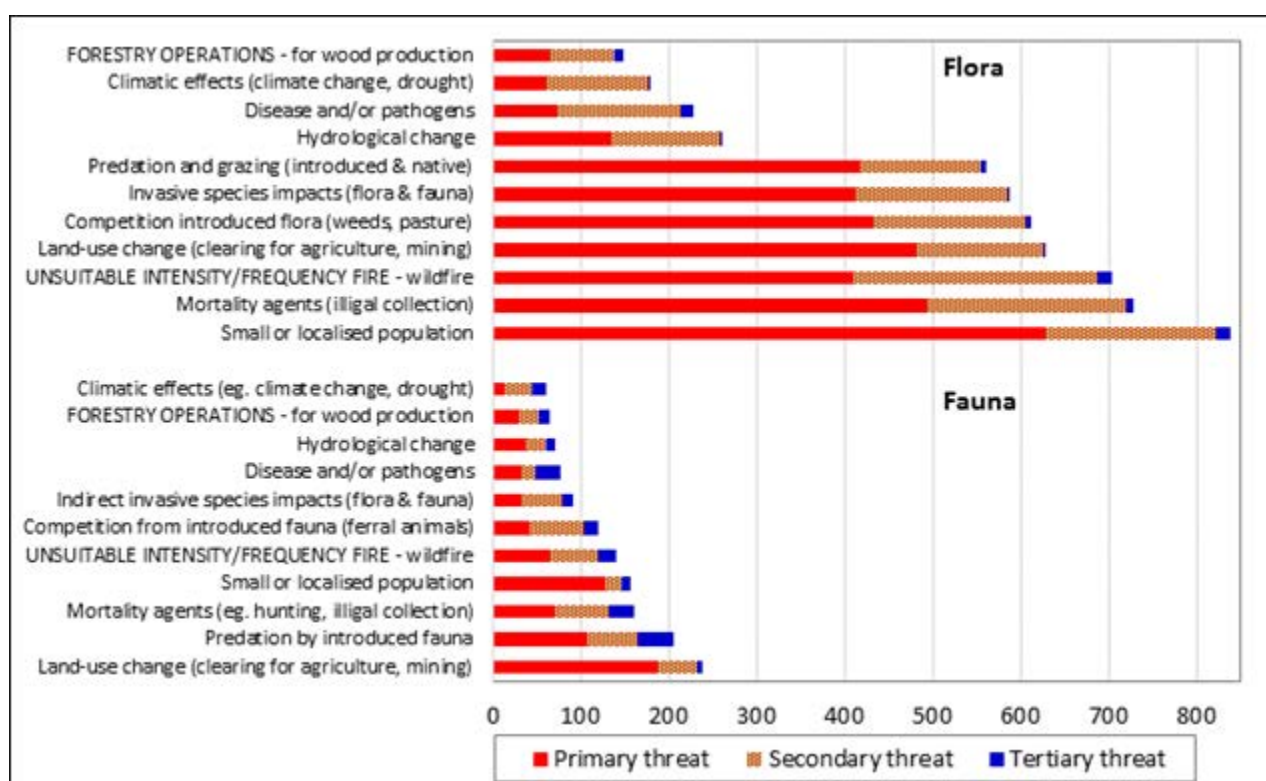




VICTORIAN PARLIAMENTARY INQUIRY INTO ECOSYSTEM DECLINE

THE NATIONALS AND LIBERALS MINORITY REPORT



Prepared by The Nationals and Liberals

11 November 2021

Cover figure: Threat rating and threat categories for forest-dwelling threatened species¹

¹ The figure shows the number of species for which a threat in that category was specified and the data was sourced directly from ABARES (2018). Australia's State of the Forests Report 2018 Chapter 1, p122.

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1. About the Inquiry

1.1 Terms of Reference

On 30 October 2019 the Legislative Council agreed to the following motion:

That this House requires the Environment and Planning Committee to inquire into, consider and report, within 12 months, on the decline of Victoria's ecosystems and measures to restore habitats and populations of threatened and endangered species, including but not limited to —

- (a) the extent of the decline of Victoria's biodiversity and the likely impact on people, particularly First Peoples, and ecosystems, if more is not done to address this, including consideration of climate change impacts;
- (b) the adequacy of the legislative framework protecting Victoria's environment, including grasslands, forests and the marine and coastal environment, and native species;
- (c) the adequacy and effectiveness of government programs and funding protecting and restoring Victoria's ecosystems;
- (d) legislative, policy, program, governance and funding solutions to facilitate ecosystem and species protection, restoration and recovery in Victoria, in the context of climate change impacts;
- (e) opportunities to restore Victoria's environment while upholding First Peoples' connection to country, and increasing and diversifying employment opportunities in Victoria; and
- (f) any other related matters.

1.2 Committee Membership

Dr Matthew Bach, Liberal Party

Ms Melina Bath, The Nationals

Dr Catherine Cumming, Independent

Mr Stuart Grimley, Derryn Hinch's Justice Party

Mr Clifford Hayes (Deputy Chair), Sustainable Australia Party

Mr Andy Meddick, Animal Justice Party

Mr Caesar Melham, Australian Labor Party

Dr Samantha Ratnam, Victorian Greens

Ms Nina Taylor, Australian Labor Party

Ms Sonya Terpstra (Chair), Australian Labor Party

Participating Member:

Mrs Bev McArthur, Liberal Party

1.3 Foreword to the Minority Report

This Minority Report gives a voice to the submissions and testimony ignored in the Committee Report. These submissions and testimony highlight that much of the ecosystem decline in Victoria is ‘at the Government’s own hand’ - a direct result of poor government policy, inadequate execution of programs and mismanagement of the major threats such as fire, invasive species and predators on public land.

The Nationals and Liberals on the committee were motivated to prepare this Minority Report because of major concerns with the Committee Report. Our concerns with the Committee Report include:

- Most members of the eleven-person Committee (apart from the Liberals and Nationals) are from the government or have demonstrated an alignment with the government – hardly independent.
- The Committee Report lacks the independence required to critically examine the government’s current policy and practise and to objectively develop improved policies, strategies and programs.
- The Committee Report is very selective in its use of the material presented to the Inquiry and has completely ignored a large body of expert submission and testimony, particularly those critical of current government policy and practise.
- The findings and recommendations in the Committee Report do not adequately take into account critical multidisciplinary knowledge, information, data, practical experience and positive suggestions.
- Findings and recommendations with respect to management of forest ecosystems are more about ‘political science’ rather than ‘real science’ and many lack a multidisciplinary approach necessary to deliver practical outcomes.
- The Committee Report takes a scattergun approach to recommendations and lacks focus on those critical success factors likely to lead to improved outcomes.
- The Committee Report basically ignores submissions, testimony and the Victorian Auditor General Office (VAGO) report² on the ‘Safer Together’ policy.
- The Committee Report ignores submissions, testimony critical of the efficiency and effectiveness of DELWP. Efficiency and effectiveness issues were raised in a VAGO³ report on Biodiversity 2037.
- Climate change is overstated as a threat to endangered species and is used to cover up organisational deficiencies and poor service delivery, particularly with respect to bushfire.
- Submissions and testimony of many regionally based interest groups have not been adequately taken into account.

The Nationals and the Liberals put forward this Minority Report with a focus on real outcomes:

- We focus on the major threats to ecosystem such as high intensity bushfires, invasive species and predators etc.
- Our Minority Report makes positive suggestions that should deliver improved outcomes on public land and private land and avoid continuation of failed policy and practise.
- We provide a more holistic appraisal of the wide range of imperatives that should be considered in ecologically sustainable forest land-use and forest management decisions.
- We focus on the drivers of organisational performance as a key to improve the efficiency and effectiveness of our agencies such as DELWP, rather than introducing more layers of unfocused and overlapping legislation and regulation.
- Positive suggestions are provided to substantially reduce the threat from high intensity bushfires – suggestions that are practical, proven, supported by fire behaviour experts and are embodied in the best practise regime employed with considerable success in South West WA.
- Some of the negative sentiment on prescribed burning is associated with ‘hot’ prescribed burns which are not part of the ‘best practise’ prescribed burning we are advocating.

² VAGO (2020). Reducing Bushfire Risk. Independent Assurance Report to Parliament October 2020.

³ VAGO (2021) Protecting Victoria’s Biodiversity. Independent assurance report to Parliament 2021-22:07 Oct 2021.

We acknowledge committee members and thank EPC secretariat staff Michael Baker, Alice Petrie, Samantha Leahy, Cat Smith and Holly McLean for their contribution and hard work on the Inquiry.

The Nationals and Liberals acknowledge the efforts of the many talented people in our agencies and we advocate for organisational improvement so that those people can be more effective.

The Nationals and Liberals recommend future actions take into account this Minority Report. We ask that Parliament treat the selective evidence, findings and some of the recommendations of the Committee Report with caution.



Melina Bath MP

Member for Eastern Victoria Region



Beverley McArthur MP

Member for Western Victoria Region



Matthew Bach MP

Member for Eastern Metropolitan Region

2. Executive summary

Evidence presented to the Inquiry indicated that:

- Bushfire, invasive species and introduced predators (and not sustainable harvesting) are the main threats to our forest ecosystems.
- The 'Safer Together' bushfire policy has failed and contributed to the 2019-20 bushfires.
- The 'Victorian Forestry Plan' is flawed, replacement plantations are unlikely to be fully implemented, and the plan will lead to lower economic output and job losses in regional areas.
- VicForests has professionally managed the 415,000 hectares of public forest under its charter and meets a raft of audits of its environmental performance.
- DELWP and Parks Victoria have not managed the 7.8 million hectares of public native forest well and these agencies need organisational improvement, not more legislative/regulatory band-aids.
- Improved management of ecosystems on private land requires strategies that make remnant native vegetation etc. more valuable rather than more costly, through mobilising volunteer effort, targeted grants and less rather than more regulatory red (green) tape.
- Victorian public and private land management is currently covered by a plethora of legislation and regulation which has not worked and impedes rather than supports continuous improvement.

The Committee Report is selective in its use of submissions and evidence, demonstrated by it failing to report, mention or cite some submissions and evidence presented by those who provided critical analysis of the government's fire management policy and practise.

The Committee Report downplays the adverse impact of bushfire and the favourable use of prescribed fire and presents no solution to reduce the frequency and extent of bushfires. It calls for action on climate change despite experts indicating excessive fuel is the key driver of our bushfires. Action on climate change, while warranted, is a global decision outside the direct control of Victorian agencies and with a long lead time.

The Minority Report believe bushfires are Victoria's greatest threat to ecosystems and improved mitigation is required, of which low intensity prescribed fire is currently the most cost-effective option and works under all climate scenarios. We need more cool burning as practised by traditional owners and less hot prescribed fire. The Minority Report believe the 'Safer Together' policy has failed because it is based on an excessively high 70% residual risk target and only about 2% prescribed burning (VBRC recommended 5%). Including the area burnt by bushfire in the calculation of residual risk is a nonsense, as that is what the policy was meant to avoid. The Victorian Auditor General raised so many concerns with the residual risk approach that it is not 'fit for purpose'.

Our Minority Report addresses the issues and insurmountable challenges associated with the Victorian Forestry Plan (ignored in the Committee Report). If the plan is implemented it will lead to 'economics of underdevelopment' at the 'direct hand of government', rather than the invisible hand of market forces:

- The 'Victorian Forestry Plan' fails to acknowledge the long lead times, low returns and challenges of ramping up plantation supply. It will lead to worse rather than better ecologically sustainable development, and the \$110 million of government investment is insufficient.
- Replacing 1 million cubic metres currently supplied from native forest, requires ca 70,000 to 140,000 hectares and an investment of \$1.0-\$1.5 billion in land and plantation costs over 30 years.
- The Forestry Plan will have an adverse impact on scale economies in agriculture because it is based on converting 70,000 to 140,000 hectares of farmland to plantations.

- Past native timber access policy, exacerbated by bushfires, has resulted in the loss of \$6.6 billion Gross Regional Product and 5,560 jobs over the last 20 years from native forest timber.
- The 'Forestry Plan' is likely to contribute to a further loss \$5.6 billion in Gross Regional Product and the loss of another 3,660 jobs over the next twenty years in disenfranchised rural communities, already severely impacted by reducing native log supply and recent fire, floods and a pandemic.

Our Minority Report shows an understanding of the issues of economic equity with respect to private landowners. We cannot ignore private land owner's costs of providing 'public good' conservation and also the 'opportunity costs' regulation and restriction place on 'highest value' use of private land.

We need to make ecosystem improvement valuable rather than costly. More legislation, regulation and bureaucrats often deliver worse rather than better outcomes or stymie progress. The regulatory 'status quo' has been relatively inefficient, ineffective and costly particularly in terms of lost opportunities. Sustainable improvement requires making ecosystems more valuable to more people and this will often involve mobilising the users of that ecosystem in the implementation of its improvement.

The value of our forests could be enhanced, and biodiversity projects adequately funded if we implemented more multiple use. The value of our public forests has diminished due to a focus on single use (or no use).

The Committee Report demonstrates a lack of focus on the most important drivers of improved management of ecosystems with far too many recommendations (74). If all 74 recommendations are implemented, effort on the most important recommendations will likely be diluted with adverse consequences for Victorian ecosystems. This Minority Report has taken note of the significant issues with the efficiency, effectiveness and delivery by our agencies, highlighted in VAGO audits.

The Committee Report calls for more legislation, regulation and red tape (bureaucratic inertia) rather than developing good strategies, implementing them effectively and delivering on promised outcomes through focus on critical success factors. The recommended increase in legislation and regulation will add the cost of more layers of bureaucratic red tape without necessarily adding value in ecological outcomes.

This Minority Report supports following the lead of successful organisations who deliver improved performance often against the odds of a non-supportive regulatory framework, adverse impacts and limited resources/budget. Successful organisations focus on critical success factors and are efficient and effective because of good organisational leadership, structure, strategy, skill formation, systems, staffing and culture. Implementation is the key and our agencies need to better manage efficiency, effectiveness and outcomes whether it be to meet legislation, regulations, policies or strategies.

This Minority Report (unlike The Committee Report) does not propose 'more of the same'. We note that VicForests is a more focused organisation than DELWP and Parks Victoria. VicForests is led by a CEO (not Secretary) reporting to an 'independent' Board and with focused management, imbedded research and has a record of operating efficiently and effectively and delivering on its objectives. VicForests research on Leadbeater's possum has successfully delivered a new understanding of habitat requirements. To avoid mega bushfires and improve ecosystem management we need:

- Focused organisations and/or management to improve the efficiency and effectiveness of agencies so they can deliver improved outcomes on the lands they manage.
- Staff responsible for public land need to be relocated in the regions closer to the ecosystems they manage. In 2019 over half of DELWP's people were located in the CBD of Melbourne and only 11% were field staff – not ideal for the management of public land.
- Roles within the various agencies should be 'process complete'. With improved skill formation there is scope for increased delegation to get more out of the talent within our agencies.
- DELWP needs a demerger. DELWP is a conglomerate of many unrelated functions headed by seven Assistant Secretaries who report to one Secretary who reports to four Ministers. The Department of Health and Human Services was split to improve management of Covid and this should be considered for DELWP.

- The demerged agencies need clearer accountability for each separate agency, particularly for forest fire preparation, mitigation and control by the Minister and the Government which is accountable to the parliament.
- We need a focused Forest Fire Organisation to manage fire preparation, mitigation and suppression, headed by CEO and with improved lines of command.

There has been an increase in the average annual area burnt by bushfire associated with the transition from a focused Forests Commission operating from 1918 to 1983 to the unfocused mega department we now call DELWP which has operated from 2015 with mixed results.

Year	Abrev.	Organisation name & functions/responsibilities	Area bushfire (000 ha/yr)
1918-83	FCV	Forests Commission of Victoria Forestry, Parks, Flora & Fauna,	185
1951-83	FCV	Forests Commission of Victoria Forestry, Parks, Flora & Fauna,	119
1983-90	CFL	Department of Conservation, Forests and Lands Forests, Parks, Public land, Fisheries, Wildlife, Flora & Fauna	55
1990-92	DCE	Dept. Conservation and Environment Forests, Parks, Public land, Fisheries, Wildlife, Flora & Fauna	35
1992-96	CNR	Dept. Conservation and Natural Resources Forests, Catchments, Land, Parks, Flora & Fauna, minerals & petroleum, primary industries, water	8
1996-2002	DNRE	Dept. Natural Resources & Environment Forests, Catchments, Land, Parks, Flora & Fauna, minerals & petroleum, primary industries, water	33
2002-12	DSE	Department of Sustainability and Environment Forests, Heritage, Environment, Land, Water, Planning, Fauna & Flora, Conservation.	314
2012-14	DEPI	Dept. Environment & Primary Industries Agriculture, Forests, Land, Fire, Environment, Water, Natural resources, Regions, Desalination	260
2015-->	DELWP	Dept. Environment, Land Water & Planning Environment, Climate change, Water, Catchments, Local government, Forests, Land, Fire, Environment, Infrastructure, Planning, Regions, Energy	294

Source: Derived from annual reports and various government sources

We support the following recommendations in the Committee Report:

3, 4, 5, 6, 9, 10, 12, 13, 14, 15*, 18*, 19, 20, 22, 24*, 25*, 27#, 31, 32, 33, 34, 36, 37*, 38, 39, 40, 41, 42, 43, 45, 46#, 48, 50, 53, 54*, 55, 56*, 57, 63, 64, 65, 66, 68, 69*, 70*, 71*, 72, 73

(* attempted amendment) (# successful amendment)

We oppose the following recommendations in the Committee Report:

1, 2, 7, 8, 11, 16, 19, 23, 26, 28, 29, 30, 35, 44, 47, 49, 51, 52, 58, 59, 60, 61, 62, 67, 74

Summary of Recommendations:

Minority Report Recommendation No 1: The Victorian Auditor General's Office (VAGO) should continue to conduct regular audits of the overall performance of government agencies against all measures of efficiency and effectiveness, not just environmental outcomes.

