



# After the Logging

Failing to regrow Victoria's native forests

NOVEMBER 2021

**Author: Margaret Blakers**

GPO Box 2234  
Canberra ACT 2601  
margaret.blakers@bigpond.com

Edited by **Jenny Lee**  
Designed by **Rainroom.studio**

Published **November 2021**  
Cover image | **Trent Patten, Delilah coupe, Toolangi**

**Co-publishers**

Alberton West Friends of the Forest  
BEAM Mitchell Environment Group  
Environment East Gippsland (EEG)  
Environment Victoria  
Friends of Bats and Habitat Gippsland  
Friends of the Earth - Forest Collective (FOE)  
Friends of Leadbeaters Possum (FOLP)  
Friends of Noojees Trees  
Gippsland Environment Group  
Goongerah Environment Centre (GECO)  
The Great Tree Project (GTP)  
Kinglake Friends of the Forest (KFF)  
Lawyers for Forests  
Newlands Friends of the Forest  
Rubicon Forest Protection Group (RFPG)  
Toolangi Forest Protection Group  
Victorian National Parks Association (VNPA)  
Wildlife of the Central Highlands (WOTCH)  
Warburton Environment (WE)





# Acknowledgment

The field work for this report, as well as the writing and further research was done on the stolen lands of sovereign First Nations Peoples. We pay our deepest respects to their Elders past and present.

We acknowledge the thousands of years of care and ongoing custodianship over the Land and the forests, which are of significant cultural and spiritual value to First Nations Peoples. Sovereignty was never ceded.

# Thank you

Thank you to everyone who has helped bring this report together. They include: Isaac Carné, Louise Crisp, Dr Michael Feller, Dr Sue Lewis, Kelly Maggs, Kieran Maguire, Alana Mountain, Linda Parlane, Trent Patten, Jill Redwood, Lisa Roberts, Chris Schuringa and many others. We are especially grateful to Greg Foyster and Environment Victoria for their contribution and to the Victorian National Parks Association for financial support. Errors remain my responsibility.

*Margaret Blakers*

# Contents

<b>Preface</b> .....	<b>7</b>
<b>Executive Summary</b> .....	<b>8</b>
<b>1. The Forests</b> .....	<b>11</b>
<b>2. The Promise</b> .....	<b>13</b>
2.1. Policy foundations	
2.2. “We grow it back”	
2.3. Defining regeneration	
2.4. Measuring regeneration	
2.5. Regeneration claims	
<b>3. The Reality</b> .....	<b>16</b>
3.1. Failure rates	
3.2. Further remediation	
3.3. Not “like for like”	
3.4. Post-survey regeneration failure	
3.5. Ground checks	
<b>Failed Coupes</b> .....	<b>18</b>
<b>4. The Root Causes</b> .....	<b>26</b>
4.1. Regulation	
4.2. VicForests	
4.3. Compliance	
4.4. Accountability	
4.5. Regional Forest Agreements	
4.6. Cost-shifting	
<b>5. The Consequences</b> .....	<b>30</b>
5.1. Biodiversity	
5.2. Carbon	
5.3. Fire	
<b>6. Conclusions</b> .....	<b>33</b>
6.1. They don’t grow it back	
6.2. Systemic failure	
6.3. VicForests	
6.4. Consequences	
<b>7. Recommendations</b> .....	<b>36</b>
<b>Glossary</b> .....	<b>38</b>
<b>Appendices</b> .....	<b>39</b>
<b>Endnotes</b> .....	<b>40</b>

# Preface

In the 1990s, the Commonwealth and several state governments signed Regional Forest Agreements (RFAs) that entrenched logging as a permanent feature of state forest management and gave native forest logging conducted in accordance with an RFA a unique exemption from federal environment laws. The RFAs were always controversial, and the conflict continues today, intensifying as logging reaches into forests once thought too precious to lose or too difficult to reach. In Victoria, the state logging agency, VicForests, is now in the unprecedented position of defending nine separate community-initiated court cases. One case is headed for appeal to the High Court.



Fauna and Flora Research Collective,  
Glossy Black Cockatoo, East Gippsland

Court cases and other community actions aim to prevent damage from logging. This report takes a different tack: for the first time, it focuses on the aftermath of logging.

The terminology is fraught. The word “regeneration” can be applied to anything from tree seedlings to forests. This report focuses mainly on individual logging operations and the overstorey. Cumulative impacts and landscape-level effects are beyond the scope of this research.

We know that forests are ecologically, culturally and aesthetically critical to First Nations Peoples, regional communities and the wider public. They are also crucial to confronting the twin climate and biodiversity crises facing Australia and the world. Victoria, like Western Australia, is on the path to end native forest logging. The sooner the better.



# Executive Summary

Governments justify native forest logging by promising that they “regrow” or “regenerate” the forests “like for like”. This promise underpins the Regional Forest Agreements (RFAs) signed by the Commonwealth and Victoria. It is used to justify exempting native forest logging from federal environment laws. VicForests, Victoria’s state logging agency, goes so far as to feature the tagline “we grow it back” on its website and goes on to state: “After harvesting, through careful planning and replanting, we regrow all harvested areas with the same type of forest that was originally there for the future enjoyment of generations to come.”

This report presents new evidence that contradicts these claims. It is based on data obtained under Freedom of Information laws and ground-checks of logged areas in the public native forests of eastern Victoria.

VicForests claims that fewer than 15% of logged coupes fail to regenerate within three years at “first attempt”. In fact, this three-year benchmark applies not to forests but to eucalypt seedlings, and the failure rate is 30%, twice what VicForests claims. In Mountain Ash forests, the failure rate is over 50%.

VicForests claims that all logged areas are regenerated, but the reality is that some logged areas have been turned into weed-infested blackberry patches. In others, colonising species such as wattles have replaced the original eucalypts. Feral animals and weeds are rife.

Under Victoria’s forest management system, regeneration outcomes are assessed by a seedling survey within three years of logging. Logged forest coupes that fail the initial seedling survey remain VicForests’ responsibility until they meet the criteria. More than 100 forest coupes are in this category. Some were logged as long ago as 2004/05.

Forest coupes that pass the seedling survey are automatically transferred from VicForests to the Department of Environment, Land, Water and Planning (DELWP). Even if the seedlings or saplings later die due to browsing, fire, drought or other factors, they remain DELWP’s responsibility. Trees and forests take many years – from decades to centuries – to grow to maturity, but logged forests are not monitored after the seedling survey. There has never been a published audit that matched coupes with logging history and systematically inspected them in the forest to see what condition they are in.

The root causes of regeneration failure are twofold: the systemic failures of Victoria's forest management system and the role of VicForests.

The forest management system is complicated, confusing and opaque. At VicForests' inception in 2004, some checks and balances were built in to give the environment department a role in determining which forests could be logged and whether coupes were satisfactorily regenerated.

In 2013, however, VicForests gained decisive control in the name of resource security. Its Board, rather than the environment department, was given the power to sign off on logging schedules, and the previous practice of requiring an audit before regenerated coupes were transferred to the environment department was abolished.

VicForests' mandate is commercial but its decisions about the nature, intensity and distribution of logging affect all aspects of forest environments. Governments have allowed it to operate with almost complete autonomy, a high level of secrecy and no effective accountability. Its Victorian regulators are two government departments with many diverse and unrelated responsibilities, and neither has acted to enforce minimum standards of transparency, precaution or compliance with aims such as perpetuating biodiversity and preventing regeneration failure. The Commonwealth, having accredited Victoria's forest management system through the RFAs, is complicit in its failure.

VicForests' position is untenable. Its narrow commercial objectives do not reflect the need to protect the many other values held by native forests. It has exercised its power in ways that have led large sections of the community to distrust it.

Every three days, a new forest coupe is opened up for logging in eastern Victoria. Every additional forest that is logged carries the risk of regeneration failure and consequent loss of biodiversity, threats to wildlife, loss of carbon storage and reduced water supply. These losses are over and above the impacts of logging itself. Regeneration failure exacerbates the interrelationship between bushfires and logging, making fires more severe and immature trees more vulnerable.

Forest restoration is costly, time-consuming and uncertain. The Victorian government has already indicated it will not pay to restore the backlog of failed regeneration accumulated from logging before 2004. Continued logging and inevitable regeneration failure would be environmentally irresponsible and contrary to the government's own logging rules and the RFAs.

In 2019, the Victorian government announced that native forest logging would end in 2030, with wood supply reducing in increments from 2024. The end of logging should be brought forward and VicForests should be closed. An independent transition authority should be established with the requisite powers and resources, the mix of skills and expertise and the integrity to manage the ecological, cultural and social dimensions of the transition out of native forest logging.

The end of logging is a historic once-in-a-generation opportunity to recover and revitalise Victoria's diverse and beautiful native forests and by so doing help protect the climate, wildlife, water and culture.

“ **The end of logging is a historic once-in-a-generation opportunity to recover and revitalise Victoria's diverse and beautiful native forests and by so doing help protect the climate, wildlife, water and culture.** ”



After decades of widespread logging, it is time for Victorians to face up to the consequences, including regeneration failure, and act before it is too late.

# 1. The Forests

This research focuses on Victoria's native forests, and specifically on the vast area east of the Hume Highway, where state forests cover 2.5 million hectares. They border the state forests in south-eastern NSW and together form the core of the forest estate in the south-eastern corner of the continent.

This is the traditional country of the Bunarong, Woiwurrung, Wurundjeri, Dhudhuroa, Taungurung, Gunaikurnai, Bidjell, Yuin and Monero Nations, whose culture, connection and care for country extend from the deep past and continue as a living responsibility across their lands. Forests hold a deeply important cultural and spiritual significance for First Nations Peoples; their stories, totems and culture are embedded in the Land that has been cared for over thousands of years.

The forests range from high-country snow gums to varied forests on the sandy coastal plains. Most are dominated by eucalypts, with pockets of rainforest in sheltered sites. Not far north-east of Melbourne are forests featuring the iconic Mountain Ash, the world's tallest flowering plant. At higher elevations, extending east on either side of the alpine plains, Alpine Ash forests can be found in disjunct patches. At lower elevations, the ash forests give way to forests dominated by a wide range of eucalypt species.

