a confidentiality technique to its Census data tables. The technique involves small random adjustments to the data which help prevent the disclosure of any identifiable data<sup>4</sup>.*

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<sup>4</sup> For further information about the confidentiality technique adopted by the Australian Bureau of Statistics please refer to the following web address: <http://www.abs.gov.au/websitedbs/censushome.nsf/home/factsheetsccd?opendocument&navpos=450>

## REPORT TITLE

### WESTERN RESEARCH INSTITUTE

WRI is a regional development research organisation located in Bathurst, New South Wales. WRI holds a wealth of knowledge on employment, business development and investment issues affecting regional Australia. It has worked with Commonwealth, State and Local Governments and industry groups on numerous investment and development programs in regional areas. WRI has strong credentials in business and commercial market consulting and applied economic modelling including input-output analysis, shift-share, agribusiness and regional socio-economic surveys and analysis.

#### **Ms Wendy Mason – General Manager**

Wendy joined the WRI team as General Manager from her former position as Head of the Commonwealth Bank Foundation. Wendy comes to the role with extensive management and business development experience, excellent networks, and a substantial track record, in stakeholder relations across the government, financial and not-for-profit sectors; and, experience as a major end-user of research to support best practice outcomes.

She also brings with her formal qualifications in education and psychology from the University of Sydney, a Graduate Certificate in Human Resource Management and Graduate Certificate in Business (Marketing). Wendy also holds an Australian Institute of Company Director's Diploma of Business (Governance).

#### **Ms Danielle Ranshaw – Senior Research Consultant** BEc&Fin NSW

Danielle's experience in project management in the information technology sector combined with qualifications in economics and finance provides a solid background for WRI projects. With skills in systems design and development, Danielle has been able to extend WRI's capability in developing robust and increasingly complex systems to support research fieldwork. Additionally, Danielle has extensive experience in business process analysis, performance planning and review, report writing and project planning.

#### **Mr Alistair MacLennan – Senior Research Consultant**

##### **BA Political Economy, First Class Honours (UNE)**

Having served in a variety of parliamentary, public service and private sector roles, Alistair brings a wealth of research experience to WRI. Alistair has well developed skills in data analysis, economics and

business, and has a wide understanding of government. In addition, Alistair also has experience in policy development in the energy sector, where he engaged with industry, government agencies and NGOs to inform policy. Alistair's experience in engaging with clients, stakeholders and the public assists WRI to fully understand its client's needs and provide tailored research.

#### **Ms Wai Matthews – Research Consultant** BBus (Fin/Eco) CSU

With a background in Business Administration and Bookkeeping, Wai brings to WRI strong experience and knowledge in local business operations, management and finance. Wai has great interest in economic issues affecting regional areas which led to her attaining an internship with the NSW Department of Industry as an Economic Analyst. As an intern, Wai has gained a wealth of knowledge and experience in data analytics and reporting as well as a good understanding of government.

#### **Ms Dale Curran – Executive Officer** BA ANU

Dale is responsible for all administrative processes at WRI including executive support, finance, and management of the Board of Directors and maintenance of policies. She has worked in a variety of roles at WRI, including Fieldwork Supervisor and Research Assistant, and has worked on several community and business surveys. Dale brings a high level of organisational skill to her role as Executive Officer.



## WHY ANNOUNCE THE END OF NATIVE FOREST HARVESTING NOW?

### Australian Paper's future

- The TSA ends in mid-2022 and Australian Paper needs an assurance of its future timber supply if it is to re-invest.
- Supply from native forests is unreliable and increasing constraints mean that Australian Paper cannot invest for the long term on the basis of this timber feedstock.
- Retaining Australian Paper maintains 870 direct jobs at the Maryvale site in the Latrobe Valley and \$819 million in annual gross state product into the foreseeable future.
- Without a taker for pulp wood, because supply is integrated, supply to saw mills is even less financially viable than at present.
- It is not possible to announce Australian paper's shift to plantations without addressing the question of future saw log supply.

### Timber mills are in decline

- The increasing frequency and severity of bushfires and the community's increasing demands for biodiversity protection have made future timber supply to mills tenuous.
- Resource constraints, a history of short term contracts and widespread uncertainty have seen few saw mills invest to upgrade their plant or products. Consequently saw mills are finding it difficult to remain financially viable and may have closed over recent years.
- At present mills close sporadically and without warning. There is no systematic support for workers and communities, and no opportunity help them be pro-active in preparing for change or to shift to other enterprises.
- Seven commercial sawmills have contracts expiring in 2019 and a further 13 will expire in 2020.
- An announcement will provide security - enabling businesses to plan and invest appropriately.
- A gradual and supported transition to other industries will be less personally, socially and economically damaging than the current random process.
- Helping businesses before they completely exhaust their capital means they still have opportunities to transition to new wood supplies and product lines.

### Ongoing community conflict

- Government supported a Forest Industry Taskforce made up of key forests stakeholders, to try to develop a consensus on the future of Victoria's forests and forest industries.
- The fact that the Taskforce was unable to agree on recommendations to Government illustrates the highly polarised nature of community views on forests.
- Protest actions in forestry areas, high profile campaigns and costly litigation have divided many regional communities.
- Victorians want this issue resolved.
- There is broad community support for increased environmental protections, particularly for endangered and threatened species. The community would like to see more parks, but wants to know that those whose livelihoods depend on forest industries will also be supported.

PROTECTED



# Victorian Forestry Insights Report



33(1)

[REDACTED], Insights Officer  
Email: [REDACTED]@dpc.vic.gov.au



Premier  
and Cabinet

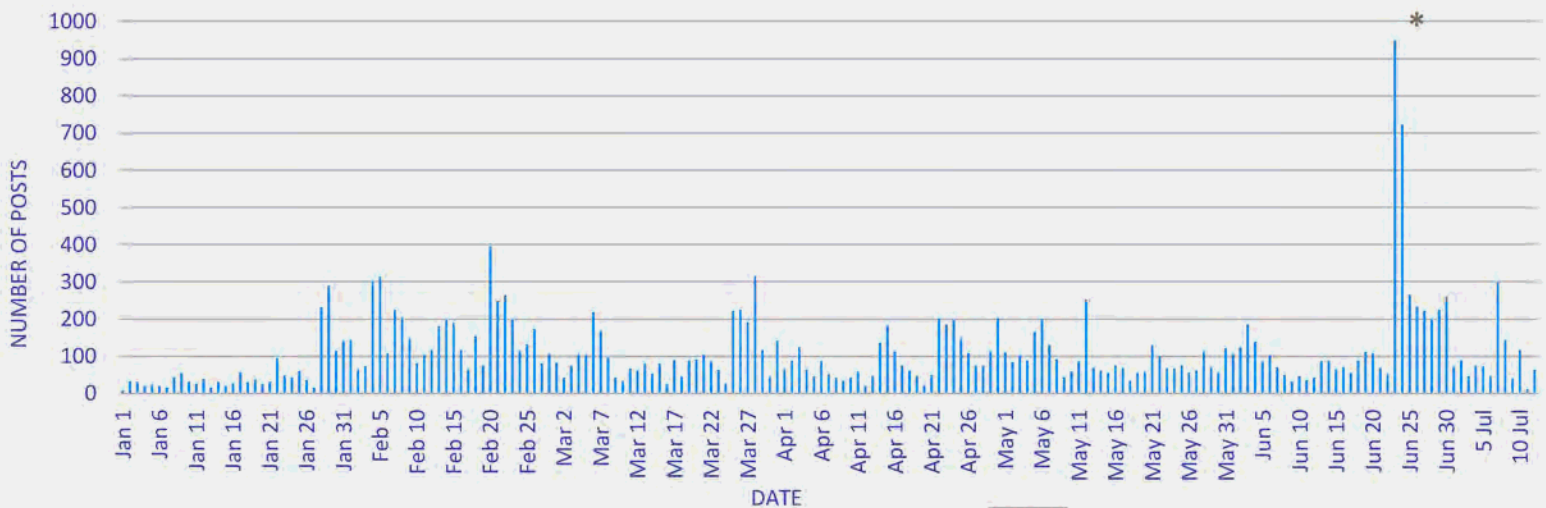
# CONTENTS

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# OVERVIEW

## Volume

20,958 mentions made to Twitter.



\* Largest spike in activity due to a Four Corners report named 'Extinction Nation'.

Other spikes in volume correlate with protests at certain logging sites. Environmental campaigners tweeted photos of signs and protestors.

The tweet to your right attracted the most engagement over this period. It was posted the day after the Four Corners report.



# TWITTER

Retweets  
accounted  
for 72% of  
posts

## Twitter Talking Points

- Ongoing calls from environmental groups and followers to end logging operations in Victoria.
- Criticism directed towards Reflex Paper. Calls from environmental campaigners for Officeworks to be 'on the right side of history'.
- Concerns the State Government would be logging in water catchments.
- Condemnation of logging operations in Kinglake with the perception the forest is still 'recovering' from the Black Saturday bushfires.
- 4 Corners report - Extinction Nation. 7.2% of total conversation contained #4Corners.

## Twitter Influencers

Majority of discussion across Twitter originated from those with 'Medium Authority' – consisting mostly of environmental campaigners.

Users who posted the most related tweets:

33(1)

- [REDACTED] – Sustainability Education, La Trobe University. 577 Tweets.
- [KNOT \(Toolangi\)](#) – Environmental campaigning group. 556 tweets.
- [Our Strathbogrie forest](#) – Environmental campaigning group. 417 tweets.

Posters with the highest authority:

- [REDACTED] (verified) – Cryptoparty founder
- [REDACTED] – Energy transition specialist
- [REDACTED] (verified) – New Matilda national affairs correspondent

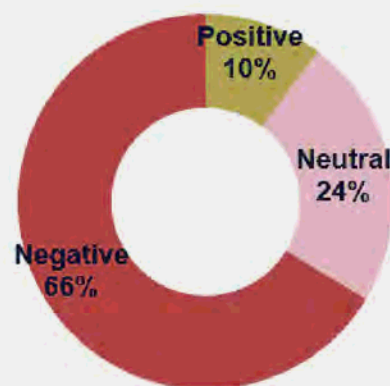
# TWITTER

## Posters with Low Authority

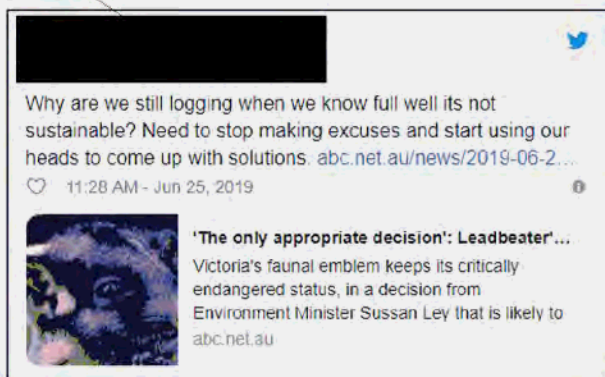
Authority is calculated by assessing followers and following data, number of tweets and number of retweets.

- Low authority commenters expressed negativity towards forestry operations in native forests.
- Users focused on climate change and threats to native species.
- While some attributed blame to the Federal Government, the majority of users named the Premier and Minister for Energy, Environment and Climate Change. This included criticism as well as calls to change current processes.
- The highest level of low authority posts followed the Four Corners 'Extinction Nation' report.

## Sentiment



33(1)



**“Disgraceful. Weak willed. Morally bereft. Unforgivable.”**

# FACEBOOK



## Traditional Media Posts

Seven posts to Facebook by media outlets. Commenters debated the logging industry in Victoria. Higher levels of positive sentiment seen on regional media posts.

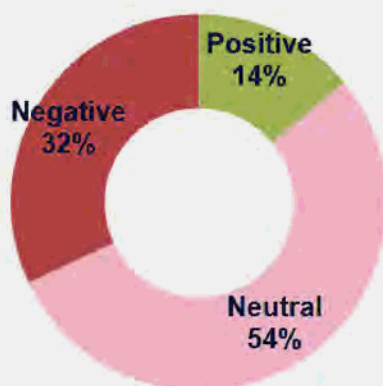
Those against logging in native forests argued:

- Logging should take place in regrowth areas, not state-owned forests.
- Newer trees should be harvested, not old growth.
- Forestry industry is “greedy” and only wants to ‘fill their pockets’.
- Wildlife should be protected.

Arguments supporting the forestry industry included:

- ‘Save logging jobs’ narrative.
- Criticism of ‘endangered’ status allocated to wildlife, specifically the Leadbeater’s Possum. Suggestions that numbers are low due to recent bushfires.
- ‘Locking up’ forests leads to an increase in bushfires.
- Forestry has not caused the extinction of native flora and fauna species.

## Sentiment



Time the government did a study of which industry has the best long term economic benefit. Eco Tourism or clear felling of old growth forests tourists love to visit, I know where I would put my money for the long term.