Minority Report Recommendation No 2: That the Victorian Government abandon its 'Safer Together' fire policy and adopt Recommendation 56 of the 2009 Victoria Bushfire Royal Commission which called for fuel reduction on 5% of the forest (rolling average). This target can incorporate increasing application of Traditional Owners forest fire management practices, where appropriate.

Minority Report Recommendation No 3: That the Victorian Government support, foster and reintroduce Traditional Owners' forest fire management practices, where possible, to complement prescribed burning programs.

Minority Report Recommendation No 4: That the Victorian Government work in collaboration with Traditional Owners to offer accreditation in qualifications in conservation and Indigenous land

management, such as Certificate III in Conservation and Indigenous Land Management as conducted in NSW.

Minority Report Recommendation No 5: That the Victorian Government discard the Victorian Forestry Plan and continue with sustainable harvesting of native forests. The Victorian Government must work with VicForests to continue to maintain practices which enhance healthy, sustainable and productive forest systems.

Minority Report Recommendation No 6: That the Victorian Government ensure that programs and funding are directed to sustaining and restoring Victoria's iconic landscapes, including ash-type forests, by establishing and maintaining strategic seedbanks for vulnerable forest types; combined with forest nursery developments and strategic reforestation programs to implement timely and effective regeneration across fire-affected public lands.

Minority Report Recommendation No 7: The Nationals and Liberals oppose the reintroduction of dingoes as an apex predator.

Minority Report Recommendation No 8: The Nationals and Liberals oppose the phase out of legal 1080 baiting used according to prescribed standards.

Minority Report Recommendation No 9: The Nationals and Liberals recommend the continued use of the Authority to Control Wildlife permit system for control of fauna species where they cause damage to the environment or economic loss.

Minority Report Recommendation No 10: The Nationals and Liberals support in principle that the Department of Environment, Land, Water and Planning conservation management of threatened species should be on a practical landscape-wide strategy.

Minority Report Recommendation No 11: The Nationals and Liberals recommend that any increased funding should only be made available after a professional appraisal of how state government agencies such as DELWP or Parks Victoria can first improve efficiency and effectiveness and extra funds should only be awarded based on a rigorous 'project plan' that clearly demonstrates how the extra funds will deliver improved outcomes.

Minority Report Recommendation No 12: That the Victorian Government further invest in strengthening regionally based natural resource management programs, including funding of local community-based organisations such as Landcare to cover Landcare coordinators and grants for Landcare projects.

Minority Recommendation 13: That the Victorian Government ensures that there is a full, transparent and regulated market, which operates from arms-length from government departments and NGOs such that there is no conflict of interest between market participants in the regulation and purchasing of vegetation offsets.

Minority Report Recommendation No 14: That the Victorian Government provide ongoing funding/resources for Vegetation Management Officers (VMO's) to provide vital training and skills to councils, road managers, landholders and CFA volunteers in fuel reduction by prescribed burning and mechanical treatment.

Minority Report Recommendation No 15: The Nationals and Liberals recommend that any initiatives to protect and restore native vegetation including remnant grassland on private land should ensure that the landowner is adequately compensated for costs of delivering 'public good' conservation of ecosystems. The government should ensure that the funding is adequate to cover the costs incurred by private landowners of delivering the 'public good' conservation and also for the 'opportunity costs' they incur as a result of any restricted land use.

3. Independent Reports on Victorian fire and biodiversity programs

In their submission to the Inquiry, Forest & Wood Communities Australia stated that the government has not been successful in forest management, as evidenced by the increasing threat of fire and the intensity of fire when it occurs, due to its failure to control fuel loads in unmanaged forests.

The Victorian Auditor General's Office (independent office of the Parliament) has a track record of unbiased, impartial and balanced appraisal of government policy and programs with respect to efficiency, effectiveness and measurement of outputs against objectives.

Minority Report Recommendation No 1: The Victorian Auditor General's Office (VAGO) should continue to conduct regular audits of the overall performance of government agencies against all measures of efficiency and effectiveness, not just environmental outcomes.

3.1 VAGO Report on the modelling underpinning the 'Safer Together' fire policy

The Victorian Auditor General's Office (VAGO) 2020 audit raised so many issues with the modelling of residual fire risk underpinning the 'Safer Together Policy', such that the failed 'Policy' is 'not fit for purpose'.

One of the most damning findings was that over the four year audit period, DELWP prescribed burnt only 30% to 43% of the area required to achieve its 70% residual risk target (86,744 ha pa rather than the 200,000 to 275,000 ha pa required). The target was only achieved by including area burnt by large bushfires, the outcome the policy was meant to avoid. The Auditor General also reported:

- Fuel management reduces the intensity of fires and makes them easier for firefighters to control.
- The Government has not recorded the reasons its targets are not met and why planned burns are not completed.
- The Government has a key role in reducing the risk bushfires pose to people, property and the environment.
- The Government does not clearly demonstrate the impact of its planned burns (positive or negative) on the environment and ecosystems.
- Limited assessments occur after the planned burns it does complete, impacting the Government's ability to assess how quickly fuel re-accumulates.
- The Government reports the number of ecosystem resilience assessments it conducts, but not the results or outcomes of these assessments.

Other issues raised by the Auditor General⁴ were:

- DELWP advised that it could reduce Victoria's bushfire risk by 30 per cent with \$50 million pa but failed to advise that it could achieve greater risk reduction with further investment.
- DELWP did not explain that the model used (Phoenix RapidFire) has several limitations.
- Limitations of the datasets and model simulations include using data that was not up-to-date.
- The models need expert validation and peer review.
- DELWP completes too few fuel hazard assessments after planned burns and bushfires, reducing its ability to validate how quickly fuel re-accumulates to hazardous levels.
- DELWP's modelling relies on a range of assumptions that likely impact the results, including the application of a single extreme fire scenario.

⁴ VAGO (2020). Reducing Bushfire Risk. Independent Assurance Report to Parliament October 2020

- DELWP has not systematically or comprehensively verified the effectiveness of Phoenix RapidFire predictions against real fire events.
- The tool needs significant investment to be fit for purpose.
- Regional targets did not consider key factors that determine a region's risk including current fuel loads.
- Regional risk targets had not been reconsidered since 2016, a serious issue given regional fuel loads can change quickly.
- A lack of focus on risks on private land created a gap in understanding risk across the state, leading to suboptimal risk-reduction.
- Cost-effectiveness of fuel management and other risk mitigation was not considered in strategic planning due to a lack of data, leading to suboptimal use of resources. (This is yet another example of DELWP's inability to manage efficiency and effectiveness).
- In 2019–20, DELWP delivered only 43 per cent of the 'priority' burns and only 30 per cent of 'normal ranked' burns.

3.2 Victorian Auditor General's Office (VAGO) audit of DELWP biodiversity performance

DELWP's objective under its program *Protecting Victoria's Environment – Biodiversity 2037* is a healthy environment and a net improvement in the outlook of all threatened species. The focus is on implementing broad actions across a landscape to protect the greatest number of species.

The Victorian Auditor General's Office (VAGO) audit of DELWP's biodiversity performance found many deficiencies relating to efficiency, effectiveness and ability to measure its performance, similar to the VAGO report of the government's fire policy. On performance on protecting Victoria's biodiversity VAGO found:

- Much of the data used in DELWP's models is old, likely to be outdated and contains critical gaps raising questions about DELWP's modelled outputs and decision support.
- DELWP cannot demonstrate how well it is halting decline of populations of threatened species.
- DELWP has no transparent risk-based process to prioritise these species for management.
- DELWP makes limited use of available legislative tools to protect threatened species.
- Funding is short, however, to support further investment DELWP has not provided the Government evidence-based advice on the costs and benefits of protecting and monitoring threatened species.
- DELWP lacks performance indicators and its reporting lacks accountability and comprehensiveness to demonstrate the impact of its management interventions.
- DELWP tells the public little about the cost, quality and effectiveness of its work and whether it is on track to meet its Biodiversity 2037 target.

4. Threats to native flora and fauna

4.1 Overview of major threats

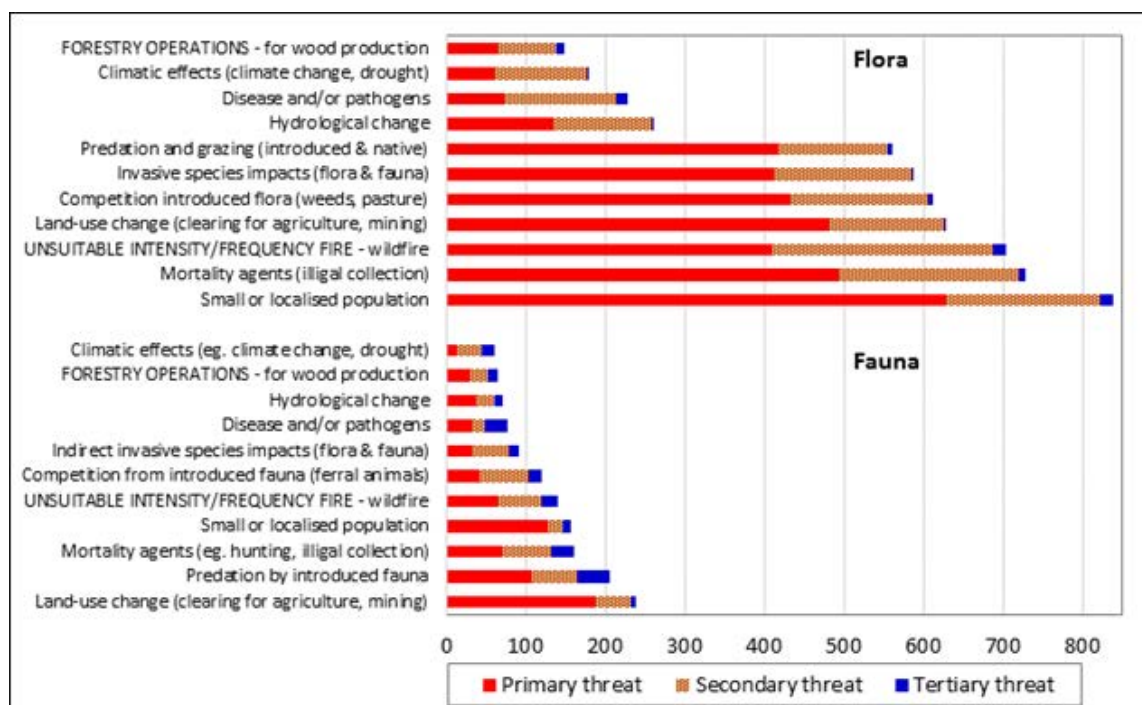
An understanding of the relative impact of the various threats to our native flora and fauna is fundamental to the development of cost-effective strategies consistent with ecologically sustainable development.

Fossil records show plants adapt to climate changes as the impact of changes on plant growth are partly accommodated by adaptations in plant structure and function. Plants adapt many other fundamental biochemical processes in response to changes in temperature or water availability, such that they remain productive and reproductively viable⁵.

⁵ From M. Adams and P. Attiwill (2011). Burning issues, sustainability and management of Australia's southern forests. CSIRO AND Bushfire CRC.

Forestry operations for wood production pose the lowest threat to Flora and one of the lowest threats to fauna relative to other more serious threats. Similarly, climatic effects pose relatively low threats to flora and fauna. High intensity or frequency of wildfire (bushfire) pose significant threats to native flora and fauna (**Figure 1**).

Figure 1: Threat rating and threat categories for forest-dwelling threatened species⁶



The results **Figure 1** concur with evidence given to the inquiry:

The major factor now impacting on the decline of Victoria's biodiversity is intense bushfire. Whilst many would focus on logging operations as being a major factor, the reality is that logging operations actually create disturbance and diversity in the forest which is a strength for ecosystem resilience. In addition, any negative impacts on biodiversity as a result of forest operations are infinitesimal in comparison to the impact of intense wildfire burning over hundreds of thousands of hectares of land on which fuel loads have not been managed. – Mr Garry Squires

Threats to threatened native flora are much higher from grazing from introduced and native fauna, invasive species, competition from introduced plants, clearing for farming and mining, unsuitable fire (essentially wildfire) and illegal collection than for forestry operations (harvesting for wood production).

Threats to threatened native fauna are much greater for invasive species, competition from introduced animals, wildfire, illegal hunting, predation by introduced animals and clearing for agriculture and mining than for forestry operations (harvesting for wood production).

4.2 Recent CSIRO review of threats to species

A recent *Pacific Conservation Biology* review, published through CSIRO Publishing, examined the threats to species listed as threatened under Australia's *Environment Protection and Biodiversity Conservation Act 1999* (the 'EPBC Act'). The review found that out of all the EPBC-listed species in Australia (1,533 at the time of publication), invasive species affect the largest number of listed species (1,257 species) or 82 per cent of all threatened species. The two next-greatest threats were ecosystem modifications (e.g. bushfire) at 74 per cent and agricultural activity at 57 per cent.

⁶ The figure shows the number of species for which a threat in that category was specified and the data was sourced directly from ABARES (2018). Australia's State of the Forests Report 2018 Chapter 1, p122.

Chief Executive Officer of Victorian Forest Products Association, Ms Deb Kerr, endorsed this finding:

The CSIRO have analysed the EPBC Act terrestrial listed species and have come up with a figure that 82 per cent have been impacted by invasive species. That likely is a similar number for Victorian listed species. Invasive species are also listed as the key threatening processes under the EPBC Act and the FFG Act. – Ms Deb Kerr – Victorian Forest Products Association

4.3 Landscape management and species-specific actions (Biodiversity 2037)

Protecting Victoria's Environment - Biodiversity 2037 focuses on landscape management to reduce the threat to multiple species rather than the previous approach of producing protection plans for individual threatened species (which are usually expensive with a poor chance of success). The new approach can work for multiple species across multiple locations and under multiple threats. It would appear to be a more cost effective approach. We support the thrust of The Committee Report recommendation that the *Flora and Fauna Guarantee Act 1988* (Vic) be amended if required to remove contradiction between the Act and Biodiversity 2037 and also accommodate cost-effective broader landscape threat management.

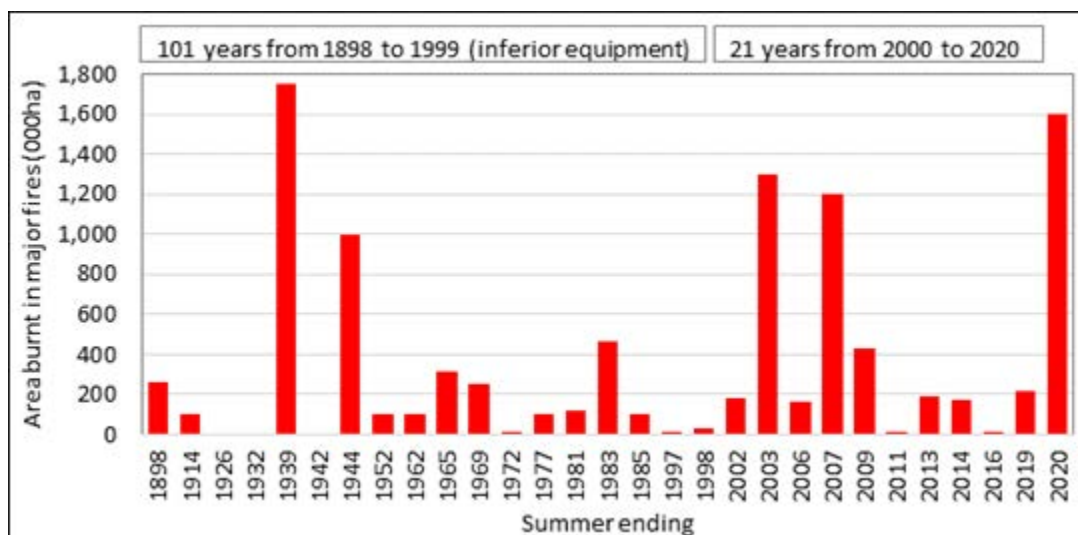
5. The bushfire threat & effective solutions

5.1 Victoria's deteriorating fire record over the last twenty years

Despite improvements over the last 21 years in equipment to detect and fight fires, the government's ability to control major bushfires on forested land has declined. In the 101 years to 1999, there were only two fires exceeding a million hectares, whereas in the last 20 years Victoria has had four mega fires with three of those fires exceeding one million hectares along with several 'campaign' fires (

Figure 2).