The forests support an equally diverse array of wildlife. Victoria's faunal emblem, the critically endangered Leadbeater's

Possum, primarily inhabits montane Ash forests dominated by Mountain Ash (*Eucalyptus regnans*), Alpine Ash (*Eucalyptus delegatensis*) and Shining Gum (*Eucalyptus nitens*). These forests also support arboreal mammal species such as the Greater Glider and Yellow-bellied Glider, which depend on the availability of mature forest with tree hollows, which take at least 150 years to develop. The Grey-headed Flying-fox ranges widely throughout south-eastern Australia's forests, while other species, including the Giant Burrowing Frog and Long-footed Potoroo, are more restricted in range.

Victoria's forests and wildlife are of great cultural importance, valued for their beauty and their vital role as places of respite and recreation. Practically, these forests are essential to providing city-dwellers and agriculture with clean water and storing carbon to limit global temperature rise. Their prognosis, however, is increasingly alarming. Logging is driving species to the brink of extinction, exacerbating fire risk and destroying places people love. Throughout the region, frequent bushfires and logging interact to jeopardise ecosystem function and survival.

After decades of widespread logging, it is time for Victorians to face up to the consequences, including regeneration failure, and act before it is too late.

## FOREST MANAGEMENT AND MEASUREMENT

Native forest logging and related activities on public land in Victoria are regulated by a complex web of legislation, policies, codes and procedures accredited by the Commonwealth government through the Regional Forest Agreements (RFAs). They are applied through various land management units.

### Zones

Special Protection Zones cover 625,000 hectares of state forest in eastern Victoria and are generally protected from logging. The remaining 1.8 million hectares are in General or Special Management Zones available for logging.<sup>2</sup>

### Forest Management Areas (FMAs)

Areas of state forest defined for planning and management purposes. There are 15 FMAs in Victoria, of which seven lie east of the Hume Highway. Each FMA is identified by a name and number. Eastern Victoria's FMAs are Central (no. 8), Dandenong (no. 9), Benalla-Mansfield (no. 10), Central Gippsland (no. 11), Tambo (no. 14), East Gippsland (no. 15)

and North-East (no. 16). These FMAs in turn are divided into about 335 blocks and more than 25,000 coupes.

### RFA regions

Areas covered by specific Regional Forest Agreement. There are four in eastern Victoria: Central Highlands, North-East, Gippsland and East Gippsland.

### Block

An area of state forest, which includes multiple coupes.

### Coupe

A smaller area identified for the purpose of logging and regeneration. Coupes are an average of 35 hectares in gross area, of which the net harvest area (NHA) will typically account for about 20 hectares. Coupes are the fundamental units for planning, carrying out logging and regeneration, documenting and managing information, and monitoring and auditing forestry operations.



VicForests' public website features the tagline “We Grow It Back” and states:

“ After harvesting, through careful planning and replanting, we regrow all harvested areas with the same type of forest that was originally there for the future enjoyment of generations to come.”

# 2. The Promise

## 2.1 POLICY FOUNDATIONS

In 1992, the Commonwealth and state governments signed a National Forest Policy Statement, which remains – in name at least – the foundation of Australia’s forest policies. The statement articulates a vision of ecologically sustainable forest management based on three principles:

- maintaining the ecological processes within forests
- preserving their biological diversity, and
- optimising the benefits to the community from all uses of forests within ecological constraints.<sup>3</sup>

These principles also underpin the Regional Forest Agreements (RFAs) signed in subsequent years by the Commonwealth and the states.

The Victorian and Commonwealth governments confirm that these principles remain the basis of the five RFAs covering the state. A key element of these principles is a commitment to ensure that “harvested areas of Native Forest on Public Land are successfully regenerated, maintaining the natural floristic composition”.<sup>4</sup>

The promise is specific: native forests are to be regenerated after logging (forests are to remain forests) and the regenerated forests are to retain their natural complement of species. They will be regrown “like for like” so that in time they will resemble the forests that were there before, supporting the same array of animals and plants, displaying the same values and meeting the same needs.

Since VicForests was formed in 2003, about 3000 coupes have been logged in eastern Victoria. They cover a net area of 60,000 hectares and bring the area of native forests disturbed by logging since the 1960s to around 500,000 hectares. The

rate of logging is decreasing, but new coupes are still being started at the rate of one every three days. After logging, all these coupes require regeneration.

## 2.2 "WE GROW IT BACK"

VicForests acknowledges the fundamental importance of regeneration. Its website says:

*Sustainability underpins good forest management and as such it is important that VicForests regrows the forest in all areas where harvesting takes place. We take pride in using multiple techniques and each area is monitored to ensure the forest returns to maturity and is left to grow and to be enjoyed by the public for many years.<sup>5</sup>*

In line with its responsibility for the forests, VicForests “regrows all harvested areas with the same type of forest that was originally there”.<sup>6</sup> Its public website features the tagline “We Grow It Back”<sup>7</sup> and states:

*After harvesting, through careful planning and replanting, we regrow all harvested areas with the same type of forest that was originally there for the future enjoyment of generations to come.<sup>8</sup>*

VicForests CEO Monique Dawson has reinforced this claim, telling a parliamentary inquiry in March 2021:

*All areas that we harvest are regenerated. It is our requirement at law to ensure that we properly regenerate everything, which means that it is to be regenerated to the quality that occurred when we harvested it or better.<sup>9</sup>*

## TIMBER MANAGEMENT PROCESSES

### Allocation Orders

Periodic orders by Victoria’s agriculture minister transferring ownership of the timber in specified forests from the state of Victoria to VicForests. VicForests is authorised to harvest and sell the timber and to carry out related management activities. The Orders require VicForests to comply with the Code of Practice for Timber Production and provide an annual report to the Department of Jobs, Precincts and Regions (DJPR) describing the area of timber harvested and regeneration results for the preceding financial year (see Appendix 1).

### Timber Release Plans (TRP)

Schedules of the forest coupes that Vic Forests intends to log in the next three to five years. TRPs are developed by VicForests, subject to public comment, then signed off by the VicForests Board.

### Coupe finalisation

VicForests nominates logged coupes for finalisation if surveys at the seedling stage meet three criteria:

- the 65% rule – eucalypt seedlings are present in at least 65% of plots on a grid across the coupe;
- the one hectare rule – no discrete area greater than one hectare has a eucalypt seedling density less than 400 per hectare (about one per 25 m<sup>2</sup>);
- the 10 seedlings rule – at least 10 seedlings of each eucalypt species present before logging must be present.

The Department of Environment, Land, Water and Planning (DELWP) automatically resumes management responsibility for finalised coupes.



### 2.3 DEFINING REGENERATION

After severe disturbance by fire or logging, trees may regrow in several different ways. Some sprout from seed stores held in the soil or the canopy. Others regrow from epicormic buds, which burst out from under the bark, or from lignotubers at the base of the trunk from which new shoots can emerge. Some plant species regrow from both seeds and sprouts.

Plants' initial reproductive success and the long-term process by which a forest regrows to maturity depend on a wide range of factors, including the age structure and pattern of the original or retained vegetation, the availability of seed, nutrients and moisture, the weather, insect activity, soil disturbance, disease, grazing, browsing and fire.

The term "regeneration" is ambiguous: does it refer to the whole sequence from germination to ecological maturity, or only to part of the sequence? Is it only about trees or forests too? In the Victorian Code of Practice for Timber Production, regeneration is defined as an event rather than a process: it is "the renewal or re-establishment of native forest flora by natural or artificial means following disturbance such as timber harvesting operation or fire".<sup>10</sup>

In this report, the term "regeneration" is used more broadly to encompass the numerous processes involved in regrowing trees and forests to maturity, without implying that forests once logged can be reinstated with all their richness and complexity. The focus is on individual logging operations and the regrowth of the overstorey, because this is the level at which the forest management system operates in practice.

### 2.4 MEASURING REGENERATION

VicForests measures regeneration success according to a three-year benchmark. After logging is completed, this allows three years for regeneration treatment (usually burning, seedfall or sowing), germination and the appraisal of regeneration through surveys of seedlings.<sup>11</sup>

Regeneration is deemed successful "at first attempt" if a seedling survey carried out at the required time records eucalypt seedlings or sprouts at or above a stipulated minimum density or stocking rate. Areas of one hectare or more that are not adequately stocked must be re-treated, prolonging the time before the coupe is considered regenerated.

VicForests classes coupes as "finalised" when a seedling survey shows they have regenerated successfully according to these criteria. The time elapsed between logging and finalising a coupe is only one measure of regeneration success.

### 2.5 REGENERATION CLAIMS

Various official sources state that VicForests successfully regenerates at least 85% of coupes within three years. For example:

- In 2013, the Auditor-General reported that VicForests had re-sown areas where initial regeneration had failed in about 15% of all coupes.<sup>12</sup>
- In 2018, the State of the Forests report estimated that successful regeneration was usually achieved at the first attempt in between 85 and 95% of cases.<sup>13</sup>
- VicForests' annual report for 2019/20 placed the long-term average extent of the regenerated areas needing retreatment in any one year at 5–6%.<sup>14</sup> This lower number probably measures the actual area requiring retreatment as a percentage of the net area logged rather than the percentage of coupes requiring retreatment.

The reports cited do not provide data to support their claims of regeneration outcomes or offer any breakdown by forest type.



“

In some coupes, extensive deforestation had left large sections covered with a dense layer of grass, blackberries or shrubs, blocking eucalypt regrowth.

# 3. The Reality

## 3.1 FAILURE RATES

In this analysis, we have taken the same benchmark for successful regeneration that VicForests uses: the three-year period from logging to finalisation. Coupes that were not finalised after three years were taken to have failed to regenerate at first attempt. By lodging numerous Freedom of Information (FOI) requests, we obtained finalisation lists from seasons 2013/14 to 2019/20. The data were then matched coupe by coupe with publicly available logging history data.

Where the data permitted, we calculated the rate of regeneration failure by season: post-logging from 2012/13 to 2016/17<sup>15</sup> and pre-finalisation for each finalisation year from 2013/14 to 2019/20. The results are shown in Tables 1 and 2.

This revealed failure rates much higher than VicForests has claimed. Overall, 30% of coupes failed to regenerate within three years after logging. Similarly, looking backwards from the finalisation year, nearly 30% of coupes failed to meet the three-year benchmark; this included 13% that had last been logged more than five years previously, and even some dating back to 2004/05.