Like · Reply · 19w · Edited

25

33(1)

But how many are growing back every day. Trees do grow back and logged areas are logged again and again. Isn't that sustainable

Like · Reply · 20w

23

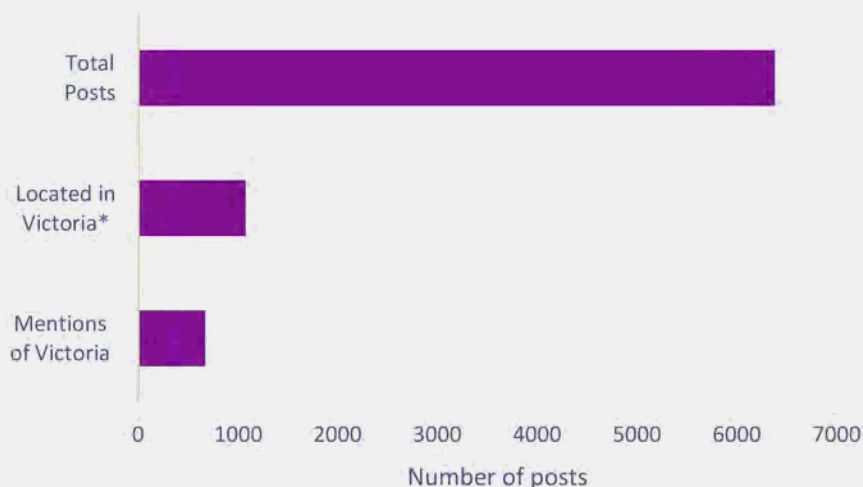
## TOPIC

### ‘Extinction Nation’

ABC Four Corners report titled ‘Extinction Nation: The fight to save Australia's endangered species’ focused on Victoria and Tasmania. On Facebook users made 702 public comments relating to the broadcast.

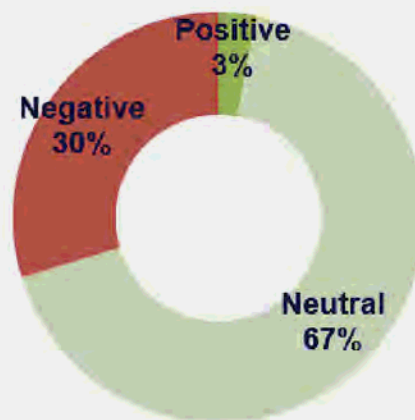
- Criticism of the Federal Government and Federal Environment Minister, Susan Ley. Comments that ‘it was great to see the Victorian Premier being confronted’.
- Concerns of human overpopulation causing so much demand.
- Discussion on the impact of ‘feral’ and ‘invasive’ species in Australia. Overall, users agreed that damage is caused by invasive species. Some argued that invasive species cause “more damage”. Support for initiatives to reduce invasive species numbers.
- Accusations governments are ‘sitting on their hands’.
- Arguments that logging doesn’t cause extinction but building cities does.
- Reoccurring statements that governments do not care and are only interested in greed.

### Twitter Relevance



*\*Users who have their Twitter location settings turned on*

### Sentiment



# TOPIC

## ‘The Ultimate Renewable’

Forest and Wood Products Australia campaign, showcasing wood as the ‘ultimate renewable’.

- Facebook and Twitter engagement low. Interaction and posts predominately from those involved in the industry.
- Twitter users associating the term ‘ultimate renewable’ with other resources, such as: wool, nuclear energy and water. Some claimed emotions of love, anger, stupidity or entitlement were ‘the ultimate renewable’ source.
- Eight mentions from users with their location filter set to Victoria.
- Negative response from Forest Embassy on [Twitter](#) and [Facebook](#). This also resulted in low engagement.

Posts include:

Industry / Association	Related Post Link
Australian Forest Products Association	<a href="https://www.facebook.com/ausfpa/posts/2774973119184593">https://www.facebook.com/ausfpa/posts/2774973119184593</a>
One Forty One	<a href="https://www.facebook.com/OneFortyOnePlantations/photos/a.2294438117494155/2360140530923913">https://www.facebook.com/OneFortyOnePlantations/photos/a.2294438117494155/2360140530923913</a>
ForestLearning	<a href="https://www.facebook.com/forestlearningau/posts/2151051871675705">https://www.facebook.com/forestlearningau/posts/2151051871675705</a>
HVP Plantations	<a href="https://www.facebook.com/hvpplantations/photos/a.1609244259155725/2320892837990860">https://www.facebook.com/hvpplantations/photos/a.1609244259155725/2320892837990860</a>
Forest Enterprises	<a href="https://www.facebook.com/ForestEnterprises/posts/3318501378175813">https://www.facebook.com/ForestEnterprises/posts/3318501378175813</a>

**‘Save forests?’ We should be using timber, the ultimate renewable, for building etc.’**

## LINKS

- The Australian:
  - ['Possum group takes fight to loggers'](#)
- ABC Gippsland:
  - ['Victorian timber workers face uncertainty as plan for industry's access to native forests delayed'](#)
- The Age:
  - ['Forestry industry in limbo as Andrews stalls timber release plan'](#)
  - ['Labor stalls on action plan as greater glider slides towards extinction'](#)
- 9 News Melbourne:
  - ['Conservationists and the timber industry are at loggerheads over a Gippsland state forest that's hundreds of years old.'](#)
- ABC Rural:
  - ['Are five MCGs of native forest being logged in Victoria every day?'](#)
- Gaurdian Australia:
  - ['"Common sense": Littleproud backs Victoria plan to earn carbon credits by forest conservation'](#)
- Four Corners:
  - [Extinction Nation](#)
- ABC News:
  - [Extinction Nation](#)

# **Future of our Forests**

## **Analysis: Workshops by Region**

### **Central Highlands**

PREPARED FOR  
Department of Environment, Land, Water and Planning

3 June 2019

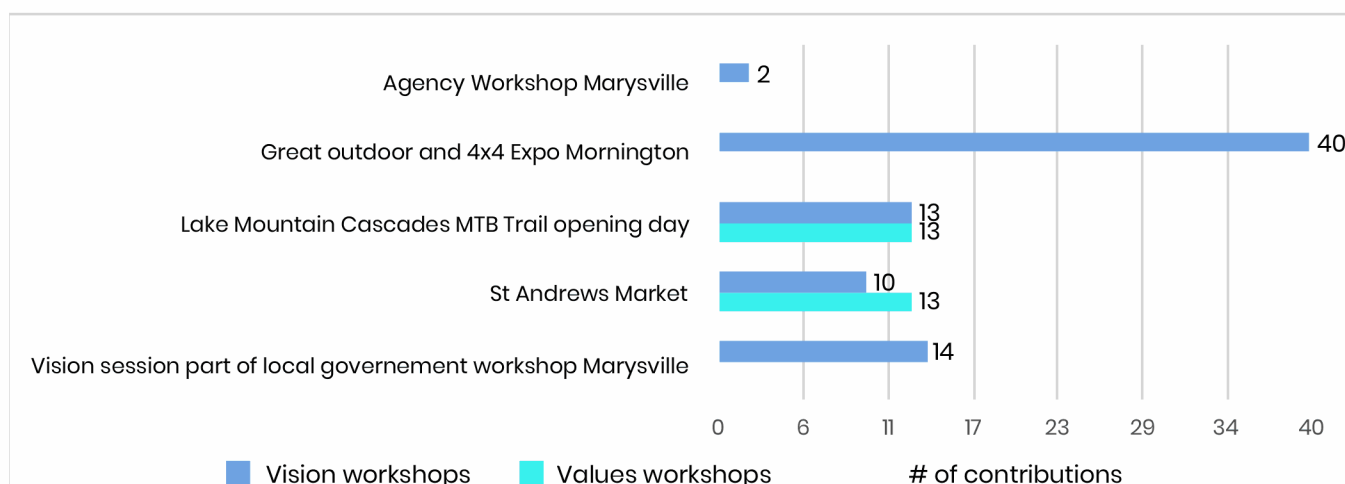


[www.converlens.com](http://www.converlens.com)

# Workshops: **Central Highlands**

*Balanced forest management across all tenures to support livelihoods, harvest products, wellbeing (mental and physical), low carbon economy, sustainable and secure timber industry with a landscape of old growth and regenerating areas. – Agency Workshop Marysville*

There were **105** total responses from participants at workshops in the Central Highlands. This represented around 14% of all contributions to workshops conducted across Victoria. The workshops and the number of responses from each follow:



The “Vision workshops” considered a “**Vision for Managing Victoria’s Forests**” and responses were to the following questions:

Participants were presented with the following questions and asked to respond:

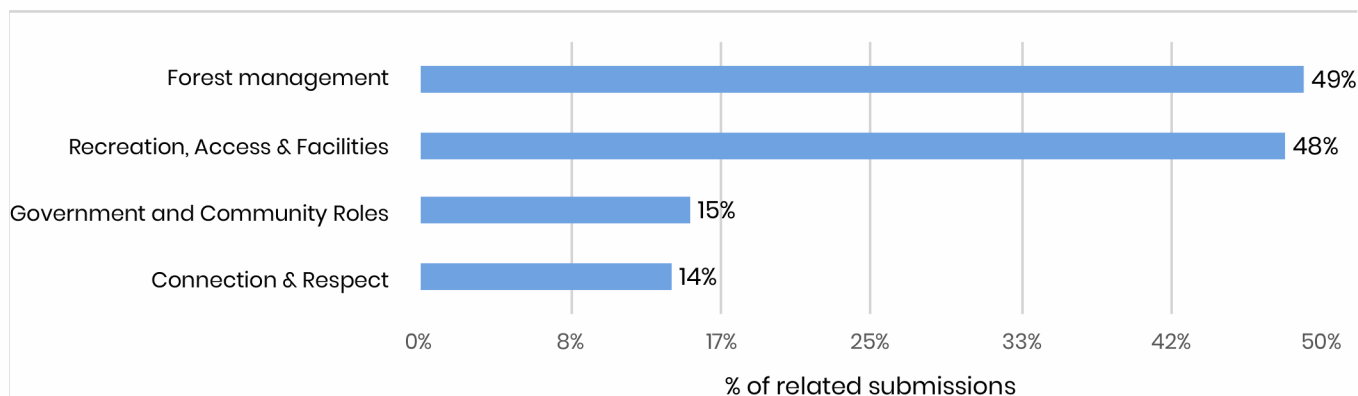
- How can we improve our forests for all Victorians?
- What are the priorities and actions we need to take?
- What are your aspirations for forests in Victoria?
- Write your vision down in a sentence

The Values workshop contributions were free form responses to the question “**What do you love, care about or prioritise about Victorian forests and why?**”

## Vision Workshops

There were **79 responses** to **Vision workshops** from the **Central Highlands**. All percentages in this section, unless otherwise stated, refer to this number.

Vision workshop discussion in West Victoria centred around 4 broad themes, as follows:



The key terms in each category were:

- **Forest Management and Programs** 49% (39/79) – enjoy, education, educate, knowledge, conservation, timber, jobs, logging, burning, pests, signage
- **Recreation, Access & Facilities** 48% (38/79) – Camping, locked, track, freedom, campsite, trails, enjoy, hunting, walking,
- **Government and Community Roles** 15% (12/79) – Government, gov, state, redtape, political, rangers
- **Connection & Respect** 14% (11/79) – respect, appreciation, connect

### Forest Management and Programs – 39 of 79 (49%)

There were two very strong themes which emerged from Vision workshops in the Central Highlands. The first was **forest management** and **programs**, discussed by nearly half of responses (49%). Within this theme, responses referred to “**Multiple use forest management...**”, “**...sustainable forest management...**” and “**forests managed for biodiversity and future generations.**” Also of importance was **rubbish management**, **fire management** and **pest management** (deer). Participants suggested implementing programs to cover a range of areas, including:

- Recycling
- Management of facilities such as BBQs, tracks/trails
- Passive low impact recreation
- Combing of adventure, tourism, connecting with nature, ecological sustainable forests use
- more burning, grazing, firebreaks
- Educate young people

One participant encapsulated their forest management vision as being successful if Victoria's forests "Maintain **healthy diverse** and productive **native ecosystems**. Allow for a range of uses that recognise the **past**, consider the future and minimise lost to **current generations**." – Vision session part of local government workshop Marysville

## Recreation, Access & Facilities – 38 of 79 (48%)

A further 48% of responses from this area discussed **recreation, access** and **facilities** in their vision. The most commonly mentioned recreation activity was **camping**, with participants wanting more **free** camping options, better **signage**, more **facilities** such as toilets, and existing sites **maintained**. Other participants discussed their **access** to forests, for a range of activities such as **firewood collection, recreational** use and access to a range of and more **tracks**.

Responses also mentioned **4WD, mountain** and **motor bike riding**, stating there should be "...less red tape for national parks and alpine resorts to fully enjoy the landscape." – Lake Mountain Cascades MTB Trail opening day



## Government and Community Roles – 12 of 79 (15%)

The role of **government** and how it interacts and intersects with the **community** was of interest to around 15% of responses. Participants in this theme saw the role of government as one of providing **certainty** for **industry**, stimulating the **economy** to ensure "...more regional jobs created". They wanted "Long term equitable benefits for all communities..." and "better gov policy to create jobs and future certainty for alternate industries." Participants also saw the role of government as being one to enforce rules, with calls for "park rangers in state forests like in national parks" and suggestions for "more informative educational experiences for state parks like PV". Some responses were critical of the government, claiming there should be "less political spin on information surrounding forests..." The strongest suggestion for ways to improve centred on **openness** between government and community, with responses suggesting "more informed and transparent decision making by governing agencies". – Great outdoor and 4x4 Expo Mornington

## Connection and respect – 11 of 79 (14%)

**Connection and respect** was a smaller (14%), but interesting, theme that came out of vision workshop discussions in the Central Highlands. Participants in this theme felt forests should be **respected**, as "A place where people can connect to country and understand how interlinked we are to our environment and all its life forms and systems." – Vision session part of local government workshop Marysville. Not only did participants want to see forests respected, but also people who use them, as one response explains "Forest remain for all users. No user is more important than another." Other key terms included **appreciation, consumerism, intervention, human, imbalance, natural** and **all**.