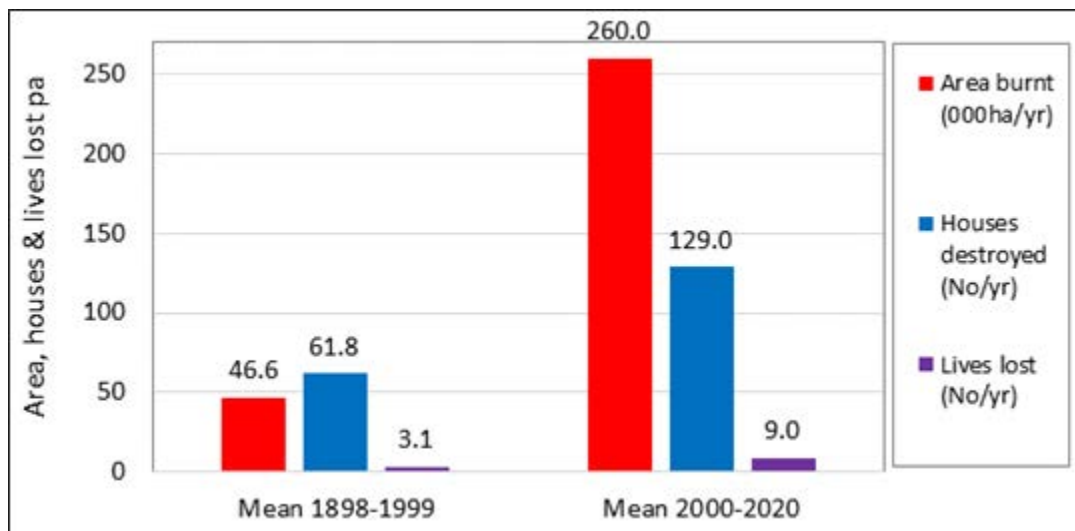
Figure 2: Victorian area burnt by major bushfires over the last 120 years⁷



Those fires over the last 21 years have caused substantial loss. In Victoria, the area lost is 5.6 times greater, houses lost twice as many and lives lost three times as many over the last 21 years, than the preceding 101 years, on a per annum basis. This is after substantial improvements in firefighting equipment, including modern aircraft for surveillance and limiting fire damage to communities (Figure 2).

⁷ Derived from DELWP webpage and Annual Reports.

Figure 3: Victorian losses per annum for 101 years to 1999 and for 21 year to 2020⁸



5.2 Victoria's deteriorating fire record is due to lack of focus on controllable factors

Our deteriorating bushfire record is due to ignoring the fundamentals of fire behaviour, mitigation and suppression. **Fire is a function of Fuel + Oxygen + Ignition (Fire Triangle) and Forest Fire is a function of Fuel + Topography + Weather (Forest Fire Triangle).** Forest land managers have no control over Topography and Weather (including climate impacts), but can effectively control the fuel load. Given that we cannot exclude ignition or fire completely we effectively have two choices⁹:

- Implement sufficient low intensity prescribed fires to reduce fuel (**Figure 4 left**), or
- Accept high intensity wild fires (**Figure 4 right**).

Figure 4: Relative impacts of a prescribed burn (left) and a wild uncontrolled bushfire (right)



⁸ Derived from DELWP webpage and Annual Reports.

⁹ Cameron J. N. (2020). Victorian mega bushfires and government policy and practise. Submission NND.600.00145.01 to the Royal Commission into National Natural Disaster Arrangements. April 2020.

Controllable factors contributing to mega fires that require more focus on works in the “off season” as well as “disaster management” over summer are:

- Effective management of fuel load through prescribed burning or mechanical treatment.
- Maintenance of access roads and tracks and some strategic fire breaks.
- Very early detection based on improved technologies such as aerial infrared surveillance.
- Rapid initial attack including the use of light surveillance aircraft equipped with retardant.
- Effective early suppression, not just containment.

Victoria has experience too many mega fires because of an inability to manage the controllable factors well. We risk more large fires if the climate change debate masks action on the controllable factors.

Locals in rural communities with a lifetime of experience living and working in forested public lands are concerned by a lack of a common-sense and practical approach to fire management. Eminent fire behaviour experts have highlighted insufficient use of fuel management, lack of effective standing aerial surveillance, delayed detection, delayed initial attack and inadequate suppression in Victoria.

Analysis of Melbourne’s weather over the last 150 years (longest complete data set available) indicates only small changes in days of high temperature and rainfall over the last 20-25 years. These changes are considered to be insufficient to explain the large increase in size and intensity of bushfires. Over the last 25 years, the number of days per year above 35 °C or 40 °C was about one day above the long run average and rainfall was about 8% below the long run average¹⁰.

The increase in size and intensity of the bushfires can be explained by the build-up of forest fuel from insufficient fuel reduction and a change in fuel characteristics on areas burnt by bushfires (more ‘ladder fuel’) relative to areas burnt by prescribed fire.

5.3 Failed Safer Together Policy

Victoria’s 2019-20 mega bushfire could have been prevented if we implemented best practice fire mitigation employed in South West WA and recommended by the Victorian Bushfire Royal Commission (VBRC). Following the 2009 bushfires the VBRC recommended 5% of the forest be fuel reduced each year. Experts called for 8% in line with South West Western Australia’s ‘best practise’.

In 2015 Victoria ignored the VBRC recommendation and introduced a new approach, ‘*Safer Together*’,¹¹ The Minister Hon Lisa Neville said:

“Our new approach is about doing more to reduce the risk of bushfire and knowing what we do is more effective. We will involve local communities in decision making, taking into account what people value in their local area.” - Hon Lisa Neville

The resulting prescribed burning was about 2%, well below the VBRC target and in the 2019-20 summer about 1.6 million ha was burnt, 396 house destroyed, businesses irreparably damaged and five lives lost despite mild weather in the fortnight after ignition – ‘*Safer Together*’ was not safer, or more effective, nor what local rural communities wanted.

Fire behaviour experts believe 70% residual risk is way too high and excessive fuel contributed substantially to last summer’s bushfire losses, along with delayed initial attack and poor suppression under favourable weather in the two weeks after ignition (see Cameron RC submission NND.600.00145).

The 70% target has only been achieved with considerable high intensity wildfire, an outcome the policy was supposed to avoid.

¹⁰ Cameron, J. N. (2020). Victorian mega bushfires and government policy and practise. Submission NND.600.00145.01 to the Royal Commission into National Natural Disaster Arrangements. April 2020.

¹¹ Victorian State Government (2015). Safer together, A new approach to reducing the risk of bushfire in Victoria.

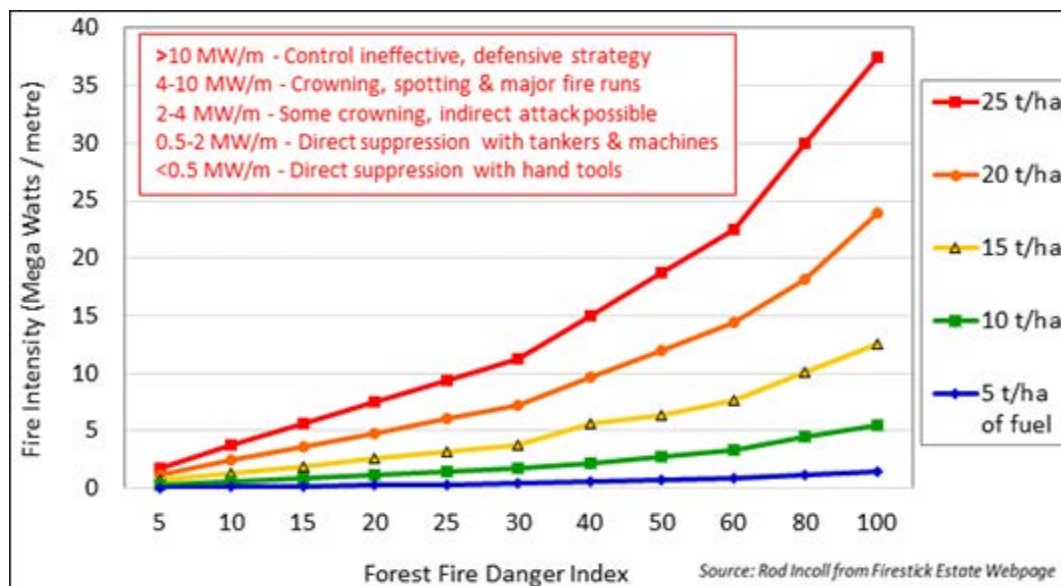
Minority Report Recommendation No 2: That the Victorian Government abandon its ‘Safer Together’ fire policy and adopt Recommendation 56 of the 2009 Victoria Bushfire Royal Commission which called for fuel reduction on 5% of the forest (rolling average). This target can incorporate increasing application of Traditional Owners forest fire management practices, where appropriate.

5.4 Fire intensity as a function of fuel load and weather (climate)

Victoria has been subjected to too much high intensity fire that is difficult to suppress and causes the most damage to life, property, ecosystems and threatened species.

Fire intensity is primarily a function of the fuel and the Forest Fire Danger Index (FFDI), where FFDI is a function of weather conditions and the drought factor, including climate change. As the fuel load increases above 5 t/ha and particularly above 10 t/ha, fire intensity increases considerably. The impact of weather, drought and climate (incorporated in FFDI) is relatively small in low fuel loads but more marked in heavy fuel loads. Low fuel loads allow suppression under more severe fire weather than heavy fuels (**Figure 5**).

Figure 5: Impact of fuel load and Forest Fire Danger Index on fire intensity



5.5 Victorian bushfire performance compared to South West WA

The forests of South West WA have an outstanding fire record yet have been subjected to adverse climate change, drought, and days of extreme fire danger similar to Victorian Forests and the WA forests about communities and residential areas. “Best practise” prescribed burning has been practised in South West WA since 1962 and has proved to be remarkably successful. The success is remarkable considering South West WA has a more Mediterranean climate characterised by very long dry summers.

Over the last 20 years prescribed burning in the South West forests of WA has averaged about 5.5% pa and their wildfire losses have been contained to less than 1.7% of the forest annually compared to Victoria’s prescribed burning of only 1.4% pa and bushfire loss of 10% of the forest annually. Tragically, Victoria has lost 183 lives from wildfire over the last twenty years, compared to 2 lives lost from wildfire in South West WA (**Table 1**)¹². Both states have been subjected to similar climate change.

¹² Cameron, J. N. (2020). Victorian mega bushfires and government policy and practise. Submission NND.600.00145.01 to the Royal Commission into National Natural Disaster Arrangements. April 2020.

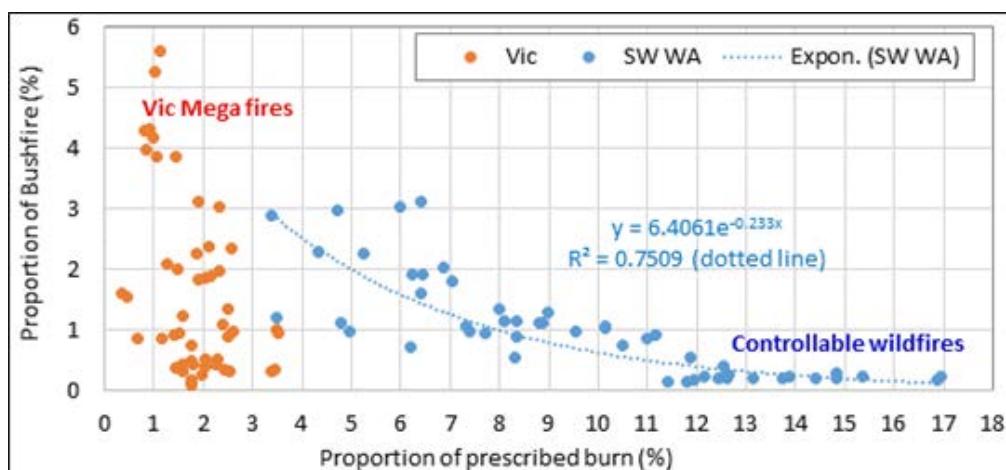
Table 1: Prescribed burning, wildfire and deaths in Victoria compared to South West WA

Attribute	Victoria 7.8 mill ha	South West WA 2.5 mill ha
Prescribed burn 1962-1999 (% of forest area)	1.6	11
Prescribed burn 2000-2020 (% of forest area)	1.4	5.6
Bushfire 1962-1999 (% of forest area)	1.9	0.6
Bushfire 2000-2020 (% of forest area)	10.0	1.7
Lives lost 1962-1999 (No)	129	0
Lives lost 2000-2020 (No)	183	2

Note that in the South West forests of WA a decrease in the area prescribed burnt (11.0% to 5.6%) has been associated with a significant increase in the area burnt by bushfires (0.6% to 1.7%). A Forest and Fire Scientist Rick Sneeuwjagt has analysed 58 years of fire records and established an inverse relationship between the proportion of the forest prescribed burnt and the proportion of the forest burnt by unplanned bushfires. This data set has been combined with data from Victoria by John Cameron.

5.6 The Victorian mega bushfires could have been predicted from the ‘Sneeuwjagt curve’¹³

The ‘Sneeuwjagt curve’ indicates that if you want controllable bushfires you must prescribed burn 5% and preferably 8% of the forest each year (**Figure 6**), according to an appropriate spatial pattern across the landscape. In South West WA they have maintained the rolling average proportion prescribed burnt always above 3.5% and avoided mega fires. Victoria¹⁴ has never exceeded 3.5% pa prescribed burnt and has experienced mega bushfires in 1983, 2003, 2006-07, 2009 and 2019-20 and some ‘campaign’ fires over the last 20 years. As a rule of thumb, on a rolling four year basis, the equation (blue line) suggests for every 1% increase in prescribed burning, wildfire loss is reduced by approximately 0.45% of the forest each year and if you want an average wildfire loss of less than 1.0% pa, you need to prescribe burn ca. 8% each year.

Figure 6: The Victorian mega fires could have been predicted from the “Sneeuwjagt curve”

“The fires over the last 20 years have had an obviously undesirable impact on biodiversity and our ecosystems. They have caused billions of dollars of damage and 183 lives have been lost. And these high-intensity large fires were predictable and they were avoidable” – Mr John Cameron

¹³ Derived and updated from Sneeuwjagt (2011). The Effectiveness of Prescribed Burning in the Control of Large Eucalypt Forest Fires. 5th International Wildfire Conference, South Africa.

¹⁴ Victorian data derived from Tolhurst (2007) Submission to the “Inquiry into the Impact of Public Land Management Practices on Bushfires in Victoria” conducted by the Environment and Natural Resources Committee of the Victorian Parliament; and DELWP annual reports.

5.7 Findings from Bushfire Inquiries

5.7.1 Select committee inquiry into the 2003 ACT fires (Nairn Inquiry)

The Select Committee¹⁵ heard a consistent message right around Australia:-

- *“There has been grossly inadequate hazard reduction burning on public lands for far too long;*
- *local knowledge and experience is being ignored by an increasingly top heavy bureaucracy;*
- *when accessing the source of fires, volunteers are fed up with having their lives put at risk by fire trails that are blocked and left without maintenance;*
- *there is a reluctance by state agencies to aggressively attack bushfires when they first start, thus enabling the fires to build in intensity and making them harder to control; and*
- *better communications between and within relevant agencies is long overdue.”- The Select Committee.*

5.7.2 Esplin inquiry into the 2003 Victorian bushfires

Principal areas of concern raised in submissions to this inquiry included; land management preparedness, principally fuel reduction on public land; agency preparedness; response issues, that is how the fire was fought; management of resources in the fighting of the fires; and recovery issues. The Esplin Inquiry¹⁶ noted:

“Prescribed burning, for whatever purpose, will reduce the amount of fuel present. If the amount of fuel is less, then the potential heat released in a fire from the remnant fuel is less. If this heat is less, then the chance of controlling any unplanned fire is greater. If the chance of fire control is greater, then the chance of loss of human life and property is smaller.”- The Esplin Inquiry.

5.7.3 Victorian 2009 Bushfire Royal Commission Recommendations

There was considerable frustration by witnesses who cited that after the royal commission in 2009, the opportunity to do more prescribed burning or other forms of fuel reduction was largely ignored. The recommendation stemming from the royal commission was 5 per cent prescribed burning, however, Victoria achieved less than two per cent.

On land and fuel management, the Victorian Bushfire Royal Commission (VBRC)¹⁷ warned of the build-up of excessive fuel loads and emphasised the importance of prescribed burning and roadside works:

- *“Prescribed burning is one of the main tools for fire management on public land. It cannot prevent bushfire, but it decreases fuel loads and so reduces the spread and intensity of bushfires.....it also helps protect flora and fauna. Ironically, maintaining pristine forests untouched by fuel reduction can predispose those forests to greater destruction in the event of a bushfire”.*
- *“Of7.7 million hectares ofnational parks, state forests and reserves,DSE burns only 1.7 per cent (or 130,000 hectares) of this public land each year. This is well below the amount experts and previous inquiries have suggested”.*
- ***“The State has allowed the forests to continue accumulating excessive fuel loads, adding to the likelihood of more intense bushfires and placing firefighters and communities at greater risk”.***
- ***“The Commission proposes that the State make a commitment to fund a long-term program of prescribed burning, with an annual rolling target of a minimum of 5 per cent of public land each year, and that the State be held accountable for meeting this target.***

¹⁵ House of Representatives Select Committee (2003). A Nation Charred: Report on the inquiry into bushfires. 23 October 2003. (Nairn Report)

¹⁶ B. Esplin (2003). Report of the Inquiry into the 2002-2003 Victorian Bushfires.

¹⁷ VBRC 2010. The 2009 Victorian Bushfire Royal Commission Report, Chapter 7 Land and fuel management.