The failure rate for Mountain Ash coupes was more than 50%. That is, every second coupe remained unfinalised more than three years after logging. Expressed in terms of the mean time required to finalise coupes, ash coupes (Mountain Ash, Alpine Ash, Shining Gum) took an average of 3.48 years, whereas mixed species coupes averaged 2.89 years. This is a statistically significant difference.

In a finalised forest coupe, by definition, logging is completed, a seedling survey has been done, and the criteria for finalisation have been met. Calculating post-logging regeneration failure on the other hand assumes logging is completed (coupes can be logged in sections over several years and completion dates are not public). Both methods of analysing the finalisation data (post-logging and pre-finalisation) are broadly in agreement. This strongly suggests that regeneration failure is the main reason coupes are not finalised within three years.

## 3.2 FURTHER REMEDIATION

Coupes that fail to regenerate at first attempt usually need more difficult, expensive and intrusive remedial work. This may include rough-heaping (where machines are used to push logging slash and unwanted regrowth such as wattles into heaps), hand-planting seedlings and installing deer-proof fencing.<sup>16</sup>

Some coupes are subjected to multiple attempts to regrow trees over many years. VicForests' Timber Release Plan for December 2020 lists over 100 coupes last logged more than three years ago as "Current Regen", meaning regeneration work is continuing. Some were logged as long ago as 2004/05. These coupes remain VicForests' responsibility until they can be finalised.

With colleagues, we conducted several ground checks for this review. These suggest that expensive remedial work is much

more commonly undertaken in ash forests, particularly those closer to Melbourne.

## 3.3 NOT "LIKE FOR LIKE"

Are logged forests regrowing "like for like"? The policies that underpin the RFAs take it as given that forests can be regrown after logging in spite of scientific evidence to the contrary.<sup>17</sup> In the decades since the RFAs were signed, there has been no attempt to establish empirically whether logged coupes have been regenerated sufficiently to maintain the forest's biological diversity and ecological characteristics. Once logged coupes are finalised, neither VicForests nor DELWP is obliged to monitor their condition.

In a 2018 report, the Victorian Auditor-General observed that the condition of the forest at the end of a logging cycle should be as good as – or better than – it was at the start.<sup>18</sup> The Auditor-General also noted that VicForests does not test whether its proposed harvest schedule is likely to maintain values such as biodiversity and carbon storage in regrown forest.

In response, VicForests asserted that "harvesting regulations, regeneration standards it needs to meet under the timber harvesting regulations and past studies collectively provide sufficient reason to assume this is occurring".

Forest type	No. of coupes logged	No. of coupes not finalised within three years	Failure rate (%)
Coastal Mixed Species	46	9	20
Foothill Mixed Species	199	46	23
Mountain/Alpine Mixed Species	145	40	28
Shining Gum	11	2	18
Alpine Ash	225	58	26
Mountain Ash	129	69	53
Total	755	224	30

Table 1: Regeneration failure rate for coupes last logged between 2012/13 and 2016/17.

Sources: Log\_Season logging history (downloaded from Spatial Datamart Victoria). Finalisation lists compiled by VicForests appended to annual harvesting and regeneration reports submitted to DJPR. (Appendix 1).

Yet there are many indications that this is not the case. Regeneration should maintain the original canopy floristics, but VicForests' own data show instances of non-compliance. For example, in the Mt Delusion area (Tambo FMA) and in the Central FMA near Melbourne, mixed-species coupes – which, as their name implies, should contain a diversity of species – have been replanted with a single species.<sup>19</sup>

### 3.4 POST-SURVEY REGENERATION FAILURE

Even where seedling surveys suggest coupes have regenerated successfully at first attempt or following remediation, the trees may subsequently die, sometimes within one or two years. We have termed this “post-survey regeneration failure”. Logged forests remain vulnerable for decades, especially to bushfires but also to browsing animals, drought, insects and other threats. Ash forests are at particular risk, because the trees take more than 25 years after logging to reach reproductive maturity and produce viable seed stores.<sup>20</sup> If they are killed before then, regeneration will depend on sowing seed or planting seedlings.

The existence of post-survey failure implies that the extent of failed regeneration can increase over time. For example, irrespective of whether coupes have been finalised, forests logged by VicForests since 2004, especially the ash forests, remain at risk because they are less than 25 years old.

Forest type	No. of coupes finalised	No. of coupes not finalised within three years	Failure rate (%)
Coastal Mixed Species	92	17	18
Foothill Mixed Species	259	62	24
Mountain/Alpine Mixed Species	203	43	21
Shining Gum	13	3	23
Alpine Ash	332	92	28
Mountain Ash	158	76	48
Total	1058	293	28

Table 2: Regeneration failure rate for coupes finalised between 2013/14 and 2019/20

Sources: as for Table 1.

As a result of logging before 2004, there is a backlog of at least 37,000 hectares that were either unsurveyed or unregenerated. More recent bushfires are likely to have substantially added to the area. In 2018, the agency responsible for dealing with the backlog, the Department of Jobs, Precincts and Regions (DJPR), told the Auditor-General that it had no firm plans to survey or treat the area, because regeneration is costly and it was unlikely to get funding.<sup>21</sup> In 2020, DJPR refused FOI requests for information about the backlog, arguing that too many documents were involved.

### 3.5 GROUND CHECKS

In 2021, as part of this review, forest coupes were inspected across eastern Victoria, sometimes on foot and sometimes using drones. The aim was to characterise the extent and types of regeneration failure. Initial visits quickly showed that it would not be necessary or practical to attempt a quantitative assessment. When coupes had not regenerated, the failure was obvious and often catastrophic.

The types and extent of regeneration failure varied, sometimes involving the entire coupe, and at other times being isolated to relatively confined patches.

In some coupes, extensive deforestation had left large sections covered with a dense layer of grass, blackberries or shrubs, blocking eucalypt regrowth. Others had patchy deforestation, and smaller areas of grass, shrubs or bracken interspersed with eucalypts. In others again, extensive areas were dominated by species other than eucalypts, usually acacias but also shrubs such as Dogwood and Blanket Leaf. There were also bare patches over old log landings and disturbed soils. Widespread damage from horses, deer and pigs was also observed. Cattle were being grazed, presumably under licence. And in many coupes the practice of burning off after logging to create an ash bed in which seeds can grow had killed almost all the seed trees.

Ground-checked coupes were rated as having failed if more than one hectare of the coupe was deforested or dominated by non-eucalypt regrowth.<sup>22</sup> Such coupes were found across the region.

Most of the ground-checked coupes had been finalised. These are examples of post-survey failure. Surveyed and assessed by VicForests as adequately regenerated at the seedling stage, they were finalised, making DELWP responsible for their management. They then suffered a reversal that destroyed some or all of the regeneration. Three of the coupes may have been affected by bushfires after finalisation, but in most cases some other factor caused the regeneration failure.

Ten of the ground-checked coupes had not been finalised and remain VicForests' responsibility. In the December 2020 Timber Release Plan, eight were listed as “Current regen” and two as “Current” logging.

# Failed coupes

## Melwood (737-502-0002)

Melwood was a mixed species forest, logged in 2012/13 and finalised in 2017/18. A 3.2 hectare section of the coupe was rough-heaped, probably in 2015/16. In March 2021 the western end of the coupe was predominantly bracken and shrubs with scattered dead seed trees interspersed with patchy eucalypt regeneration.



Photos: Lisa Roberts | Melwood in March 2021

# Failed coupes

## Blue Shirt West 8 (764-503-0008)

Blue Shirt West 8 was an Alpine Ash forest close to the boundary of the Alpine National Park. Huge stumps show the size of the trees when they were clearfelled in 2004/05. VicForests records that regeneration was established in September 2012 and surveyed in March 2014. The coupe was finalised in 2013/14.

Images from Google Earth show large areas devoid of trees in 2016. In February 2021 we found well-established stands of acacia, some eucalypt regeneration and extensive areas of grass and weeds. Horse tracks and droppings were everywhere.



Photo: Trent Patten | Some eucalypts are regrowing (yellow-green) but large areas are covered with grass and weeds or dominated by acacia (grey-green). The two white sheets (centre bottom) are 25 metres apart.

# Failed coupes

## Tom's Track (771-507-0013)

Tom's Track was an Alpine Ash forest until it was logged in 2010/11. After a seedling survey by VicForests in 2014, the coupe was finalised and handed back to DELWP. This is one of four coupes included in DELWP's 2016/17 audit program, because the department had 'concerns' about their status. The auditors visited the coupe in September and October 2017. They commented: "VicForests' regeneration surveys were undertaken in November 2014 and presumably reflected the stocking of the coupes at the time. Grazing by cattle, deer, insects and other herbivores, as well as competition from the dense grass cover has presumably reduced stocking since those surveys. The two understocked coupes had been rough heaped and hand seeded, indicating that the initial regeneration attempts were also unsuccessful. (DELWP 2016/17 Audit report)

In 2019 Goongerah Environment Centre (GECO) visited the coupe and included it in a formal complaint to DELWP (OCR) (see Appendix 3). Officers from the Timber Harvesting Compliance Unit visited the coupe in October 2020 and reported that the prevailing species were heath and grasses. Large heaps were dominated by blackberry and eucalypt regeneration was minimal. DELWP (OCR) nevertheless dismissed the complaint, claiming there was no direct evidence that VicForests' original seedling survey was not successful.

In February 2021 we too found grasses, weeds, severe blackberry infestation, no regeneration and evidence of cattle grazing.



Photo: Trent Patten | Tom's Track, February 2021

# Failed coupes

## Delilah (297-819-0005)

Delilah in the Toolangi area was Mountain Ash forest. It was clearfelled in 2006/07 and burnt in the 2009 bushfires. The eastern edge of the forest had been logged in the 1970s.

Images from Google Earth show that much of the area logged in 2006/07 appears to have been rough-heaped (cleared and bulldozed into windrows) several times between 2011 and 2016. In 2020 a tender was let for 2.7 hectares to be rough-heaped and hand-planted.

The coupe has not been finalised and was listed as 'current regen' in the December 2020 TRP.

In March 2021, sections that had been hand-planted with eucalypt seedlings were heavily infested with scotch thistle. Areas that were not planted had mixed wattle and eucalypt regrowth.

