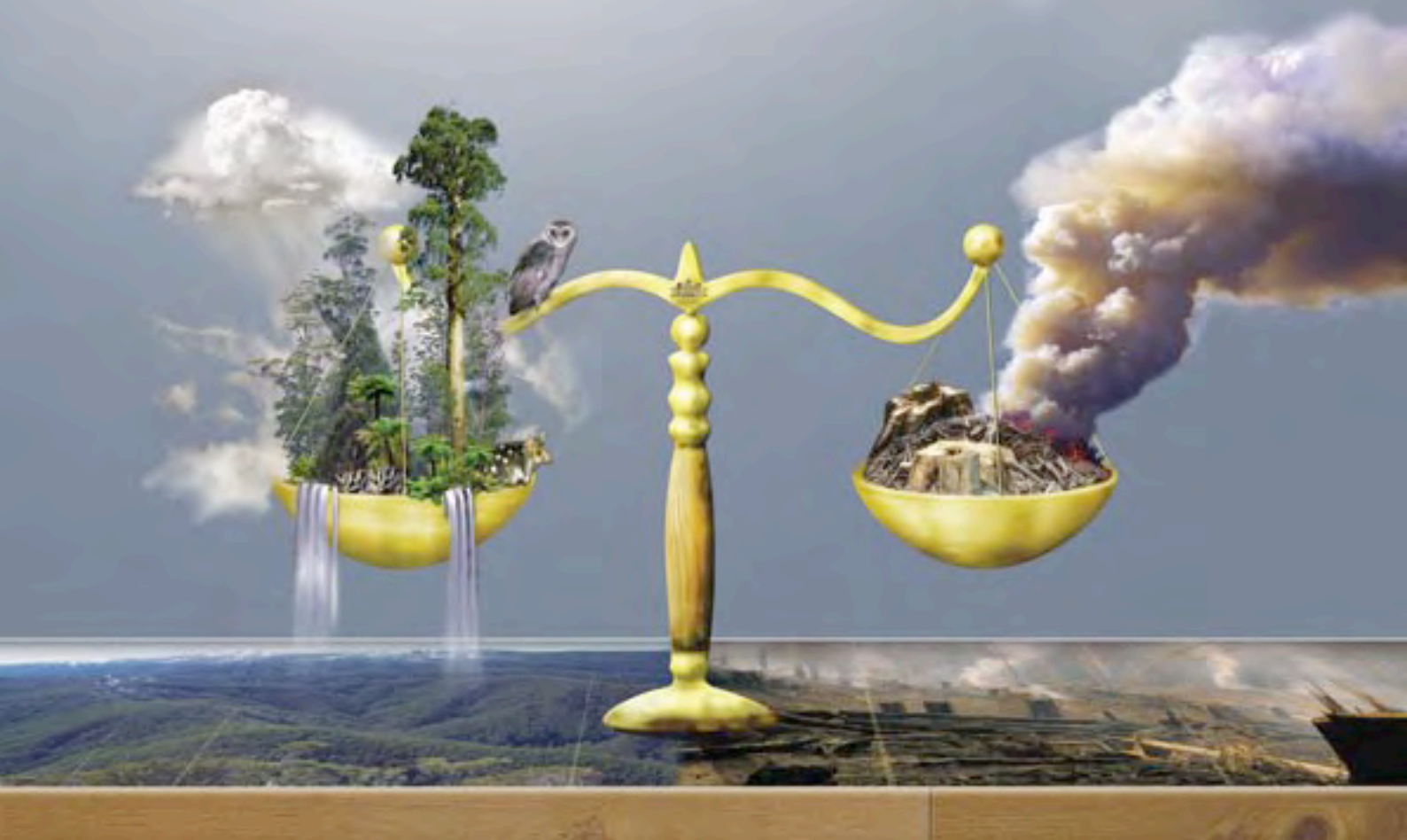
Victorian Forest Alliance

June 2006

Choosing a Future
for Victoria's Forests



Thanks to all those who helped with their time and expertise
to make this report possible especial thanks to:

Dr Hilary Cadman
Dr Graeme Gillespie
Dr Chris Belcher

for their contributions.

Written and researched by The Wilderness Society Victoria Inc
on behalf of The Victorian Forest Alliance.
Published by The Wilderness Society
Choosing a Future for Victoria's Forests
June 2006
ISBN 0-9775663-0-7

Cover image design: Andrew Wong

Graphic design: Dylan Buckee

Printed on 80% post consumer recycled, 20% FSC paper.

Contents

Victorian forest rally 2006. Eli Greig

15,000 people rallied for the protection of Victoria's forests in June 2006.

Executive summary

In this report, the Victorian Forest Alliance presents an argument for change in the management of eastern Victoria's native forests, and a proposal for an alternative to the current system of protected areas. The report has been written in the context of commitments given by the Victorian Government, and is for consideration by political leaders for the upcoming Victorian state election. It identifies the threats to forests posed by continued logging of old-growth, and outlines how continued logging will affect water catchments, biodiversity and tourism.

The report provides compelling evidence that the continued logging of native forest in eastern Victoria is no longer necessary, because rapid growth in pine and hardwood plantations, and investment in processing facilities, provides a secure basis for the local timber industry. It also refutes arguments presented by the native logging sector that native forest logging is essential to stem the tide of tropical rainforest imports and improve the balance of trade in timber products.

Result Creek, East Gippsland. Alex Kaeslin

Victorians are expressing a strong desire to ensure that their old-growth forests and water supplies are adequately protected. Both the Government of Premier Steve Bracks and the Liberal Opposition must show leadership if these aspirations are to be met. The choices facing eastern Victoria are stark. On one hand, there is an opportunity to protect what remains of the old-growth forests, the clean water that flows from them and the animals that depend on them. On the other hand, a few more years of subsidised access to the native forest logging sector will see these values irretrievably damaged.

Leadbeaters possum. Fredy Mercay / ANT PHOTO LIBRARY

The current reserve system is inadequate, and a fundamentally new approach to managing eastern Victoria's forests is required, particularly in light of climate change. This report presents a proposal for a new protected area network that links and expands current areas of native forest.

Toorongo River, Gippsland. Ern Mainka

The proposal recognises that creating connected areas of forest and minimising disturbance in the natural landscape will be critical to the conservation of forest biodiversity in the long term.

A transition strategy for the forest industry is presented, based on three components:

- a rapid shift from commodity production using native forests to commodity production based on plantations;
- $104 million five year investment in regional tourism, and economic and employment initiatives creating 132 jobs;
- $32.5 million in recurrent funding for National Parks to create 292 new jobs for rangers and other parks workers.

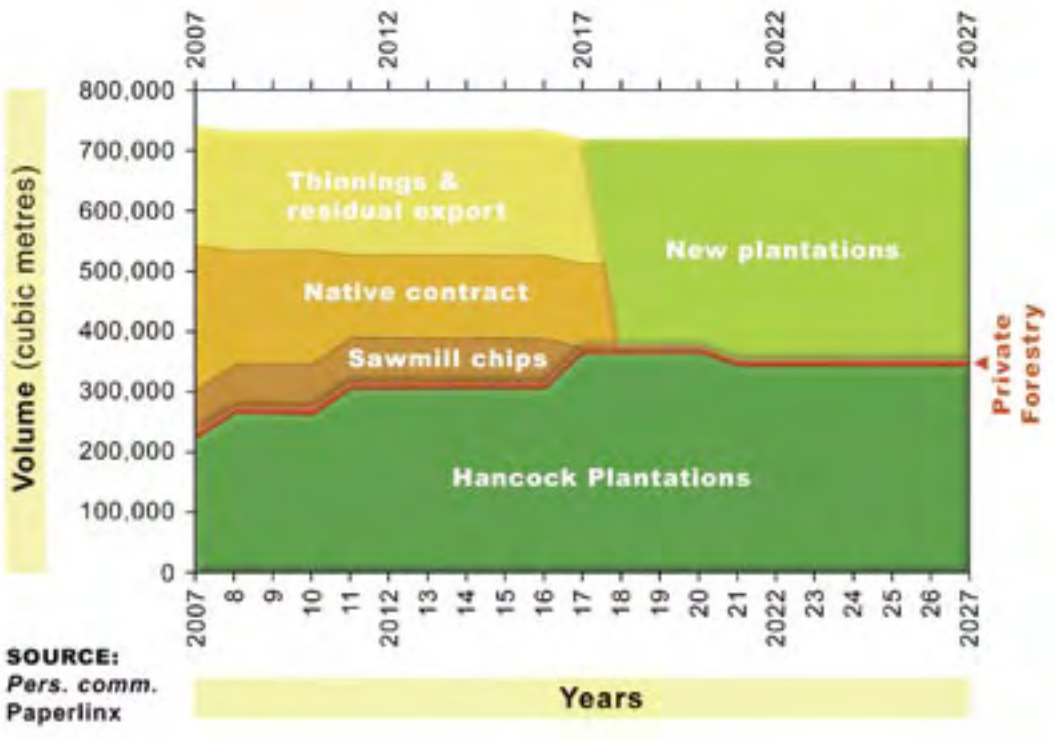
The report provides evidence that the transition is already occurring, and makes additional policy recommendations for more government support to assist this transition.

This document has been well researched and uses the most up-to-date conservation science and, government and industry statistics to support the case for change and the proposed new protected area network for the forests of eastern Victoria. A series of maps and appendixes provide additional detail on the science, analytical evidence and methodological approaches used.