## Sentiment

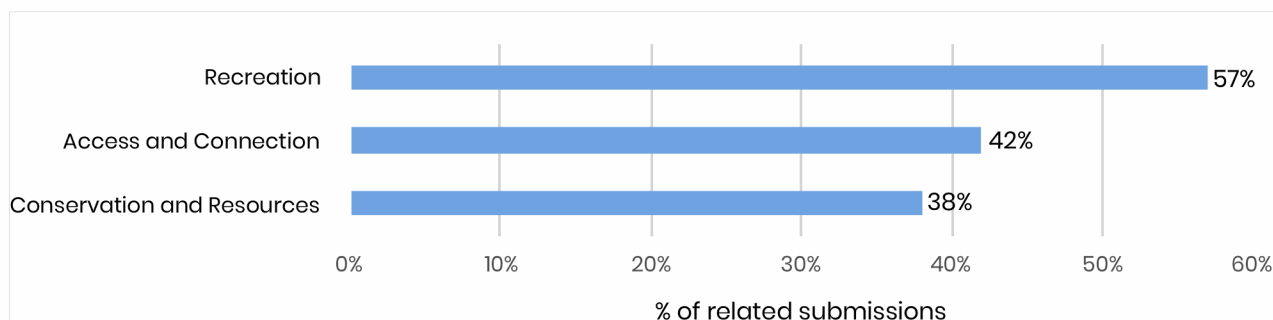
Overall sentiment for Vision workshops in the Central Highlands was neutral at around 80%, and significantly more positive (17%) than negative (2%). Similarly, **recreation, access** and **facilities** saw a negative sentiment rate of just 2.5%, with positive sentiment staying at 17% and 80% neutral sentiment. **Forest management** and **programs** saw a slight increase to a negative sentiment score of 3%, with a decrease in positive sentiment to 15%, and 81% neutral sentiment. **Government and community roles** also had around 17% positive sentiment, with the lowest negative sentiment of all the themes at 1.5%. **Respect** was where participants felt most positive, with a jump to 38% positive sentiment, which is three times the average background positive sentiment score for Vision workshops.

## Values Workshops

There were **26 responses** to **Values workshops** from the **Central Highlands**. All percentages in this section, unless otherwise stated, refer to this number.

The sentiment of responses in this region shifted to the lowest negative sentiment compared to the rest of Victoria, dropping by half to 1.6%. Most responses were neutral (around 80%) and positive sentiment of the overall values discussion was 18%, which is a slight decrease from the overall background sentiment (19% across Victoria).

Values workshop discussion in the Central Highlands centred around 3 broad themes, as follows:



The key terms in each category were:

- **Recreation** 15/26 – recreation, camping, campsite, activity, swimming, enjoy, walking, bike, trail
- **Access and Connection** 11/26 – respect, all, experience, people,
- **Conservation and Resources** 10/26 – firewood, nature, rubbish, burning, knowledge, management, timber,

Recreation - 15 of 26 (57%)

The strongest value from the Central Highlands for what people loved, cared for and prioritised in the forests was **recreation**. Over half (58%) of participants cited **recreational** activities such as **mountain bike riding, trails, camping, picnics, walking** and spending time with **family**. They valued forests as “...a place to escape the city or suburbs” and appreciated being able to “Enjoy the forests...”

Access and connection - 10 of 26 (42%)

Access and connection was a strong theme, with around 42% of responses discussing **accessibility** of forests and how they valued them not only for the activities discussed above but as a place to go “... **for connection to nature**”. Participants also discussed how **people** interact with forests, and likewise as

with the Vision workshops for this region, **respect** came through as a strong value. Participants wanted to be able to **experience** the forests and ensure **access** for **all**.



Conservation and Resources - 10 of 26 (38%)

Around 38% of responses discussed values of **conservation** and **resources** associated with the **forests**. These included **firewood collection, timber harvesting** and the forest as a source of **recreational** enjoyment. Participants referred to land management initiatives such as **controlled burning**, increasing **knowledge** and more **conservation** as things they loved, cared or prioritised. There was one outlier response, where others called for *more* conservation, this participant wanted *"less conservation & more access to parks – more **recycling** and **recovery of materials**"* – St Andrews Market

# **Future of our Forests**

## **Analysis: Workshops by Region**

### **East Gippsland**

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Department of Environment, Land, Water and Planning

3 June 2019

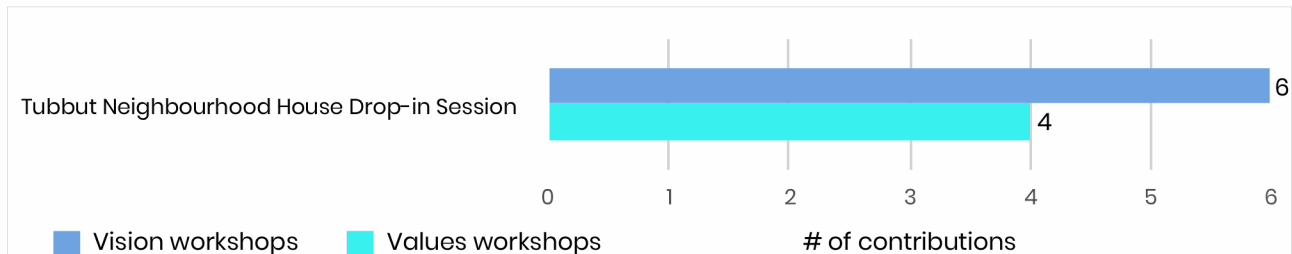


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## Workshops: **East Gippsland**

There were **10 total responses** from participants at workshops in **East Gippsland**. This represented just 1.5% of all contributions to workshops conducted across Victoria.

The responses all came out of the workshop “Tubbut Neighbourhood House Drop-in Session”.



The “Vision workshops” considered a “**Vision for Managing Victoria’s Forests**” and responses were to the following questions:

- How can we improve our forests for all Victorians?
- What are your aspirations for forests in Victoria?
- What are the priorities and actions we need to take?

The Values workshop contributions were free form responses to the question “What do you love, care about or prioritise about Victorian forests and why?”

Given the small sample size, we note that sentiment analysis is not particularly representative. Nonetheless, the sentiment expressed in the 10 responses was generally constructive and neutral, in line with responses from other regions in Victoria.

## Vision Workshops

There were **6 responses** to Vision workshops from **East Gippsland**.

These participants were mostly concerned with preparing and conserving forests for the impact of **climate change** and **protecting** them against **megafires**. One participant mentioned the establishment of the **Emerald Link**, “...connection of protected area of forest from the sea to summit”. They criticised the current funding, referring to “Disparity between \$ spent on **fire management** in an emergency compared to annual budget...”.

One response was sceptical of government, claiming they had “Lack of confidence in **government** action, policy, management of forests and process of engagement”. Participants in this workshop described visions of “**Protection** of forests for **education** and **future generations**”, “more **action** to address climate change”, and “No **native forest logging**”.

## Values Workshops

There were **4 responses** to Value workshops from **East Gippsland**.

Two of the participants' values centred around **recreational opportunities**, mentioning activities such as **bee keeping, camping** and **4WD**. Another participant valued **old growth** forests which was echoed by another who valued the **scenic views** forests provide. One response captured all, stating "*Everything is **important** about them*".

*[End of report]*

# **Future of our Forests**

## **Analysis: Workshops by Region**

### **Gippsland**

PREPARED FOR  
Department of Environment, Land, Water and Planning

3 June 2019

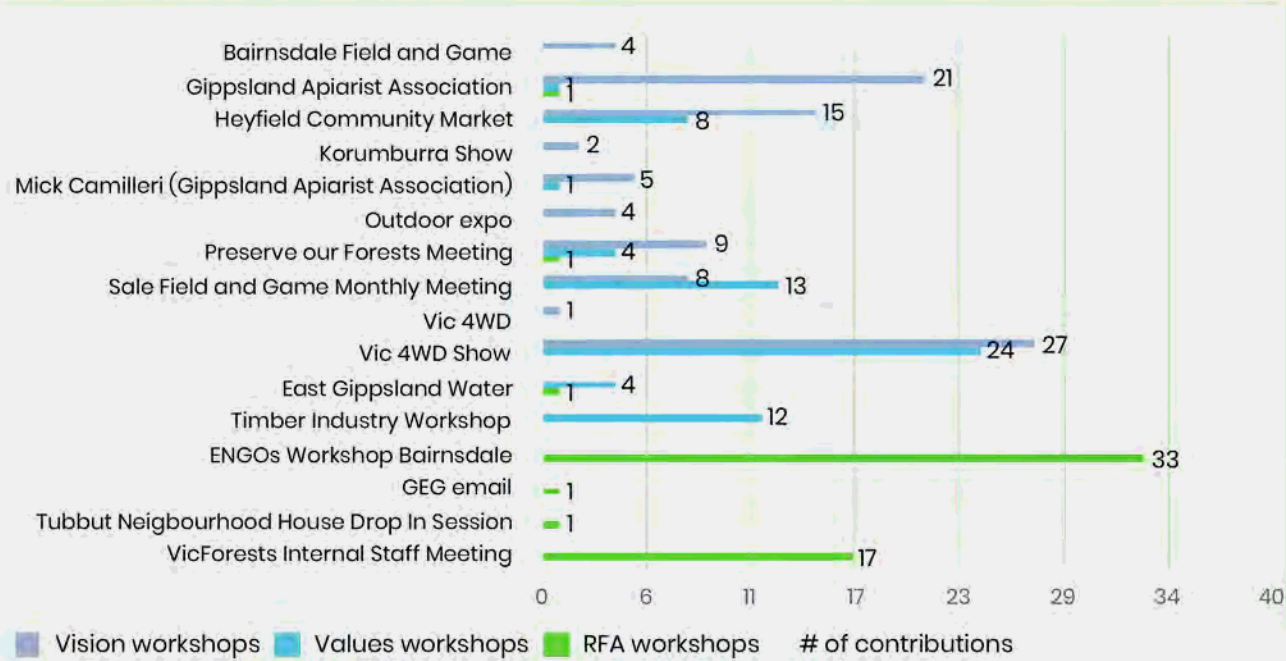


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# Workshops: Gippsland

*“A healthy, diverse forest system providing economic, social and cultural benefits for all Australians”*

There were **218 total responses** from participants at workshops in **Gippsland**. This represented around 29% of all contributions to workshops conducted across Victoria. The workshops and the number of responses from each follow:



The “Vision workshops” considered a **“Vision for Managing Victoria’s Forests”** and responses were to the following questions:

- How can we improve our forests for all Victorians?
- How do we have to manage our forests to achieve this [your aspiration/s]?
- What are the priorities and actions we need to take?
- What are your aspirations for forests in Victoria?
- Write your vision down in a sentence

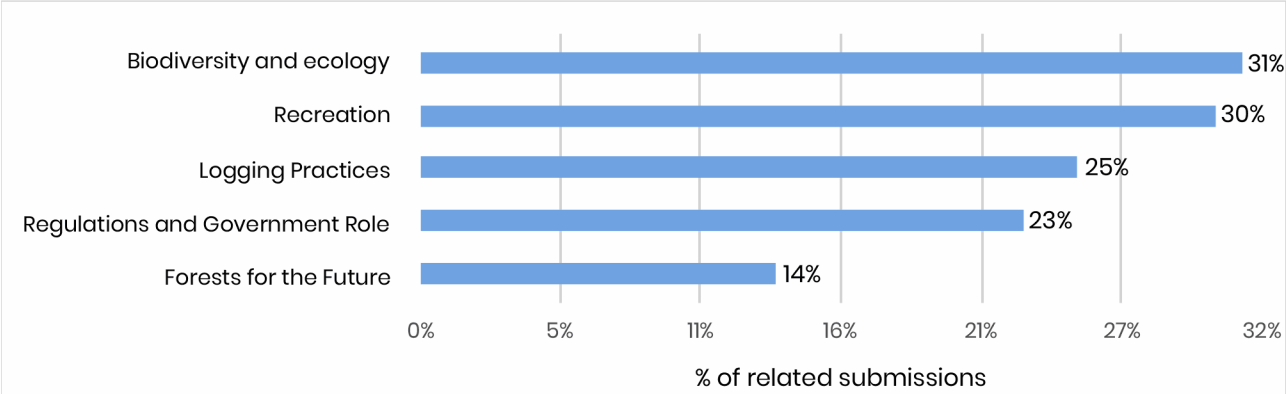
The Values workshop contributions were free form responses to the question **“What do you love, care about or prioritise about Victorian forests and why?”**

The “RFA workshops” provided **“Input into negotiations on RFA Agreements”** and answered:

- What doesn’t work well?
- What changes have you seen in the industry?
- What works well?
- How can we improve our forests for all Victorians?