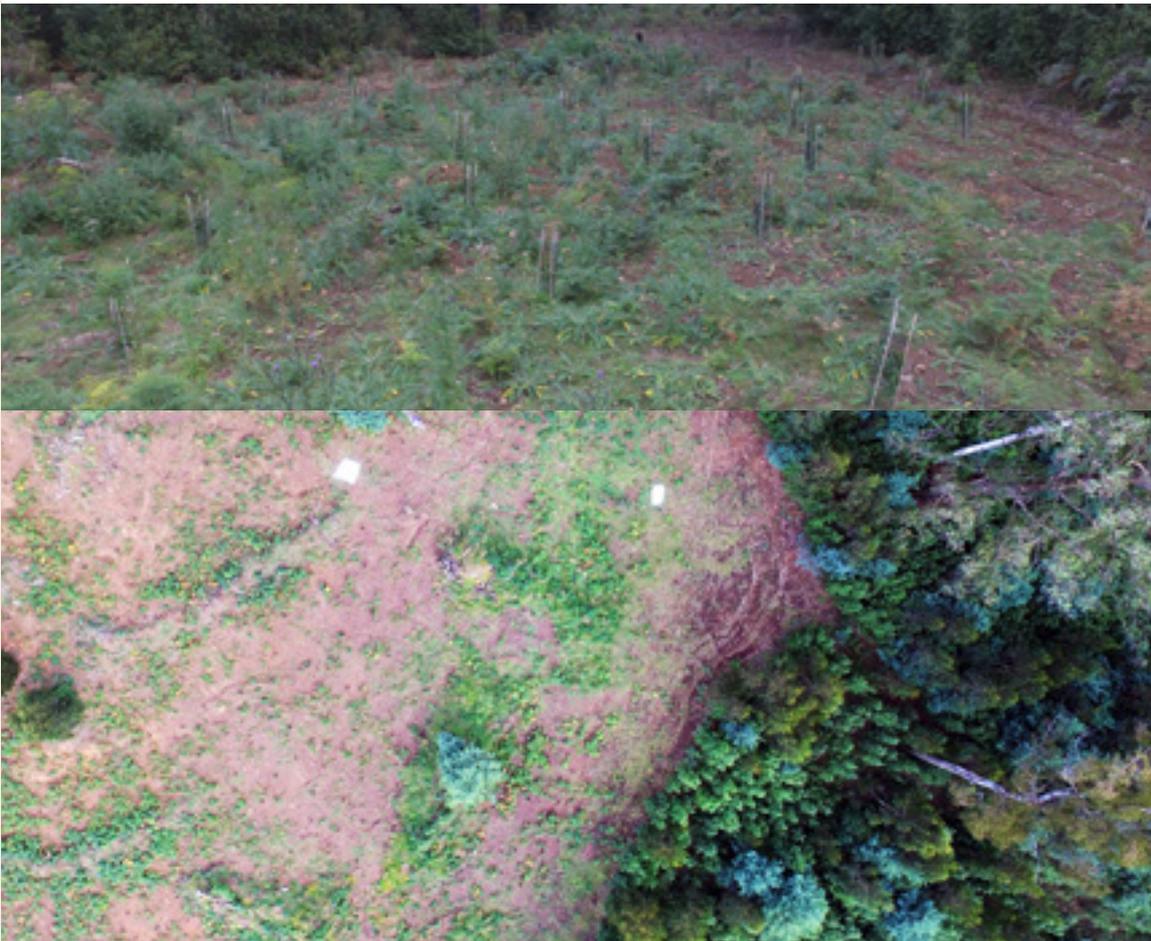


Photo: Trent Patten | Hand-planted area surrounded by regrowth eucalypt and wattle. White sheets are 25 metres apart.

# Failed coupes

## Crawfords Track Ext (771-505-0005)

Crawfords Track Ext is a large coupe (47.5 hectares net). It was an Alpine Ash forest before it was clearfelled in 2004/05. Since then, serial regeneration attempts have failed. These have included five episodes of hand-planting, rough heaping (three times), root raking, chemical use and cultivation.

The logging coupe has not been finalised and was categorised as 'current regen' in the December 2020 TRP. In February 2021 it was mostly thick grassland surrounded by a deer-proof fence with occasional struggling seedlings.

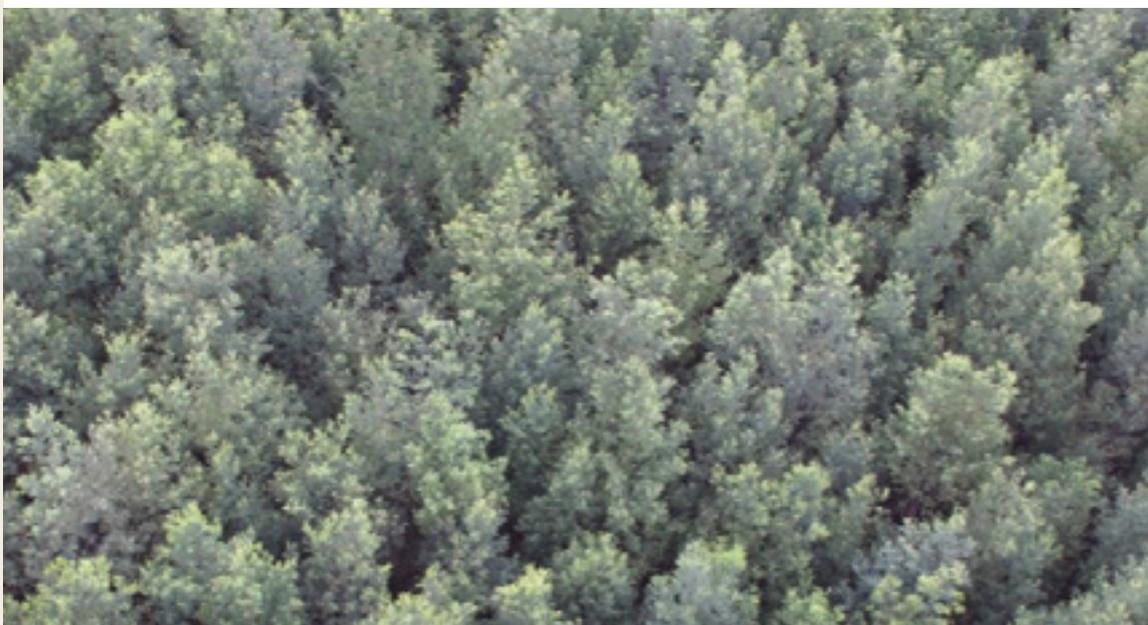


Photos: Trent Patten | Deer proof fence, struggling seedlings and thick grass cover. February 2021

# Failed coupes

## Big Bull Fiddle (297-538-0001)

Big Bull Fiddle was a Mountain Ash forest east of Toolangi. It was thinned in the 1960s, then 32 hectares net were clearfelled between 2009 and 2011. VicForests cleared and hand-planted several small sections, including 1.8 hectares planted with Mountain Ash in 2017/18. The coupe was finalised and returned to DELWP in 2018/19. In 2020 a drone survey showed it was predominantly – in places exclusively – Silver Wattle (*Acacia dealbata*).



Photos: Trent Patten | Silver Wattle is grey-green, Mountain Ash is light yellow-green.

# Failed coupes

## Oil Bore (743-506-0002)

This was a coastal mixed species forest logged in 2018/19 and finalised a year later in 2019/20. In February 2021 a large area of disturbed, waterlogged ground, presumably the log landing and surrounds, was mostly devoid of eucalypts.



Photo: Lisa Roberts

# Failed coupes

## Hardings (735-519-0010)

Hardings was foothill mixed species forest, logged in 2015/16. The first regeneration attempt (eucalypt seedling survey) was unsuccessful. In June 2019 two bulldozers were on-site clearing and heaping burnt logs and vegetation, including young regrowth wattles and eucalypts. In the process Long-flower Beard-heath (*Leucopogon juniperinus*) plants were destroyed. The species should have been protected before logging started. The work was halted in response to a formal complaint by the Gippsland Environment Group, upheld by the DELWP Conservation Regulator. Nothing has been done since.

In March 2021, the area that was rough-heaped was mostly grass, native ground-cover, weeds and herbs. Black wattle and Long-flower Beard-heath are growing in the sections that were not bulldozed. The coupe is not finalised and remains listed on the December 2020 TRP as 'current regen'.



Photo: Above - Louise Crisp | Bulldozed, June 2019. Below - Lisa Roberts | March 2021.

# 4. The Root Causes

## 4.1 REGULATION

Logging and regeneration in Victoria are regulated by a complex set of laws, policies, codes and procedures.<sup>23</sup> The key agency in the system is VicForests, the state-owned business responsible for harvesting, selling and re-growing timber in native forests on publicly owned land. Two departments have policy and regulatory roles: the Department of Jobs, Precincts and Regions (DJPR), which is responsible for Allocation Orders and receives VicForests' data on harvesting operations, and the Department of Environment, Land, Water and Planning (DELWP), which is responsible for administering the Code of Practice for Timber Production, which governs timber harvesting in Victorian state forests. The Commonwealth accredits the system through the RFAs.

The main legislation governing the forest management system is the *Sustainable Forests (Timber) Act 2004*. The Act defines the requirements for key processes and decisions. In particular, it sets out the requirements for Allocation Orders, which transfer ownership of timber in specified state forests from the government to VicForests, and Timber Release Plans (TRPs), which list the coupes VicForests intends to log. Finalisation, which transfers management responsibility for regenerated coupes from VicForests to DELWP, is an administrative process; the term is not defined in legislation.

The Code of Practice for Timber Production and its subsidiary Management Standards prescribe the core set of rules governing VicForests' operations.<sup>24</sup> The Code's aims are to perpetuate biodiversity and maintain the floristic composition of regrowing forests, but these goals are not being met. VicForests instead focuses only on those rules that deal with eucalypt seedling surveys, and measures "success" in terms of seedling density. It sets itself only a commercial standard, ignoring the ecological one.

VicForests must carry out the seedling survey within a specified period after logging. If seedling density and distribution do not meet the stocking criteria, regeneration can be attempted multiple times over years. But, coupes must also be regenerated as soon as practical, aim to achieve canopy floristics common before logging and take into consideration sensitive understorey species.