The proposed protected area network spanning the forests of eastern Victoria will secure an additional 970,000 ha of forest in reserves including:

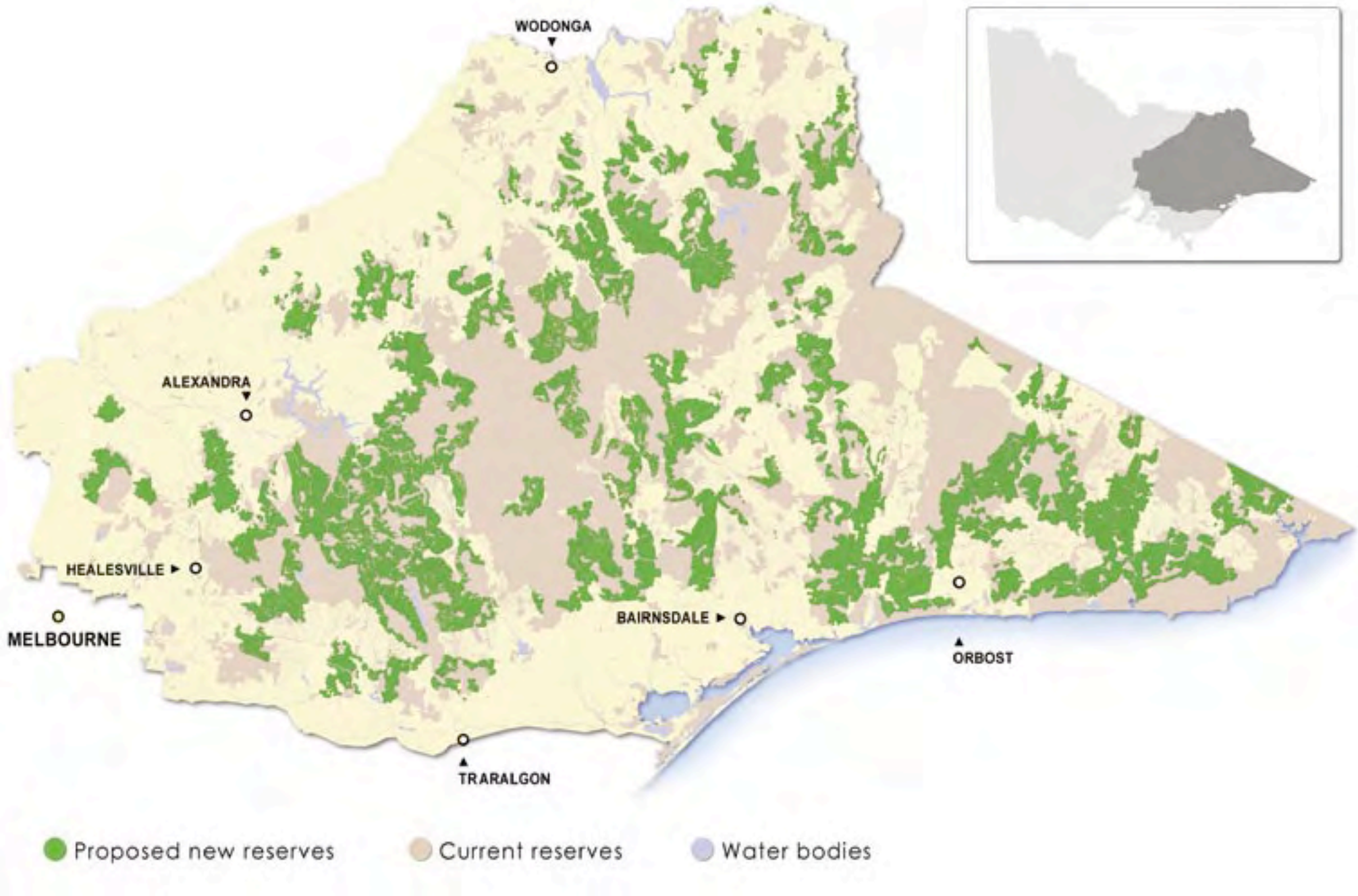
- nearly 400,000 ha of a sustainable old-growth forest estate;
- 623,000 ha of public water supply catchments;
- habitat for the future for some of Australia's most precious state and nationally threatened and endangered fauna and flora;
- a chance for the Leadbeaters possum (the Victorian faunal emblem, which is threatened by extinction) to survive.

At the same time areas outside of the proposed protected area network will provide approximately a quarter of a million hectares of the most productive commercial forest to the industry. These areas will be available to assist transition in the forest industry, which will largely be based on plantations. PaperlinX, Australia's largest paper manufacturer, has already embraced this strategy, and will cease to use native forest wood supply by 2017. In addition, there will be more than enough wood left to support this enlightened decision and allow other major processors to make an orderly transition.



Wood Supply to Maryvale (*PaperlinX* 2006)*

* The resource volume projections contained in the figure 4.2 does not imply consent by the Victorian Forest Alliance for any logging of the Strzelecki Cores and Links.


WODONGA
ALEXANDRA
HEALESVILLE
MELBOURNE
BAIRNSDALE
ORBOST
TRARALGON
Proposed new reserves
Current reserves
Water bodies

1. Introduction

This document has been produced by the Victorian Forest Alliance — an alliance of more than eight environmental organisations, including The Wilderness Society, Australian Conservation Foundation, The Central Highlands Alliance, Goongerah Environment Centre, Yarra Ranges Environment Coalition, Environment East Gippsland and Lawyers for Forests.

The document is intended for government, policy makers and all those interested in protecting Victoria's forests. Its aim is to highlight the inadequacies of the current system for protection of forests in eastern Victoria and the consequences of continuing on the current path. It puts forward a proposal for a revised network of reserved forests that will protect endangered species, improve the quality and quantity of water, create jobs and secure the long-term future for old-growth forests.

The document is based on extensive research and a comprehensive consultation process with key scientists who are experts in areas relevant to the project.

Chapter 2 first considers the definition and values of old-growth forest, and then looks at how logging of such forests affects water (both quality and quantity), forest-dependent native species, climate and tourism.

Chapter 3 presents an analysis of the current situation and trends in the wood products industry, particularly in Victoria, comparing the use of plantations with logging of native forests.

Chapter 4 presents a proposal for linking the remaining areas of old-growth forest, habitats of threatened species and water catchments in a protected area network. This network will:

- help to provide clean and abundant water;
- secure viable habitat for threatened and endangered species;
- mitigate against the impacts of climate change ;
- provide jobs in both tourism and the wood products industry;
- protect old-growth forests into the future.

A set of appendixes describe the research that underpins the document, and provides further detail on the topics discussed in the body of the publication.

2. Impact of logging

This chapter discusses what is meant by the term 'old-growth forest', and whether the definition needs to be expanded to reflect the ecological realities in the forests of eastern Victoria. It considers the values of old-growth forest, in particular, in relation to water, species survival, climate and tourism, and looks at the effect of logging on each of these aspects.

2.1 What is an old-growth forest?

A number of definitions of old-growth forest have been used over recent years; some of these are shown in Box 2.1.

Box 2.1 Examples of definitions of 'old-growth forest'

"Old-growth forest is ecologically mature forest where the effects of disturbance are now negligible".[1]

"Old-growth forest is forest which contains significant amount of its oldest growth state in the upper stratum – usually senescing trees – and has been subjected to any disturbance, the effect of which is now negligible".[2]

"Old-growth forests include many old trees with dead branches and many dead, rotting logs. This dead wood provides a food source for a diverse range of specialised fungi, insects and the many birds, reptiles, mammals and invertebrates which feed on them. Similarly, forests with large trees produce more nectar than forests with young trees. Nectar is a major source of food for many animals, lorikeets, honeyeaters and numerous insects, bats and possums ".[3]

Since many of the last remaining stands of old-growth forests have been removed from the Victorian landscape over the last decade, the definitions of such forest may need to be expanded to include the classes 'mature' and 'late mature'. This preference has also been advocated by forest managers. For example, the report *A Study of the Old-growth Forests of East Gippsland* stated that the preference should be extended beyond old-growth forest to negligibly-disturbed younger forests and forest with a mature growth stage, which have the potential to become the old-growth forests of the near future. The long-term conservation of old-growth forests must therefore include a wider range of age classes. There are many natural processes constantly shaping and re-shaping the extent and characteristics of these forests. New areas will be recruited as trees reach their older growth stages or as the effects of past disturbance become negligible.[4]

Many Victorians care deeply about their old-growth forests because of their aesthetic, cultural and natural values. Characteristics of old-growth forests include:

- presence of relatively large trees and other associated understorey species in wetter forest types, to stunted and gnarled trees in drier forest types;
- relatively old trees and other plants, in terms of developmental stage;
- the presence of tree hollows and or fallen trees;
- a particular mix of species and structural elements;
- presence of certain growth forms; for example, epiphytes in some forest types;
- stable nutrient cycles and high levels of litter (in some forest vegetation classes);
- low rate of change in species, forest structure and ecosystem functioning.

Recent data suggest that, in eastern Victoria, only 668,396 ha of old-growth forest remains; this represents about 10% of the entire land area, most of which was forest and woodland at the time of European settlement (DSE Modelled Old-growth coverage). This forest is scattered across the landscape often in small patches. Logging has a major impact on the characteristics of an old-growth forest:

Logging radically alters the structure of the forest – the number of big old trees with hollows, the number of fallen logs, the density of the understorey and the canopy vegetation. It also alters the floristic structure of the forest – the number, type and density in the forest. Logging can also create conditions which promote the spread of pest animals and weeds and increase the probability, frequency and severity of fire. Consequently, many plants and animals are now absent from the forest.[3]

2.1.1 Loss of species

The most significant effect of logging is the reduction in the number of trees containing hollows; at least 98 Victorian animal species require hollows for shelter and breeding.[3] Normally, it takes around 100 years for hollows to begin to form in eucalypt species.[5] Logging is systematically removing this age class from the public native forests, meaning that many species are moving closer to extinction.[6] We often think of extinction as an end point, where a species is no longer found on the planet. In reality, there is a scale along which a species moves towards the point of extinction.

A study in Victoria found that four common shrub and tree species never returned after logging. Also, tree ferns, which play a vital role in maintaining the moisture of the forest floor and providing protection for the growth of other forest plants, are mostly eliminated by logging.[7] Thus, Victoria's magnificent old-growth forests, which pre-date the arrival of the first European ships, are logged they are unlikely to regenerate to their original state for between 1500 and 2500 years.[8]

2.1.2 Increasing fire risk

Fire is increasingly becoming an issue for wildlife and humans inhabiting Victoria. The processes of logging of old-growth forests contribute to an increase in both the frequency and intensity of fires within Victoria. This is because logging reduces the resistance of these forests to fire, because the process dramatically changes the very nature of the forest's microclimate. This, in turn, alters the composition and structure of the forest's plant species, and an old-growth forest changes from a fire-resistant 'wet' forest to a much 'drier', fire-prone ecosystem.[9]

2.2 Water – too precious to waste

Water is Australia's most precious and scarce resource. Supply of clean water is emerging as one of the biggest, possibly the biggest, issue the world has to face over the next 50 years.[10] Three major factors will potentially have dire effects on water supply:

- increasing public demand in both rural and city regions;
- climate change;
- continuing land clearing and logging in water catchments.

Thomson water catchment

Victoria is in a water shortage crisis, our demand for water continues to increase and recent drought years have placed added pressure on available supply. For example, if Melbourne's water consumption continues to grow at present rates, it is projected to be using all available water by the year 2012.[11] The general community is increasingly concerned about water, and farmers face the possibility of less water allocated to them in the coming years.

Managing water resources to ensure that we have sufficient clean clear water in the future is a major challenge, and we need to focus not only on demand management, but more importantly, on resource management, to achieve maximum resource yield and quality for all end users.

Old-growth forests can play an important role in protecting and contributing to our water supply, because they produce more and cleaner water (around 12 megalitres of water per hectare per year) than regrowth forests after logging.[12] Instead of responding in the traditional way by harvesting more water or building more dams, we could extract more water from catchments simply by ending logging in these areas.