# Vision Workshops

There were **96 responses** to Vision workshops from **Gippsland**. All percentages in this section, unless otherwise stated, refer to this number. Vision workshop discussion in Gippsland centred around 5 broad themes, as follows:



The key terms in each category were:

- **Biodiversity and ecology** – 30/96 – sub theme bees, feral species, apiary, hunting, preserved
- **Recreation** – 29/96 – used, 4WD, camping, activities, access, family
- **Logging Practices** – 24/96 – felling, clear, thinning, logging, woodchipping, coupes
- **Regulations and Government Role** – 22/96 – DELWP, administration, engagement, education, rangers, stopping, national
- **Fire Management** – 13/96 – fire burning firefighting bushfire burn

## Biodiversity and ecology – 30 of 96

The strongest theme throughout Gippsland Vision Workshops was **biodiversity** and **ecology** of forests. Participants in this theme directly mentioned terms such as **native, species, buffer, natural, wildlife** and **conserve**. They were concerned with retention of species, particularly as related to **habitats** and the impact of **pests** on **native ecology**. In particular, they discussed the loss of **box** and **Ironbark** forests, called for stronger **weed management** and wanted a “**cohesive forest management structure**”. Participants offered various suggestions to achieve good **biodiversity** and forest **ecology** such as:

- Retain better wildlife corridors
- Protection of catchments, soil
- Cut it down and reseed forests, freshen the bush
- Reintroduce mountain cattlemen and grazing

Throughout this theme there was an interesting sub-theme not seen in other areas of Victoria, that of **apiary** practice, or **bee-keeping**. Responses which discussed this scrutinised the lack of

**permanent bee sites**, stating “No more permanent bee sites are being issued. These sites have good species **diversity** and **honey** production.” – Gippsland Apiarist Association. These participants wanted area changes, stating “Bee sites should be **expanded** to include a **buffer**...” which was echoed by another participant who explained “...this [buffer] is not large enough as bees travel up to 4km.” Another area of concern for apiarists was that “...**Harvesting** is occurring in bee areas and this depletes the **nectar source**” which another response felt was “...unfair when apiarists **pay** for the entire area.”

## Recreation - 29 of 96

Recreation was another strong theme, with around a third of participants discussing **4WD, camping, hunting, fishing, trails** and other **activities**. Participants in this theme felt it was important to maintain **access** to the forest for **recreational uses**, asked for **more access**, and didn't want to see the forest 'locked up'. **Hunting** was discussed with some frequency, with responses wanting "...More areas available for hunting" and for rules to "Allow hunting of all pest animals (not just deer) in National Parks". Other participants enjoyed spending time with their family in parks, "I love getting out in the bush and taking kids out camping, hiking. Forest education is really important for the future." – Vic 4WD Show.

Logging Practices - 24 of 96

A significant topic of discussion (25%) concentrated on **logging practices**. Participants in this theme discussed **clearfelling, thinning, woodchipping** and **coupes**. There was agreement amongst responses that **clearfelling** is less preferred, with responses stating “*Forestry should involve selective harvesting, not clear felling...*”, and felt that “*Clearfelling only benefits a small industry and group of people, yet has a big impact.*” Participants were concerned about the impacts of clearfelling, referring to the **time** before trees mature (40–50 years), the loss of slow growing trees (box, ironbark) and were critical of “*...the disparity in application of rules for clearing between DELWP and the general public.*” Participants wanted logging practices to change, particularly coupes, stating “*...burning of coupes is changing forest ecology in bad way*”. They suggested “*Vicforests move boundaries of coupes*” and that “*Mosaic burns and coupes are preferable*”.



## Regulations and government role - 22 of 96

**Regulation** and the role of **government** was discussed by around 22% of participants. Responses scrutinised current practices, expressing “*Lack of **confidence** in government action, policy, management of forests and process of **engagement***”. Participants felt there should be “*Better administration required by **DELWP***”, and were “*...disillusioned with engagement that DELWP undertakes...*”. There was a desire to see “*More **education programs** with DELWP and Parks*”, “*More*

**rangers** or more people managing the bush out in the bush” and “...more tracks accessible and want more **signage** to educate people on what is allowed or not **allowed** in the bush”. Other key terms included **process, access, open, and protect**.

## Fire Management – 13 of 96

A smaller, but important, theme of around 14% of discussion was **fire management**. Participants were concerned about “**Damage to forests from large bushfires**”, saying “**Fuel reduction burning** should be more like a **natural** running fire and not so **high intensity** and it is mostly undertaken on hot afternoons and this **cooks the bush**.” Another participant pointed out that even if forests were **closed** down and left to their own, they still burn and there needs to be “*Better managed fuel reduction burning*”. Suggestions to achieve this included “*More **planned** burning, issue of high fuel loads after bushfires (scrub), consider **timing** of burning...*” Participants also expressed an appreciation for **firefighters**, with one response reminding us to “*Keep up the good work fire fighting.*”

## Sentiment

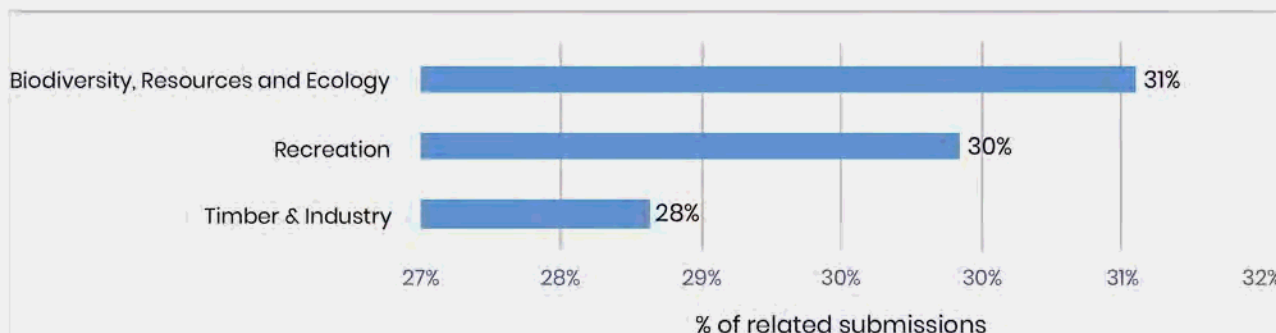
The sentiment of responses in this region was significantly more negative compared to the rest of Victoria, with negative sentiment increasing by 72% to a total of 8.7%. The remainder stayed neutral (81%) with around 10% positive sentiment.

Participants were less negative about **recreation**, which saw a strong drop in negative sentiment to 1.5%, where positive sentiment stayed at around 10%. The strongest negative sentiment was seen in the theme of **fire management** which had a jump in negative sentiment to 23%. **Logging practices** also leaned more negatively, which had a jump in negative sentiment to just below 12% and a decrease in positive sentiment to around 7%. **Biodiversity and ecology** remained mostly neutral (83%) with negative sentiment staying at around 8% and positive sentiment changing slightly to 9%. **Regulation** and the role of **government** saw a rise in positive sentiment to 12%, whilst negative sentiment in this theme stayed at 7% the discussion remained mostly neutral at 79%.

## Values Workshops

There were **67 responses** to Values workshops from Gippsland. All percentages in this section, unless otherwise stated, refer to this number.

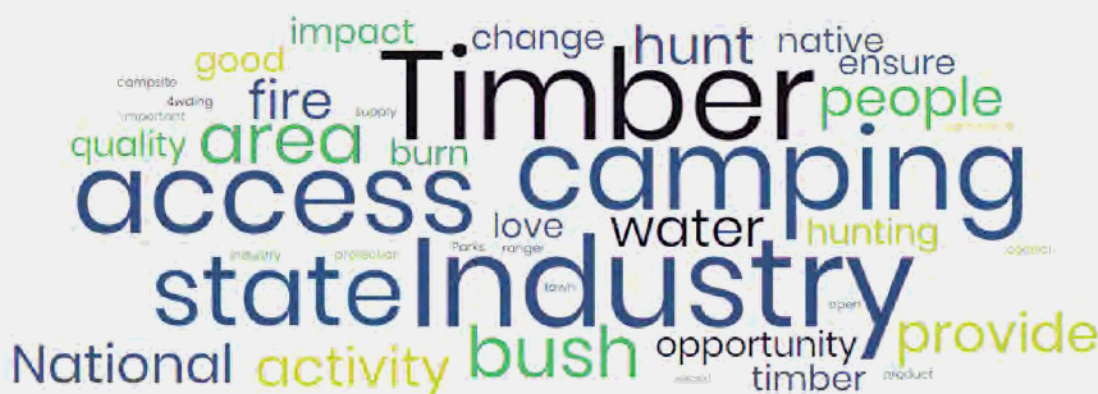
Values workshop discussion in Gippsland centred around 3 themes, as follows:



The key terms in each category were:

- **Biodiversity, Resources and Ecology** – 28/67 – water, impact, native, catchment, control, conserve, natural, change
- **Recreation** – 26/67 – activities, enjoy, camping, campsite, hunting, fishing, access
- **Timber & Industry** – 19/67 – economy, jobs, resources, timber, industry

Representing the contributions from the Values Workshops as a word cloud of most frequently mentioned terms, we can visualise the content as follows:



## Biodiversity, Resources and Ecology - 28 of 67

The strongest value expressed by Gippsland participants centred on **biodiversity, resources** and **ecology** of forests, with around 31% of responses directly referring to key terms of **water, impact, native, catchment, control, conserve, natural** and **change**. **Water** was a key area of concern and interest, with **rivers** and **catchments** being frequently mentioned. Participants discussed the impact of any “*changed forest regime*” and “*controlled burning activities*” which may affect **fresh water supply**, particularly that of “...water **quality, flow** and **yield**.” Other

priorities included “Too many big **fires**, need better controlled **burns**”, “**Conserving native forests** and keeping the **natural** state,” and “**Biodiversity** values, and highly value small area left of native forest ...”

## Recreation – 26 of 67

**Recreation** closely followed, with 30% of participants referring to **activities** they **enjoyed** and valued the forest for. The most common activity in this theme was **camping**, with around half of the responses referring to camping as what they loved about Victoria’s forests. There were some requests for more **campsites** and more **free** campsites, and one suggestion that “*Rangers should be present at state forest campsites...*” **Hunting** and **fishing** were also popular, with a handful of participants requesting **more access** and more **open areas** be made available for hunting. Generally, participants felt that forests were valuable as they provide an opportunity to “...*get in the **bush**, away from city rush, be part of **environment***”.

## Timber & Industry – 19 of 67

The role of forests as a part of the **economy**, providing **jobs** and **resources** was valuable to around 28% of participants in Gippsland. Participants claimed that there are many benefits to the **timber industry** that go beyond immediate resource value, stating the “*Timber Industry provides protection from bushfires, industry provides skilled operators, access tracks, equipment, knowledge*” and that there is “...*unrecognised employment down supply chain e.g. architects, builders, window and stair manufacturers, people in Melbourne...*” Other responses echoed this thinking, pointing out that forest industries create job opportunities, a source of income, and “...*social benefits to towns, communities, people, services and population.*” Overall, participants were concerned with retaining the benefits provided by industries, summarised best by one response which stated:

*“Timber Industry provides important social purpose, making things better economically and socially”*

## Sentiment

The sentiment of responses in this region shifted only slightly compared to the rest of Victoria, with negative sentiment decreasing by 38% to a total of 2.3%. The remainder stayed neutral (80%) with around 18% positive sentiment.

Participants were the least negative about **biodiversity**, **resources** and **ecology**, with a small negative sentiment score of just 1.8%. **Recreation** saw a decrease in positive sentiment to 12% and a slight increase in negative sentiment to 3%. **Timber** and **industry** remained predominantly neutral at 74%, but saw a spike in positive sentiment to 25%.

# RFA Negotiation workshops

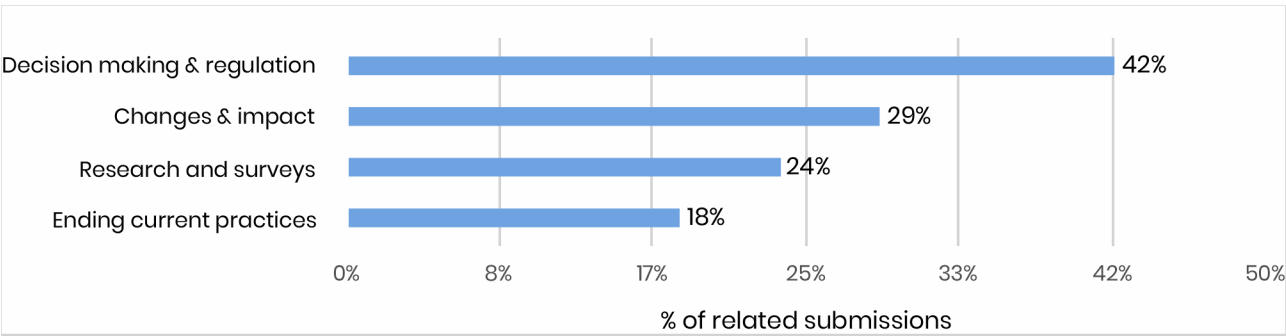
There were **55 responses** to input into negotiations on RFA agreements from **Gippsland**. All percentages in this section, unless otherwise stated, refer to this number.