In November 2021, the government published substantial amendments to the Code prompted at least partly by recent court decisions.<sup>25</sup> The changes are complex but appear little changed from those proposed in the June 2021 draft.

The new Code considerably weakens forest protection. As the Victorian National Parks Association observed when the changes were proposed, they would "weaken current protections for threatened species ... risk undermining the protection of biodiversity... [and] do nothing to resist the increased pressure for unsustainable logging".<sup>26</sup>

This pressure has risen since November 2019, when the Victorian government announced that native forest logging would end in 2030.

## 4.2 VICFORESTS

VicForests is at the centre of the forest management system. It determines the level of harvest and plans the distribution and timing of logging to meet its commercial commitments. It defines coupe locations and boundaries and decides when and how they will be logged. Logging may start and finish in a single season or coupe sections may be logged separately over a period of years. Logging operations defined as "tending" (thinning) do not require regeneration and can be scheduled at any time. After bushfires, burnt forests can be logged under special "salvage logging" rules.

When logging in a coupe is complete, VicForests carries out the eucalypt seedling surveys, decides whether, how and when to undertake remedial work, and selects the coupes to list as finalised.

At VicForests' inception in 2004, some checks and balances were built into the system. The environment department was given a role in determining which forests could be logged and whether coupes had been satisfactorily regenerated. In 2013, however, VicForests gained decisive control in the name of resource security.<sup>29</sup>

Important rights were transferred from the Department of Environment and Primary Industries to VicForests.<sup>30</sup> The *Sustainable Forests (Timber) Act 2004* was amended so that:

- Allocation Orders, which had previously been limited to 15 years, were made open-ended and a requirement for five-year reviews was abolished.
- TRPs no longer needed approval from the Secretary of the Department of Sustainability and Environment (DSE). Their development and approval became internal VicForests processes, subject to public comment, and signed off by the VicForests Board.

An audit of VicForests' regeneration survey results had previously been required before the environment department accepted coupes back.<sup>31</sup> In 2013 the audit was abolished and in 2014 the coupe finalisation procedures were scrapped. Since then, DELWP (previously DSE) automatically resumes management responsibility for coupes if VicForests lists them as finalised; DELWP has never refused to accept the return of a coupe since then.<sup>32</sup>

The remaining constraint on how much VicForests can log is a clause in the Allocation Order specifying the maximum gross area of ash and mixed species forest that can be logged in a five-year period. VicForests reports against this limit in its harvesting and regeneration reports; these reports are submitted to DJPR but not published.

The coupe finalisation process determines when management responsibility for a coupe passes from VicForests to DELWP. As a result, VicForests' responsibility is interpreted to be confined to the narrow window between finishing logging and



# VicForests earns money by selling timber from trees it did not grow and which it ultimately has no responsibility for replacing.

## WOOD PROCESSING

By far the biggest user of native forest wood in Victoria is Opal Australian Paper, which is part of the Nippon Paper Group. Victorian timber is also processed in NSW by Allied Natural Wood Enterprises, which operates Australia's oldest export woodchip mill at Eden and has acquired other wood processing plants. Smaller processors of native forest wood from eastern Victoria include local sawmills.

In 1996, the Victorian government entered into an agreement with Amcor Limited (then an Australian publicly listed company) to supply pulpwood to the Maryvale pulp and paper mills until 2030.<sup>27</sup> Through subsequent takeovers, in 2009 this business (including the original agreement) became part of Nippon Paper, which then renamed and rebranded part of their business as Opal Australia in 2020. The agreement binds the government to supply the company with at least 350,000 cubic metres of pulpwood annually, of which at least 300,000 cubic metres must be ash from a defined area close to the Maryvale mills.

There are adjustment mechanisms. Clause 32 allows for the agreement to be suspended if damage to the forests makes it impracticable to provide the volumes specified. In that case, the company would have no claim against the government. Supply reductions must already have been negotiated in response to bushfires and also to various injunctions preventing the logging of coupes while legal action proceeds.

The largest pending adjustment, however, is in response to the projected end of native forest logging in 2030. When the government made this announcement, it also announced that wood supply would not change before 2024.<sup>28</sup> Under its agreement with Opal, the government is required to review pulpwood supply at least once every five years. The pending phase-out is well within this five-year planning horizon.

completing a successful seedling survey. It does not include post-survey regeneration failure.

In 2021, DELWP's internal regulator, the Office of the Conservation Regulator (OCR), dismissed a public complaint where regeneration failure was clearly established.<sup>33</sup> The OCR determined that it had no power to enforce compliance or require rectification of the coupes because the failure occurred after VicForests had completed successful seedling surveys.<sup>34</sup> OCR also did not act to prevent nearby coupes being logged as a precaution against regeneration failure because it had "no evidence or reason to believe VicForests will fail to successfully regenerate [the] coupes".

VicForests controls the release of information about logging and regeneration. It does not publish data on its regeneration performance coupe by coupe, although the Auditor General and others have recommended that it do so in the interests of transparency and accountability. As a condition of the Allocation Order, VicForests must provide DJPR with annual data on harvesting and regeneration, including lists of finalised coupes, but this information is not published.<sup>35</sup>

Partial regeneration data were included in VicForests' sustainability reports, but the most recent such report was for the year 2017/18. The five-yearly "State of the Forests" reports contain similarly partial regeneration data. None of the published data sets are consistent with the relevant Sustainability Indicator in the sustainable forest management criteria referenced in the RFAs, where clause 2.5 specifies they should include the proportion of timber harvest area successfully regenerated by forest type.<sup>36</sup>

## **4.3 COMPLIANCE**

### **4.3.1 The Office of the Conservation Regulator**

In 2019, DELWP's regulatory functions, including its responsibility for logging and regeneration, were consolidated in a new Office of the Conservation Regulator (OCR). The OCR is not independent; it remains a unit within the department. It mainly regulates logging and regeneration through an annual audit of a sample of coupes and by responding to complaints.

The audit rarely covers regeneration. When it does, field inspections take place immediately after logging, so the audit is blind to longer-term outcomes.

OCR has dismissed two recent complaints of regeneration failure. The first, discussed in the previous section, concerned multiple coupes around Mt Delusion (Tambo FMA).<sup>37</sup> It was ultimately dismissed with a finding of "no breach detected" because there was no direct evidence that VicForests' regeneration surveys were inaccurate when they were done.<sup>38</sup>

The second complaint related to VicForests' failure to complete regeneration within the required time frame in multiple coupes

in the Central FMA. OCR declined to investigate because no physical evidence was provided and because it considered the fact that a coupe remained on a TRP for years could not be taken to indicate failure.<sup>39</sup>

Beyond VicForests' eucalypt seedling surveys, there is no monitoring of the persistence, quality or condition of regrowing forests over time. Unfinalised coupes remain in limbo unless and until VicForests successfully remediates them. OCR has said it is "currently considering" how forest regeneration is monitored to ensure the viability of regenerating forests when management returns to DELWP.<sup>40</sup>

OCR considers that there is no avenue under the Code to enforce compliance or require VicForests to rectify regeneration failure if there is evidence that a coupe was successfully regenerated in the first instance.<sup>41</sup> In practice, responsibility for post-survey regeneration failure defaults to DELWP as land manager.

### **4.3.2 DJPR**

Within DJPR, regulatory and compliance responsibilities rest with the forestry unit, which sits within the department's Forestry and Climate Change group. The unit receives VicForests' annual harvesting and regeneration reports. It claims that it reconciles the gross area of coupes harvested by VicForests with the areas allocated to it, but the Auditor-General has observed that the unit was not able to show how it verifies or uses the data.<sup>42</sup> None of the data are published.

### **4.3.3 Audits**

In 2013 the Victorian Auditor-General examined whether native forests on public land in eastern Victoria were being managed "productively and sustainably". Unfortunately, however, the Auditor-General, the various government reviews and the state of the forests reports have failed to test the evidence about whether forests are regrowing like-for-like after logging or whether biodiversity and other values are being sustained. They have not reconciled logging, regeneration and finalisation data coupe by coupe – and, crucially, they have not systematically inspected coupes in the forest.

#### 4.4 ACCOUNTABILITY

VicForests has failed in multiple ways to comply with elements of the Code. Specific examples include:

- It is not taking a precautionary approach; coupes continue to be logged despite serial regeneration failures in similar or even adjacent coupes
- There is evidence of specific instances of non-compliance (as when mixed species coupes are hand planted or seeded with a limited number of species instead of the diverse range originally present)
- When we ground-checked finalised coupes, they were frequently fail-rated, suggesting that they were not handed back to DELWP in a resilient condition with regeneration likely to persist and regrow into forest of the type and quality previously growing on the site.

VicForests and DELWP are clearly aware of the recurring instances of catastrophic regeneration failure around Mt Delusion. Equally, they are aware of persistent regeneration failures in Mountain Ash forests, because tenders for hand-planting are an annual event. But this awareness has not prompted action against specific instances of apparent non-compliance, and it has not led the departments to minimise the risk of regeneration failure when scheduling coupes for logging. DELWP and DJPR are not independent regulators, and neither has acted to hold VicForests accountable for regeneration failures.

#### 4.5 REGIONAL FOREST AGREEMENTS

Oversight and accountability are absent from the RFA regime as well. Although regeneration is a fundamental requirement for sustainability, it is tracked through a single indicator in the five-yearly "State of the Forests" reports.<sup>43</sup> This indicator compares the area harvested in a given year with the area "effectively" regenerated. The latter figure is inflated by including areas re-treated after failing in earlier years. There is no breakdown by forest type. The data is not independent; it is sourced from VicForests and the DJPR or its predecessors.

Graeme Samuel's 2020 review of the EPBC Act strongly criticised the RFAs' provisions for environmental protection:

*The RFAs rely solely on the States to undertake surveillance, compliance and enforcement ... The EPBC Act does not require reporting on the environmental outcomes of activities conducted under RFAs. The Review considers that Commonwealth oversight of environmental protections under RFAs is insufficient and immediate reform is needed.*<sup>44</sup>

The treatment of RFA regeneration commitments bears out this finding. The Commonwealth does not independently verify regeneration outcomes, yet the RFAs explicitly accredit Victoria's forest management system and agree it is providing for Ecologically Sustainable Forest Management, including ensuring that harvested areas are successfully regenerated.