Logging is extensive in the rain-soaked upper catchments of the rivers that supply water to Melbourne, to the irrigation districts of West Gippsland and to the stressed rivers of the upper Murray. Such logging adversely affects water yield,[13] as shown by a recent Strategic Water Review undertaken in Melbourne, which found that if catchments were logged, water yield would decrease. The logging taking place in many of Victoria's water catchments is leading to severe damage to catchments in Victoria and substantial reductions in water supply. For example, logging operations in the Thomson have already affected Melbourne's water supply. If logging were phased out of the Thomson catchment by 2020, this would result in a saving of 20,000 ML per annum by the year 2050.[14] Reductions in stream flow due to logging will compound other changes to the reliability of stream flow expected as a result of climate change.[15 16]

Protecting our water has proven to be economically beneficial to the community. For example, The New York Department of Environment and Conservation estimates that, by spending US $1.5 billion in catchment management, the City of New York has been able to cancel proposed water treatment plants with an estimated cost of US $6.7 billion.[17]

Water is far more valuable to the community than native forest wood, for which there are existing plantation alternatives.[18 35] Protecting catchments would increase water yield and have environmental gains; help to prevent changes in water quality, volume, salinity and nutrient levels; and help rural communities buffer themselves against drought.

To protect catchments, Government bodies or water authorities could either buy out the sawlog licenses, compensating saw millers, employees and contractors, or procure wood requirements from plantations should they be available. Assisting a transition out of headwater catchments and into lowland plantations would improve catchment health and increase water yields to all. The Victorian Infrastructure Planning Council discussed principles that could be applied nationally to catchments:

- managers should have a duty of care to not damage the resource, but where damage occurs the responsible party, if identifiable, should pay;
- improvements should be paid for by government.

2.3 Species

As discussed in 2.1, the logging of old-growth forests destroys and removes habitat needed for the survival of species that depend on them. The destruction of habitat through activities like logging has been identified as the main past (and present) cause of the endangerment and extinction of species in all vegetated countries on Earth.[19 20 21 22 23]

Spotted-tailed quoll. Photo: Jiri Lochman / LOCHMAN TRANSPARENCIES

Logging does not simply destroy habitat — it leads to the fragmentation of continuous species' population into a series of small residual populations. These isolated pockets of populations are far more susceptible to extinction due to genetic inbreeding and greater vulnerability to the impacts of fire and disease.[24] [25]

In Victoria, the permanent loss of old-growth forest habitat has led to a serious decline in both the abundance and distribution of many plant and animal species. Many plants and animals simply do not come back after logging, including a large number supposedly protected by state and federal law. This includes Leadbeaters possum, Long-footed potoroo and Spotted-tailed quoll (which has disappeared from about 50% of its former range in Victoria).[27] [28] [29] [30] A similar decline has been identified in many other species of bird, mammal, frog, fish and plants.

The present reserve system, that attempts to protect species against processes that drive extinction through logging, has been extensively criticised by the scientific community.[31] [32] Currently, in Victoria, 15% of each forest type is set aside to ensure that biodiversity is maintained. This level of reservation is insufficient for securing the conservation of Victoria's biodiversity because:

- a large number of species simply do not occur in a protected forest and therefore have no protection status;
- even the largest old-growth forests in Victoria are too small and vulnerable to disturbance; for example, the long-term survival of populations of threatened species within national parks is now limited as a consequence of fire;
- the small size and relative isolation of old-growth forest reserves do not leave much scope for plants and animals to allow gene flow (to prevent problems such as genetic inbreeding) or adapt to long-term climate change (either through dispersal or by evolution).

In addition, the present conservation strategy for Victoria makes little or no attempt to synthesize the parts of each threatened ecosystem into a working whole. It is not valid to assume that just because certain elements are included in a reserve system, the entire ecosystem is protected, and that biodiversity and ecological processes that the forest provides will somehow be preserved in the long term.

These issues mean that a complete reassessment is necessary if the species inhabiting old-growth forests are to persist in the future. Chapter 4 of this document outlines a proposed alternative to the current reserve system that will make this possible.

2.4 Carbon stores – climate change

Logging coupe burning, Errinundra. Ern Mainka

The increasing level of carbon dioxide in the atmosphere is one of the major factors causing climate change. Forests store carbon, and if they are destroyed, they release that stored carbon into the atmosphere, either rapidly (e.g. through fire) or slowly (e.g. through decay). The world's old-growth forests, particularly the wetter types, are some of the most important carbon stores in nature, storing up to 1500 tonnes of carbon per hectare.[33] Logging such forests releases large amounts of carbon into the atmosphere, adding to the greenhouse effect that is causing global warming. Thus, conserving old-growth forests is important in ameliorating the impacts of climate change.

A seminal study of the impacts of logging on old-growth forests showed that logging in the Styx Valley (an old-growth forest in Tasmania) would produce approximately 1000 tonnes of greenhouse gases per hectare.[33] In simpler terms, clearing 1000 hectares of Styx old-growth forest would produce greenhouse gas pollution equivalent to all the cars in Tasmania in a year.

It has been argued that logging of old-growth forests is a 'carbon neutral' process, because regeneration after logging rapidly takes up carbon dioxide from the atmosphere, balancing out the carbon released by the logging. However, it is now clear that logging actually reduces the carbon stored in the forest to levels much lower than those estimated after severe wildfire. Wildfires that destroy an entire stand of trees (referred to as 'stand-replacement wildfires') left 1000–1100 tonnes of carbon stored per hectare; whereas, after successive logging scenarios, carbon stored in a regenerating forest could be reduced to as little as 485 tonnes per hectare.[33] These results reflect the global literature, which shows that the amount of carbon stored in the forest ecosystem is related to the age class of the forest.[34]

There are a number of related reasons why logged forests contain far less carbon than old-growth forests:

- logged forests have relatively more frequent fires that emit gaseous carbon;
- when a forest is logged, wood products are not returned to the soil;
- logged forests often contain a vegetation understorey that is under-developed when compared to old-growth forests;
- trees in logged forests often only grow to around 60% of the size they would in an old-growth forest; [33]
- forest soils lose carbon due to:
  - a loss of nutrients;
  - changes in the physical properties of the soil due to disturbance by logging machinery;
  - changes to the microclimate as a result of the loss of forest canopy.

The results of such research are applicable in Victoria's wetter forest types.

Protecting our old-growth forests will make a significant contribution to keeping carbon 'locked up' rather than contributing to rising atmospheric carbon dioxide levels.

At present, protection of forests relies on a network of 'forest reserves' based on a representative sample of each forest type. However, preventing our forests from contributing to climate change and securing them from the impacts of climate change requires a radical rethink of this accepted approach. Chapter 4 proposes a solution to this problem, in the form of a new protected area network.

2.5 Tourism

"Forests are critical to the future of the Australian tourism industry; tourism is critical to the future of Australian timber communities. Tourists will only pay to see the jewels of the forest, not the leftovers … for big money you need old-growth forests."

> - Ralf Buckley (Professor of Eco-Tourism at Griffith University and ex- Director of Nature and Adventure Tourism for the Cooperative Research Centre for Sustainable Tourism).

Tourism is an important aspect of economic growth and employment, providing considerable benefits to Victoria and its regional communities. Victoria contains some of the most significant old-growth and high-conservation forests in Australia. Tourism figures and case studies from interstate and New Zealand demonstrate that, together, conservation and tourism can help to provide both the necessary protection to these forests, and the economic and employment benefits that communities depend on.

Tourism Victoria's Strategic Plan (2002–06) identifies the need to develop and profile iconic products that will boost the state's competitive position — such products might include wilderness lodges and high-profile walks.

Logging and tourism do not sit comfortably side by side, even in Tasmania and Western Australia, where forestry agencies have made huge taxpayer-funded investments in large tourism infrastructure. The experience being provided is the majesty and grandeur of natural and old-growth forests, not smoking clearfelled wastelands, or vast expanses of monotonous regrowth or monocultural plantations. Judging from the graffiti around such projects, many are not fooled by the illusion. These types of projects are like a billboard — one that people can look behind very easily. Sustainable forest eco-tourism is about providing people with enduring experiences rather than a glorified scenic viewing point, no matter how well constructed the viewing platform. The best tourism infrastructure investment is in protecting the forests, which are durable, renewable and low maintenance.

In Chapter 4 we look at successes with sustainable tourism investments as a model for Victoria, and present a $104 million investment plan over five years together with $32 million dollars recurrent for National Parks Management for jobs and infrastructure investment.

Eco-tour group

3. An analysis of the wood products industry

This chapter looks at the trends in wood supply in Australia and Victoria, and what those trends mean for native forest logging and protection. It explores some of the myths about wood supply and employment prospects within the industry sector.

3.1 Two industries in competition

One might imagine that the high level of conflict over native forest logging is driven by a shortage of wood resources in Australia — after all, most conflicts are driven by scarcity. In this case, the opposite is true.

The conflict over native forest logging has nothing to do with wood supply. There is no wood supply shortage in Australia and there will not be in the foreseeable future, because of the maturing plantation resource now coming on stream (see Figure 3.1, below). Plantations now provide three times the sawlog volume and twice the volume of pulpwood that is currently extracted from native forests across Australia.[35]

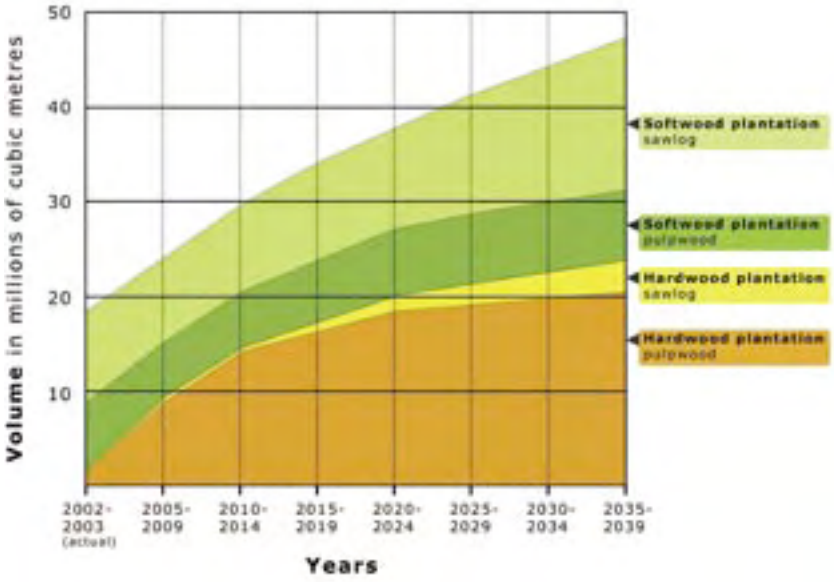


Figure 3.1 The Wall of Wood

The figure shows the substantial growth we can expect in plantation wood supply (both hardwood and softwood) for sawn timber and pulpwood from now until 2039.[36]

Around Australia, as in the rest of the world, the logging industry is rapidly moving out of native forests and into plantations (of pine for construction and hardwood for pulp), as shown in Figure 3.2. For example, 75% of the country's sawn timber needs now come from softwood plantations, and this proportion is increasing. By contrast, native forest wood consumption is declining, and most of the small and shrinking part of the sawn wood supply that comes from native forests is competing with pine in many categories.[37]

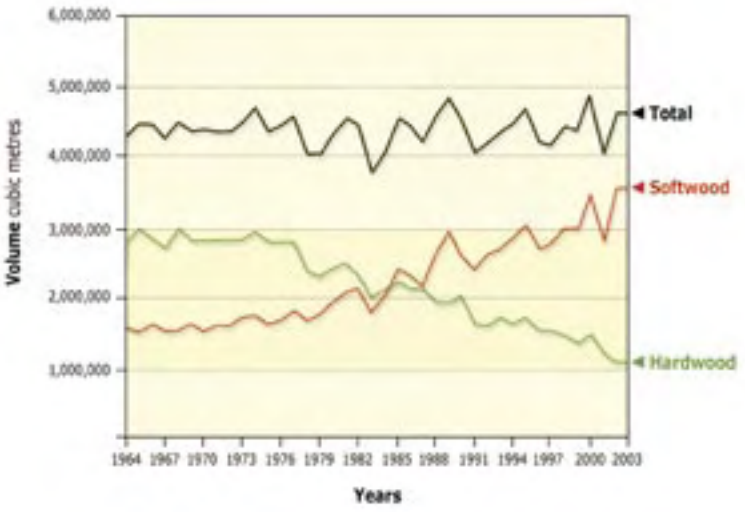


Figure 3.2 Softwood substitution of native forest wood 1964 – 2003

The market appears to be moving faster than government policy, and much of what is considered commercial forest is not economically viable to log, given the move towards plantation wood, particularly pine. A small number of native forest sawmillers have made some efforts to 'value add' their wood; however, most of their product is still of a commodity nature (woodchips, pallets, palings, posts etc) and is competing directly in market niches where pine and other materials provide a cheaper alternative.