Sentiment in this region was more positive than other parts of Victoria but also saw an increase in negative sentiment. Overall, sentiment in discussion was neutral at around 77%, with positive sentiment increasing to 11% and negative sentiment to 12%. In general, discussion was slightly more negative than positive.

Participants responded to the following questions:

- What doesn't work well?
- What changes have you seen in the industry?
- What works well?
- How can we improve our forests for all Victorians?
- What are the priorities and actions we need to take?

Discussion centred around the following four themes:



Key terms in each category were:

- **Decision making & regulation** - 23/55 - harvesting, FSC, EPBC, growth, action, promise, opportunity
- **Changes & impact** - 16/55 - change, impact, transition, support, community, sustainability
- **Research and surveys** - 13/55 - area, protect, detection, glider, map, decline, research
- **Ending current practices** - 10/55 - logging, clearfelling, RFAs, exemptions

## Decision making & regulation - 23 of 55

Almost half (42%) of participants raised **decision making** and **regulation processes** in relation to RFAs. Responses covered a range of areas, and expressed *“High level of concern over level of assessment within the pre-RFAs not being replicated and the time frames are ridiculous”*, *“Very high level of distrust, loss of faith and lack of confidence in the government ability to prioritise*

*biodiversity*” and *“Issue with non RAP groups not being funded, inequitable.”* Key terms included **harvesting, FSC, EPBC, growth, action, promise** and **opportunity**.

Participants raised several questions, including asking about **opportunity** to comment on a draft RFA, doubting **funding promises** and questioning project assessments under the **EPBC Act**. There was strong criticism on a range of issues, *“breach of Codes in harvesting”*, *“Exemption from EPBC Act is not acceptable”*, *“licences issues for unlimited woodchip exports”*, and *“logging of areas identified as being of state and national significance for biological values”*. RFA processes were also interrogated, with participants stating the *“RFA process is difficult to feed into and VF staff feel disillusioned”* and that the *“engagement process on the RFA is back to front”*

## Changes & impact – 16 of 55

Another large area of concern (29%) was around how RFAs **change** and **impact** the **timber industry**. Participants expressed worry over *“...losing good operators...”*, asking *“What transition from native forest logging will occur?”* and *“What industry exit packages will be made or planned for?”* There was disagreement between responses, with some wanting to retain and **support** the industry, whilst others claimed *“Plantations are not the answer and will not pick up the slack in the short term”*, and *“Community concern over forest destruction grows and protests have escalated”*, with one response going so far as to say *“The timber industry is built on the false assumption of sustainability.”* There were some suggestions to support **changes**, such as *“... move towards landscape scale approach to habitat protection and not the reactive zoning and buffers that result from PHSP...”* and *“Increase the certainty of the resource availability...”*

## Research and surveys – 13 of 55

A fairly contentious theme with around 24% of responses focussed on **research** and **surveys**. Much of these pointed out gaps in research, as one response pointed out:

*There is a massive (2 year) backlog of updates required to forest zoning as a result of detections of threatened species in East Gippsland. So whilst you can look on the map and think there is lots of GMZ available for harvesting, many areas are not available as new detections have occurred and DELWP have not updated their database.”*

Other expressed frustration, stating *“We can't survey everywhere.... the current surveys do not appear extensive enough to balance or correct this in-balance in detections of threatened species.”* There were suggestions to employ *“...greater flexibility and review of which areas are set aside as reserves”* and to research how *“climate change [will] be addressed and the impacts of logging into the next 20 years.”* Key terms included **area, protect, detection, glider, map, decline** and **balance**.

## Ending Current Practices – 10 of 55

About 18% of responses discussed **ending current practices** of **logging, clearfelling, RFAs** and **exemptions**. There were mostly referring to ending **native forest harvesting** and **old growth forest logging**. One response pointed out that the current practices are not working, stating *“There are so many FFG Action Statements which are not done, it is a failing.”* Another response felt there should be *“No more clearfelling of native forests or woodchipping, use plantation timber”* and another went so far as to call for *“No RFAs, no exemption from the EPBC Act for logging.”* This was echoed by another response, which claimed *“Fire has the biggest impact on water, then logging. Increase in sediment, decrease in flow and quality. Prefer to see no logging or less, no increase.”*

## Sentiment

The sentiment of responses in the Gippsland RFA workshops was about equally balanced between negative and positive sentiment, with negative sentiment sitting at 12% and positive sentiment at 11%. The remainder of discussion stayed neutral (76%).

The strongest negative sentiment was seen in the theme of **ending current practices** which had a jump in negative sentiment to 18%, however positive sentiment stated at 11%. Participants were less negative about **changes** and **impact**, which saw a strong drop in positive sentiment to 9%, but retained 12% negative sentiment. **Surveys** and **research** leaned more positively, with 13.5% positive sentiment and 10% negative sentiment. **Decision making** and **regulation** also leaned slightly more positively, with around 11% positive sentiment and 9% negative sentiment.

# **Future of our Forests**

## **Analysis: Workshops by Region**

### **North East**

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Department of Environment, Land, Water and Planning

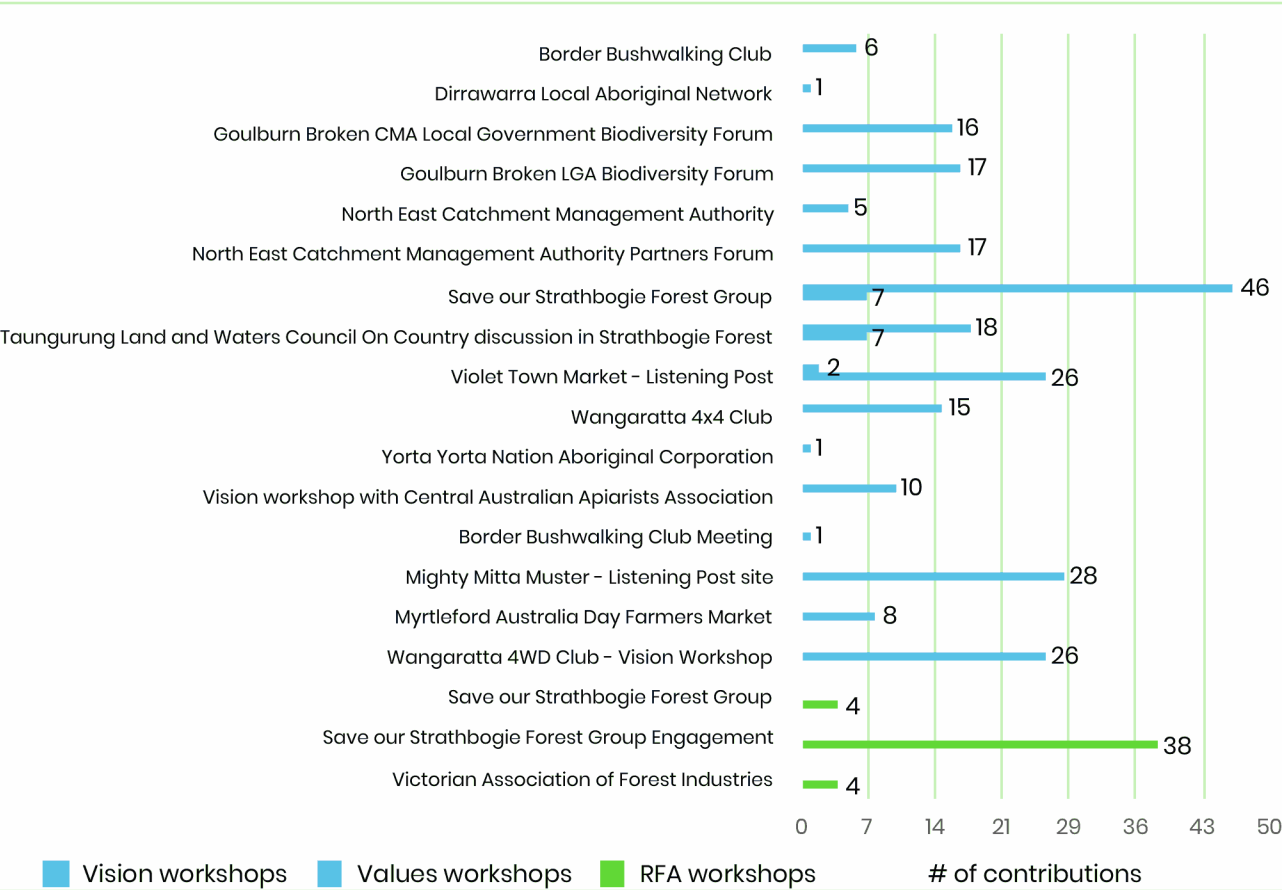
3 June 2019



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# Workshops: North East

There were **275 total responses** from participants at workshops in the **North East**. This represented just over 36% of all contributions to workshops conducted across Victoria. The workshops and the number of responses from each follow:



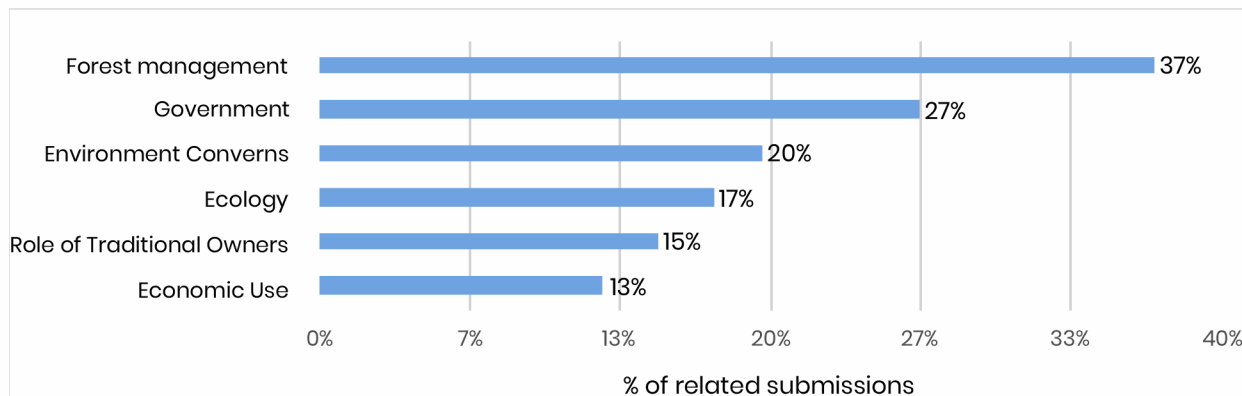
The “Vision workshops” considered a “**Vision for Managing Victoria’s Forests**” and responses were to the following questions:

- How can we improve [our/the] forests for all Victorians?
- How do we have to manage our forests to achieve this [your aspiration/s]?
- What are the priorities and actions we need to take?
- What are your aspirations [for] [the] forests [in Victoria]?
- Write your vision down in a sentence

The Values workshop contributions were free form responses to the question “What do you love, care about or prioritise about Victorian forests and why?”

## Vision Workshops

There were **143 responses** to Vision workshops from the **North East**. All percentages in this section, unless otherwise stated, refer to this number. Vision workshop discussion in the North East centred around 6 broad themes, as follows:



The key terms in each category were:

- **Environmental Concerns** – 28/143 – Water, carbon, climate change, impact, sustainability, sustainable, conservation, environment
- **Role of Traditional owners** – 21/143 – traditional owners, indigenous, aboriginal, heritage, connection, yorta yorta
- **Economic Use** – 18/143 – Economics/industry/timber/plantations/jobs, tourism
- **Forest management** – 53/143 – protect, protection, science, burning, modelling, tracks, trails, recreation, facilities, fire
- **Ecology** – 25/143 – pest, biodiversity, native, natural, seed, trees, health, diversity, feral
- **Government – Decision making/compliance and role of gvt** – 38/143 – illegal, transparency, funding, DELWP

### Forest management – 53 of 143 (37%)

The strongest theme (**37%**) from the **vision** workshops in **North East** centred on **forest management** and **programs**. This included responses related to **protection** of the forests and **ensuring** their continued existence, using **scientific models**, improving and regulating **tracks, trails** and other **recreation facilities**, and how to approach and manage **fire** and **burning** practices.

Criticism from participants on **forest management** concentrated on the perceived lack of community involvement, particularly that of **traditional owners**, “...allow Traditional Owners to truly be able to **respond to activities** and **input to the management** of the forests taking into account the **TO integrated view of land and water**”. Other criticisms claimed “Current forest management practices are not **progressive** and the culture of Vic Forests does not reflect **contemporary science**” and that work is needed on “**Maintenance of the forest to avoid degradation of the forest, e.g. address feral animals such as samba deer, avoid herbicide**”.

application on the side of the roads, address **blackberries**, have a **fire management** plan that focuses on **conservation** values.”