- “DSE should modify its Code of Practice for Fire Management on Public Land so that it is clear that protecting human life is given highest priority, and should report annually on prescribed-burning outcomes.”
- “The Commission proposes that DSE expand its data collection on the effects of prescribed burning and bushfire on biodiversity.”
- “In the case of bushfires, roads and roadsides can be important fuel breaks, so road managers need to reduce the fuel levels in preparation for the fire season. Roads are also essential for people seeking to escape fires and for emergency services seeking access to fires”.
- “Concerns would be reduced if the State’s planning provisions were amended to facilitate a broad range of roadside works to reduce bushfire risk”- **Victorian Bushfire Royal Commission.**

5.8 Prescribed burning to reduce bushfires

Based on decades of rigorous fire behaviour research, Mr David Packham OAM MAppSci and Mr John Cameron MBA DIP Hort said *that controlling forest fuel is vital if we are to avoid damaging wildfires:*

If you keep the fuel levels below about 10 tonnes per hectare you will have relatively low fire intensities, but if you let the fuel levels get above that then you can have difficulty suppressing bushfires. – Mr John Cameron.

In the last 200 years there have been about 800 bushfire deaths in Australia—600 in Victoria. Now, the failure to reduce fuels to less than 8 tonnes per hectare means destruction to the environment, loss of water supplies, death and injury to humans and fauna and loss of homes and infrastructure. – Mr David Packham.

The amount and characteristics of forest fuel have a considerable impact on fire intensity. Reduce the fuel load from 36 tonnes per hectare to 8 tonnes per hectare, the bushfire intensity decreases by 20 times and all fires can be controlled, environmental damage is reduced and no lives are lost. - Mr David Packham

Submitters such as Prospectors and Miners Association of Victoria and Bush Users Group United, Mr David Bentley, was concerned over a lack of prescribed burning:

There have already been multiple inquiries into public land management and its effect on bushfires, including Royal Commissions. There have been countless recommendations made to improve the environment and lessen the devastation to ecosystems, property and lives caused by bushfire and yet many of those sensible recommendations have not been enacted by government. Tracks are still being closed. Local knowledge is still ignored in favour of orders from city-based academic bureaucrats – David Bentley.

More controlled burning is repeatedly recommended yet it is still opposed by conservation groups and seems to be opposed by many in Parks Victoria and DELWP judging by the small amount of burning being done.

5.9 Cool Indigenous burning

5.9.1 The Firestick Alliance

Submitters such as Dr Victor Steffensen, Practitioner for Firesticks Alliance, have been working with indigenous knowledge for over 30 years and has been helping communities put traditional knowledge back

onto landscapes and onto the community for social and environmental wellbeing. He affirmed the role as being really crucial to improve our landscapes, the health of our communities and also for the broader community. Like other submitters he stressed the importance of bringing indigenous fire management back onto Country.

Dr Steffensen affirmed that indigenous fire management is the outstanding one at the moment because the landscape is very sick and fire is high on the agenda, along with water, to start to revitalise it and rehabilitate, also with cultural values, as well. He stated:

- *Over the years, I have worked with many communities, across many different States across Australia, and also internationally with doing this practice of reviving knowledge from landscapes, and helping communities to do that on their own Country. The aim of the Firesticks Alliance is to help communities to do their own business on their own countries and support them with training, if they need it -* **Dr Victor Steffensen, Firesticks Alliance.**

5.9.2 Importance of cool indigenous burning

The Taungurung Land and Waters Council Aboriginal Corporation stated in their presentation to the Committee that their goal is to have primarily two things. A cultural fire program where they are healing first and then managing Country with cultural fire and associated practices so forest gardening and the cultural flows and that sort of stuff, especially in flood plain country.

- *Where we are seeing cultural fire as kind of one of the leading applied practices to do that, to manage Country. –* **Mr Matthew Shanks, Taungurung Land and Waters Council Aboriginal Corporation.**

The importance of cool indigenous burns was also shared by many other submitters to the inquiry.

I think low-intensity fire does nourish the soil, and I have heard many old elders talk about the right colour charcoal being a blanket for country throughout the winter – **Dr Jack Pascoe, Conservation Ecology Centre.**

The concern is that many traditional skills have been lost including those related to ‘cool burning’. To restore those skills it will be necessary to involve people in training programs. However, training programs in themselves are not enough. There needs to be strong government commitment to the necessity to reduce fuel levels in the forests and a commitment to ensuring that the training programs result in results on the ground – **Mr Garry Squires.**

For successful cultural burning, East Gippsland resident, Mr Garry Squires stressed the importance of adopting the following traditional indigenous principles:

The canopy should remain green, the ground brown

Smoke should be white and the ash black – not the reverse

The controlled burn should creep over the ground like water

Burn regularly - **Mr Garry Squires**

Minority Report Recommendation No 3: That the Victorian Government support, foster and reintroduce Traditional Owners’ forest fire management practices, where possible, to complement prescribed burning programs.

5.9.3 Training and accreditation in cultural burning

Citing the social applications as being crucial for the health of young people, the Firestick Alliance have created a three year training program in the Hunter Valley. The first of its kind, the program currently consists of 40 trainees.

It is crucial that Indigenous knowledge is shared in good faith and shared in a way that we want to bring everyone – everyone to know this knowledge and to look after our Country into the future. To also work in areas in improving agriculture. Looking at the green economics, as well, within healthy landscapes. And if we do not have a healthy landscape, then we do not have a baseline for green economics. And that is why it is so crucial that we make the Country healthy, not only for the green economic opportunities around managing landscapes, but also for the cultural indicators and knowledges, as well, that will show further benefits.

*Indigenous fire management is not just about burning. It is about many layered benefits that come from land. So, traditional knowledge is structured on a number of knowledge categories, which evolves every living thing on the landscape, including people. And when we apply certain practice to landscapes, through indigenous management, there are seven-fold benefits that come from that. So, for example, when we burn, we are looking after trees. We are looking after the animals. It is creating employment. It is creating education for people. It is building the bridge of reconciliation between black and white people of Australia. It is just to name a few. So, I know and understand and also seen evidence that young people improve their lives when we get them on Country – **Dr Victor Steffensen, Firesticks Alliance.***

Minority Report Recommendation No 4: That the Victorian Government work in collaboration with Traditional Owners to offer accreditation in qualifications in conservation and Indigenous land management, such as Certificate III in Conservation and Indigenous Land Management as conducted in NSW.

The Nationals and the Liberals are pleased that the above Recommendation was adopted in the Committee report.

At a public hearing, Daniel Miller, General Manager of the Gunaikurnai Land and Waters Aboriginal Corporation spoke of the need for cultural burning educational accreditation with a particular focus on the Gippsland environment:

*We already do it in an unaccredited way, I guess, for people as part of their cultural education. But we are also looking at not being the keeper of all this knowledge but helping to facilitate that, again, in an accredited way. So we have strategic partnerships with several universities for outcomes that are similar to what we are talking about, and then the next step would be to help that to realise that level of training. Again, it is not about us being the keeper and deliverer of all of it; it is often about a place where it can be shared together- **Daniel Miller, General Manager, Gunaikurnai Land and Waters Aboriginal Corporation***

Uncle Russell Mullett, Registered Aboriginal Party Manager from the Gunaikurnai Land and Waters Aboriginal Corporation told the Committee of the importance of cultural burns:

*One of the things about it is we know what bushfires raging do and how deep into the soils those fires penetrate, and we know the effects. I think it takes at least 10 or 15 years for it to come back. But that coming back—the bush is resilient; it comes back thicker than previously. But it also nukes a lot of the animals in it. With cool burning regimes, it trickles around. You know, people want to question it. It is about not scorching yourself and not scorching the animals. - **Uncle Russell Mullett, Gunaikurnai Land and Waters Aboriginal Corporation***

5.10 Fire detection, initial attack and bushfire suppression by government agencies

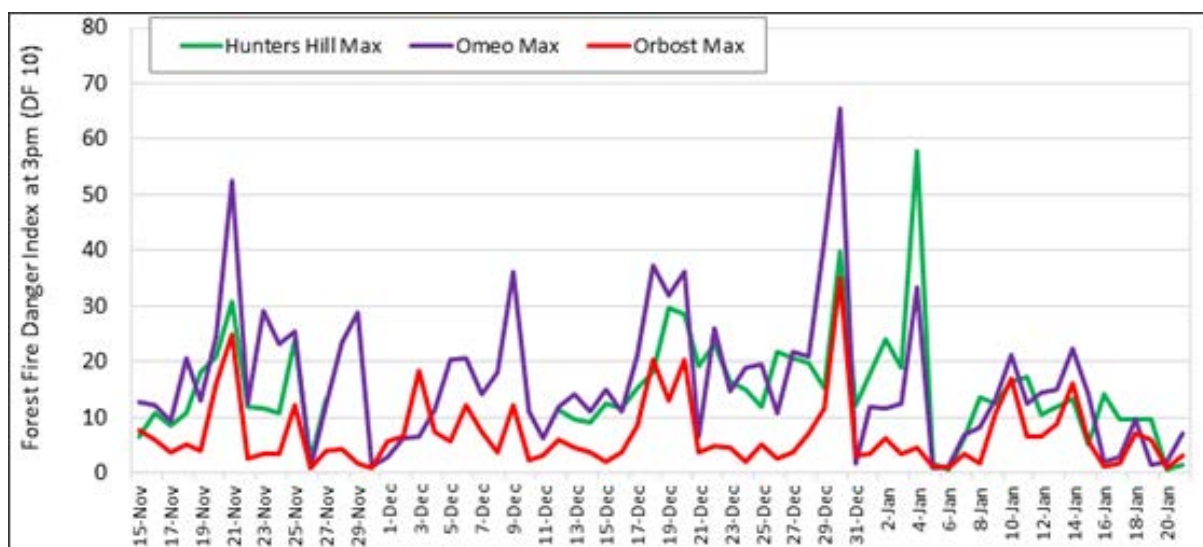
Forest workers and their equipment are located in the forests and provide a valuable resource that can be used in early initial attack and bushfire suppression to lessen fire damage. There is much public anger at the lack of fire preparedness, slow initial attack and not mounting suppression with sufficient force by government agencies.

Rural communities have lost assets, livelihoods, and lives, because bushfires escaped public land and destroyed private property. DELWP has used private property as 'neighbour firebreaks', rather than better fire mitigation in public forests. This is inequitable and probably actionable under WorkSafe or Common law. Fires escaping from public forest are attributed to poor fuel reduction, firebreaks and fire access; and tardy detection, initial attack and suppression¹⁸.

5.11 Victorian 2019-20 fire was controllable based on FFDI in the fortnight after ignition

With the bushfire in 2019–20 there was a two-week window of opportunity after ignition when the forest fire danger index was low enough for that fire to be suppressed and it was not. The Forest Fire Danger Index between the 22nd of November and 8th of December remained below 20 to 30, and sufficiently low to allow suppression, provided there was prudent fuel reduction, adequate fire access, rapid initial attack and appropriate fire suppression force (**Figure 7**)¹⁹.

Figure 7: Forest Fire Danger Index at Drought Factor 10 for East Gippsland & North East Fires



5.12 Light aircraft for early fire detection, surveillance and prompt initial attack

The best strategy for first attack is to bring a bushfire under control at or near the time and point of ignition, when the fire is small. There is an urgent need for new methods to locate and extinguish fires before they get out of control. Victoria must do better at keeping more fires small - **all fires start small, but we let too many get very big**. About half our large bushfires start from lightning strikes, often in inaccessible country. If these fires can be quickly located and suppressed, then human lives, animals, property and the environment will be saved. The Nationals and Liberals have just become aware of an opportunity using Aircraft in a different way is being promoted by National Fire Surveillance (NFS)²⁰.

¹⁸ Cameron J. N. (2020). Ecologically sustainable management of Victorian native forests. Submission S471 to Parliamentary Inquiry into Ecosystem Decline in Victoria.

¹⁹ Derived from BOM data assuming a Drought Factor of 10 and FFDI calculated according to CSIRO CAWCR Technical Report No 10. June 2009.

²⁰ G. Wight NFS.

- Aircraft are mostly used to fight fires after they are larger, more intense and much damage has already been done. Air and ground suppression of large, intense and fast moving fires is costly and dangerous and of limited effectiveness.
- Technology can equip aircraft for surveillance, early fire detection (including at night), rapid initial attack and quick suppression to avoid costly dangerous fires.
- NFS plan to equip planes with surveillance infrared fire detection technology, aerial fire spotting capability and fire suppression capability.
- The concept is simple and relatively inexpensive and fills a void in current firefighting capability.
- It involves a standing patrol of small specialised fixed wing aircraft over remote and fire sensitive areas.
- Detect small fires quickly including using infrared technology before dawn or before smoke is sighted.
- Locate the fire, report accurate location, fire behaviour, forest fuel condition, topography and access.
- Immediately mount initial attack using the 1000 litres of fire retardant on board to contain the spread of the fire, well before ground crews can arrive.
- In most cases the retarding of the fire until ground crews arrive will facilitate suppression of fires well before they become large and intense and before weather conditions worsen.
- Going harder much earlier after ignition is much better than waiting for traditional fire attack.

6. The Victorian Labor Government's Forestry Plan

The Victorian Labor Government's announcement last year that it would phase out the native timber industry from 2020, with a full shut down by 2030. We mount a strong case for continued access to the 6% or 415,000 hectares for the sustainable production of native timber.

The Victorian Forestry Plan is flawed and will not deliver the environmental outcomes it purports nor will new plantations ensure sufficient wood volume to accommodate the loss of Victoria's sustainable native timber industry.

Minority Report Recommendation No 5: That the Victorian Government discard the Victorian Forestry Plan and continue with sustainable harvesting of native forests. The Victorian Government must work with VicForests to continue to maintain practices which enhance healthy, sustainable and productive forest systems.

6.1 Why the Governments Forestry Plan is poor policy and likely to fail

6.1.1 Overview of why the Forestry Plan is flawed policy

A number of inquiry participants acknowledged the huge challenge and disadvantages of transitioning to plantation based timber. Mr John Cameron provided a comprehensive analysis of the Forestry Plan in his submission which he summarised in his evidence to the inquiry:

The 'Forestry Plan' fails to acknowledge the long lead times, low returns and huge issues and challenges associated with ramping up plantation supply, and is likely to lead to worse rather than better ecologically sustainable development and the promised \$110 million of government investment is insufficient.

Replacing 1 million cubic metres currently supplied from native forest, requires 70,000 to 140,000 gross hectares and an investment of \$1.0-\$1.5 billion in land and plantation costs over ca 30 years.

The 'Forestry Plan' is essentially a 'media release' on compensation for closing the native forest timber industry in 2030 and 'token' establishment of plantation on marginal sites.

Continuation of sustainable harvesting of some native forests will deliver a mix of native forest age classes and genetic recombination, both desirable for adaptive ecosystems.

This will provide continuing diversified rural employment and help stave off ‘economics of underdevelopment’ facing rural communities, particularly ‘timber towns’.

It will also avoid the adverse impact on scale economies in agriculture under the ‘Forestry Plan’ which is based on converting large areas of farmland to plantations.

It will also avoid the undesirable substitution of native timber with building materials that are less ecologically sustainable, because they archive less carbon, consume more energy in manufacture and release more emissions. – Mr John Cameron.

It was considered that this investment is unlikely to be completed and the ‘Victorian Forestry Plan’ will result in the use of more imports with high ‘timber miles’ or less environmentally sustainable building materials and further adverse socioeconomic impacts for Victorian ‘timber towns’.

6.1.2 Government agency Vicforests view of the Victorian Forestry Plan

VicForests is the government agency responsible for sustainable harvesting and successful regeneration of harvested areas within the 415,000 hectares or only 6% of the 7.8 million hectares of Victoria’s native forests available for sustainable timber production. The CEO of Vicforests provided the following comments:

- *There were two aspects of the government’s announcement. The first was that timber harvesting would cease in old-growth forests from the time of the announcement, but we had already ceased harvesting in old-growth forests some six months in advance of that announcement. The second aspect of the policy is that there will be no harvesting at all in state forests from 2030.*
- *It is not commercially viable to have a hardwood plantation to produce a sawlog because capital—plantation companies are not going to put trees in the ground and wait for 120 years to get a return on that investment. So hardwood forests—generally the economics of it only work for a pulp log because you can produce that at a much earlier age, and so you get that return on investment.*
- *Plantation forests are softwood, predominantly, and they are produced for a product which is a lighter, softer product that is used for different applications to the applications for (native) hardwood. –Ms Monique Dawson, CEO, VicForests.*

6.1.3 Industry view of the Victorian Forestry Plan

Members of the forest industry believe the Victorian Forestry Plan is ill conceived, flawed and will have a considerable adverse socioeconomic impact on regional communities:

Victoria’s forestry plan is ill-conceived. Native trees take many decades to reach harvestable age—an 11-year time frame from 2019 and nine years from now leaves a gap of many decades, even if a native (replacement) timber plantation estate was in existence, which it is not.

....the plantation estate has been static for quite some time now and the economic drivers to expand the plantation estate are just not there. It is competing with higher value land uses, like dairy in Gippsland and cropping in south-western Victoria and other areas. So it just does not make it a viable option to say, ‘Well, okay, let’s expand the pine plantations and the blue gum plantations. – Ms Deb Kerr, Victorian Forest Products Association

6.1.4 Professional view on the Victorian Forestry Plan

The Institute of Foresters of Australia and Australian Forest Growers (IFA/AFG) are an independent professional association of forest scientists, managers and growers operating in all aspects of forest and natural resource management across all land tenures in Australia – they are not an industry association.