The biggest market segment for sawn timber is for construction, notably housing, and it is here that pine has come to dominate. This is directly competing with the native forest hardwood industry, which still mainly produces commodity-grade wood for the construction segment, with only a small proportion

for appearance-grade products (see Figure 3.3).[38] The trends clearly show that substitution of hard woods by pine can only continue, as the volume of pine logs available continues to increase, and the price gap between hardwood and softwood continues to widen.

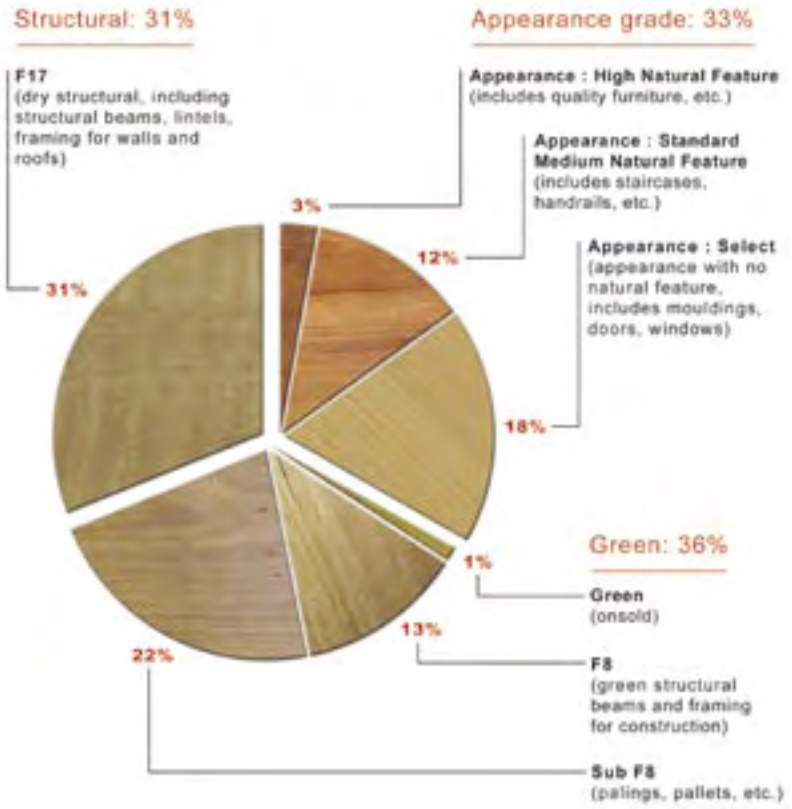


Figure 3.3 Sawn hardwood usage [38]

3.2 A globally exposed industry

In terms of the local market, if native forest wood availability were to fall significantly due to increased forest protection, the domestic wood supply would still increase, because of the large plantation resource coming on stream in the future. In the international wood market, there is similarly no incentive or imperative to log Australian native forests.

If current production and consumption trends were to continue, Australia is likely to become a net exporter of paper products within a decade. By that time, our small deficit in sawn-timber products will be met from an increasingly large volume of pine sawlogs available from our trading partner, New Zealand, whose production is likely to double over that period, as shown in Figure 3.4. Therefore, logging of Australian native forests can cease without affecting the wood supply.

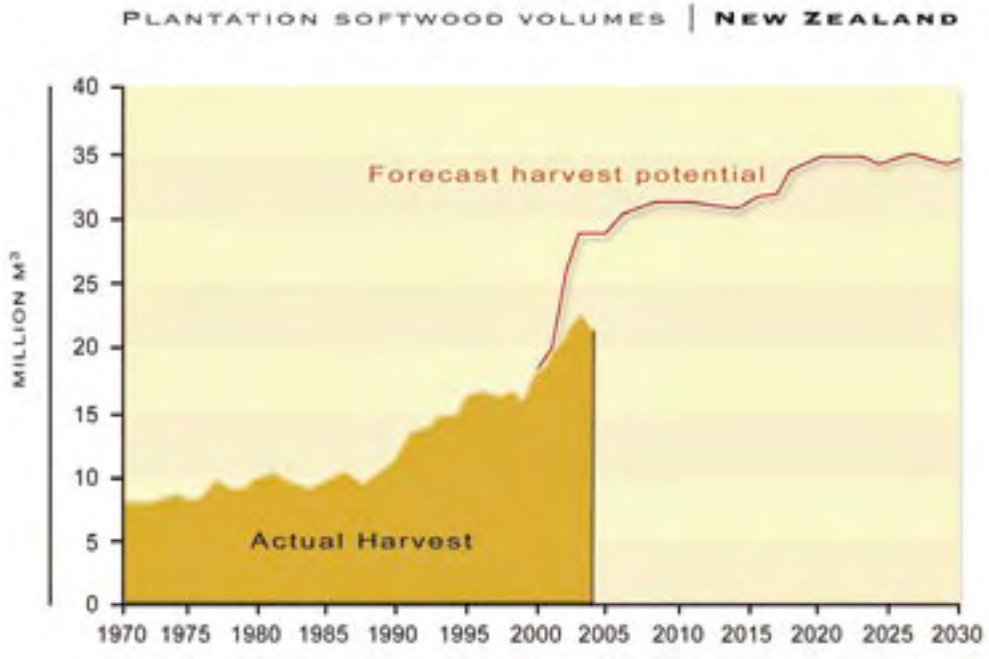


Figure 3.4 New Zealand plantation softwood harvest volumes [39]

Almost all businesses in the wood supply industry are exposed to competition in a trans-Tasman or Asia-Pacific market; a situation that will present challenges. However, net employment is likely to continue to expand along present trends, building on the increase in jobs in the industry over the last decade (see Section 3.5).

3.3 Wood pricing policy

Given that wood is not in short supply, conflict is driven by a small sectoral interest inside the native forest industry determined to hold on to subsidised access to logs from the bush.

Most of the native forest wood supply is in government hands, so the industry puts a great deal of entrepreneurial effort into capturing politicians and the bureaucracy. Predictably, a revolving door of identities moves from industry and associated bodies to the governments' forest bureaucracy and back again.

Through *Vicforests*, the Victorian Government sells more than 500,000 tonnes of sawlogs each year. This represents about 4% of all sawlogs harvested in Australia (plantation and native) and 18% of the Australian native forest supply. Sawlogs from native forests in Australia provide less than 25% of the total sawlog supply.[40]

A recent auction of 'surplus' sawlogs, (apparently those not committed through long-term licenses) achieved the prices shown in Table 3.3.1. Any private grower of commercial hardwood sawlogs is competing with the government at these prices.

Table 3.1 Recent *Vicforest* Sawlog Sales in Eastern Victoria [41]

Lot	Grade	Quantity (m3)	Bid price ($)	Lot sale price ($)
L04	C+	750	17.50	13,125
L05	C+	750	17.50	13,125
L01	C+	1500	25.00	37,500
L02	C+	1500	25.00	37,500
L03	C+	250	25.00	6,250
L07	C+	1500	25.00	37,500
L08	C+	2000	25.00	50,000
L13	C+	500	25.00	12,500
L06	C+	1500	27.50	41,250
L09	C+	1000	27.50	27,500
L10	C+	1500	27.50	41,250
L11	C+	1500	27.50	41,250
L12	C+	2000	27.50	55,000
L14	C+	500	28.00	14,000
L18	C+	500	32.50	16,250
	Total	**17250**		**444,000**
Weighted average price			**25.74**	
Prices are at the stump — buyers pay for logging and haulage. Variations relate to tree species.				

Private growers of commercial hardwood sawlogs are in market competition with the government. The viability for small scale sawlog growers in Victoria depends entirely on what the Victorian government, as a supplier of 500,000 tonnes per annum of hardwood logs, decides to do on both volume and price. In this light, the low level of investment in hardwood sawn-timber plantations appears perfectly rational.

The lack of competitive neutrality is the major reason why so few private land owners have entered the business of growing hardwood sawlogs other than for reasons of Commonwealth tax incentives. Small subsidies and handouts to growers will not change this — removing major market distortions affecting price outcomes will.

A report produced by economists Marsden Jacob Associates in 2001, titled *Forestry & National Competition Policy* found that:

'In all States of Australia, timber from State-owned established native forests competes with timber from plantations – but not on a level playing field. In all States, the playing field is tilted against plantations and farm forestry in favour of exploitation of native forests. The study showed that the lack of competitive neutrality between State forestry arrangements in established forests and those of private forestry activities: [42]

- *makes private investment in farm forestry and plantations much less attractive;*
- *distorts the allocation of wood sources within the forestry sector;*
- *undercuts competing uses of public native forests; and*
- *worsens the Australian environment and resource base.'*[42]

The National Competition Policy (NCP), to which Victoria is a signatory, requires governments to remove from their commercial entities any unfair competitive advantages arising from public ownership to achieve Competitive Neutrality with private sector competition.

A major anti-competitive advantage exploited by the state agency is the free use of public land for forestry. This places a market price distortion on competitive products beyond the scope of private foresters who face capital costs, rents and rates as a major component in the costs attributed to their pricing structures.

Competitive Neutrality can only be achieved if the State Treasury includes an appropriate charge for rents and rates for commercial forestry use in addition to other management costs. Until then the Government is technically in breach of its NCP commitments and will continue to suppress investment in private forestry.