Other suggestions to improve forest management included “Ongoing **engagement** of the traditional owners and broader **community**”, “Appropriate **resources**, funding and people...”, and “Improved **enforcement**... for **compliance** management”.



### Government: Decision making/compliance and role of gvt – 38 of 143 (26%)

The role of **government** and **DELWP** was another strong theme coming out of the North East, with around a quarter (26%) of participants discussing **decision making**, **transparency** and **funding**, as well as **illegal** activity and **compliance**.

Participants called for increased **transparency** in **decision making**, **clarity** and **commitment** on the **role** of **government** in forests, and increased **community involvement**. There were several requests for a “...transparent decision making framework”, which was echoed by participants stating the “need for transparent objectives” and “Inclusion of all forest values in decision making”. The community was eager to be involved, as one response claimed “Community to be partners in the future discussion and decision making around forests not just observers. We all have a responsibility for preserving the forest.” – Save our Strathbogie Forest Group

**Legality** and **compliant** forest use were mentioned in relation to a range of alleged **illegal activities**. Participants directly mentioned **illegal firewood collection**, **track use**, **littering**, **logging** and **riding off established tracks**. Responses proposed solutions of:

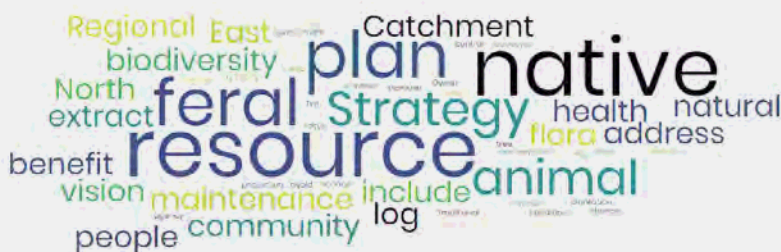
- “A strong compliance framework is required and appropriately resourced...”
- “...clear rules and boundaries...”
- “...significant consequences for people who do not do the right thing.”
- “...cameras at strategic points...”
- “Charge a small fee for forest users and use the funds to improve forest compliance...”
- “...more rangers to patrol to ensure everyone is doing the right thing”

Participants in this theme were also concerned with adequate **funding** and **resourcing** for forest management, planning and programs. Responses referred to the need for “... appropriate funding for the adopted plans and responsibilities”. This sentiment was echoed by a call for increased funding, with participants asserting that “More funds to be allocated to Parks Victoria to manage the National Parks and to implement all the adopted plans” and that “Local Government’s role in forest management needs to be clarified, and if Local Government has a role, then it needs to be resourced appropriately”.

## Environmental Concerns – 28 of 143 (20%)

About a quarter of participants (20%) discussed **environmental concerns**, particularly that of **climate change, sustainability, conservation, water** and **carbon**.

Participants expressed desire to ensure the **future** of forests and that they were seen not just for their **resource** value of **timber** and logging but also as assets for **carbon storage** and **water**, “Carbon storage needs to be perceived and treated as an asset” – Save our Strathbogie Forest Group. Recognition and planning for **climate change** was also of importance, with calls to “Adapt to a future inclusive of climate change” and “...understand the impact of climate change and the need to manage this”.



**Conservation, preservation** and **sustainability** were also frequently mentioned. In particular, responses in this theme wanted “the balance to shift from logging to conservation” – Goulburn Broken LGA Biodiversity Forum. Overall, participants in this theme were concerned with protecting the future of the forest, summarised best by the following responses which stated:

“Whilst conserving the environment, we will maintain and enhance the health and condition of land resources, water resources, biodiversity resources and their long term productivity” – North East Catchment Management Authority

“We need to conserve the forests for the future so they are there for everyone and for future generations” – Taungurung Land and Waters Council On Country discussion in Strathbogie Forest.

## Ecology – 25 of 143 (18%)

Of particular value to around 18% of participants in the North East was the **ecology** of forests. Responses in this theme generally discussed **biodiversity** and maintaining, recovering and preserving Australia’s **native diversity** of its **flora** and **fauna**. There were recurring mentions of **pests** and **feral** animal management and improving the **health** of forests.

Some suggestions included “Replanting of native flora”, which was reinforced by other participants requesting the “Quantity of seed trees to be increased”. Concerned about the overall health of the forest, other responses called for “All relevant agencies to plan together effectively for the overall health of the forests” – Taungurung Land and Water s Council On Country discussion in Strathbogie Forest and that “Agencies and the community will work together to monitor and evaluate the condition of natural resources and effectiveness of

*protection measures to improve natural resource management” – North East Catchment Management Authority.*

Other areas of discussion in this theme included **pest management**, *“Shooting for a government-controlled eradication program of feral animals”*, requests for invasive species management, *“An effective maintenance plan to address invasive flora and fauna species such as weeds and feral animals”*, and diversification of plantation wood *“The plantations should be diverse native hardwoods but could be pine if necessary....”*

Other key terms included: **native, resource, control, strategy, local, catchment, protection, signage** and **focus**.

## Role of Traditional owners – 21 of 143 (15%)

A slightly smaller (15%), but significant, area of discussion centred around the role of **Traditional Owners**. Responses in this theme felt strongly about *“Acknowledgement of aboriginal heritage associated with forests” – Dirrawarra Local Aboriginal Network* and *“Strong Traditional Owner partnership and application of their knowledge, cultural practices and deep connection to country” – Save our Strathbogie Forest Group*.

This thinking was echoed by another participant who felt that it was important to *“Value the involvement of Traditional Owners in all steps along the way of the modernisation process and with the future management as part of a real partnership” – Taungurung Land and Waters Council On Country discussion in Strathbogie Forest*. Supporting this sentiment, suggested roles by participants included:

- Implement the Traditional Owner Burn Strategy
- If native logging is to continue, then log to the specifications of Traditional Owners
- Identify forest related business opportunities for Traditional Owners
- Develop recreation and tourism opportunities that Traditional Owners can be a part of
- Involve Traditional Owners in developing legislation
- Implementation of Traditional Owner management practices including cool burns
- Traditional Owner Food Trails

Overall, responses in this theme expressed desire for *“Implementation of Traditional Owner land management knowledge and for the broader community to understand this”*. – Goulburn Broken CMA Local Government Biodiversity Forum

## Economic Use – 18 of 143 (12%)

Around 12% of participants directly mentioned the **economy, industry, timber, plantation, tourism** and **jobs** in their response. Participants were concerned that *“Timber communities need to understand what is the future of the timber industry” – Goulburn Broken CMA Local Government Biodiversity Forum*.

There were questions around whether “... *the economics of the timber industry still stack up versus other ways for the local community such as the visitor economy*” – Goulburn Broken LGA Biodiversity Forum which was echoed by another participant’s response which stated “*There needs to be clear evidence that the economics of the timber industry still stack up*” – Goulburn Broken CMA Local Government Biodiversity Forum.

Participants also wanted to “*Address the issue of timber production profits going out of the local communities and whether timber is being used for its highest value*” – Goulburn Broken CMA Local Government Biodiversity Forum, with another participant claiming that “*The public to better understand the timber industry supply chain.*” – Goulburn Broken LGA Biodiversity Forum. One participant even went to far as to assert there should be “*Cessation of logging of native forests, acknowledging that the economic benefits mainly go to people and organisations outside the local community*” – Save our Strathbogie Forest Group

Other key terms included: **agricultural, stack, benefit, product, land, local, future** and **people**.

## Sentiment

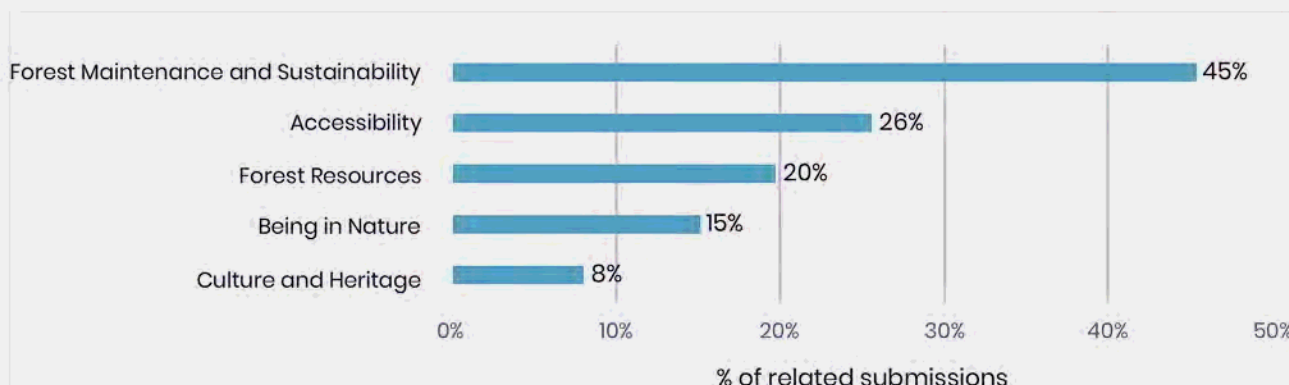
The sentiment from participants in this region shifted slightly against the overall background sentiment. The overall sentiment stayed neutral at around 83%, with around 14% positive sentiment. There was a 33% decrease in negative sentiment for responses from the North East, sitting at around around 3.4% (from a background figure of 5%).

North East participants were most positive when it came to the **economy** which had a complete drop in negative sentiment, however this was coupled with a decrease in positive sentiment to around 8% making the topic predominantly neutral (92%). They were mostly neutral (86%) around the **role of government** which saw just under a 30% drop in both negative and positive sentiment. **Role of Traditional owners** also had 30% drops in negative and positive sentiment to make it predominantly neutral (86%). Likewise, **ecology** remained fairly neutral (82%) with 14% positive sentiment and a 20% decrease in negative sentiment. The strongest negative sentiment was in the theme of the **forest management**, which saw a negative sentiment score of around 5% and a positive sentiment decrease of 12%. **Environmental concerns** was the next most negative theme for this area at 4.5% negative sentiment.

## Values Workshops

There were **86 responses** to Values workshops from the **North East**. All percentages in this section, unless otherwise stated, refer to this number.

Values workshop discussion in the North East centred around 5 themes, as follows:



The key terms in each category were:

- **Forest Maintenance and Sustainability** 39/86 – fire, climate, graze, fuel, retain, health, compliance, stay, renewed, preserve
- **Accessibility** 22/86 – free, accessible, everyone, people, public, 4WD, heritage, available, lock, enjoy, recreational, hunt
- **Forest Resources** 17/86 – educational, logging, timber, deer, brumbies, woodworkers, biodiversity, collect, economy, economies
- **Being in Nature** 13/86 – bird, fresh, stars, peace, walk, beautiful
- **Culture and Heritage** 7/86 – Cultural, connection, ancestors, traditional, traditional owner, aboriginal, indigenous

The key terms are represented for the whole of the Values workshops as follows:



## Forest Maintenance and Sustainability – 39 of 86 (45%)

Around half (45%) of the participants in the North East listed values relating to **forest maintenance** and **sustainability**. This included areas of **fire** and **fuel** management, **climate change**, **compliance**, **health**, **renewal** and **continued preservation** and **renewal** of the forest. Participants in this theme cared about “...*effective and sustainable management of public land*” – *Mighty Mitta Muster Listening Post site*. Directly mentioned terms included **cattle, grazing, fuel management, monitoring** and **future**. The most common management area mentioned was **fire management** with participants calling for **improvement** on current practices.

## Accessibility – 22 of 86 (26%)

**Accessibility** and keeping forests **open** for **public** use was of value to roughly a quarter of responses from the North East. Some participants in this theme were concerned that forests may become less accessible in future, stating they “*Don’t want the forests locked up and preventing everyone enjoying them*” – *Myrtleford Australia Day Farmers Market*. Participants also valued accessibility to the forests for **recreational** purposes, “*Enjoy the forest for a range of recreational pursuits: hunting, camping, fishing, walking*” and supported keeping “*Low impact and passive recreational experiences available for the public*”.

## Forest Resources – 17 of 86 (20%)

A further 20% of responses to values centred on **forest resources**, including less obvious or secondary resources such as the “**Educational value** of the forests, including for children” and the benefits of **biodiversity**. **Logging, timber** and **woodworking** were frequently mentioned, with responses discussing the value of these resources being kept **sustainably**, “*We are woodworkers and value the forest being sustainable*”. Other participants enjoyed using the forest for personal resources such as **firewood** and for recreational **hunting**, “*Want to be able to shoot deer*”. Other key terms in this theme included **carbon, production, healthy, waterway, native** and **retain**.

## Being in nature – 13 of 86 (15%)

Enjoyment associated with **being in nature** was frequently referred to by 15% of participants as what they valued about Victoria’s forests. Responses mentioned “*Being in the fresh air*”, “*Observing the bird life*” and “*I love walking in the forest*”. Forests were listed as a place to “**Enjoy** being in the **outdoors** with my **family**”. Participants in this theme valued the forest for its **beauty** and purity “**No light pollution** at night; seeing the **stars**” and expressed appreciation for the “**solitude** and the **peace** that being in the forest brings”

## Culture and Heritage – 7 of 86 (8%)

In just under a tenth of North East values workshop discussion was the theme of **culture** and **heritage**. Most commonly discussed in this theme was the **role** and **involvement** of **Traditional Owners** and their **ancestral connection** to the forests. Comments included an assertion that “...*traditional owners should have a say in the future management of our forests*” and a call for

*“Traditional Owner **partnership** for forest management”*. Participants valued for the forest as a place for *“Experiencing the **heritage** and **historical sites**”*, with another participant stating we should consider *“**Cultural conservation** is the same as **ecological** conservation”*.