The IFA/AFG does not agree that cessation of native forest timber harvesting will remove a major threat to Victoria's forests, nor will it meaningfully benefit bushfire management or wild life protection. The major threats to forest ecosystems in Victoria are large scale, high intensity bushfires; introduced feral pest animals and plants; and urban expansion. IFA/AFG said that:

By adopting the Victorian Forestry Plan in its current format, Victoria will forego the opportunity to transition to different forms of sustainable timber harvesting, which could realise a range of benefits that would be complimentary to a plantation industry and increase resilience to future climate change and bushfire risk. This includes opportunities for Traditional Owners to implement traditional management practises and develop new types of businesses based on their natural resource and drive. - IFA/AFG

Concerns were raised by Melbourne University's School of Ecosystem and Forest Science and Mr Garry Squires a professional forester:

From a point of view of moving away from native timber harvesting, the big question becomes around a lot of the plantations, hardwood plantations, if we are, say, concerned about keeping some of these local communities going and the mills that produce sawlogs, take sawlogs to produce high-end furniture products and so forth, you know, if we wanted to keep those mills going, we would need to be thinking about a very different plantation model of forestry from what we have right now. I mean, yes, maybe they could switch to pine, but then that would be millions of dollars in investments into those mills to have them transition. Also a major investment would be needed to transition to higher end technology to cut smaller pieces of wood. But there is also the time frame. The exit plan is 10 years, if I recall, or probably less than that now. – Dr Nitschke, Uni. Melb.

Whilst many would focus on logging operations as being a major factor, the reality is that logging operations actually create disturbance and diversity in the forest which is a strength for ecosystem resilience. In addition, any negative impacts on biodiversity as a result of forest operations are infinitesimal in comparison to the impact of intense wildfire burning over hundreds of thousands of hectares of land on which fuel loads have not been managed. – Mr Garry Squires.

6.2 Regulation of harvesting native forest timber

All activities on public land, including harvesting, must comply with a raft of legislation (**Table 2**)

Table 2: Key Victorian legislation applicable to public land management

Land Use Category	Legislation	Manager
National and State Parks	<i>National Parks Act 1975</i>	Parks Victoria
Regional Parks	<i>National Parks Act 1975, Crown Land Parks</i>	Parks Victoria
Nature Conservation Reserves	<i>Crown Land (Reserves) Act 1978</i>	Parks Victoria
State Forest - 7.8 million hectares	<i>Forests Act 1958</i>	DELWP
State Forest - 415,000 hectares	<i>Sustainable Forests (Timber) Act 2004</i> <i>Code of Practise for Timber Production 2014</i> <i>Safety and Public Land Act 2004</i>	VicForests
water production areas	<i>Catchment and Land Protection Act, 1994.,</i>	Water Authorities
Softwood production	<i>Victorian Plantations Corporation Act 1993</i>	HVP as licensee
All land use	<i>Flora and Fauna Guarantee Act 1988</i>	All land managers

Under the *Sustainable Forests (Timber) Act 2004* (the Act), the Minister for Agriculture is responsible for allocating timber in State forests to VicForests for harvesting and selling. The allocation to VicForests is made through an Allocation Order, intended to provide long-term access to Victoria's timber resources. VicForests may only harvest and/or sell vested timber resources in accordance with the Allocation Order.

The Gazetted Allocation Order specifies the maximum area available for timber harvesting in any five-year period, and the conditions VicForests must comply with. The conditions include compliance with all relevant Codes of Practice, including the *Code of Practice for Timber Production 2014* and the Forest Management Zoning Scheme for Victoria - Special Protection Zones (SPZ), Special Management Zones (SMZ) and General Management Zones (GMZ). These zones reflect the data assessed in the Comprehensive Regional Assessments (CRAs) that informed Regional Forest Agreements (RFAs).

The current modernised RFAs bolster protection for Victoria's forest biodiversity and threatened species by:

- Reinforcing existing protections of rainforests and protect all old-growth forests from harvesting.
- Providing for more timely interventions to protect threatened species (through Action Statements).
- Identifying and reviewing priorities for research to fill critical knowledge gaps, including the effectiveness of protections and management actions and to improve understanding of new and emerging threats to vulnerable species.
- Strengthening the checks and balances through outcome-based reporting to inform five-yearly reviews, the ability to initiate Major Event Reviews, new audit provisions for evaluation of RFA performance and identification of remedial actions.

VicForests is subject to multiple audit processes, including the annual DELWP Forest Audit Program (FAP), regular audits for the Responsible Wood (formerly the Australian Forestry Standard) and Forest Stewardship Council (FSC) certification programs, and periodic audits by the Victorian Auditor General's Office (VAGO). VicForests has also commissioned independent reviews of aspects of its High Conservation Value (HCV) processes, including during the 2019 Assessment. VicForests has implemented corrective actions since the last HCV assessment relating to design, construction and rehabilitation of waterway crossings, old-growth identification and landscape-scale vegetation management.

6.3 Past claims of illegal harvesting by VicForests were unsubstantiated

VicForest has not had a single prosecution of illegal harvest operations upheld against it in the past three years as evidenced in Ms Pulford's answers to questions in parliament in relation to the debate on the Forest Legislation Amendment (Compliance and Enforcement) Bill 2019 (Legislative Council).²¹

Ms PULFORD: I have some advice on some numbers on the conservation regulator's compliance actions in the last two years. So in 2019–20 investigations completed by the conservation regulator included one letter of advice, four section 70 directions, two findings of non-compliance, two official warnings and no prosecutions.

For 2020–21 there were three letters of advice, one section 70 direction, two findings of non-compliance, three official warnings and no prosecutions. the prosecution that led to the 2018 independent review of timber-harvesting operations was where it was found there was an opportunity for improvement.

Mr RICH-PHILLIPS: Thank you, Minister. So, Minister, to be clear, there have been no prosecutions in the last two years.

Ms PULFORD: That is my advice.

²¹ Hansard, Tuesday 5 October 2021, Legislative Council, page 3394

Mr RICH-PHILLIPS: You referred to the one failed prosecution in 2018. Were there any other successful prosecutions in that 2018 year, which is the one before the two years when there were no prosecutions, or are you effectively saying there was a single prosecution over the last three years, and that is the one failed one?

Ms PULFORD: Yes, that is the advice. That is right. Hang on. Yes, that is correct. So that initial case that has given rise to the review and the reform and the legislation was in 2018. There has not been one since. So the advice that I have provided is accurate in terms of those numbers, yes.

6.4 Socioeconomic impact of exiting native timber harvesting

One submission made a detailed analysis of the economic impact of phasing out native forest harvesting and concluded²²:

- The misallocation by policy, exacerbated by wildfire loss has resulted in the loss of \$6.6 billion Gross Regional Product and 5,560 jobs over the last 20 years.
- The Victorian 'Forestry Plan' is likely to contribute to a further loss \$5.6 billion in Gross Regional Product and the loss of another 3,660 jobs over the next twenty years
- The 'Forest Plan' will lead to an exacerbation of the 'economics of underdevelopment' for disenfranchised rural communities and timber towns, already severely impacted by years of reducing native log supply and is poorly timed coinciding with the recent impact of Covid-19 on regional economies.
- We are witnessing a classic example of the 'economics of underdevelopment' being played out, albeit in this case at the direct hand of government, rather than the invisible hand of market forces.
- Rural communities and timber towns are being stripped of economic output and employment opportunities. This is causing adverse impacts on community services.
- This adverse impact is a result of the abandonment of the application of 'multiple use' to the remaining 6% of forest currently available for timber production. This 6% equates to only 0.004% or 3,000 ha of the forest logged each year across spatially dispersed small coupes.

6.5 Plantations are no substitute for sawlogs harvested from native forests

Virtually all the existing hardwood plantations in Victoria are unsuitable for sawntimber. This is because of smaller log size, defects, recoveries, density, durability, drying properties and stress profile of hardwood plantation logs from un-thinned and unpruned plantations are significantly poorer than logs currently harvested from native forests²³.

Existing hardwood plantations have been established primarily to produce pulpwood and have not received the early pruning and thinning necessary to produce high quality sawlogs. The limited sawlogs that have been supplied from existing plantations contained more defects than sawlogs from native forest. When processed, the resulting sawntimber was generally unsuitable for appearance grade products and some structural sawntimber products. The smaller diameter and more defects including tension wood make plantation hardwood sawlogs difficult to saw and dry. Local sawmills substantially reduced sawing plantation sawlogs in about 2010 when the old >30year old *E. regnans* plantations were liquidated

²² Cameron J. N. (2020). Ecologically sustainable management of Victorian native forests. Submission S471 to Parliamentary Inquiry into Ecosystem Decline in Victoria.

²³ J. Cameron and R. Meynink (2008). Feasibility of timber currently harvested from Melbourne's water catchments. Phase 1 – Resource and Timber Properties. Report to Department of Sustainability and Environment.

6.6 Plantations are not a perfect substitute for pulpwood harvested from native forests

Most of the existing plantations in Victoria are generally suitable for pulping, although wood, pulp and paper quality varies considerably with species, age and site. Most plantation species harvested before 20 years of age are inferior to Ash residual pulplogs (residues logs after removal of sawlogs) currently supplied from Victoria's native forests.

The new plantations required to substitute for residual native forest pulplogs will be unlikely to fill any supply shortfall before 2040 because rotations of at least 20 years are required to meet quality requirements, deliver a return on investment.

6.7 Challenges expanding plantation supply

There are numerous challenges in replacing native forest Eucalypt timber with plantation timber²⁴:

- The greatest challenge with plantations is the long lead time to final harvest (ca 30 years), scarce land, high costs and relatively low investment returns.
- In Victorian and particularly Gippsland, plantation area and future plantation supply are declining.
- This is evidenced by zero net new planting in the region and increased fire loss.
- Area and log supply from Eucalypt plantations are declining rapidly, with major grower's clearfelling and converting most Eucalypt to pine plantations or farming.
- Area and log supply from softwood plantations has plateaued and may decline.
- Plantation hardwood or softwood timber is no substitute for timber harvested from native forests and is inferior for sawntimber²⁵.
- Small holdings and high land cost make it very difficult to acquire land for new plantations, particularly for Eucalypts with their high site requirements (deep soil and high rainfall).
- There is a potential adverse impact of increased plantations on stressed water catchments²⁶.
- With respect to Eucalypt plantations for sawntimber, considerable challenges include securing sufficient land to establish a large enough plantation, to ensure a large enough log supply to support a mill of sufficient scale, and to justify the considerable investment in new reconfigured mills to handle the poorer size and quality of plantation grown logs²⁶.

6.8 Poor Ecologically Sustainable Development of other substitute building material

Most European countries are targeting increased wood production from their native forests, given the improved sustainability of using more wood including for bioenergy.²⁷

Timber is a renewable raw material that is recyclable and whose manufacture into sawntimber consumes less energy and contributes less to air emissions than alternative building materials.

Converting trees into sawntimber is greenhouse friendly. Production of sawntimber use less fossil fuel energy, releases less carbon in manufacture and stores more carbon in use. Carbon stored in mild steel could be about 30kg/m³ assuming 0.4% carbon by weight and basic density of mild steel of 7,860kg/m³, but this is still only about one eighth of the carbon stored in sawntimber (**Table 3**)

²⁴ Cameron J.N. (2021) Inquiry into Ecosystems decline in Victoria, public hearing by Zoom 26 August 2021.

²⁵ Feasibility of plantations substituting for timber currently harvested from Melbourne's water catchments. Phase 1 – Resource and Timber Properties Report prepared by John Cameron and Rod Meynink MBAC Consulting Group for Department of Sustainability and Environment. 2008.

²⁶ Feasibility of plantations substituting for timber currently harvested from Melbourne's water catchments. Phase 2 Markets, supply, land and water. Report prepared by John Cameron and Rod Meynink MBAC Consulting Group for Department of Sustainability and Environment. 2008.

²⁷ P. Hopkins, Timberbiz 12/7/20.

Table 3: Greenhouse friendly attributes of Sawntimber as a building materials²⁸

Material	Energy use in production (MJ/m3)	Carbon released (kg/m3)	Carbon stored (kg/m3)
Sawntimber	750	15	250
Concrete	4,800	120	0
Steel	266,000	5,320	ca. 30
Aluminium	1,100,000	22,000	0

7. The native forest timber industry

7.1 RFA's, reservation and the small area available for harvesting

Following the modernisation of Victorian RFAs earlier this year, the Institute of Foresters of Australia felt that the Victorian Government should now:

- Ensure the responsible agencies (i.e. DELWP and DJPR) and state-owned enterprises (i.e. VicForests), are fully supported in their mandates to manage public native forests in accordance with these renewed agreements, which are designed to facilitate ecosystem and species protection, restoration and recovery in Victoria, in the context of climate change impacts; and
- Consider further the scope to extend these agreements (or the policy principles they represent) to ensure a longer-term view is applied to active management of public native forests across Victoria.

In their submission to the Inquiry, they called on the state government to reverse the decision to phase-out timber harvesting in native state forests on the basis that it will not guarantee protection of biodiversity, and will be more likely to counter-productively foster a significant reduction in active, adaptive and accountable forest management across public land, especially in relation to fire.

Additionally, they call upon the Victoria Government to promote, foster and support responsible agencies and state-owned enterprises to ensure there is active, adaptive and accountable forest management across public land tenures, principally to address the broader threats of wildfires, invasive species and climate change.

Ms Monique Dawson from VicForests explained that 94% of the forest estate is in either land reserves or unavailable for productive forests, leaving only 6% available for harvesting on a rotational basis.

The total amount in our model that is available to us is about 417 000 hectares out of the 7.5 million hectares. That is not going to be harvested; that is just the total gross amount that is available to VicForests for consideration of harvesting.

The proportion of the state forest that is harvested annually is 0.04 per cent of the forested areas, and that dot on the map is an actually statistically accurate representation of the amount of forest that is harvested on an annual basis.

Regional forest agreements (RFA's) are the means, or have been the means, to bolster protections for Victoria's unique forest biodiversity and threatened species, and they govern commercial forestry on public and private lands. Victoria's forests are mostly multiple use, as I have said, and that includes timber harvesting activities. You have heard previously from other witnesses that 0.04 per cent of trees are harvested and all coups are regenerated. 0.04 per cent is equivalent to four trees in 10 000, just to put that into context – Ms Deb Kerr.

²⁸ Adapted from RAC Report & I. Ferguson, B. Lafontaine, P. Vinden, L. Bren, R. Hateley, and B. Hermesec, B. (1996). Environmental Properties of Timber. FWPRDC Report PN005.95

The Victorian Forest Products Association stated that Victoria has increased its reserve area by 77 per cent:

Overall it is the only jurisdiction to have increased its total public land estate over the period of time since RFAs commenced. During that same time period Victoria also reduced the net native timber harvestable area by 54.5% and log take declined by 62%. – Deb Kerr, Victorian Forest Products Association.

During a public hearing, the Australian Forest Products Association informed the Committee that the biodiversity in forest coupes is well known because it is surveyed. Concerns were expressed, however, for the rest of the public land estate.

The Victorian Labor Government's announcement last year that it would phase out the native timber industry from 2020, with a full shut down by 2030, means there will be even further timber reductions between now and 2030. These reductions will have a devastating impact on Victoria's hardwood timber industry, as native forestry industry in Victoria is already at the point where it cannot sustain any further reduction in production forest. Further reductions will mean significant job losses even before the Victorian Government's 2030 deadline. – Mr Ross Hampton, Australian Forest Products Association.

7.2 Native timber industries role in fire control and fire risk

Forest & Wood Communities Australia stated that the state government has not been successful in forest management as evidenced by the increasing threat of fire and the intensity of fire when it occurs due to its failure to control fuel loads in unmanaged forests. Their submission further noted University of Melbourne academic Patrick Baker's June 2020 report which stated that fire is the greatest threat to Victoria's ecosystems, not logging.

Ms Monique Dawson from VicForests acknowledged the critical role that forestry workers play in being part of the firefighting force. She stated:

That the industry are active community members. In times of need, like fires, they play an important role in being part of the firefighting force; in assisting in opening roads that might have been closed through fallen trees or removing burnt timber from the roadside so it makes it safe for the passage of vehicles. So that is a workforce that will be largely lost if the native timber forestry is closed down. – Ms Monique Dawson, VicForests.

Professor Rodney Keenan, from the University of Melbourne, disputed the flawed notion that harvesting native forests increased fire risk:

Some argued that the severity and frequency of these fires were made worse by logging and associated forest management and that harvesting in native forests should cease to reduce fire risk. Little evidence from those fires has been presented to support these contentions.

Their new analysis, he says, indicates that the extent and severity of these fires was largely determined by three years of well-below-average rainfall, leading to dry fuels across all vegetation types, extreme fire weather conditions, and local topography. – Professor Rodney Keenan, University of Melbourne.