The annual report of *VicForests* stated that 1,250,800m3 of pulpwood was sold in 2004–05 for $11,849,000, which works out at $9.47 per tonne at the stump. Compare this to the stumpage implicit in the returns promised to private money investing in blue gum plantations for pulpwood, around $39 per tonne.[43]

Ironically, the current Victorian Government's stated policy is to encourage more private investment in forestry. Removing the distortion to the supply side and allowing a functioning market place in pulplogs is an obvious starting point for this policy.

Long-term state government licenses and legislated native forest supply volumes through the Regional Forest Agreements haven't stopped plantation forest

Table 3.2 Major wood processors – Geelong and Eastern Victoria[44]

Company	Location	Product	Approximate log supply from region	Employment
Australian Newsprint Mills Ltd	Albury, NSW	Newsprint	305,000 tonnes/a (NSW+Vic)	270
Carter Holt Harvey Ltd	Myrtleford, Vic	Sawn timber Plywood	260,000 m3/a (NSW+Vic) 50,000 m3/a (NSW+Vic)	340
Carter Holt Harvey Ltd (Tissues)	Myrtleford, Vic	Pulp (hardwood) Pulp (softwood chips)	12,000 m3/a (Vic.) 45,000 tonnes/a	N/A
Dominance Industries	Wangaratta, Vic	Medium Density Fibreboard	280,000 tonnes/a	100
DR HendersonMonsbent P/L	Benalla, Vic	Sawn timber Particleboard	170,000 m3/a	100
Radiata Exports P/L	Geelong, Vic	Log & sawn timber export	50,000 m3/a	N/A
PaperlinX	Maryvale, Vic	Pulp and paper	500K softwood, 500K hardwood	940
Carter Holt Harvey	Morwell, Vic	Structural sawn tibmer & pallets	400K softwood	210
MacDonnell	Yarram, Vic	Rails and palings, sleepers & other landscape timber	150K softwood	22
Softwood Plantation Exporters	Geelong, Vic	Woodchips	50,000 tonne/a	N/A

companies from taking market share from their native forest competitors. Wood products are not an infant industry requiring any special government attention; they form part of a mature and globally exposed market.

3.4 Major employers in the industry

Processing of softwood timbers and other plantation wood in eastern Victoria is responsible for most of the employment (more than 1800 jobs) in 'further processing' of wood (i.e. sawmilling, wood products and paper), as shown in Table 3.2.

On the basis of the data below, much employment relies on plantation wood for its raw material. The exception to this is the Maryvale pulpmill, responsible for most of the paper and paper product manufacturing in Victoria. This mill receives approximately two-thirds of its wood from plantations, and has a strategy to stop using native forest supply by 2019 at the latest. The implications of this are discussed in Chapter 4.

3.5 Employment trends

It is possible to estimate the number of jobs employers create upstream of their business, by looking at:

- employment in forestry and logging of forests nationally and by region;
- the relative volumes of timber taken from native forests and plantations nationally and by region.

Wood products industry employment has increased in line with the increased availability of wood.

For example, over the last decade, employment in the wood products industry has increased by 20% (see Table 3.3) — similar to the growth rate in employment in the Australian economy overall. Approximately 25% of this employment is in Victoria, with the state's logging industry following the national trend of employment growth.

In the eastern half of Victoria, there are about 4500 jobs in the wood products industry or 23% of Victoria's total for this industry (see Figure 3.5).

Table: 3.3 Employment growth in the Australian wood products industry [36 40]

NATIONAL	1991	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Forestry and logging		11,300	12,400	11,400	10,900	14,000	14,000	8,700	13,500	13,200	9,700	12,100
Log sawmilling and timber dressing		15,700	16,900	15,400	15,000	15,300	12,500	13,500	13,900	17,200	18,800	20,300
Other wood product manufacturing		31,100	31,300	30,400	28,800	30,200	30,900	33,300	31,400	30,800	36,000	41,000
Paper and paper products		17,900	17,800	20,000	17,900	17,200	17,300	16,900	19,700	21,700	18,900	18,000
Total		76,000	78,400	77,200	72,600	76,700	74,700	72,400	78,500	82,900	83,400	91,400
VICTORIA	16666				18,167				19,500			

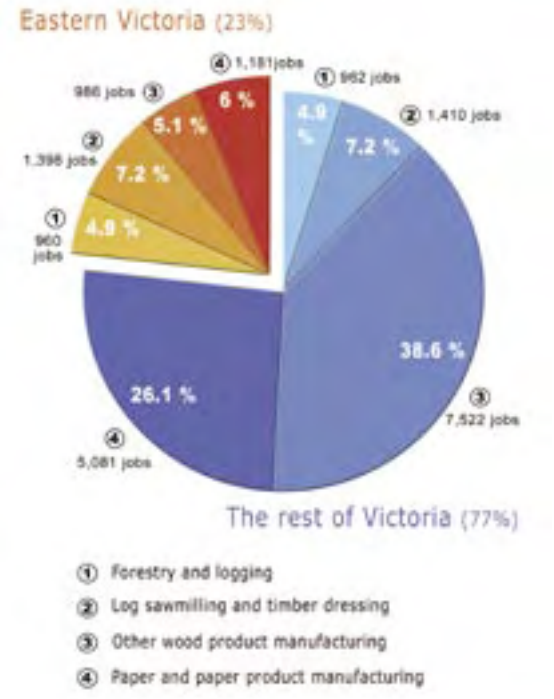


Figure 3.5 Wood products jobs by category in Victoria[45]

In East Gippsland, where forestry jobs are predominantly based in native forest, there were 580 jobs as of the 2001 census. Since then, there has been a major and long-term decline in sawmilling jobs in East Gippsland, balanced by an increased number of jobs in logging due to a large expansion in export woodchipping. After 2001, reductions in logging of some 50%, due to past overcutting, reduced sawmill jobs further.

Most of the other jobs in eastern Victoria are plantation based, particularly in manufacturing operations, which are the major employers.

Detailed statistics on transport jobs involved in hauling logs are not available, but are probably proportional to the volume of material cut in the plantation versus native forest sector. Most employment in the wood products industry (about 5 out of every 6 jobs) is outside of eastern Victoria (see Figure 3.5).

The number of jobs in the native forest sector is expected to fall. Likely reasons for job losses due to market developments include:

- Japanese woodchip buyers (particularly Nippon) shifting from East Gippsland and Central Highlands native forest supplies into plantations, including those the company itself has established;
- Competition with pine has resulted in tougher market conditions for sawn timber and manufactured wood products, leading to cost pressure and possible layoffs.

The growth sector of the logging industry, both in terms of employment and output, is processing. This industry is plantation dependent.

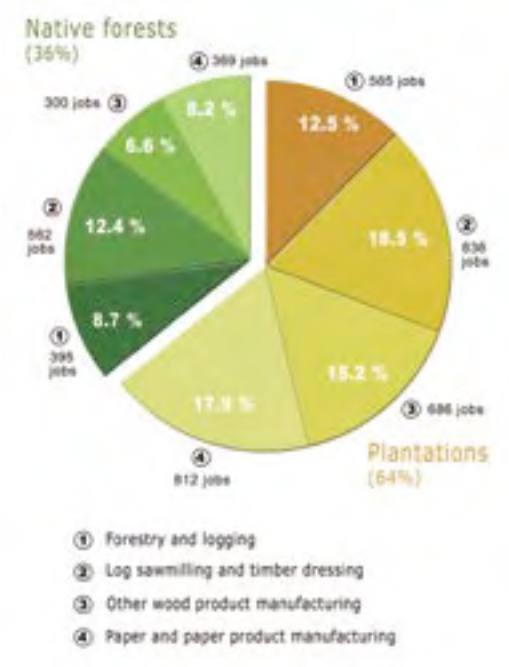


Figure 3.6 Jobs in Eastern Victoria, Plantations vs Native Forest [40 45]

The chart in figure 3.6 includes Maryvale pulp mill that has wood supply from both native forests and plantations, the native forest component will be gone by 2017.

Workers required

Timber industry facing labour shortage

Figure 3.7 Worker shortages in plantation sector

(The Border Watch, 14 December 2005)

Since 2002, when large cuts to native forest log licenses were implemented as part of *Our Forests Our Future* (OFOF), the native forest segment was expected to have further declined, although it is not clear by how much.

A number of employees and contractors accepted a government structural adjustment package, reducing the size of the native forest workforce across Victoria by at least 350 persons. By the time of an Auditor General's report in 2003, most had found new jobs.

Within one year of the introduction of the OFOF package, 90% of displaced workers were employed, in training or had retired voluntarily — only 4% were unemployed, less than the national unemployment figure (see Table 3.4).

The stories of doom and gloom from the Forestry Union and native forest logging public relations groups such as the Victorian Association of Forest Industries (VAFI) about the prospects of displaced native forest logging workers are not supported by the Auditor General's report.

Status on 30 June 2003		Individuals #	Individuals %
Workers eligable for *Worker Assistance Program*			
Obtained new jobs (in the timber industry or other industries)	Full-time	163	47
	Part-time	28	8
	Casual	29	8
	Total obtained jobs	**220**	**63**
Other circumstances	Undertaking training	73	21
	Retired voluntarily	21	6
	Unemployed	13	4
	Not actively seeking employment	13	4
	Other (e.g. Work Cover)	8	2
	Total Worker Assistance Program	**348**	**100**
Workers ineligable for *Worker Assistance Program* or whose applications are pending			
	Workers deemed ineligable	5	n.a.
	Workers whose applications are pending	26	n.a.
	Total number of workers who applied	**379**	**n.a.**

Table 3.4 Worker Assistance Program Results[46]

The 2005 report by Gippsland Private Forestry Inc.[47] suggests that a further 100 jobs in East Gippsland have been lost, over and above the ABS 2001 data shown above.

The effects on employment of expanding the new protected area forest system, as proposed in Chapter 4, are likely to vary, depending on locality and the extent that government invests in new jobs in tourism and parks management.

3.6 Rainforest imports and Australia's current account deficit for wood and wood products

A myth being actively promoted by sections of the logging industry lobbying for continued and indeed increased access to native forest is that Australia should log its native forests in order to 'stop illegal tropical forest logging'. This argument is completely disingenuous.

Australia does not have a shortage of wood, and the importation of wood from any source into Australia is an issue of consumer demand and trade agreements, not shortage of supply.

Imports of 'rainforest' timber products from countries such as Indonesia and Malaysia with poor environmental records represent a tiny part of our overall consumption. In 2002–03, Australia's total consumption of sawntimber was 4,721,000 m3. Total imports of sawn timber from Indonesia and Malaysia into Australia were around 81,000 m3 in that year; that is, those countries provided only about 2% of Australia's needs. Thus, we could restrict or ban these products with no impact on our wood products market, and certainly no need to log a correspondingly greater area of native forest in Australia.