## Sentiment

The sentiment of responses in this region shifted only slightly compared to the rest of Victoria, with negative sentiment increasing to a total of 6.2%. The remainder stayed neutral (75%) with 18% positive sentiment.

**Participants** felt most positively about **being in nature**, which saw an increase of almost double in positive sentiment to 37% and a 50% drop in negative sentiment to only 2%. The strongest negative sentiment was seen in the theme of **forest maintenance and sustainability** which had a jump in negative sentiment to 9%. **Forest resources** also leaned more negatively, with a 50% increase in negative sentiment and almost a 30% drop in positive sentiment to 14%. **Culture** and **heritage** saw a complete drop off of positive sentiment to 0%, and whilst negative sentiment in this theme stayed at 6% the discussion remained mostly neutral at 94%. **Accessibility** also stayed mostly neutral at 78%, with 17% positive sentiment and a negative sentiment of 4.4%.

# RFA Negotiation Workshops

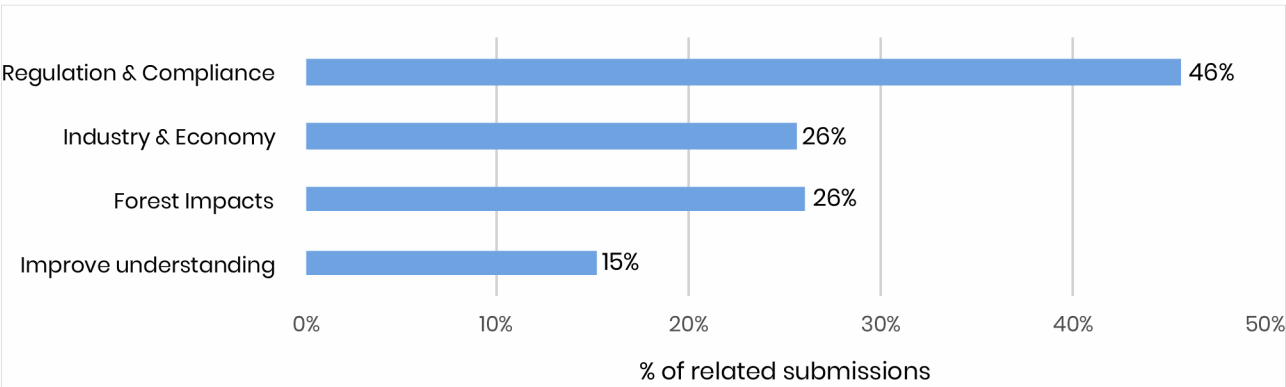
*“Despite being one of the most fire prone landscapes on Earth, Victorian RFAs do not have an ability to respond to bushfire impacts on timber resources or biodiversity.”*

There were **46 responses** to input into negotiations on RFA agreements from the **North East**. All percentages in this section, unless otherwise stated, refer to this number.

Participants responded to the following questions:

- How can we improve our forests for all Victorians?
- What are the priorities and actions we need to take?
- What are your aspirations for forests in Victoria?

Discussion centred on the following themes:



Key terms discussed in each category follow:

- **Regulation & Compliance** – regulation, accountability, decision, government, advisory, transparency, SAC, DEWLP, system, framework, community, 21/46
- **Industry & Economy** – plantation, timber, logging, economy, economic 19/46
- **Forest Impacts** – recovery, protection, threaten, conservation, preserve, damage, regenerate, pollution, 12/46
- **Improve understanding** – clarity, confusion, uncertainty, clear, certainty, understand, define, definitions 6/46

## Regulation & Compliance – 21 of 46

Almost half (45%) of participants raised **regulation** and **compliance** issues in relation to RFAs. Responses had *“Concerns about the regulation and **accountability** of the new RFAs. What evidence of regulation and compliance will be available? Will the **EPBC** Lists be updated regularly?”* There were some questions about the overall RFA **review process**, with one response criticising that *“There is very limited **consultation** through roundtables and community*

workshops considering the many **complex issues** involved.” Others felt that “no case has been made by government or DELWP as to why RFAs should continue at all given the failure of meeting the **objectives** of the original RFAs”, which was echoed by another response stating

“Required **actions** from the previous RFA and North East Forest Management Plan (NE FMP), the Code, and **conservation** guidelines for some **threatened species** have not been effectively implemented and new knowledge has not been taken into account.” Other key terms included **modernisation, community, transparent, scientific, conflict, knowledge** and **effective**.



## Industry & Economy – 19 of 46

Also of significant interest to about a third (34%) of participants was **industry** and the **economy**. Responses were mostly discussing **timber** and **logging**, with some reference to **plantations**. The main theme in these responses was the changing landscape, both economic and environmental, and the need to respond to this. Participants raised matters such as “Major **Retailers 2020 deadline to refuse Vic Forests products**” and claimed “**Technology innovations** in sawn timber should be encouraged” as well as “**Transparent methodologies for economic and environmental accounting are required**”. There were calls for **certainty** and **relevance**, particularly for the **timber industry** as “There is considerable stress at the moment due to uncertainty of the industry”. Others felt it was important that forest industries should be expanded, and “Logging must be considered against the value of all ecosystem services (including water, tourism and scientifically determined present and future carbon



sequestration)”. There were also calls for “Meaningful incorporation of Traditional Owners, their aspiration for forest management and economic opportunities should be a central part of the RFA modernisation and determined by those communities.”

## Forest Impacts – 12 of 46

Around a quarter of participants discussed **forest impacts** of RFAs, referring to **threatened species, adaptive forest management, recovery, certification, regeneration, sustainability, pollution** and **modernisation**. Responses in this theme listed requirements for action including:

- Regeneration of harvested areas
- Address industrial pollution emitted from coupe burns
- Protection of understory species
- Need for Recovery Plans

- Certification of forestry practices
- Forests managed in line with community values, priorities and expectations

Overall, participants in this theme were concerned with conservation and protection of the forest, summarised best by one response which stated:

*"Many threatened species continue to decline, showing current management is ineffective, and logging of habitat of listed threatened species continues to occur on a vast scale. There are unacceptable delays in producing recovery plans and implementing their recommendations. Conservation advice is not enforced, is based on inadequate science, and not interpreted using the precautionary principle." – Save our Strathbogie Forest Group Engagement*

## Improve understanding – 6 of 46

A smaller (13%), but significant theme was that of **improving understanding**. There were several calls for better **clarification of messaging, modelling, processes, mechanisms** and **definitions**. Some felt there *"is confusion about DELWP's messaging regarding the RFA Review process and the broader forest management system modernisation"*, whilst others wanted *"...clarity regarding the maintenance of the RFAs for the life of the new RFAs."* Definitions were requested for **old grown** and **rainforest** and further information was asked for around *"...what climate change impact modelling is being funded through this programme..."*

## Sentiment

The sentiment of responses to RFA inputs in the North East was more positive than negative, with negative sentiment sitting at 5% and positive sentiment at 8%. The remainder of discussion stayed neutral (86%).

The strongest negative sentiment was seen in the theme of **industry and economy** which had a jump in negative sentiment to 8%, however positive sentiment increased slightly to 9%. Participants were less negative about **forest impacts**, which saw around 6% negative sentiment, but retained 8% positive sentiment with the remainder staying neutral (85%). **Regulation** and **compliance** also stayed predominantly neutral, with 8% positive sentiment and just under 5% negative sentiment. **Improving understanding** leaned slightly more positively, with around 9% positive sentiment and 3% negative sentiment.

# **Future of our Forests**

## **Analysis: Workshops by Region**

### **West Victoria**

PREPARED FOR  
Department of Environment, Land, Water and Planning

3 June 2019

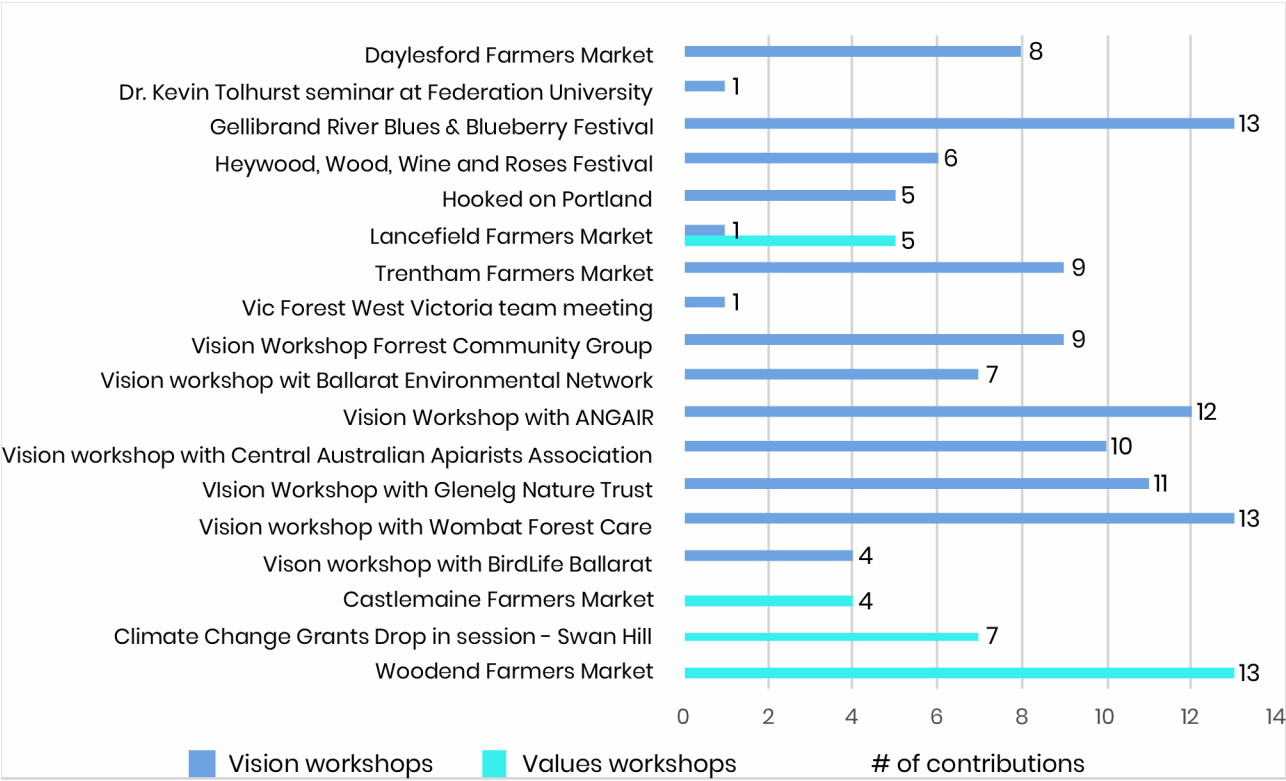


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# Workshops: **West Victoria**

*“Our future forests are connected, healthy and rich with biodiversity in a self-sustaining ecology. People participate in their common wealth. Despite global heating, they are the foundation for our eco-system health. Our forest are not for sale.” – Vision workshop with Wombat Forest Care*

There were **139** total responses from participants at workshops in **West Victoria**. This represented about **18%** of all contributions to workshops conducted across Victoria. The workshops and the number of responses from each follow:



The “Vision workshops” considered a “**Vision for Managing Victoria’s Forests**” and responses were to the following questions:

- What are your aspirations for forests in Victoria?
- What are the priorities and actions we need to take?
- How can we improve our forests for all Victorians?
- How do we have to manage our forests to achieve this [your aspiration/s]?
- Write your vision down in a sentence

The Values workshop contributions were free form responses to the question “**What do you love, care about or prioritise about Victorian forests and why?**”.



*forests self-sustainable.*” Participants felt that by ensuring the health of Victoria’s forests they would also ensure their ongoing value, as one response explains: *“Forests are managed that recognize appropriate economy activity is accepted but that in the long term healthy forests have a higher over-riding value for the future”* – Vision workshop with Wombat Forest Care

Participants often saw the forests as having an integral role to play for their **environmental** and **economic benefits**, particularly for challenges surrounding **climate change impacts**. As one participant stated in their vision, they want *“Forests ‘managed’ strategically for stability and sustainability and optimised for production of high quality water, enhancement of biodiversity and controlling pests (ie. Ecosystem services).”* – Vision workshop with ANGAIR.

## Protecting the environment – 33 of 110 (30%)

About a third of participants (30%) discussed **environmental protection** in their response. Frequently mentioned in this theme was **climate change, preserving biodiversity, re-establishing forest health** and **networks**, and increasing forest **conservation**.

Participants expressed desire to **restore** forests to a good condition, stating they felt *“...the need to repair past damage and to ensure increasing population and climate change impacts are minimized.”* – Vision workshop with Wombat Forest Care.