7.3 Harvesting native forests does not make them more prone to fire

Logging in multiple use forests does not make them more prone to fire than unharvested forests in reserves. The flammability of stands is explained by fuel accumulation and stand structure. Lindenmayer et al²⁹ proposed that logging makes "some kinds of forests more prone to increased probability of ignition and

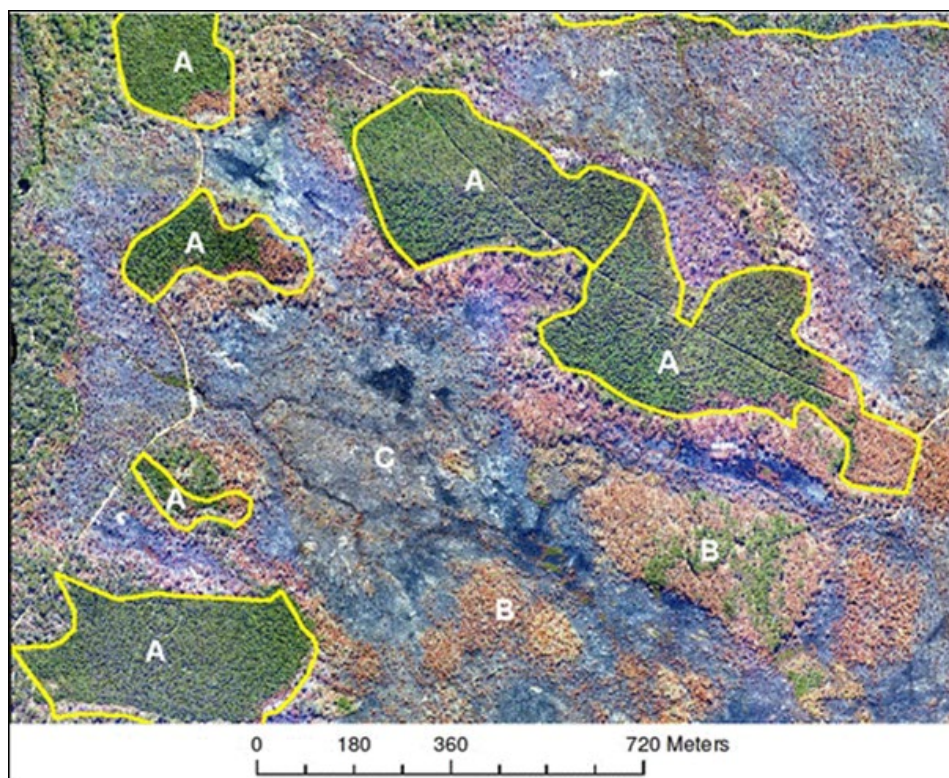
²⁹ Lindenmayer, D.B., Hunter, M.L., Burton, P.J. & Gibbons, P. (2009) Effects of logging on fire regimes in moist forests. Conservation Letters., 2, 271- 277

increased fire severity.” Eminent Australian forest scientists lead by Peter Attiwill³⁰ refuted the proposition as follows:

We find no support for that argument from considerations of eucalypt stand development, and from reanalysis of the only Australian study cited by Lindenmayer et al. In addition, there is no evidence from recent megafires in Victoria that younger regrowth (<10 years) burnt with greater severity than older forest (>70 years); furthermore, forests in reserves (with no logging) did not burn with less severity than multiple-use forests (with some logging). The flammability of stands of different ages can be explained in terms of stand structure and fuel accumulation, rather than as a dichotomy of regrowth stands being highly flammable but mature and old-growth stands not highly flammable. Lack of management of fire-adapted ecosystems carries long-term social, economic, and environmental consequences.

Immediately following harvesting and regeneration burning, soil becomes wetter with greatly reduced canopy interception, evaporation and transpiration, and there is virtually no surface fuel. Experience in WA (**Figure 8**) and Victoria is that up to age 10 years, regenerating eucalypt stands do not burn readily.

Figure 8: Unburnt 10y Marri (A) & burnt mature Marri (B) & Jarra (C)³¹



7.4 Ecological sustainability of managing 6% of native forest for timber production

During the public hearing the Committee heard that Victorian forests are certified by Responsible Wood, under Programme for the Endorsement of Forest Certification, which manages 75% of all certified forests around the world. Wood Products Victoria Technical Officer Mr Boris Iskra confirmed that forests in Victoria are also certified as being managed sustainably. Mr Boris Iskra stated:

³⁰ P. Attiwill, P. F. Ryan, N. Burrows, N. P. Cheney, L. McCaw, N. Neyland and S. Read (2013). Timber Harvesting Does Not Increase Fire Risk and Severity in Wet Eucalypt Forests of Southern Australia. Conservation Letters, A journal of the Society for Conservation Biology.

³¹ Derived from Attiwill et al (2013).

Wood Products Victoria fully supports the Victorian forestry and wood products industry, which produces sustainable, renewable, certified, local softwood and hardwood timbers and value-added manufactured products that collectively through their use play a significant role in assisting to deliver a low-carbon future and combating climate change. Wood truly is the ultimate renewable. - Mr Boris Iskra, Wood Products Victoria.

In their submission to the Inquiry (Submission 691), the Australian Forest Products Association stated that:

Victoria's public native forest resources are managed productively and sustainably. This was confirmed in a 2013 audit by the Victorian Auditor-General, Managing Victoria's Native Forest Timber Resources. This is not surprising given the scientific rigour and planning that VicForests applies to its operations, and the comparatively small volumes (and area) of native forest harvested each year – Ms Deb Kerr, IFA

7.5 Impact of harvesting on biodiversity, ecosystems, flora and fauna

The Committee heard at a public hearing that VicForests have committed considerable resources that focus on Leadbeater's possum surveys. These are only conducted in Ash type forests. Ms Monique Dawson stated that they have also been detected in forest recently affected by fire; despite the current understanding that the species generally do not occupy habitat in areas recently affected by fire. Ms Monique Dawson further confirmed:

We have a very substantial monitoring and evaluation program. So we go back in after we have harvested and we confirm the persistence of threatened species in the coupes that we operate in. We are getting very good results from those post-harvest surveys - Ms Monique Dawson, VicForests.

Ms Dawson presented information to show that harvesting native forest can enhance Leadbeater's possum by providing mid-storey connectivity. Ms Dawson stated that VicForests map all of the areas of forest by the characteristics of that forest area using LiDATA and overlay this data with where possums are found.

We also have over time been substantially funded by the state government to participate in developing better science around the Leadbeater's possum. So a lot of the money that we receive from the state government is so that we can participate in the Leadbeater's possum conservation effort. Now, I am very proud to be able to provide this committee with the hot-off-the-press results of that analysis. We can now map all of the areas of forest by the characteristics of that forest area using LiDAR data, and we have then overlaid that with where possums are found.

What we can say is that these detections show that there is a high correlation between a Leadbeater's possum being in an area of the forest that has good mid-storey connectivity—not tall trees, mid-storey connectivity—and that there is a low correlation with old tall forests. – Ms Monique Dawson, VicForests.

Ms Dawson reiterated VicForests findings which confirms that Leadbeater's possums are not found in old tall forests as derived from from LiDATA mapping.

It makes sense because the mid-storey provides forage, so it is the food that the possums need, and so that is where you would find them. And fire has a stronger impact on that mid-storey and Leadbeater's presence than harvesting – Ms Monique Dawson, VicForests.

Mr Bill Paul from VicForests further confirmed the practices implemented in terms of identifying threatened species in timber coupes:

We have scientists, as we said, in the business and we utilise them to train our staff to identify those habitat values. But it is our field forestry staff who in most cases are qualified with tertiary qualifications as well, and they are out assessing those areas, identifying the habitat values and marking out and then supervising the operations to ensure they comply with the requirements we have set up. - Mr Bill Paul, VicForests

7.6 Contribution of the forest and forest products industry to climate change

The significant potential for the forestry and forest products industry to contribute to climate change mitigation was acknowledged in the 4th assessment report of the Intergovernmental Panel on Climate Change (IPCC), which stated:

“A sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit.”

This is achieved by storing carbon in wood products which both minimises carbon losses from future bushfires and produces renewable, low emissions materials. Trees in forests and plantations typically sequester carbon at a maximum rate between 10 to 30 years old. After this age, if the trees are not harvested, the sequestration rate slows until maturity at about 80 to 100 years of age.

Claims that a reduction in timber harvesting sequesters more carbon also ignores the stored carbon from the timber and paper products produced, and the substitution that would occur with imported wood and paper products from countries that do not have the stringent environmental protections and sophisticated forest managements practices that are in place in Australia; or the use of materials with greater greenhouse emissions.

All native forest harvested in Victoria (and Australia) is sustainably regenerated by law and so does not result in deforestation. However, reforestation cleared areas will create carbon sinks to counteract greenhouse gas emissions and will also assist in controlling salinity and creation of wildlife habitat (submission 691, page 9).

8. Public land management for improved ecosystems

Year-round management actions such as promoting and supporting forest health and diversity, more strategic fuel management interventions, maintaining roads for access and protection, as well as intervention to manage regeneration, pests and diseases, are all critical aspects in need of attention and will be required across tenures.

Minority Report Recommendation No 6: That the Victorian Government ensure that programs and funding are directed to sustaining and restoring Victoria’s iconic landscapes, including ash-type forests, by establishing and maintaining strategic seedbanks for vulnerable forest types; combined with forest nursery developments and strategic reforestation programs to implement timely and effective regeneration across fire-affected public lands.

We recognise the disproportionate focus on bushfire response including investment in large aerial fire tanker capacity, rather than bushfire prevention/mitigation based on effectively resourcing fuel reduction, early fire detection, rapid first-attack responses, are putting ecosystem processes, flora and fauna at risk.

8.1 Adequacy of State legislation governing activities on public land

Victorian public lands are managed through a complex framework of legislation. The following list along with Regional Forest Agreements and a layer of Commonwealth legislation govern activities in Victoria's native forests:

- *Forests Act 1958*
- *Safety and Public Land Act 2004*
- *Sustainable Forests (Timber) Act 2004*
- *Flora and Fauna Guarantee Act 1988*
- Regional Forest Agreements
- *National Parks Act 1975*
- National Parks Regulations 2013

Further increasing legislation is unlikely to deliver an outcome that is any better than the legislation introduced over the last thirty or so years. What Victoria requires is ways to make both our regulatory and operating agencies operate more efficiently and effectively. John Mulligan, East Gippsland Wildfire Taskforce commented on adequacy of legislation and hindrance of the Victorian Government agency responsible for managing Parks:

- *In answer to this I would suggest that the legislative framework is more than adequate. It is not the legislation that is letting the ecology down, but the administration and application of field operations.*
- *The patchwork burning and natural fires of the past (which Parks now always fight and extinguish) was much kinder to the environment. - John Mulligan, East Gippsland Wildfire Taskforce.*

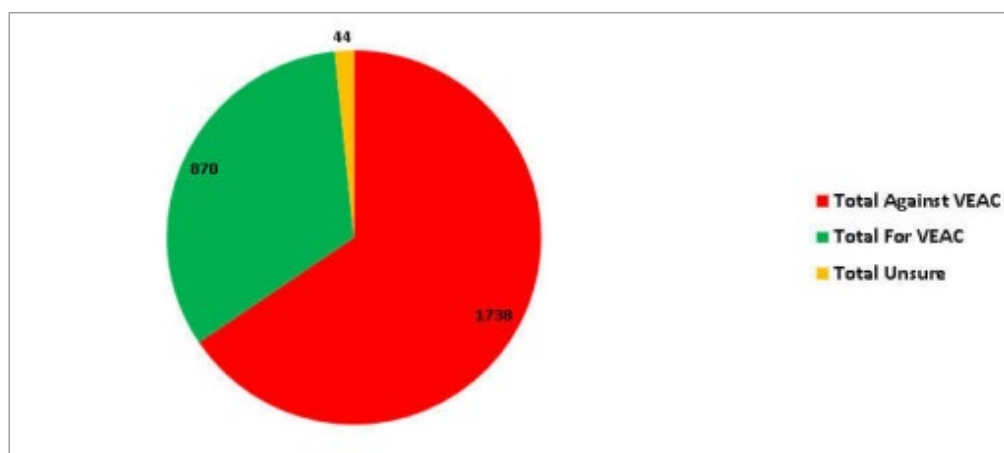
8.2 The role of Victorian Environmental Assessment Council – VEAC

Many submitters had extensive concerns about the biased nature of recommendations emanating from VEAC and VEAC's lack of understanding of active management of crown land that still enables people and industry to play a positive role within the environment. In his submission to the Inquiry, Mr David Bentley highlighted the concerns held by public land user groups:

There was overwhelming opposition from the public to the VEAC recommendations. However, on VEAC's website "The Summary of Submissions" fails to mention the public anger, yet this Summary will be shown to the politicians and senior bureaucrats by VEAC to justify their recommendations. - Mr David Bentley

The following chart, included in Mr Bentley's submission and sourced by Stephen Smithams, shows that 66% of submissions were opposed to VEAC recommendations (**Figure 9**).

Figure 9: Proportion of submissions for and against VEAC recommendations



Many witnesses shared their commitment to enhancing the environment and elaborated on their frustration with the lack of active landscape management.

I have firsthand knowledge of VEAC and also Engage Victoria's system in use. Nature is now the sole ownership and responsibility of autocracy. Would you replace the responsibility of the care and development of your child's life to the hands of a removed centralised bureaucracy, as has been done to natural life? I am here to engage you and will answer any questions honestly and openly. Please engage rural Australians. We have so much to offer, yet our integrity is treated as no more than a tradable commodity for urban votes. Rhetoric is no substitution for reality.

*Every action has a reaction or a consequence. Thousands of different ecosystems, yet stewardship is replaced with one lazy lock-up solution from centralised government. Yet historically our environment has never been without management, never before locked up and left without evolution—and now left without evolutionary defences from weeds, feral animals, population and ideological stupidity. **Mr Daryl Cochrane, Bush User Groups United member.***

In his submission to the Committee Mr Jason Wood, Director of Silver Linings Pty Ltd and Forward Prospects Pty Ltd, proposed the abolishment of the Victorian Environmental Assessment Council (VEAC) on the basis that it is scientifically unfounded, does not take account of the full range of issues of Ecologically Sustainable Development and that it fails to represent the genuine interests of the majority of stakeholders.

He also called for the dismissal of the present Central West Investigation Final Report on the grounds that it is scientifically unfounded, does not take account of the full range of issues of Ecologically Sustainable Development, or represent the genuine interests of the majority of stakeholders.

As an alternative form of governance Mr Jason Wood suggested the creation of a new Victorian Public Land Use Commission (VPLUC) to look at land categories in a similar way to the first peoples which placed humans at the centre of land use, partitioned the landscape into actively managed ecological mosaics with a specific purpose for each area and which integrated ecological enhancement and sustainability into the planned use of that land. Mr Jason Wood suggested a truly independent Land Use Commission that encompasses the principles of integrative ecology and ecologically sustainable development:

What we need is a range of areas of expertise that are not attached to stakeholders or portfolios so that it is a more central meeting place for discussion about how a project could proceed, what projects are valid. And all we need is a checklist based on the National Strategy for Ecologically Sustainable Development and each project can be assessed on the merits of that checklist and even on a competitive basis, whether they are commercial or government projects.

*The replacement of VEAC with a PLUC would ensure that humans are placed at the centre of land use and operate independently from any ministerial portfolio. Furthermore, it would draw heavily on the National Strategy for Ecologically Sustainable Development (NSED) with guiding principles of governance. The landscape would then be segmented into actively managed ecological mosaics with a specific purpose for each area. – **Mr Jason Wood, Bush User Groups United member***

The advantages of a VPLUC were highlighted by Mr Wood in his submission to the Inquiry:

To provide a cooperative effort between conservation, industry, government and the population to effectively 'terraform' Australia's landscape back to the mosaic based overlays developed by the First Peoples.

To provide a separate, impartial, independent and permanent commission charged with the sole purpose of determining a more balanced and distributed use of land in keeping with the principles of Integrative Ecology across the whole of government.

Industry and the general public, as both users of land and the source for funding for sustainability must have input and full transparency on the Commission.

Innovation should be the driver of the Commission's activities.

The National Strategy for Ecologically Sustainable Development provides the perfect backdrop for land use law reform and should be used as the foundation document to guide the charter of the Commission.— **Mr Jason Wood**

8.3 Impact of fire on forest ecosystems

It was widely recognised throughout the inquiry that high intensity bushfires represent one of the most damaging threats to Victorian ecosystems. At a public hearing, Dr Michelle Freeman, Vice President of the Institute of Foresters of Australia and Forest Growers, stated that high intensity fire is a major issue causing major forest changes and compositional changes. A submission to the Committee highlighted:

The greatest most pervasive threats to our forest ecosystems are invasive species and the increased frequency and intensity of bushfires..... - **Dr Michelle Freeman.**

8.3.1 Impact of bushfire on Fauna

Ecologist for the University of Melbourne, Dr Holly Sitters commented that in the last Victorian bushfire 3 billion vertebrates were killed.

Commenting on the seriousness of fire as a contributor to ecosystem decline Dr Craig Nitschke from the School of Ecosystem and Forest Sciences, University of Melbourne stressed that:

Wildfire is the big driver, has a direct effect and in interaction with how it affects hollow-bearing trees and foraging resources - **Dr Craig Nitschke.**

Commenting on the seriousness impact of the 2019-20 summer bushfire of fire, John Mulligan, East Gippsland Wildfire Taskforce provided the following evidence:

Bush animals and birds manage light patchwork burning very well, it is only the mega type fires that destroy them. Also, all bush animals and birds are very territorial so it would be doubtful if the returned birds would be accepted back by the resident birds so the whole exercise was probably an expensive waste of time. Whereas, had a regular burning program similar to what we use to do, been carried out then the survival of all species would have been ensured. But this situation is what happens when common sense and practicality are replaced by idealism and ignorance.

The catchment of the Betka River which lies to the west of Mallacoota was heavily burnt in some of the worst of the 2019/20 fires. Then because of the dry conditions and no flow the entrance to the sea closed. Subsequently, recent rains in the area flooded the stream and forced open the ocean entrance.