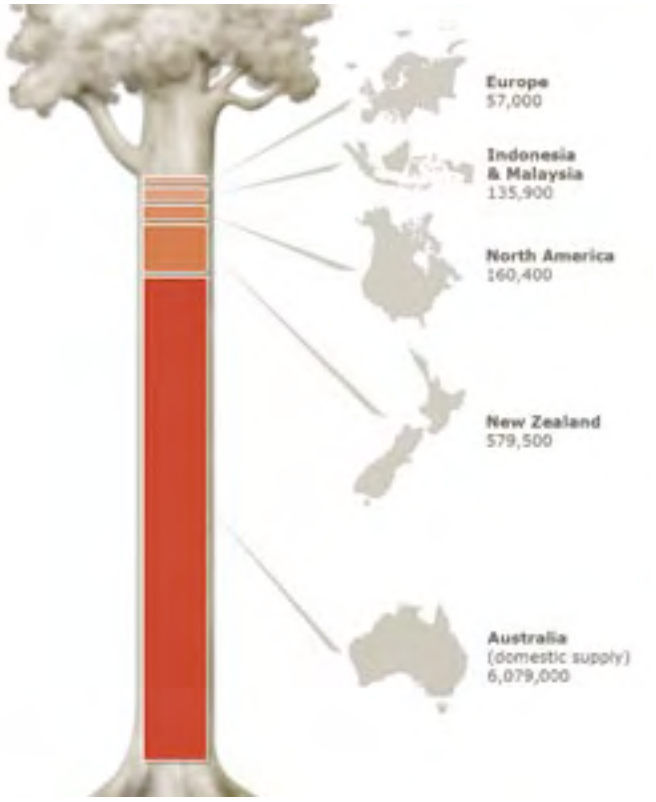


Figure 3.8 'Rainforest' timber imports are a minor part of Australia's wood supply [35]

The competitiveness of the Australian furniture manufacturing industry is in decline, due largely to cheap imports from China and elsewhere. As a result, there is growing importation of furniture made from illegal and unsustainable tropical wood. Similar problems are evident with the importation of cheap paper, although harder to substantiate.

The solution advocated by most Australian conservation groups is for government to ban all products that are imported from tropical forests that do not carry Forest Stewardship Council (FSC) certification. The World Trade Organization (WTO) recognises that FSC is 'controlled wood', and therefore such a ban would not be in breach of international trade agreements. There is also a clear role for furniture and other timber product retailers to demand products that are FSC certified.

Furniture manufactured from Australian FSC certified hardwood and softwood plantations could replace any perceived shortfall in supply from closing down the trade in destructive logging practices and their associated environmental and human misery. At the same time, it could improve the prospects for retaining manufacturing jobs without using tariff barriers.

The overall deficit in forest products, a rather meaningless number when quoted by itself, is driven largely by paper imports. This has nothing to do with a shortage of log supply here in Australia, as we actually supply a large part of Japan's woodchip needs as well as our own.

The deficit has nothing to do with the supply of wood. Rather, the deficit, as measured in dollar terms, occurs because Australia exports a lot of cheap, unprocessed wood and imports processed products (mostly paper). Furniture and furniture components are not included in this data.

Table 3.5 Australian Wood Trade 2003 – 2004[40]

	Imports	Exports
	2003-04	2003-04
	$million	$million
Roundwood	1	114
Sawnwood		
Coniferous	394	34
Hardwood	108	37
railway sleepers		4
Misc	584	50
wood based panels	192	149
paper and paperboard	2014	713
paper manufactures	369	106
recovered paper	5	53
Pulp	235	1
Woodchips	1	794
TOTAL	3902	2056

If a small part of the woodchips exported from Australia were used to replace all of the paper and pulp imported into Australia, there would be a surplus rather than a deficit.

Imports and exports of sawntimber are small relative to paper and pulp, and most of the imported sawn timber is pine. Australia's pine industry is expanding rapidly, due to plantings that occurred 30 years ago and will continue to replace sawntimber imports. In 1999–00 total imports of sawn timber were $548 million compared to $506 million in 2003–04.

Poor government procurement and trade policies are the major impediment to good environmental and social justice outcomes associated with the import of forest products into Australia — not lack of resource eg. It is perhaps not surprising that the main advocates for the native forest logging sector refuse to accept that bans and environmental procurement policies are the solution to this small but significant problem.

4 The way forward for the forests of eastern Victoria

This chapter puts forward a proposal for an extended forest protected area network in eastern Victoria that will provide long term security to water catchments and threatened species, and protect old-growth forest values. It shows how a bold investment of $104 million in the region over a five year period and a commitment of $32.5 million recurrently for National Park management will lead to economic prosperity in the region. The chapter also identifies a transition strategy in which the bulk of timber commodities are supplied by plantations, citing the policy changes governments and industry must make to assist in this transition.

4.1 Rationale for a new forest protected area network

The current forest reserve system is inadequate. Here we present a reserve agenda for eastern Victoria that aims to protect, promote and restore old-growth forests, and natural processes for the wellbeing and ongoing evolution of the community of life across Australia, using a scientific framework developed by some of Australia's most prominent ecologists.[48] This framework was developed in response to the threats outlined in earlier chapters and summarised below. A detailed description of the scientific underpinnings and details of the methodological approach can be found in Appendix 2.

Accelerated global climate change, caused by human activities has already contributed to species extinctions, and is likely to be the major driver of biodiversity change and species extinctions in the near future. [22, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61] Species are expected to respond to the changing climate by migrating, in an attempt to find environmental conditions to which they are adapted.[62, 63, 64, 65, 66, 67] To do this in Victoria, species need connectivity within the landscape. For threatened species that depend on old-growth forests, connectivity means that all remnants of such forests must be kept intact, and suitable habitat between the old-growth forests must be established, to ensure that species can disperse. Without connectivity between old-growth forest remnants, the endemic species will be unable to survive climate change at local, regional and national scales, and may well become extinct.

In Victoria the current system of island-like parks connected by narrow and often disturbed corridors cannot meet the needs of many species, or enable wildlife to disperse and re-establish in response to local climate change and the impacts of such change (eg increasing bushfire activity). Protecting biodiversity within old-growth forest ecosystems is complex. For example, protected areas need to be sufficiently large to allow viable populations of individual species to occur across their entire range. The areas also need to be connected, in order to maintain adequate contact between viable populations. Such connectivity allows genetic interchange, prevents inbreeding and allows evolutionary processes to continue.[68] Thus a protected area network must have adequate amounts of suitable habitat, in the right locations, with sufficient connectivity.[69]

Goolengook catchment. Alex Kaeslin

4.2 Framework for a new forest protected area network

We propose a framework for a new forest protected area network that will:

- maximise protection of old-growth and older age class forest across the eastern Victorian public forest landscape;
- protect and improve public water supply catchments;
- improve habitat protection and therefore survival prospects for a group of forest-dependent animals;
- wherever possible, create highly connected reserve systems, to allow adaptation to climate change and maintenance of broadscale ecosystem processes; [48]
- minimise the inclusion of forest area that has been subjected to high levels of logging disturbance since 1970;
- provide sufficient areas of commercially viable forest outside the network to facilitate an industry transition strategy.

In developing the framework, we focused on how governments could meet commitments to additional old-growth forest protection, and the importance of ensuring availability of clean and abundant water for human, agricultural and industrial uses.

This approach requires that all old-growth outside the proposed new protected area network are reserved by prescription. The approach will also need to include a few areas occurring outside the protected area network that are critical for species requirements such as the Strzelecki's cores and links, and a section of the Rubicon forest block. Once a forest-industry transition strategy is completed, most of the intensively used areas need to be allowed to recover. At the completion of the transition, it may be possible to continue to allow low-intensity use of forest outside the reserve system for high-value timber products. Such an approach will maximise the chances for maintaining biodiversity in the long term.

Basic assumptions of the proposal are that:

- an interconnected network of reserves will be more effective in maintaining populations of species than would smaller, more isolated reserves;

- a reserve design that maintains large mammals will also maintain prey populations, smaller carnivores, and the majority of native plants and animals.

To determine how a reserve would need to be configured to meet the habitat requirements of the forest-dependant fauna of eastern Victoria, we identified a suite of twelve forest-dependent species (listed in Table 4.2) whose protection requirements could be used as a surrogate.

These are not the only species threatened in Victoria's old-growth forests, but were chosen because there is sufficient research available to be able to use them as indicator species.

Table 4.1 Indicator Species used to help design the new protected area network

Indicator Species
Spotted-tailed quoll *Dasyurus maculatus*
Leadbeaters possum *Gymnobelideus leadbeateri*
Smoky mouse *Pseudomys fumeus*
Long-footed potoroo *Potorus longipes*
Barred galaxias *Galaxias fuscus*
Baw Baw frog *Philoria frosti*
Spotted tree frog *Litoria spenceri*
Giant burrowing frog *Heleioporus australiacus*
Powerful owl *Ninox strenua*
Masked owl *Tyto novaehollandiae*
Sooty owl *Tyto tenebricosa*
Orbost spiny crayfish *Euastacus diversus*

Many of these species are predators or sit high in the food chain of old-growth forests, meaning that they are useful as indicators of the status of other elements of forest biodiversity. Many of the species have specific habitat requirements and depend on a combination of certain habitat components that occur within an old-growth forest ecosystem, meaning that they capture many elements of such ecosystems. Many of the twelve species exist in isolated populations and are thus vulnerable to disturbances, especially chance events such as wildfire, which can cause local extinctions. Finally, population trends are the clearest indicators of a species likelihood of decline or extinction, and all the twelve species are experiencing varying levels of decline.

A short description of these species and the threats to them can be found in Appendix 3.

4.3 Generating a boundary for additions to the existing reserve system in Eastern Victoria

In order to determine a boundary for a new protected area network a methodology to implement the framework identified in Section 4.2 was devised. It is based on the three step spatial approach set out below.

The first step in this process was to undertake a comprehensive consultation process with scientists who are experts on the relevant indicator species. The experts were asked to analyse the various GIS overlays for these areas; the analysis also addressed the predicted effects of climate change and the corresponding requirements for flora and fauna. The group of scientists consulted estimated that a broadscale approach required about 1.6 million ha to render species dependent on Victoria's native forests extinction proof.

Secondly the boundaries identified through this process were digitised on screen using arc view GIS application to create an indicative boundary. The limitations of this approach are that boundaries do not necessarily efficiently capture all the values, and may capture large areas of forest that are outside of production forest for example streamside reserves, prescription areas and special protection zones (SPZs).

Thirdly a set of spatial analysis units is required. In order to derive a boundary with good spatial integrity and amenable to analysis in the context of both ecological and economic values, it was decided to use the forest blocks data layer as the spatial analysis units. These were provided by the Department of Sustainability and Environment. These units were chosen because they often conform to catchment boundaries or cadastral boundaries, and/or features easily determined on the ground like roads or tracks. Importantly they are also the units by which wood supply is identified at both the strategic and operational levels of planning for forestry operations. In order to achieve this, the indicative boundary was made to conform to the forest blocks layer. The indicative boundary was merged with the forest blocks layer and then edited. The resulting product was then merged with an amalgamated forest management zone layer also provided by the DSE and all 'protection' classes removed. This was further edited to remove the bulk of heavily disturbed logging areas.