It’s important to note that although responses in this theme centred on **protection** this did not include limiting **access** to forests or closing them to the public. Rather, participants were eager to keep forests **accessible** *“...for activities*

*that allow essentially passive undertakings and experiential activities, without degrading forests in order to explore the forests.”* Vision workshop with Wombat Forest Care

There were shared visions of **preservation**, particularly of Australia’s **unique native flora** and **fauna**, as well as **cultural heritage**. A small number of responses mentioned **Traditional Owners** and **Aboriginal history** and **spiritual connection** to the land, with participants wanting to **keep** and **expand** on the cultural aspects Victoria’s forests and to preserve the history contained within.

## Resource management – 28 of 110 (25%)

Around a quarter of responses from West Victoria directly mentioned terms relating to **resource management** of forests, using key terms of **logging, felling, plantation, fire, firewood, burning**, and **burn-offs**.

**Plantations** were frequently mentioned with just under a third of responses in this theme directly referring to them. Whilst some participants were critical of plantations alleging the forest *“Needs*

*better protection of waterways from spraying and siltation caused by plantations” – Gellibrand River Blues & Blueberry festival, there was a general support for plantations as a source of **wood**; their possible role for **integration of wildlife corridors**; and moving all **logging** to the plantations, “Make sure there is plantation industry, it is important for the **economy**”.*

Responses generally agreed that forests should be left untouched by logging, with one participant going so far as to call for “...*complete cessation of all logging of any native forest.*” – *Vision Workshop with ANGAIK.* Mirroring this view, participants who discussed **logging** or **felling** agreed that there should be “...*no logging in the forests, plantations for logging separately completely away from forest*” – *Vision Workshop with Glenelg Nature Trust.*

A fairly contentious sub-theme within **resource management** was that of **fires, burning** and **burn offs**. Some participants wanted to see “*Thinning forest more, burning less*”, which was echoed by another participant who claimed that “...*there is little or no evidence that fuel reduction burns achieve their objective. Furthermore, old growth forests are less flammable than forests burnt about a decade ago.*” – *Vision Workshop with ANGAIK.* However, other responses felt that “*Too much undergrowth is a fire risk*” which was reinforced by support for **cool burning**, with another response claiming Victoria’s forests “*need more **small crews** doing cool burning year through to reduce **fuel load** and for **ecological benefits***”. Overall, participants were concerned with maintaining and preserving the forest, summarised best by one response which stated:

*“Very careful management is necessary to maintain these **habitats** and the **biodiversity**, **recreational, cultural, historical** values for **future generations**. Human actions which **damage** the environment (fire, hunting, logging, off-road vehicle access, etc...) need to be controlled” – Vision Workshop with Ballarat Environmental Network.*

## Forest Enjoyment – 28 of 110 (25%)

Of particular value to around a quarter of participants in West Victoria vision workshops was **forest enjoyment**. This covered a range of **activities** including **hunting, walking** and general **recreation**. **Access** to be able to **enjoy** the forest was valued by participants, as one vision put forward, “*Forests that are accessible for any person: within a manageable distance (5km – 20 km?) an area of mature growth forest available to spend time in.*” – *Vision workshop with BirdLife Ballarat.*



The concept of **enjoyment** of natural forests was a strong theme, whether that was for “...*environmentally sensitive walking paths through the bush so that beautiful places can be enjoyed by many*” or a more millennial focused approach to “...*Provide economic activity in a form designed for the new millennium and younger generations, eg walk, bike, selfie....*”

participants supported *“Healthy forested areas that are in the most part accessible that can enrich our lives and planet.”*

Other key terms included: **horses, trails, future, generations, traditional, learn, time** and **impact**.

## Forests for the Future – 24 of 110 (21%)

A slightly smaller, but important, area of discussion centred around the **longevity** and **future proofing** of forests. Responses in this theme felt strongly *“That we **manage our forests and wildlife** with a **long term future** in mind and not with an underlying **commercial focus**”* – Vision Workshop Forest Community Group. This thinking was echoed by another participant who felt that it was important to *“**Learn from the knowledge holders and the past**, dream for a future where **flora and fauna** flourish alongside healthy **waterways** and towering **old growth-forests**, for us all to **share, enjoy** and learn to **care for**.”* – Vision Workshop Forest Community Group.

There were frequent mentions of **future generations**, in particular that *“future generations will be able to **access** and **enjoy beautiful natural environments** that have **retained** full biodiversity of flora and fauna.”* Participants wanted to see longer term thinking, *“Valuing of **long-term relationships** and managers’ who have long term knowledge and insights”*, and that forests are *“Recognized as having value as a complex living thing, not just in terms of human values”* Other key terms included: **balance, understand, ensure, provide, benefit, health** and **heritage**.

## Sentiment

The sentiment from participants in this region shifted significantly against the overall background sentiment, with a 30% increase in positive sentiment to 19.2%. There was a slight increase in negative sentiment from 5% to 5.9% but the overall sentiment stayed neutral at around 75%.

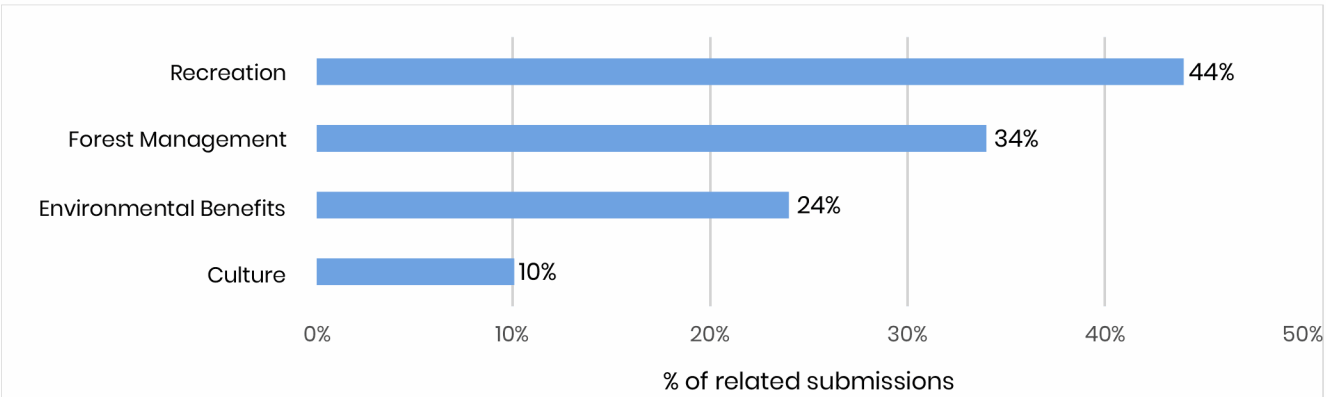
West Victorian participants were most positive when it came to **forest enjoyment** which had just under 25% positive sentiment and 4% negative sentiment. The strongest negative sentiment swing was in the theme of **resource management**, which saw a 112% jump to 10.7% negative sentiment (against a background of 5.9%). **Protecting the environment** saw jumps in both negative and positive sentiment to 9% and 23% respectively. **Forest management** had a 54% positive increase to around 23%, which was mirrored by a similar jump when discussing **Future of forests** where positive sentiment increased to 21% and negative sentiment dropped to 4%.

## Values Workshops

There were **29 responses** to **Vision workshops** from **West Victoria**. All percentages in this section, unless otherwise stated, refer to this number.

The sentiment of responses in this region shifted significantly compared to the rest of Victoria, with *negative* sentiment **dropping by half** to 1.6%, as well as an **18% increase in positive** sentiment to 21%. In general responses were more positive and less negative.

Values workshop discussion in **West Victoria** centred around 4 themes, as follows:



The key terms in each category were:

- **Recreation** 44% (swimming, mountain bike riding, trails, camping, walking)
- **Forest Management** 34% (Biodiversity, fire, natural habitats, clearing, natural environment)
- **Environmental benefits** 24% (oxygen, water, trees)
- **Culture** 10% (cultural heritage, indigenous communities)

Throughout the responses above, there was an underlying theme of **balance** and **inter-connectedness**, with participants referring to a “good mix” of both **recreation** and **conservation**, balancing **biodiversity** with **enjoyment**. They expressed a desire to take care of the **natural environment**, suggesting “*people should be more responsible for their rubbish*”. Demonstrating this sentiment, when asked about what they valued one response summarised it as “*Plant and animal life, I appreciate how everything is all connected*” – Woodend Farmers Market.

### Recreation – 44%

The strongest value expressed by almost half (44%) of participants in West Victoria centred on the use of the forest for **recreation**. Participants referred to a range of activities, including **swimming, mountain bike riding, camping** and **walking**. Responses included requests for **more trails, managing firewood collection** and information about **volunteering**.

## Forest Management – 34%

Around a third (34%) of responses directly referred to **biodiversity, fire management, natural habitats, clearing, and natural environment**. Responses mentioned “*Minimising tree clearance, retain natural habitat for wildlife*” and wanting to see “*A good balance of recreation and biodiversity, not just one avenue should be considered*” – Climate Change Grants Drop in Session – Swan Hill. Other key terms in this theme included **wildlife, balance, natural** and **environment**.



## Environmental Benefits – 24%

Likewise, **environmental benefits** derived from forests were listed as values for about a quarter of responses in West Victoria, specifically that of **oxygen, water** and **trees**. As one participant stated “*Humans need to understand their impact on the forest, the forest produces clean water*” – Castlemaine Farmers Market.

## Culture – 10%

10% of responses valued the connection of forests to **culture**, particularly that of **indigenous** Australia. Participants expressed a desire to “*...learn more about cultural heritage*” with another participant suggesting “*Signage for Federal and State Parks, food forest – management by community with indigenous/aboriginal food*” – Castlemaine Farmers Market.



## Native forestry industry transition approach

### Briefing for the Premier

Topic	Government plans and actions that form part of a managed exit out of native forestry.
Analysis	There are several matters that must be considered to plan for a staged transition out of native timber harvesting. Work has commenced to develop a plantations strategy and a strategy for negotiating with Australian Paper (AP) on timber supply.

Act by

### Recommendations

28(1)(d)

- 1 [REDACTED] ☒ Note ☐ Please discuss
- 2 **Note** preliminary high level analysis of a scenario to exit native forest harvesting by 2030 is at Attachment A. ☒ Note ☐ Please discuss
- 3 **Agree** to DPC leading further whole-of-government analysis and planning on **one or two** of the following four future timber supply scenarios (at Attachment B): ☒ Agreed ☐ Not agreed
- Option 1.** Exit old growth logging, continue regrowth logging ... ☐ AND/OR
- Option 2.** Exit native forest harvesting by 2035..... ☐ AND/OR
- Option 3.** Exit native forest harvesting by 2030..... ☒ AND/OR
- Option 4.** Exit native forest harvesting by 2024..... ☐
- 4 [REDACTED] ☒ Note ☐ Please discuss
- 5 **Note** that the timelines provided in the DEDJTR strategy can move forward at your direction. ☒ Note ☐ Please discuss
- 6 **Note** that DPC has already briefed you on DEDJTR's proposal to develop a plantations investment strategy (Attachment D). This will be funded through an initial \$20 million allocation from the Government's \$110 million plantations investment commitment. ☒ Note ☐ Please discuss

34(4)(a)

The Hon Daniel Andrews MP  
Premier

Date 9/4/2018

Comments

*Plantations should be expedited — not delayed. d.*

### 1 Key reasons

#### 1.1 There are a number of matters that need to be considered by Government if a decision is made to exit native forestry by 2030

An information package has been prepared and agreed by the Secretaries of DPC, DELWP and DEDJTR (at Attachment A). This outlines managing reductions in timber supply volumes, the supply needs of Australian Paper, a strategy for industry transition, a communications strategy, possible additional old growth protections, and work which could be undertaken by the Victorian Environmental Assessment Council.

28(1)(d)

## 2 Further reasons

### 2.2 A plantation investment strategy will support a negotiation strategy with AP regarding timber supply up until 2030 and beyond

28(1)(ba)

Subject to your and the Treasurer's agreement, \$20 million (of \$110 million currently held in contingency for plantations development) will be provided to DEDJTR to develop a plantation investment strategy (at Attachment D).

### 2.3 DPC will lead further analysis and planning based on a future timber supply scenario

Your direction is sought to select one or two future timber supply scenarios (at Attachment B). DPC will lead further whole-of-government analysis, planning and risk assessment work based on the selected scenarios.

### 2.4 Further analysis needs to be undertaken to understand the likely downstream employment impacts

In 2017, DEDJTR undertook analysis to estimate potential direct and indirect downstream job impacts based on different timber supply scenarios. DPC notes that the modelled job impacts are untested and actual impacts will depend on a range of factors such as timing, flow through and ability to access timber from other sources (i.e. plantations). Further work will be undertaken to understand these impacts, and any necessary transition arrangements as part of the further analysis that will be led by DPC.

## Endorsement

33(1)

Name	Position	Branch	Phone
		ERE	
		ERE	33(1)
Sarah-Jane McCormack	Director	ERE	
Kylie White	Executive Director	ERE	
Simon Phemister	Deputy Secretary	EPSP	