I have been told by a reliable witness that the clean beach sand over which the overflow flowed was black from the ash in the river, also littered with dead fish that had died from lack of oxygen in the water.

Parks Victoria removed the visible dead fish and made some excuse that the saltwater ingress was the cause of the fish deaths. Saltwater ingress in previous openings has not killed fish.

So imagine the whole length of the river not just the little bit the public have access to at the mouth and then imagine the vast range of marine life in this one river that have been seriously affected by these catastrophic fires. — **John Mulligan.**

8.3.2 Impact of prescribed fire on fauna

One of Dr Sitter's objective has been to figure out exactly what aspect of fire regimes are causing problems for these species:

She has found that big, severe, frequent fires are often the problem. Large scale prescribed burning with very low fire intensity leave quite a few unburnt patches within the burn perimeter was suggested. Depending on the forest type the canopy would remain intact with vegetation structures, such logs and hollows, remaining.

*I have been working mostly in the Otway Ranges, a little in the Central Highlands and a lot in the heathy woodland of western Victoria, and so in those ecosystems the animals we have been focusing on—ground-dwelling mammals and birds—are very little affected by that sort of low-severity prescribed burning - **Dr Sitter***

8.4 Impact of bushfire and prescribed fire on CO₂

Prescribed fire plays a key role in reducing CO₂ emissions through reducing bushfires. Bushfires release huge amounts of carbon dioxide including from carbon stored in the soil that can take hundreds of years to restore. Wildfire contributes 5-10% of global CO₂ emissions each year and are a significant contributor to greenhouse gas. The CO₂ released from low intensity prescribed fire is very small and replenished within 5 to 10 years.

8.5 Invasive species

The Committee Report has not made the eradication of invasive species a top priority for the Andrews Government. This is a major weakness with the majority report.

When implementing the *Catchment and Land Protection Act (Vic)* and the *Invasive Plants and Animals Policy Framework*, the first action by government should be to explore how the existing resources can be deployed more efficiently and effectively.

8.6 Control of damaging fauna

We oppose using apex predators such as dingoes to control other introduced predator species recommended in the Committee Report. That recommendation would have devastating impact on domestic and native animals. Farmers who already suffer great stock losses from wild dogs have also suffered from recent bushfires and floods.

Minority Report Recommendation No 7: The Nationals and Liberals oppose the reintroduction of dingoes as an apex predator.

The Nationals and Liberals acknowledged the legal use of 1080 bait carried out in accordance with prescribed standards:

- *We use 1080 and any other chemicals according to the standards that we must meet to use that, and that includes the appropriate use of 1080 baits, the way in which they are buried and then the way in which they are monitored - **Kylie White, Deputy Secretary, Climate Change, DELWP.***

Minority Report Recommendation No 8: The Nationals and Liberals oppose the phase out of legal 1080 baiting used according to prescribed standards.

Minority Report Recommendation No 9: The Nationals and Liberals recommend the continued use of the Authority to Control Wildlife permit system for control of fauna species where they cause damage to the environment or economic loss.

8.7 Approach to conservation and management of threatened species

Professor Brendan Wintle, Professor of Conservation Ecology, University of Melbourne noted the importance of adopting landscape-scale coordination and the oversight. A lot of the activities we do have to happen at a landscape scale, but the focus on what that means for this species and that species is what allows us to connect this to the public interest. He stated:

"We have to manage the whole landscape, and if you just focus on species you'll keep losing them; you've got to change practices at a landscape scale".

"We just do not spend enough money on sophisticated programs to track changes in species abundance across the landscapes. - Professor Brendan Wintle, University of Melbourne.

Minority Report Recommendation No 10: The Nationals and Liberals support in principle that the Department of Environment, Land, Water and Planning conservation management of threatened species should be on a practical landscape-wide strategy.

The Inquiry received calls for more funding for work on threatened species, but also heard evidence from VAGO and others that the government agencies such as DELWP had issues with focus, efficiency and effectiveness, exacerbated by poor organisational structure, strategy, systems, staffing, skill formation etc.

Minority Report Recommendation No 11: The Nationals and Liberals recommend that any increased funding should only be made available after a professional appraisal of how state government agencies such as DELWP or Parks Victoria can first improve efficiency and effectiveness and extra funds should only be awarded based on a rigorous 'project plan' that clearly demonstrates how the extra funds will deliver improved outcomes.

8.8 Mountain pygmy possum, brush tailed rock wallaby and southern bent-wing bat

Ecologist and ecological historian, Mr Vic Jurskis, provided an historical overview on three endangered mammal species.

There are only three mammals that are critically endangered in Victoria today, and none of them are arboreal or forest dependent. The mountain pygmy possum is rare because it lives in alpine boulder fields, where it can survive under the snow. This habitat was protected by Aborigines when they burnt it when they were feasting on Bogong moths, and mountain cattlemen continued the tradition.

Since the alpine habitats have been protected, they have been incinerated by a succession of mega-fires. There have also been a lot less moths turning up in the mountains, because they breed in the Murray-Darling, where their grubs feed on weeds, crops and pastures. They used to feed on drought-adapted vegetation that disappeared along with Aboriginal burning. But now the weeds and crops disappear when irrigation water is diverted for so-called environmental flows, which top up an artificial freshwater lake at the mouth of the Murray, so the moths and the pygmy possums are both in strife.

The brush-tailed rock wallaby and the southern bent-wing bat are the same. They are not forest dependent. But anyway, Victor Steffensen says we should not manage for species; we need to see the big picture and maintain the whole landscape for the right fire.

8.9 Koalas

Mr Vic Jurskis, provided an overview which shows that historically koalas have been a sparse species rather than endangered species:

Koalas are just one species that irrupted when we disrupted Aboriginal burning. There were many others that did as well, and then there were the small mammals that we lost on the other hand.

When we disrupted Aboriginal burning we upset the balance that maintained healthy mature trees and diverse, grassy ground layers and everything that depended on them.

Koalas were naturally a very rare species, because soft young growth is a rare commodity in healthy mature forests, and koalas only lived in forests. They were confined to forests. No explorers, apart from Strzelecki, ever saw koalas, because they did not live in the woodlands and the grassy areas that Europeans sought for agriculture. They only moved into those areas after they irrupted from the forests and the woodland trees got sick. When people sowed pastures and changed the soils the trees got sick and started recycling soft young growth, so the koalas irrupted in the forests from lack of burning and then in the woodlands from the trees being sick.

The young koalas are very mobile, and they go out looking for new territory to occupy. So it was not just in Victoria. There is a great myth about koalas irrupting in Victoria because they were translocated. That is absolute nonsense. Koalas like any other animal irrupt when there is an abundance of food, and the abundance of food has been as a result of the growth of dense young forests from disruption of burning and the sickening of old woodland trees due to disruptions of burning and/or pasture improvement. So koalas irrupted right across their range, except in far northern Queensland, where there was very limited agricultural development and they still maintained the traditional burning practices.

The only difference between Victoria and other places is in the timing, but, in general from south-east Queensland down to Victoria and South Australia the koalas crashed in the federation drought because they were relying on all this soft young growth that collapsed in the federation drought, and then they disappeared from the woodland valleys and things where they never really lived anyway before whitefellas came along.

Nearly all the koala populations that have been studied and written about are all unsustainably dense populations. Healthy sustainable populations are in the order of one koala per 100 hectares. The densities at Cape Otway at the moment are, like, 20 per hectare—or they were recently. That is 2000 times the natural density.

*So what needs to happen is that we need to restore healthy forests and low sustainable densities of koalas. In the meantime you have got the animal welfare problem of what to do with all the surplus. The idea of translocating them somewhere else in the bush does not work. All the translocations have always been into areas where there are already koalas. The reason they have gone mad after translocation is because people have excluded fire from the areas where they have translocated koalas - **Vic Jurskis**.*

Everywhere that koalas have had isolated manna gum woodlands and there is no top-down pressure on koalas, they become overabundant and they take out the forest. Other experts shared their opinions about koalas:

The symptom of an upside-down bit of country like this was koala overabundance. Because there was no top-down pressure on them and they were able to take advantage of manna gums, which are a highly nutritious species, they were able to explode in numbers and they took out the canopy of the trees. It is certainly no blame on the koala; it was just an ecosystem well and truly out of balance.

*The koala population along with the canopy crashed drastically, and you would have seen in the news if you were paying attention at the time that it became quite prominent in the media. Many hundreds of koalas, probably thousands, starved to death as that ecosystem collapsed. Hundreds probably I euthanised myself, because that ecosystem could no longer take them and they were starving to death and they could not be rehabilitated. – **Dr Jack Pascoe, Conservation Ecology Centre**.*

9. Private land management for improved ecosystems

9.1 More bureaucracy will not deliver improved outcomes

Many submitters stressed that connection to the land has gradually been reduced over the last century as communities have become more urbanised and government regulation has reduced the range of activities allowable in the bush. It was felt that the decisions about land management are made by people who have no connection to the land. Today, in addition to traditional owners the groups with the most connection to the land are farmers and those working in the forest.

9.2 Adequacy of state legislation governing private plantations

Mr David Bennett is Risk and Compliance Manager at PF Olsens who manage plantations throughout Australasia. Mr Bennett has 30 years' experience in operational forestry; safety, training and environmental compliance; certification; and management of risk and compliance with regulations. He indicated that there are seven Acts that regulate plantation forestry and provided the following evidence:

We get our authority to act and use the land under the Planning and Environment Act, and that enables the code of forest practices. So all of the operations are regulated under the code of forest practices framework, which is fairly unique as a land use. There are no other rural land uses that have a similar sort of model, but it works well and I think it is a fairly robust document.

Obviously, the Environment Protection Act—it touches on biodiversity management mainly along waterways, so under the SEPPs under the environmental Act there are rules around not disturbing and protecting the biodiversity along waterways.

The Wildlife Act is quite a powerful Act and quite important to us at the moment.

The Prevention of Cruelty to Animals Act also touches us. I will touch on that later in my presentation.

The Flora and Fauna Guarantee Act—the plantation estate that we manage has got about 60 to 70 listed species under the Act, so it is real. We have got to engage and make sure that we are managing the land appropriately for those plants and animals.

The Catchment and Land Protection Act has provisions around weed management and feral pest management and appropriate management of the trees.

And then more lately the Plant Biosecurity Act—again, it is around weeds and treats the biosecurity. Trees are subject to pests as well as agricultural trees. Some of the pests in pine plantations are things like Sirex wasp—those sorts of things—so managing biosecurity and having good biosecurity in place is important to managing the crops and protecting the crops we manage.

Mr David Bennett added that managing according to the seven state statutes involves dealing with several government agencies such as CMA, EPA and DELWP³² and also complying with a layer of commonwealth legislation.

*So I suppose my plea to the committee is that you look at these legislations and the plethora of them, their effectiveness and their efficiency and whether there are some opportunities to streamline and improve them to then provide the outcome of reversing ecosystem decline - **Mr David Bennett, PF Olsens.***

³² CMA – Catchment Management Authority, EPA – Environment Protection Authority & DELWP – Department of Land, Environment, Water & Planning.

9.3 Role of local government and potential duplication

The Country Fire Authority (CFA) in their submission to the Inquiry expressed compliance with legislation from a local government point of view is problematic because it is very poorly resourced.

It is very poorly resourced, but the political will, especially at local government level, to enforce the Planning and Environment Act is often absent. – Dale Tonkinson, Biodiversity Advisor, CFA.

Before we throw good money after bad, we should question whether local government should not have the role of enforcement. Stakeholders have identified the need to improve biodiversity 'outcomes' on private and public land, yet the answer is not to direct funding through another tier of government where a significant proportion will be consumed by another tier of administration across 79 Local Government Areas.

The Committee recognises weaknesses with local government and biodiversity initiatives, however, the Nationals and the Liberals believe any additional financial support should be for direct grants to private landowners and public land managers including local government grants. The Committee endorses that any funding should be managed in a streamlined way and directed to those who submit proposals for field projects, including LGA's that will have a demonstrated favourable impact on ecosystems.

The Nationals and Liberals believe a relevant arm of DELWP (or for some projects the Catchment Management Authorities) can lead-manage the financial support of regional biodiversity initiatives. DELWP has greater expertise than local governments and is better placed to manage long term projects than a fragmented approach involving 79 LGA's.

9.4 Need outcome focused incentives and leadership

The following comments were made by local government:

Council has 400 hectares or so of bushland reserves, which we manage for access and amenity but also for biodiversity conservation. So we directly employ the Wurundjeri Narrap team. We also engage with them around traditional burning in our reserves, so we are looking at opportunities for that" – Lisa Pittle, Nillumbik Shire Council.

We also, similarly to Nillumbik, do engage traditional owner groups for on-ground works as appropriate, including for cool burns where we can. As I mentioned, we have a great desire to continue to work with traditional owner groups and to do more with them, including with their on-ground teams, such as the Narrap Team. They are very stretched for what they can actually do and how many services they can actually provide across their country, hence why I feel that expanding core funding for those groups would really help them grow their teams and grow their service capacity to enable them to meet the demands on their services. If they had greater ability to work across their country, we would certainly engage them more. – Macedon Ranges Shire Council.

9.5 Landcare funding

The Nationals and Liberals see the need to more effectively engage local communities, garner volunteer input and integrate resources more efficiently to better arrest ecosystem decline, and achieve improved environmental outcomes and habitat restoration.

Minority Report Recommendation No 12: That the Victorian Government further invest in strengthening regionally based natural resource management programs, including funding of local community-based organisations such as Landcare to cover Landcare coordinators and grants for Landcare projects.

9.6 Vegetation Offsets

DEWLP manages Victoria's entire state-based vegetation offset system from regulations to sales to compliance. That includes the writing of regulations, mapping of vegetation zones, approval of offset sites for sale, managing of offset sales (but not involved price), granting of permits, quality assurance programs and compliance checks.

Where third parties and brokers are involved to assist with tasks such as the sourcing of offset units, DEWLP has final approval over almost every aspect of the market. DEWLP generally:

- Writes the system's **regulations**.
- Develops the **mapping** that dictates permit requirements.
- Assesses **offset sites** to go onto the market.
- Manages **sales** of land for offset units.
- Assesses **permits** that have offset unit requirements.
- Manages **quality assurance** of offset sites.
- Runs **compliance checks** of purchased offset sites

A downfall of DEWLP's monopoly is a serious lack of compliance checks, meaning that there is often no way to know whether land bought as an offset is actually maintained for the purpose it was purchased.

Native vegetation offsets may apply to public as well as private land. Many stakeholders would like to see the removal of native vegetation offsets. Rex Motton from the Prospectors and Mining Association of Victoria told members of the Committee at a public hearing that the association would like to see the removal of native vegetation offsets for small-scale mining because it does not seem that this is particularly appropriate:

The licence area is usually in the order of 1 to 5 hectares. So for small-scale miners who have limited funds it is fairly prohibitive to take on these really quite large environmental programs. We are quite willing to work with community groups and First Nations groups in order to get a positive outcome, but it should not be prohibitive or preventative to have such a burden, an economic burden, on such a small operation – Rex Mottom, Prospectors and Mining Association of Victoria.

Mr Motton further expressed that native vegetation offsets are not necessarily directly benefiting the area that is impacted. Sharing these concerns are the South Gippsland Conservation Society Inc. who stated that:

*Mostly it is local governments that administer it, and they do not have the capacity to be entirely focused on front-end paperwork and just have no interest in long-term compliance. Really it is designed to boost the liquidity and reduce the cost of clearing permits for developers. By design the net gains scheme inevitably leads to net loss. Adding to this is just the poor administration of the scheme - **South Gippsland Conservation Society Inc.***

Minority Recommendation 13: That the Victorian Government ensures that there is a full, transparent and regulated market, which operates from arms-length from government departments and NGOs such that there is no conflict of interest between market participants in the regulation and purchasing of vegetation offsets.

9.7 CFA role on prescribed fire, bushfires and ecosystem management

In a submission to the Committee, the Country Fire Authority (CFA) acknowledged fire as an ongoing and long-term force in Victorian ecosystems that continues to shape them. CFA's Biodiversity Advisor, Mr Dale Tonkinson stated that it is not possible to understand the effects of fire by just calling it fire, nor is it possible to understand any individual fire without the context of what has gone before. He further stated that what has gone before is very much related to timing, fire intensity and how big fires are.

As a volunteer based emergency response organisation, the CFA stressed that they do not have any specific responsibility for ecosystem management but the community expectations around environment and ecosystems fall upon them and they respond accordingly. Through their submission to the Committee it was noted the vital role that they play in terms of vegetation and fuel management:-

Relevant CFA programs are the statewide vegetation management team that we both belong to, with two biodiversity advisors across the state, a cultural heritage advisor, a coordinator and a team leader. So Dan is the team leader. We also have 13 regional vegetation management officers, and they support our fuel management activities. This whole program works in the non-emergency space around fuel management, which under the CFA Act we also have responsibilities for. We also have a research and development team that undertakes applied research, particularly in climate change and fire and vegetation relationships. – Mr Dale Tonkinson, Biodiversity Advisor, Country Fire Authority.

Vegetation Management Officers VMO's are retained as technical professionals within CFA but require support with resources and funding to undertake these important works. VMO's play a key role in bushfire mitigation and protect lives and property.

Minority Report Recommendation No 14: That the Victorian Government provide ongoing funding/resources for Vegetation Management Officers (VMO's) to provide vital training and skills to councils, road managers, landholders and CFA volunteers in fuel reduction by prescribed burning and mechanical treatment.