In most cases reasonable boundaries could be derived. The reserve proposal still contains approximately 40,000 ha of clearfall and seed tree regeneration. It was not pragmatic to remove these areas and retain overall boundary integrity. Details of the methodology can be found in Appendix 2.

Once this boundary was derived a set of analyses was possible.

4.4 Conservation outcomes

The results of the spatial analysis are presented below and are shown in Maps 1-5. No attempt has been made to provide area statements for increased faunal habitat protection, as this is not appropriate in the context of the methodology used to derive this information. While priority habitats for the Barred Galaxias have been identified they have not been shown on map 5. This data is highly sensitive due to species' vulnerability to acts of vandalism.

Table: 4.2 Summary Table: Outcomes for Old-growth and Public Water Supply Protection

Summary Table: Outcomes for Old-growth and Public Water Supply Protection					
Production Forest Area proposed for protection	Additional Area of Old-growth Forest Protection **(modeled Old-growth)**	Additional Area of Old-growth Forest Elements Protection **(Senescent Forest)**	Additional Area of Old-growth Forest Elements Protection **(Late Mature Forest)**	Additional Area of Old-growth Forest Elements Protection **(Mature Forest)**	Additional Area of Public Water Supply Catchment Protection
977,851	135,459	12,390	61,988	316,190	623,558

A breakdown of regional catchment outcomes by Forest Management Area is presented in Appendix 4.

4.5 A transition out of native forest logging in Eastern Victoria

In order to rapidly implement a new protected area network for Eastern Victoria a transition strategy which recognises the wood supply trends in the industry is required. It is clear from the wealth of data presented in Chapter 3 that a transition into timber commodity production based on plantations is well underway both in Victoria and the rest of Australia.

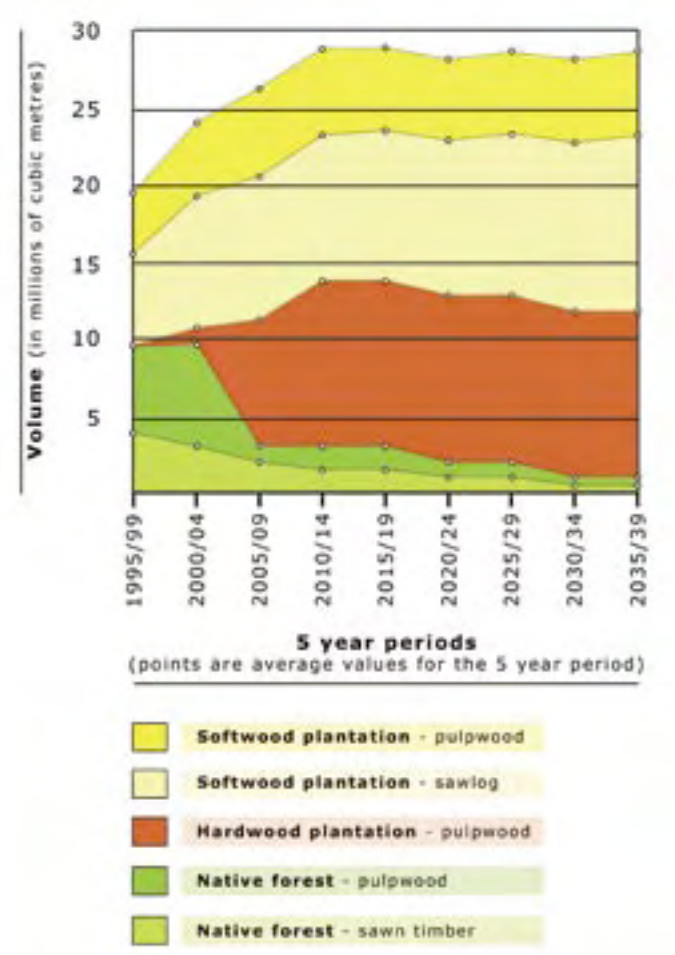


Figure 4.1 Rapid phase out of commodity production from native forests derived from (annual yield in each 5 years) [36] [37]

Figure 4.1 presents one scenario of what a rapid phase out of commodity production (woodchips, pallets, palings etc) from native forests into plantations might look like in terms of wood supply. Overall wood supply continues to increase despite a reduction of native forest logging. The reduction in native forest logging is offset mostly by a dramatic increase in eucalypt plantation sawlog arising out of processing of part of the eucalypt plantation pulpwood resource.

Almost everything the native forest industry produces can be made from plantation wood. This chart, prepared by The Wilderness Society from historical data, and information about the

plantations that are already in the ground, shows how we can meet almost all our own needs for sawn timber and woodchips whilst dramatically reducing native forest logging in Australia over the next fifteen years.

If the forest areas identified by the Victorian Forest Alliance are protected, it will require a rapid phase out process to manage any short term dislocation in wood supply using the least sensitive areas. An analysis of Figure 4.1 shows that the gradual reduction in native forest sawlog supply and rapid reduction in pulplog supply can be easily met by the substantial and increasing plantation resource coming on stream over the next decade.

There is more than enough wood available to allow a transition strategy to proceed smoothly. The area of the major commercial forest types (most important for the wood processing industry) available for production once the reserve proposal is fully implemented is approximately 120,000 ha. Additionally, there is an approximately equal amount of recent clearfall and seed tree retention silvicultural regeneration.

Despite a 1.5 million tonne reduction in Australian sawlogs taken from native forests in the past ten years, we have not seen a surge of imports or a major increase in the price of hardwood sawn timber (refer Table 4.3), which would be expected under the 'scarcity' theory.

Table 4.3 Price Selected building materials (index – 1989-90 = 100)[35]

	1989-90	1999-00	2000-01	2001-02	2002-03	2003-04	Annual growth
Hardwood timber	100	138.1	150.5	153.2	157.5	161.4	3.5%
Softwood timber	100	137.9	139.5	139.5	142.6	145.3	2.7%
Plywood, hardboard and softboard	100	110.9	114.2	117.2	121.7	125.5	1.6%

So what was used to fill this gap in supply? Plantations. Pine sawlog removals increased by 4 million tonnes, more than making up the difference. The explanation of these trends is presented in Chapter 3.

4.6 PaperlinX – the transition in progress

Recent developments proposed by *PaperlinX,* the giant paper manufacturing company, provide a perfect illustration of how industry transition out of native forest logging can proceed. The company has taken a strategic decision to expand its operations and at the same time get out of native forests.

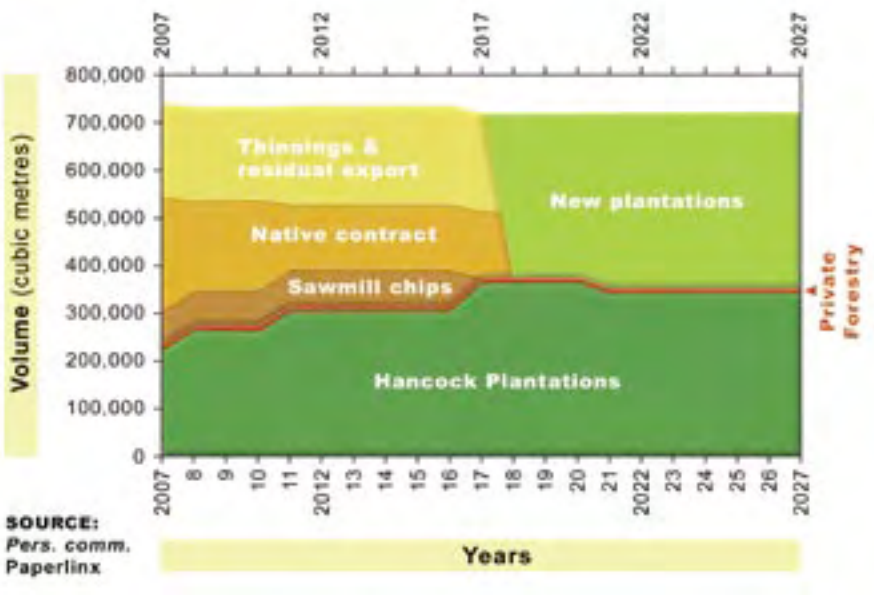


Figure 4.2 Wood Supply to Maryvale (*PaperlinX* 2006)*

Figure 4.2 shows the volume of wood presently taken by the Maryvale mill from Victoria's native forests. This volume will decrease from 450,000 m3 to 350,000 m3 by 2009. The mill also takes a volume from sawmills estimated to be around 100,000 m3. As the amount of wood available from public native forest decreases it is estimated that there will be a corresponding increase in the amount of wood supplied by Hancock plantations.

* The resource volume projections contained in the figure 4.2 does not imply consent by the Victorian Forest Alliance for any logging of the Strzelecki Cores and Links.

East Victorian plantation. Heidi Douglas

The short term additional wood required for the expansion will come from native forests. After 2019 this and all the current native forest supply will come from plantations established over the next few years.

The legislated volume of native forest available to *PaperlinX* is 450,000 this volume will decrease to 350,000 by 2009. The new protected area network will take out two thirds of the productive wood that *PaperlinX* presently receives from their particular consignment area. Despite this fact, there is still enough wood for *PaperlinX's* short term requirements outside the protected area network. The reserve proposal will therefore provide enough wood for *PaperlinX* for the duration of its transition out of native forest use and maintain a diminishing native forest sawmilling sector for a similar period in parts of the region.

PaperlinX is setting itself the target of being completely out of native forests woodchips from Victoria by 2017. The adoption of a transition strategy by *PaperlinX* and its pursuit of best practice certification are welcome developments. They provide a clear message for other commodity wood processors in Victoria.

4.7 Policy instruments required to support a transition

The Victorian Government has a clear role to play in helping industry and workers adapt to the changes that will flow from the protection of eastern Victoria's forests and the inevitable outcomes from current industry trends. The Victorian Government has a good track record of successfully rolling out Forest Industry Structural Adjustment Packages. A similar approach will be required to ensure that workers are not disadvantaged in transition processes. In addition, governments need to:

- introduce environmental procurement policies for all forest products including paper;
- ban all imports of tropical forest products; including hardwood, round-wood, hardwood sawn timber, furniture and furniture components and paper products, unless they carry FSC Chain of Custody Certification;
- withdraw support for the Australian Forestry Standard as it does not conform to best practice international governance and sustainability criteria.

Australian Governments have a major role to play in addressing the current trade deficit in paper products. European governments are developing environmental procurement policies for forest products they purchase. All countries that have these policies in place accept that Forest Stewardship Council (FSC) certification provides a guarantee of both sustainability and legality – this is world's best practice.

As Australia's largest paper producer and wholesaler, *PaperlinX* is in an ideal position to capitalise on the introduction of environmental procurement policies. The company has a clear transition strategy that will see it completely out

of native forest wood supply by 2017 and a part of the FSC chain of custody certification.

As discussed in section 3.5, failure by Governments and retail industries to adopt policies banning the importation of illegal and unsustainable forest products is encouraging this trade.