#### 4.6 COST-SHIFTING

Costs and income are out of balance in Victoria's forest management system. VicForests earns money by selling timber from trees it did not grow and which it ultimately has no responsibility for replacing. VicForests is bearing no liability for the risks and costs imposed by the inherent susceptibility of young logging regrowth and immature trees to bushfires and to damage from browsing animals, weather, weed competition and, increasingly, the impacts of rising global temperatures.

Once coupes are finalised by VicForests, DELWP automatically resumes responsibility for them, transferring their long-term management cost to the public. Provided VicForests has evidence of successful regeneration from a seedling survey, it is not being held responsible for non-compliance or required to rectify areas subsequently found to have failed. The extensive regeneration failure and deforestation around Mt Delusion are a case in point.

Remediation is at least twice as expensive as regeneration at first attempt.<sup>45</sup> The costs can be circumvented by selecting which coupes to remediate and when. There are no absolute time limits being imposed after the initial seedling survey. Coupes that are difficult to regenerate remain on VicForests' books indefinitely without penalty.

# 5. The Consequences

The consequences of regeneration failure are long-term and cumulative. They include the impact of permanent forest loss or alteration and the effects of the regeneration process and remedial work itself. The time scales for recovery are long – from decades to centuries or more. Regeneration failure impacts all forest values, including cultural values, biodiversity and water supply.<sup>46</sup> The following sections briefly review just three – biodiversity, carbon and fire.

## 5.1 BIODIVERSITY

A key consequence of regeneration failure is habitat loss. At the coupe level, forest converted to grassland, shrubland or acacia woodland no longer supports the complex natural diversity of the original forest. The loss of old forest and hollow-bearing trees takes with it the wildlife that depend on hollows for shelter and breeding. Repeated attempts to use mechanical methods to regrow eucalypts obliterate diverse understorey plants and favours early-succession species and weeds. At the landscape level, disturbances interact, altering ecological condition, biodiversity and ecosystem processes.<sup>47</sup>

Victoria's ash forests are vulnerable to increasingly frequent bushfires. Short intervals between fires can result in regeneration failure and ecological collapse.<sup>48</sup> In some areas, ash forests that have been logged have also been burnt by multiple bushfires in quick succession, leaving insufficient time for forests to regrow to maturity and replenish seed stores. Older eucalypts that might otherwise be a seed source have also been killed by excessively hot post-logging burns. In the Mt Delusion area, Alpine Ash forests have been converted to grassland after repeated regeneration failure. Other high

elevation stands of Alpine Ash are currently listed for logging. There is a high risk that they too will fail to regenerate and be converted to grassland.

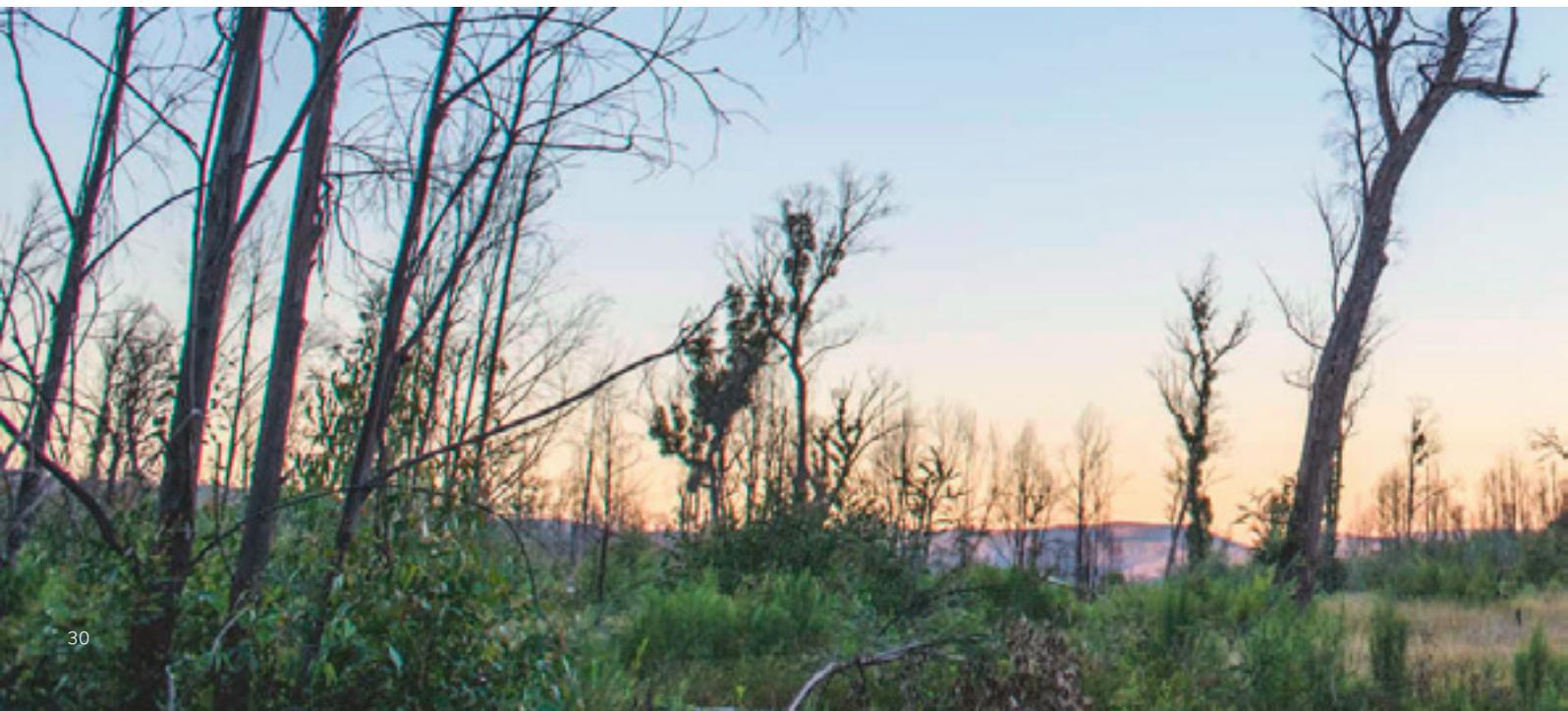
Mountain Ash forests east of Melbourne are listed as critically endangered by the International Union for Conservation of Nature.<sup>49</sup> Almost 99% of the ecosystem has been burnt or logged since 1939. It is dominated by trees that are at most 82 years old (regenerating after the 1939 bushfire). This impacts on hollow-dependent fauna such as Leadbeater's Possum and the Greater Glider. The high frequency of regeneration failure in Mountain Ash coupes also contributes to ecosystem fragmentation.

Mixed species forests are widely distributed at all elevations, from alpine regions to coastal areas. Regeneration failure here equates to loss of habitat, simplification of forest structure and changed species composition. For example, Silvertop Ash (*Eucalyptus sieberi*) may regrow from a stump with a multi-stemmed structure similar to a mallee, completely changing forest functionality.<sup>50</sup> High elevation mixed species forests are notoriously prone to regeneration failure, greater than for any other forest type in Victoria.<sup>51</sup> Failed regeneration coupes at high elevations ground-checked for this project had extensive areas dominated by thick stands of wattle (*Acacia* spp).

## 5.2 CARBON

Victoria's Mountain Ash forests are among the most carbon-dense forests in the world. The land sector, including public native forests, is a significant part of Victoria's Climate Change Strategy.<sup>52</sup> In 2019 the land sector offset 19% of the state's emissions, about half coming from public native forests or softwood plantations established before 1990.

Regeneration failure reduces the amount of carbon stored in the forest. In 2019, Victoria's greenhouse gas accounts shifted to a



spatially explicit method in which carbon stock changes can be calculated from remote sensing and logging history records.<sup>53</sup> The method, however, has a lag time of 12 years before forest conversion to grassland is reported as such. It also understates carbon loss because it is not yet possible to distinguish non-eucalypt from eucalypt regeneration.<sup>54</sup> In future it should be possible to quantify the carbon stocks lost or foregone due to regeneration failure, and due to state forest land being taken up by roads, tracks and log landings.

In 2021, an independent expert panel reporting on interim emissions targets for Victoria identified opportunities for increasing sequestration in public native forests by reducing logging and restoring areas previously logged but not fully regenerated.<sup>55</sup> The opportunity is real, but there is a risk that it will be implemented with the sole aim of capturing as much carbon as possible as quickly as possible to offset fossil fuel emissions. Restoration should instead aim to regrow biodiverse forests for their resilience as carbon stores in the face of global heating and for their contribution to ameliorating the biodiversity crisis.<sup>56</sup>

### 5.3 FIRE

Bushfires are an increasingly important cause of regeneration failure as they become more frequent and recur at shorter intervals. Logging creates expanses of fire-susceptible regrowth and immature forest. It also makes bushfires worse, increasing their severity and frequency.<sup>57</sup> Old growth forests are comparatively fire-resistant but increasingly rare and fragmented, not least as a result of logging.

Dominant eucalypts that regenerate primarily from seed are especially vulnerable to fire. Young trees are 15 to 20 or more years old before they reach seed-bearing age; if they are killed



Photo: Alana Mountain | Hunter coupe, Kinglake

before then, there is a high probability that the forest will be replaced by grassland or acacia-dominated shrubland unless it is artificially re-seeded or planted.<sup>58</sup> Mixed species forest types with dominant eucalypts that regenerate largely by re-sprouting are also at risk from frequently recurring fires.

Re-seeding operations are often undertaken after bushfires, but the extent to which logging was an underlying factor in the loss of immature forest is rarely stated. Following the bushfires of 2003 to 2009, for example, more than 7000 hectares of recently logged ash forest needed artificial sowing.<sup>59</sup> After the Black Summer fires of 2019–20, 11,600 hectares of Alpine Ash and Mountain Ash were sown with seed.<sup>60</sup> The loss of immature forest was attributed to frequently recurring fires.

Since 1960, about 500,000 hectares of native forest in eastern Victoria has been disturbed by logging with varying degrees of intensity. These forests present a risk, higher in the younger cohorts, to forests and settlements around them in the event of future fire because of their increased flammability. The immature forests themselves are at risk from future bushfires.