The areas of forest outside the reserve proposal have the potential to support a low-volume high-value adding niche industry once the transition is complete. However, it will have no chance to become established without protection from cheap, often illegally sourced and environmentally destructive wood products.

The support by the Commonwealth Government and some State Governments for the current Interim Australian Forestry Standard is highly counter-productive. This standard has a very poor credibility internationally. Despite rather heavy handed lobbying by industry and Australian diplomats in the UK and Belgium, the scheme was 'B' listed in Belgium early in 2006 and is likely to fail assessment processes currently underway in the UK. Support for this standard sends a very bad signal to importers that Australia will look the other way when it comes to poor environmental performance.

4.8 Tourism in Victoria – an outstanding success story

A new protected area network for the forests of Eastern Victoria offers a great opportunity to build on a vibrant tourism industry whose economic achievements are summarised below. A number of case studies and examples of successful investment in nature based tourism have been provided.

- Victorian employment in tourism was 156,000 in 2002 – 03 (6.7% of total employment), a 16% increase from 1997-1998. Tourism is the fastest growing source of jobs for young people;[70]

- Tourism employment in eastern Victoria increased by 7.1% from 1997-98 providing an extra 303 tourism jobs in 2002/03;[71]

- International visitor numbers showed a 9% increase over the previous year in September 2004. The annual growth rate of visitors to Australia is forecast to be 6.2% over the period 2003-2013;[72]

- Changing the tenure of public land from State Forest to National Park greatly increases the public's attraction to the region. Visitor days to Victorian National Parks totalled 24.9 million in 2002/03, compared with an estimated 4.2 to 4.7 million visitor days to State Forests in 2000;[73]

- Tourism's contribution to gross state product grew from over $7.3 billion 1997/1998 to $10.3 billion 2002/2003;[74]

- Tourism is a driver for the renewal of regional centres. It is currently worth $3.3 billion to regional Victoria – a 27% increase from $2.6 billion in 1997-1998;

- Tourism contributes more to the Victorian economy than the traditional industries of agriculture, forestry and fishing combined: 3.2% versus 3.1%;

- For every $99,000 spent by tourists, one additional job is created and an extra $58,000 enters the Victorian economy. In 2003 alone international visitors spent more than $2.2 billion in the state;

Nature based tourism is the fastest growing tourism sector. Australian and US studies show that at current prices people will pay about 10 times more to use forests for recreation than they will for timber products from the same area.[75]

Victoria provides an assortment of experiences including rock climbing, cycling, bushwalking, four wheel driving, trail rides and ballooning. The Victorian Tourism Association states however that much needs to be done to help Victoria reach its adventure tourism potential. Adventure tourism is a key policy and strategic initiative of the Victorian Government.[76] Changing tenure of key forest areas from State Forests to National Park would add greatly to the emphasis on adventure-based tourism in eastern Victoria.

According to the Victorian Adventure Tourism Action plan, an integrated approach to adventure tourism is required. Garry McSweeny, former director of the New Zealand Tourism Board, argues that a partnership between state government and its bodies, the tourism industry, conservation groups and tourists is essential to benefit all members. A tourism industry that supports environmental protection and involves the community and its clients is an industry with a viable future[77].

There are good models in New Zealand and Australia that point to the success of regional tourism following the closure or major downsizing of forestry in a region.

- **New Zealand** – The remote community of Haaras is now the fastest growing on the west coast. Tourism has provided the once small logging community with jobs and a viable future. Tourism in Westland brings in five times the money the logging industry generated and has grown at 20% annually;[78]
- **Queensland** – The South East Queensland Forests employs 768 people, has 84 tourism operators (40 are 100% forest-based), and enjoys 7.6 million visitor days by tourists who spend $196 million per annum;[79]
- **The Otways Fly** – this venture provides a good example of the tourism, employment and economic potential of protecting forests, receiving 220,000 visitors in the first year and employing 35 people in peak season.

Case Studies

The following case studies demonstrate the value of tourism to a regional economy, when native forests and other natural areas are converted to conservation tenure. These case studies were compiled by Kirsty Furniss (B.Env.Sc – University of Melbourne 2005).

1: The Milford Track, New Zealand – The Milford Track is a good case study as it is a track through similar terrain and of a similar standard to those found in Victoria. The track is an international draw card. It is one of New Zealand's most popular walks, with approximately 14,000 people completing the track each year. There is a waiting list to get on the track, and a booking fee of approximately $120 contributes to track maintenance.

Fiordland has capitalised on its natural features, receiving world renown for its nature based tours on the Milford track as well as Doubtful Sound. In 2003 visitor expenditure in the Fiordland region was $92 million. The forecast for 2010 is $151 million.

2: Wet Tropics World Heritage Area (WTWHA) – Walking is the primary activity associated with nature based tourism in the Wet Tropics. In 1993 there where 5 million site visits to the WTWHA, contributing $753 million pa to the local economy with 34 tourism operators. The 2001 Wet Tropics Walking Strategy identified 200 walks and potential walks in the WTWHA.

4.9 A five year tourism plan for eastern Victoria

To take advantage of the new parks system, it is critical that resources are injected into regional communities so they can exploit the tourism benefits of the new protected area network. To facilitate this, the Victorian Forest Alliance is proposing a major investment in regional tourism development and jobs to;

- provide safe and appropriate access for visitors to Park attractions by upgrading roads;
- assist local government fund capital works to provide for increased visitor numbers;
- develop tourism strategies to showcase eastern Victoria's forests for nature based and adventure tourism.

The five-year plan includes:

1. Upgrading tourist roads to new parks and attractions;
2. Upgrading local minor facilities;
3. Tourism Programs;
4. Eastern Victoria 'Great Walks'.

1. Upgrading tourist roads to new parks and attractions – $50m.

These funds would be directed to local government and Parks Victoria for the construction and development of appropriate access for tourism in the expanded reserve areas. It is anticipated that this program will provide immediate employment for displaced forestry workers.

2. Upgrading local minor facilities – $15m.

These funds would be targeted toward local government as capital to enable them to benefit at a local level from tourism growth. This could include new visitor centres, picnic sites and information displays.

3. Tourism Programs – $34m.

- ***Nature based tourism program – $20m***. Enhance the capacity within Parks Victoria to promote Victoria's unique natural environment to domestic and international tourism;
- ***Local Tourism Strategies Implementation – $10m.*** Targeted toward local government programs to benefit at a local level from tourism growth;
- ***Adventure tourism action plan – $4m***. Develop and set priorities for the development of the adventure tourism market in eastern Victoria.

4. Eastern Victoria 'Great Walks' – $5,004,400

The expanded protected area system also allows for the development of exciting new 'Great Walk' opportunities in eastern Victoria's forests. The Victorian Forest Alliance has proposed as examples a new network of 'Great Walks' to showcase the new protected forest estate.

The Highlands Trail – Central Highlands - $3,940,800

Duration: 6 days
Distance: 115km
Standard: Medium
Start: Mount Donna Buang
Finish: Eildon Township

The Central Highlands is a bushwalker's playground of tall wet forests within easy access of Melbourne, and is a popular destination for millions of visitors every year. The Highlands Trail is an excellent opportunity for the unique and diverse beauty of the region to be experienced over a 6 day walk. The trail begins at the summit of Mount Donna Buang and finishes at Eildon, meandering through the regions' tall eucalypt forests and rainforests past several waterfalls and over alpine summits. The Highland Trail will be certified under the Sustainable Tourism Stewardship Council.

Infrastructure: Track, shelter, toilet, signage and hut construction
Employment: Track maintenance, construction, information boards. Post construction employment track maintenance, rangers and hut wardens.

East Gippsland 'Great Walks' – $1,063,600

East Gippsland's forests are largely unknown to the majority of Australians. However they are amongst the most spectacular and intact on Earth. East Gippsland covers less that 5% of Victoria's land area yet supports over half the state's plant species and well over 300 rare and threatened animal and plant species (seven times the state average). Despite their beauty, which rivals that of better-known forests in Tasmania, the old-growth forests and rainforests of East Gippsland are under-promoted.

The forests of East Gippsland have a number of advantages for tourism. They are situated only three hour's drive from Canberra and lie half way between Sydney and Melbourne. They contain the largest tracts of temperate old-growth forest remaining on the mainland, rainforest, heritage rivers, endangered wildlife and waterfalls. Local towns (Orbost, Cann River, Bonang) will act as forest-based tourism hubs with significant employment and development opportunities.

Three proposals are set out in the boxes below:

1. Big Tree & Result Creek Falls loop
Distance: 4kms
Cost: $339,400

Located on the edge of the Errinundra Plateau on the road between Goongerah and Bendoc 90kms north of Orbost, this spectacular walk includes huge old-growth trees, waterfalls and spectacular views.

2. Yalmy Walking Track
Overnight
Cost: $356,000

The Yalmy State Forest is situated west of the township of Goongerah, immediately south-east of the Snowy River National Park. The Yalmy River flows into the famous Snowy River, and the catchment contains untouched old-growth forest and warm temperate rainforest.

The Yalmy Forest Walking Track would be styled after New Zealand's Milford Track, with the option of walking further into the Rodger River Wilderness area, continuing north along the Deddick Trail, or looping back to Goongerah.

cont..

3. Goolengook Recreation Area
5 old-growth and rainforest walks
Cost: $368,200

The Goolengook valley is one of the most biologically important forest areas in Australia. Covering 9166 hectares of public land, Goolengook contains rainforests of national significance, old-growth forest, granite outcrops and a Heritage River.

Situated approximately 35km from the Princes Hwy along Goolengook Rd, half way between Orbost and Cann River, the Goolengook Forest offers a unique opportunity for recreation in Victoria. Its abundant water supply and unique rainforest and old-growth forest make it a unique place of rare and stunning beauty. The region also has a rich aboriginal history. It is located off the road between Canberra and Melbourne, and Canberra is only 3.5 hours away by car.

The Goolengook Recreation Area would contain a camping ground with up to ten sites, a composting toilet, picnic and BBQ areas, information boards and five marked walks which would take in the impressive ecological sites of Goolengook.

Infrastructure and Employment – The East Gippsland walks require the construction of a camp ground (Goolengook only), picnic tables, BBQ, track signage, information boards and interpretive information, composting toilets, shelters, drainage, boardwalks over sensitive areas, car parks and water tanks.

TOTAL **$104,004,400 over 5 years**
132 direct new jobs.

4.10 National Parks Management

The expanded parks system needs to be adequately managed to ensure the protection of nature conservation values (including fire management and feral pest mitigation) and provide the best possible experience, facilities and access for visitors. National Parks funding therefore must be sufficient to cater for the increased management needs over a larger area of protected forests.

1. National Parks funding $32.5m per annum

- Jobs – $17.5m for 292 direct new jobs (90 park rangers and 202 construction and general duties workers);

- $15 million for parks operations costs.

New staff is required for infrastructure development and park management. Parks operation costs cover equipment and material needs.

Errinundra. Alex Kaeslin

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