Image: Lisa Roberts | High Five coupe, Nunnett Road



VicForests' position is untenable. Its narrow commercial objectives do not reflect the need to protect the many other values held by forests

# 6. Conclusions

## 6.1 THEY DON'T GROW IT BACK

VicForests claims to regrow *all* logged areas with the same type of forest that was previously there and to monitor progress in every logged area. This report shows that it does neither.

In the first instance, 30% of logged coupes fail VicForests' obligatory eucalypt seedling survey within three years of logging. This is twice the failure rate VicForests claims. VicForests is still attempting to regenerate some coupes that date back to 2004/05.

Logged forest coupes that pass the seedling survey are automatically returned to DELWP. If regeneration subsequently fails, the regulator interprets the logging rules as absolving VicForests of responsibility for growing back the forest. Instead, DELWP is responsible for forests logged after 2004 and DJPR for the backlog of failed regeneration accumulated before 2004. The cost is borne by the public.

Logged forests where regeneration has failed are not monitored. Ground-checks conducted for this review found instances of failure ranging from outright deforestation to patches dominated by grass, shrubs or trees other than eucalypts. Weed infestation and damage from feral animals were rife. There is an urgent need to assess the scope of the problem and prepare rehabilitation and restoration plans.

Every additional coupe that is logged carries the risk that it will not regenerate. That loss is over and above the damage caused by the logging itself. Forest restoration is expensive. The Victorian government has already indicated it would not regenerate the pre-2004 backlog because of the cost. It would be environmentally irresponsible, contrary to the government's own logging rules and a breach of the RFA to continue current logging and adding to the failed regeneration backlog. Native forest logging is due to be scaled down from 2024 and to end in 2030. The end date should be brought forward to as soon as possible.

## 6.2 SYSTEMIC FAILURE

Victoria's forest management system is complicated and opaque. Multiple agencies are partially responsible for different elements of the system. As a whole, it is a failure. In relation to regeneration of public native forests it displays:

- **Lack of precaution:** If governments took seriously their claims to regrow forests and perpetuate biodiversity, they would analyse the causes when regeneration failed. They would also require rigorous assessment of the risk of regeneration failure before logging a coupe. They do neither, and there are many instances where forests are scheduled for logging even though nearby forests have failed to regenerate.
- **Lack of monitoring:** Other than the eucalypt seedling survey, there is no monitoring or auditing of regeneration over time, either coupe by coupe or at a regional or landscape scale.
- **Lack of transparency:** VicForests has not been required to publish data on its regeneration performance and related information. This includes the timing and results of eucalypt seedling surveys, any remedial work, regeneration expenditure (if any) and outcomes.
- **Lack of enforcement:** Government departments DELWP and DJPR are responsible for regulating VicForests. Neither has acted to enforce transparency, monitoring, precaution or compliance with the Code's goals and requirements to perpetuate biodiversity and maintain the floristic composition of regrowing forests.

The Commonwealth is also complicit in the systemic failure of forest management. As the EBPC review found, the Commonwealth relies solely on the states for surveillance, compliance and enforcement. Immediate reform is needed.

Native forest logging will end in the near future. The transition has begun. For credibility and effectiveness, the transition should be made the responsibility of an independent authority with the mix of skills and expertise and the integrity to manage its ecological, cultural and social dimensions.



### 6.3 VICFORESTS

VicForests' mandate is commercial<sup>61</sup> but its decisions on the nature, intensity and distribution of logging affect all aspects of forest environments. Particularly since 2013, the Victorian government has allowed VicForests to act with almost complete autonomy in pursuit of its commercial interests, increasing the tension between its activities and their impact on the gamut of other interests and values.

As a government agency managing publicly owned forests on behalf of the community, VicForests is:

- **Not trusted.** VicForests is in the unprecedented position of defending nine separate court cases initiated by regional communities who live close to forests targeted for logging or thinning. The amount of time and expense citizens have given to these cases reflects their anger, frustration and distrust of VicForests. Commercially, Bunnings Warehouse has decided to ban the sale of VicForests' timber.
- **Secretive.** VicForests routinely withholds information that should be public, such as seedling survey data and coupe finalisation lists. It even required confidentiality for seedling survey data it supplied to the Office of the Conservation Regulator in defending a public complaint.<sup>62</sup> As a result, the regulator has withheld the documents from release under FOI in case VicForests refuses to supply similar data to the agency in future.
- **Deceptive.** VicForests' website makes a feature of its commitment to "grow it back" with descriptions of seed collection, regeneration burning and sowing. The claims it makes about regeneration are misleading: it is not the case that VicForests regrows all logged areas; it is not the case that VicForests monitors every area to ensure the forest returns to maturity; and it is not the case that areas are always sown or planted with the same species that were present before logging.

VicForests' position is untenable. Its narrow commercial objectives do not reflect the need to protect the many other values held by forests. As the only stand-alone government agency with a role in native forest management, its dominance is unconstrained. The way it has exercised this power has earned it the irretrievable distrust of large sections of the community.

VicForests' role becomes more untenable the deeper Victoria moves into the transition away from logging native forests. Its commercial interests will increasingly conflict with the need to protect critical habitat values and other environmental obligations. This is especially clear in its role as the state's agent in supplying wood to Opal Australian Paper (Nippon Paper Industries). Negotiations must be well underway on the sources and volumes of wood to be made available, but none of the planning is in the public domain.

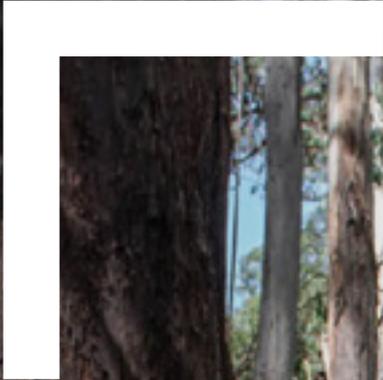
### 6.4 CONSEQUENCES

The consequences of regeneration failure, past and continuing, are significant:

- dwindling habitat, threatened wildlife and reduced biodiversity;
- a potentially significant reduction in valuable carbon storage;
- reduced water quality and quantity;
- reduced resilience of natural forests against feral pests and weeds;
- the heavy cost of restorative land management; and
- the interrelationship between bushfires and logging, which makes fires more severe while at the same time expanding the extent of immature forests that are vulnerable to fire.

Western Australia will end native forest logging by December 2023. Victoria's transition should be much faster than the currently planned 2030 end date to keep the costs and risks of continued logging to a minimum.

The end of native forest logging is a historic, once-in-a-generation opportunity to recover and revitalize Victoria's diverse and beautiful native forests and, by so doing, help protect the climate, wildlife, water and culture.



# 7. Recommendations

## FORESTS

### FOR THE VICTORIAN GOVERNMENT:

#### Recommendation 1

Urgently transition logging out of all native forests to avoid further serious environmental harm, including regeneration failure. Return custodianship of the forests to Traditional Owners.

#### Recommendation 2

Commission a rapid independent field audit of forests logged since 2004 to establish their condition and the extent of regeneration failure, including after bushfires.

#### Recommendation 3

Compare Victoria's carbon accounts with records of regeneration failure to establish consistent and reliable information for each.

## GOVERNANCE

### FOR THE VICTORIAN GOVERNMENT:

#### Recommendation 4

Close VicForests as soon as possible and establish an independent authority with the requisite powers and resources to oversee the end of native forest logging. The authority should have the mix of skills and expertise and the integrity needed to manage the ecological, cultural and social dimensions of the transition. Place First Nations Traditional Owners at the forefront of decision-making.

#### Recommendation 5

Immediately direct VicForests to open its books on the state of the forests and on its finances by (a) making public all data sets it holds relating to logging, seedling surveys, regeneration and remediation, and (b) publishing accounts of expenditure on regeneration and other post-logging management.

#### Recommendation 6

Negotiate a rapid reduction (within a year) in wood supply with Opal Australian Paper (Nippon Paper Industries). Clause 32 of the legislated agreement should be invoked; five-yearly pulpwood reviews and annual plans of utilization should be published.

### FOR THE COMMONWEALTH GOVERNMENT:

#### Recommendation 7

Withdraw the accreditation of Victoria's forest management system under the RFAs. Give notice of intention to initiate an audit on the grounds that Victoria has failed to comply with the National Forest Policy Statement by not implementing ecologically sustainable forest management, specifically by not "ensuring that harvested areas of native forest on public land are successfully regenerated, maintaining the natural floristic composition".

#### Recommendation 8

As a matter of urgency, implement the EPBC Review recommendation relating to RFA reform, namely that "the Review considers that Commonwealth oversight of environmental protections under RFAs is insufficient and immediate reform is needed".



# Glossary

**Acacia.** A genus of trees and shrubs commonly known as wattles. Often a colonising species after disturbance.

**Allocation Order.** Order made by the Agriculture Minister transferring ownership of timber in specified forests from the State of Victoria to VicForests for the purpose of commercial harvest and sale.

**Block.** A mapped area of state forest containing multiple coupes.

**Code.** Code of Practice for Timber Production 2014 incorporating Management Standards and Procedures for timber harvesting operations in Victoria's state forests 2014. Rules and standards for logging and regeneration in Victoria.

**Coppice.** Growth from the base or stump of a tree.

**Coupe.** An area of state forest identified in a Timber Release Plan for the purpose of logging. Identified by a unique number (coupe\_ID) and usually a common name. May be in several sections. Gross coupe area is the total coupe area including parts that cannot be logged for environmental or other reasons. Net harvest area (NHA) is the area of the coupe actually logged.

**Department of Environment, Land, Water and Planning (DELWP).** [www.delwp.vic.gov.au](http://www.delwp.vic.gov.au)

**Department of Jobs, Precincts and Regions (DJPR).** Formerly Department of Environment and Primary Industries (DEPI). [www.djpr.vic.gov.au](http://www.djpr.vic.gov.au)

**Eucalypt.** Flowering trees and shrubs of the genus *Eucalyptus* and other closely related genera.

**Finalisation.** Process by which DELWP resumes full management responsibility for a forest coupe after logging is completed. VicForests conducts a seedling survey and, if the required density and distribution of eucalypt seedlings is present, nominates the coupe for finalisation. DELWP automatically resumes responsibility and the coupe is removed from the TRP.

**Forest Management Area (FMA).** Areas of public land managed for conservation and uses including wood production. There are 15 FMAs in Victoria, seven in eastern Victoria (east of the Hume Highway) each identified by a name and number. Eastern Victoria FMAs: Central (8), Dandenong (9), Benalla-Mansfield (10), Central Gippsland (11), Tambo (14), East Gippsland (15), North-East (16)

**Forest Type.** Broad forest types based on forestry usage in Victoria. Ash forests: Alpine Ash (AAS), Mountain Ash (MAS), Shining Gum (SHG). Mixed species forests: Alpine Mixed Species (AMS), Mountain Mixed Species (MMS), Foothill Mixed Species (FMS), Coastal Mixed Species (CMS).

**Freedom of Information (FOI).** The right to request access to documents held by Victorian public sector agencies under the Freedom of Information Act 1982.

**Net Harvest Area (NHA).** The area of a coupe actually logged as compared with the gross coupe area which includes forest that will not be logged for environmental and other reasons.

**Regional Forest Agreement (RFA).** Commonwealth-state agreements about native forest logging based on the National Forest Policy Statement. Logging 'in accordance with' an RFA is exempt from the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

**Seed Tree.** Tree retained in a logged area of forest to provide seed for regeneration.

**Stocking.** Measure of the density of a stand of trees.

**Tending.** Types of logging such as thinning for which regeneration is not required under the Code.

**Timber Release Plan (TRP).** List of coupes scheduled for logging in the following three to five years. Prepared by VicForests and approved by the VicForests Board.

**VicForests.** Victorian government logging agency. [www.vicforests.com.au](http://www.vicforests.com.au)

# Appendices

## Appendix 1.

### **VicForests Harvesting and Regeneration Reports**

VicForests Annual Harvesting and Regeneration Reports and finalisation lists, 201314 – 201920

## Appendix 2.

### **VicForests Planting Tenders**

Planting tenders 2018-2021

## Appendix 3.

### **Failed regeneration, Mt. Delusion area, East Gippsland**

November 2019. GECCO (Goongerah Environment Centre) Report

April 2021. Letter from Conservation Regulator, Investigation Outcome

September 2021. Notice of decision, DELWP FOI request

## Appendix 4.

### **Finalisation audit**

DJPR FOI Decision letter

## Appendix 5.

### **Taylor 2018**

Nippon Paper Industries and the Wood Pulp Agreement. Report by Dr Chris Taylor, April 2018

## Appendix 6.

### **Failed regeneration, Rubicon Forest**

June 2021. DELWP FOI



# Endnotes

1. DB Lindenmayer et al., "Managing interacting disturbances: lessons from a case study in Victorian forests," *Journal of Applied Ecology*, 57, 2020, 1711–1716. <https://doi.org/10.1111/1365-2664.13696>
2. Victorian Environmental Assessment Council (VEAC), *Fibre and wood supply. Assessment report (2017)*. Website, accessed 27 September 2021.
3. Commonwealth of Australia National Forest Policy Statement: a new focus for Australia's forests (1992), Website, accessed 20 September 2021.
4. Clause 39, Central Highlands RFA
5. VicForests, *Regrowing our forests (2021b)* VicForests website, accessed 9 August 2021.
6. VicForests, *Our organisation (2021a)* VicForests website, accessed 9 August 2021.
7. Video on the front page of VicForests website [www.vicforests.com.au](http://www.vicforests.com.au)
8. VicForests, *National biodiversity month an opportunity to showcase VicForests' focus on biodiversity (2021d)* VicForests website, accessed 20 September 2021.
9. M Dawson, *Evidence to Legislative Council, Parliament of Victoria, Inquiry into ecosystem decline in Victoria*. 10 March 2021. Website, accessed 20 September 2021.
10. Department of Environment and Primary Industries (DEPI), *Code of Practice for Timber Production (2014)*. Office of the Conservation Regulator website, accessed 11 August 2021.
11. Victorian Auditor-General, *Managing Victoria's native forest timber resources*. Victorian Government Printer, December 2013; *VicForests, Sustainability report 2014/15*. Website, accessed 13 August 2021.
12. Auditor-General, *Managing Victoria's native forest timber resources*.
13. Commissioner for Environmental Sustainability, *Victoria's State of the Forests Report 2018*. Commissioner for Environmental Sustainability, Victoria.
14. VicForests, *Annual Report, 2019/20*. VicForests website, accessed 19 August 2021.
15. Within the three-year benchmark, 2016/17 is the latest a forest coupe can have been logged and finalised by 2019/20. The earliest a coupe is finalised is the season after logging, meaning coupes logged in 2012/13 could be finalised in 2013/14 but not before.
16. Department of Natural Resources and Environment (NRE), *Native Forest Silviculture Guideline No.6: Site Preparation*. DNRE, 1998.
17. D Lindenmayer, "Prior disturbance legacy effects on plant recovery post-high-severity wildfire", *Ecosphere*, 12 (5), May 2021; K Ough and A Murphy, "Decline in tree-fern abundance after clearfell harvesting", *Forest Ecology and Management*, 199 (1), September 2004.
18. Victorian Auditor-General, *Follow up of selected 2012/13 and 2013/14 performance audits. 2. Managing Victoria's native forest timber resources*. Victorian Government Printer, June 2018.
19. Appendix 2.
20. RH Nolan et al., "Climate change is testing the resilience of native plants to fire, from ash forests to gymea lilies", *The Conversation*, 21 September 2021.
21. Auditor-General, *Follow up of selected 2012/13 and 2013/14 performance audits. 2. Managing Victoria's native forest timber resources*.
22. This conforms with the Code's "one hectare rule".
23. DELWP (Department of Environment, Land, Water and Planning), *Overview of Victoria's Forest Management System (2019)*, DELWP website, accessed 9 August 2021.
24. DEPI, *Code of Practice for Timber Production (2014)*.
25. Victorian Government, 2021. *Code of Practice for Timber Production 2014 (amended 2021)*. Victorian Government Timber Harvesting website, accessed 4 November 2021.
26. Victorian National Parks Association (VNPA) (2021) VNPA submission to the proposed variation to the Code of Practice for Timber Production. Website, accessed 28 September 2021.
27. C Taylor, "Nippon Paper Industries and the Wood Pulp Agreement". (2018) Appendix 5.
28. DJPR (Department of Jobs, Precincts and Regions) Victorian Forestry Plan (2021a). Website, accessed 9 August 2021.
29. L Caripis, "Victorian law change abandons native forests to loggers", *The Conversation*, 27 May 2013.
30. VicForests *Annual Report 2013/14*. VicForests website, accessed 20 September 2021.
31. DSE (Department of Sustainability and Environment) *Coupe finalisation procedures (2008)*. VGLS website, accessed 10 August 2021.
32. Appendix 4.

33. GECO, "Failed regeneration at Mt Delusion area, East Gippsland". Report by Goongerah Environment Centre, November 2019, Appendix 3.
34. Appendix 3.
35. Harvesting and finalisation data used in this analysis were obtained under FOI (Appendix 1).
36. DSE, Criteria and indicators for sustainable forest management in Victoria. Guidance document (2007). BGLS website, accessed 20 September 2021.
37. GECO, "Failed regeneration", Appendix 3.
38. Appendix 3.
39. Appendix 6.
40. Appendix 3, Appendix 6.
41. Appendix 3.
42. Auditor-General, Follow up of selected 2012/13 and 2013/14 performance audits. 2. Managing Victoria's native forest timber resources.
43. Montreal Process Implementation Group for Australia and National Forest Inventory Steering Committee, Australia's State of the Forests Report 2018, ABARES, Canberra
44. G Samuel, Independent Review of the EPBC Act. Final Report, EPBC Act Review website, accessed 28 August 2020.
45. Minister for Agriculture (2015) Answer to Question on Notice: Tassie Logging Coupe. Greens Victoria website, accessed 4 September 2021.
46. D Lindenmayer and C Taylor, "Researchers allege native logging breaches that threaten the water we drink", *The Conversation* 26 November 2019, accessed 27 August 2021.
47. DB Lindenmayer et al., "Managing interacting disturbances", <https://doi.org/10.1111/1365-2664.13696>
48. DM Bergstrom et al, "Combating ecosystem collapse from the tropics to the Antarctic. *Global Change Biology*, 27, 2021: 1692–1703 <https://doi.org/10.1111/gcb.15539>
49. DM Bergstrom et al, "Combating ecosystem collapse".
50. Ian Cane, pers. comm.
51. J Turner et al., "Management of Victoria's publicly-owned native forests for wood production. A review of the science underpinning their management". Forest & Wood Products Australia, February 2011.
52. DELWP Victoria's Climate Change Strategy. (2021a) DELWP website, accessed 27 August 2021.
53. Department of Industry, Science, Energy and Resources (DISER) National Inventory Report 2019, Volume 2. DISER website, accessed 27 August 2021.
54. The greenhouse accounts identify deforested land at a resolution of less than 0.2 hectares (25x25 m pixels) compared with the one-hectare minimum for regeneration failure in the Code.
55. Independent expert panel on interim emissions reduction targets for Victoria) Final report. (2019) DELWP website, accessed 27 August 2021.
56. CV Barber et al., *The Nexus Report: Nature Based Solutions to the Biodiversity and Climate Crisis*. F20 Foundations, Campaign for Nature and SEE Foundation (2020); K Dooley et al., *Land-Based Carbon Dioxide Removal Options for Victoria*, Review Paper, Melbourne Sustainable Society Institute, The University of Melbourne (2020).
57. D Lindenmayer et al., "Recent Australian wildfires made worse by logging and associated forest management", *Nature Ecology and Evolution*, 4: 2020, 898–900; P Zylstra et al., "Native forest logging makes bushfires worse -- and to say otherwise ignores the facts", *The Conversation*, 20 May 2021.
58. TA Fairman et al., "Too much, too soon? A review of the effects of increasing wildfire frequency on tree mortality and regeneration in temperate eucalypt forests", *International Journal of Wildland Fire* 25 (8) (2015) 831–48 <https://doi.org/10.1071/WF15010>
59. TA Fairman et al., "Too much, too soon?"
60. Community Bushfire Connection Regrowing our ash forests (2021). Website, accessed 28 August 2021.
61. Victorian Government, State-owned enterprises (state body -- VicForests) order 2003. Victorian Government Gazette, No. S 198, 28 October 2003.
62. Appendix 3.