Under the Andrews Government there has been substantial discontinuity of leadership of the CFA. Over the last few years the CFA has had four Chairman, six CEO's and three Chief Officers. In addition, there has been essentially three different compositions of the Board including one where the entire Board was dismissed by the Andrews Government.

There has been a lack of respect for the volunteers by the government resulting in a decline of 5,490 in operational volunteer firefighters over recent years, which has not been offset by the increase of 776 in career firefighters.

9.8 Equity issues for private landowners

Minority Report Recommendation No 15: The Nationals and Liberals recommend that any initiatives to protect and restore native vegetation including remnant grassland on private land should ensure that the landowner is adequately compensated for costs of delivering 'public good' conservation of ecosystems. The government should ensure that the funding is adequate to cover the costs incurred by private landowners of delivering the 'public good' conservation and also for the 'opportunity costs' they incur as a result of any restricted land use.

9.9 Camping on licenced river frontages

Concerns were raised about third party campers on licenced river frontages. The Victorian Farmers Federation (VFF) and Friends of the Barwon raised concerns:

The licenses that we have in order to have that Crown land and those river frontages come with a whole bunch of responsibilities. Campers, who will be allowed into that land, will be sharing in those responsibilities. There has to be a really strong registration system to ensure that where there is a need for compliance and enforcement we actually have an adequate tool to be able to do so. – Emma Germano, VFF.

We have serious concerns about the new regulations regarding camping on Crown land, and we would in fact be urging farmers to change their leases from Crown grazing leases to riparian management leases, which basically takes away the ability to access those areas in sensitive areas. We know that there are very many sensible fishermen, but there is a fairly big rump that do the wrong thing. We have seen fires from camp fires that have been lit, we have seen trees that have been cut down—all against the spirit of the legislation or what should be done.....unfortunately there is a group that does the wrong thing and there are certainly serious concerns. Many farmers have expressed the same thing. – Mr Trevor Hodson – Friends of the Barwon.

10. Making Ecosystems valuable and harnessing volunteers

We need to focus on making ecosystem improvement valuable rather than costly. More legislation, regulation and bureaucrats often deliver worse rather than better outcomes or stymies progress and it has proved to be relatively inefficient, ineffective and costly. The secret to sustainable improvement is to make ecosystems more valuable to more people and this will often involve the users of that ecosystem.

Enhanced value to support ecosystem improvement is likely to be generated from sustainable multiple use rather than single use. This requires reversing the trend over recent years of single use or 'lock it up'

On public or private land the government can make ecosystem improvement more valuable by harnessing those that have a vested interest in improving the resource, which includes user who are prepared to either pay or volunteer their time to ensure improvement. Examples include Landcare, Field and Game Association, CFA and Prospectors and Miners.

10.1 Landcare volunteers

Landcare is a valuable volunteer movement who contribute to reducing land degradation and improving biodiversity and ecosystems primarily on private land. Mr Andrew Maclean, Chief Executive Officer, Landcare Victoria offered the following commentary:

The principal way people volunteer is they volunteer their time, so they go to the tree-planting days and those sorts of activities.

The committee's volunteer time in organising, strategising and planning the activities.

I also like to make the point that ultimately the landholders volunteer their land to make it available for these ecosystem restoration projects.

Now, whilst there is quite a level of enthusiastic volunteering around those themes, the hard work of organising the planting day, all that sort of stuff, that really is where the facilitators come in. So, they spend their days busily applying for grants—that is a big part of their role—and basically organising the volunteers, seeing that people turn up to implement the project. - Mr Andrew Maclean, CEO, Landcare Victoria.³³

10.2 Field and Game Association

Field and Game Australia was formed in 1958 by concerned hunters who lobbied for shooters to be licenced and the money raised was used to acquire and restore wetland habitats across Victoria. Over 75,000 hectares has been restored into natural wetlands through the state game reserve system, and over 70 of these reserves are Ramsar listed. Mr Peter Hawker Chair, Field and Game Australia, provided the following evidence to the Inquiry:

³³ Inquiry into Ecosystem Decline in Victoria Transcript. Tuesday, 11 May 2021

Field and Game members are very passionate about their wetland conservation and restoration and ensuring that wetland ecosystems are protected for generations to come. Field and Game has delivered substantial projects across Australia in the last 60 years.

....it seems only a natural progression to form a public fund, and that became a reality in 2002. It was stated that whilst wetlands on public land were being managed by bureaucrats and state game managers, we also saw a need to actually have more access to be able to perform more conservation and perform more maintenance, and that became very problematic. So in 2002 we established the Wetlands Environmental Taskforce Trust for that purpose of purchasing, restoring and maintaining wetland habitats.

With ownership of the habitats came the full access required to rehabilitate ecosystems and restore biodiversity. With the rehabilitation comes the transformation—none so dramatic as the changes brought about in the Heart Morass in Gippsland. Back in 2004 a parcel of 819 hectares of the Heart Morass was up for sale. The land was worn down, depleted, after a century of stock grazing, with salinity issues and salt water intrusion.

The restoration and conservation started with the 2006 purchase and continues to this day. Field and Game Australia's members have and will continue to volunteer their time and expertise to rehabilitate this degraded farmland to the thriving wetland habitat it once was. In the years since that first parcel of land was purchased over 50 000 native trees have been planted, 20 tonnes of introduced or invasive carp have been removed and seeds have been collected from over 50 native plant species for revegetation, with thanks to hunters and the Heart Morass project partners, which were Field and Game Australia, Watermark, Bug Blitz, West Gippsland Catchment Management Authority and the Hugh Williamson Foundation.

Field and Game has been involved in longstanding and very difficult situations to save wetlands within Australia as well as in Victoria. I think part of those many efforts have predominantly been aimed at non-game species, especially the ibis up at Kerang, and we actually have seen increases in brolgas across the regions as well.

But some of the wetlands that have benefited from Field and Game's hunter-led conservation efforts—and I will just include a few of these wetlands for the committee— would be Hird Swamp, which is a Ramsar-listed wetland and part of the Kerang wetlands; Johnson Swamp, a Ramsar-listed part of the Kerang wetlands; Dowd Morass, another Ramsar-listed part of the Gippsland Lakes; Reedy Lake at Nagambie; Kanyapella Basin near Echuca; Tower Hill at Warrnambool; Lake Eppalock near Bendigo; the Loveday Wetland complex in South Australia; Gunbower Island and Gunbower forest, Ramsar listed, near Kerang; Gaynor Swamp near Rochester; Lake Buloke near Donald; Harrison Dam in the Northern Territory; Lake Wellington at Sale; Jack Smith Lake at Sale; the Heart Morass and Sale Common at Sale.

*I could continue to go on with many more wetlands that have actually had long-term benefit from Field and Game members and hunter-conservationists, and they continue to do work in these wetlands—from eradicating pest species to building nest boxes to actually supporting tracks, making sure there is an overall management program in place and working alongside government departments – **Peter Hawker, Chair, Field and Game Australia.***

Field and Game Australia has consistently been at the forefront of wetland conservation, often being the first to notice changes in waterfowl habitat and population, continually seeking the reasons for these changes. Wildlife scientists agree that the loss of habitat is the greatest threat to waterfowl and far greater than the recreational hunting. Several species, including the hardhead, blue-winged shoveler, blue-billed duck and musk duck, have been considerably affected throughout the alteration and loss of their habitat, reflecting the continuing need for Field and Game Australia's wetland restoration and conservation programs.

10.3 Contrasting approach on volunteering by 'green' activist groups

The Wilderness Society has, by its own admission has thousands of members, however, it has no active invasive weed or pest species eradication programs. This is in stark contrast to Field and Game Australia who put their money where their mouth is and roll up their sleeves, do the hard field work and make a positive contribution to real-world outcomes for ecosystem improvement.

Further Questions on Notice and Submitted by Richard Hughes, Victorian Campaigns Manager, The Wilderness Society Victoria³⁴.

Ms Bath: Noting definitive CSIRO research that finds that invasive weed species are by far the greatest threat to threatened species, at the Hearing you answered that although you have thousands of members none of your programs target weed eradication. Why?

Mr Hughes: There are multiple analyses of the drivers of extinction in Australia. These variously highlight habitat loss, invasive species or climate change as the predominant driver, depending on how the analysis was done, relevant species and location. Wilderness Society is campaigning and engaging community members to secure strong environmental laws that are properly enforced, including threatened species protection that properly addresses invasive and other threats. As an example, our submission to the Royal Commission into Natural Disasters highlighted the need to redress the vast underinvestment in invasive species management and endangered species recovery programs.

Ms Bath: Acknowledging the harm that feral animals cause to flora and fauna in the forest, why do you not participate in programs aimed to eliminate feral animals?

Mr Hughes: The Wilderness Society is deeply concerned about the impact of invasive fauna. Our focus is on the intersection where habitat destruction exacerbates the impacts of invasive fauna on threatened species...

11. Other issues raised with the Inquiry

Due to the enormity of the volume of submissions and hearing testimonies it is not possible to do justice to many of the issues canvassed by community members, stakeholders and professionals.

We recognise and thank submitters who raised the importance of:

- The recognition, management, preservation and welfare of sustainable Australian Wild Horse populations. (Australian Brumby Alliance)
- Conservation objectives and modern mineral resource development are not mutually exclusive outcomes – the two can, and do, successfully co-exist. (Minerals Council of Australia)
- Bees as pollinators and comments from beekeepers in relation to a decline in flowering cycles and a noticeable and significant reduction in nectar production from the forests. (Gippsland Apiarists Association Inc).
- Historical context to declining ecosystems, with (Bill) Gammage in his book, *The Biggest Estate on Earth* and Jurskis in *Firestick Ecology* provide a comprehensive review of the Australian landscape at the time of European arrival and the use of fire by Aboriginal people, prior to the destruction of the Aboriginal way of life. (South East Timber Association – SETA)
- Volunteers from the ADA who are involved in Deer Management Programs across land tenures in conjunction with public, private and NGO land managers and other Volunteer organisations. (Australian Deer Association).
- An Assessment of the Gillespie and Midas Social and Economic Analysis for the Victorian Environmental Assessment Council's (VEAC) Recommendations for Public Land in Victoria's Central West, prepared by Regulation Economics for the Prospectors and Miners Association of Victoria (David Bentley).

³⁴ Transcripts Question on Notice Thursday, 11 March 2021 Submitted by Richard Hughes, Victorian Campaigns Manager, The Wilderness Society Victoria.

Minority Report – Legislative Council Environment and Planning Committee inquiry into Ecosystem Decline

The Minority Report by Clifford Hayes, Deputy Chair of the Committee, on behalf of the Sustainable Australia Party, has been produced in response to concerns held about some of the content, findings and recommendations in the majority report of the Legislative Council Environment and Planning Committee inquiry into Ecosystem Decline. This minority report is informed by evidence given before the Committee, which has not sufficiently been taken into account in the majority report.

Chapter 1 – The Need for Urgent Action To Reverse Ecosystem and Biodiversity Decline

While the majority report goes a good way towards addressing the concerns of many witnesses about the grievous state of our ecosystems and biodiversity in Victoria, overall it could do better to take into account the urgency of the situation and therefore the need for urgent action, which a number of witnesses conveyed in their evidence.

A number of findings and recommendations in the report reflected a need for action, in that they asked the Victorian government to consider additional funding and to consider a much stronger regime of regulation and enforcement.

However, it is submitted that this is inadequate for the emergency at hand and the majority report needed to call for more funding and more regulation and enforcement, rather than just asking the government to consider that this should occur. There is no timetable for the government's consideration set out, nor any mechanism whereby the government can inform the Committee of the nature and outcome of its deliberations.

While a number of witnesses did not go to a macro view, a number who did, were in concurrence about the dire environmental situation that faces this state after years of neglect and destruction.

Dr Brian Coffey, Vice-Chancellor's Research Fellow, at the Centre for Urban Research, RMIT University provided the following evidence at a public hearing of the Committee:

“transformative change is required. We need to shift the trajectory of development towards sustainability so that our economy fits within our ecology while still meeting people’s needs. For too long we have tried to fit nature into the economy. I would argue that we need to fit the economy into nature. This requires far-reaching structural and social change, something akin to the industrial revolution.”¹

It is the contention of this minority report that the majority report favoured incremental change and improvements when in fact “transformative change is required.” Sufficient evidence was heard about the parlous state of Victoria’s environment to merit recommendations that favoured transformative change rather than incremental change.

Dr Coffey described transformative change as:

¹ Brian Coffey, Vice-Chancellor's Research Fellow, at the Centre for Urban Research, RMIT University, Public Hearing, Melbourne, 21 April 2021, Transcript of Evidence, p30

“a fundamental, system-wide reorganisation across technological, economic and social factors, including our paradigms, our world views, our goals and our values. So that is a really profound sense of change of direction.”²

The majority report does not reflect that need. Rather than offer a profound change of direction, the majority report reflects bringing order to the management of decline. Nature is still required to fit into the economy rather than the other way around, which is what is needed.

Dr Jenny Gray, Chief Executive Officer of Zoos Victoria, reflected this need for transformation when she called for “bravery.”³

Dr Gray said:

“a lot of our tried and tested conservation tools are not working.”⁴

She went on to say:

“I think there is going to be bravery in terms of things that we need to stop doing and there is going to be bravery in terms of things we start doing, and that is where the collaboration really comes in. We can only be brave if we live in a culture of collaboration and a culture of learning.”⁵

On a subject which will be dealt with at length later in this minority report, Victoria’s rapid population growth this century has been a big contributor to the state’s biodiversity and ecosystem decline.

Brendan Wintle, Professor of Conservation Ecology at the University of Melbourne, told the Committee that managing human population growth is a key factor in conservation:

“the congruence of population growth, carbon emissions, nitrogen emissions and plastic accumulation in the oceans—these exponential growths that are disturbing, to say the least……. I think human population growth is key—managing that is key—to conserving, and thinking carefully about sustainable economies that do not just focus on growth as the index of performance is also key. So, yes, I agree that human population growth needs to be very carefully managed. It is the number one or proximal driver behind all of this.”⁶

Victoria has experienced rapid population growth this century, in some years the population growth rate was running at four times the rate of the developed country average.⁷ This issue and its negative impact on ecosystems and biodiversity will be addressed later in this minority report. Despite many witnesses referring to it, the issue received almost no attention in the majority report.

Clearly, given all the above, a much more urgent transformative approach is needed and this is also not reflected in the majority report. Even with the measures suggested in the report, ecosystem and biodiversity decline pressures will continue in Victoria.

We have to act urgently and we have to do more.

² Ibid., p.30

³ Dr. Jenny Gray, Chief Executive Officer, Zoos Victoria, Public Hearing, Melbourne, 3 December 2020, Transcript of Evidence, p.36

⁴ Ibid., p.36

⁵ Ibid., p.36

⁶ Brendan Wintle, Professor of Conservation Ecology, University of Melbourne, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.55

⁷ <https://propertyupdate.com.au/population-growth-in-victoria-from-slow-growth-to-woah-growth/>
<https://data.worldbank.org/indicator/SP.POP.GROW?locations=OE>

FUNDING

Current programs are underfunded and the Committee heard evidence they are not working.

Drastic action is urgently needed. Saying as the majority report does, that the Victorian government should consider more funding and should consider regulatory reform, is not adequate.

The government immediately needs to provide more funding and reform environmental regulation.

Dr John Morgan, Co-chair, ESA Policy Working Group, Ecological Society of Australia said:

“The question for this inquiry is: is the decline grim enough for governments to change their behaviour and actions? And we might ask: how bad do you think the ecosystem decline actually is? Is it catastrophic and worth acting on? The ESA—our organisation—submits that far from being incapable of acting or ignorant of the approaches that we need to improve the situation, ecosystem scientists have a really good understanding of some of the solutions that are necessary to bring about change, but it requires a will to implement them.”⁸

Dr Morgan gave further evidence that we are falling behind in restoring damaged ecosystems and the government’s Biodiversity 2037 strategy is underfunded and lacking definition:

“If we take, for example, the 2037 biodiversity strategy, the budget allocated to that strategy in 2017–18 was an \$86 million commitment for four years and then just \$20 million per year ongoing to deliver on the plan. It is a pretty modest investment given the magnitude of the problem that has been identified in this inquiry. Importantly there are relatively few hard targets to be delivered upon in the strategy, and where there are targets it is probably unlikely they will be able to be delivered because the budget has been earmarked. Upscaling existing initiatives and investments is clearly one of the biggest opportunities to arrest the consistent decline in Victoria.”⁹

And he went on to say that the strategy is already well behind schedule:

“the target in the 2037 biodiversity strategy of 200 000 hectares of revegetation is about 20 to 40 times more than what we are currently doing. Over the last 16 years we might have, generously, on back-of-the-envelope calculations, restored maybe 10 000 to 15 000 hectares—in 16 years.”¹⁰

According to Dr Morgan current programmes will not go anywhere near the goal of restoring 200,000 hectares as set out in Biodiversity 2037. Dr Morgan said at current rates of progress we will only achieve just 16,000 of that 200,000 hectare target, which is not even 10 per cent.

The Sustainable Australia Party wholeheartedly agrees with Dr Morgan when he said:

“Biodiversity 2037 is a vision target. So in the meantime those species need something to happen today.”¹¹

⁸ Dr John Morgan, Co-Chair, ESA Policy Working Group, Ecological Society of Australia, Public Hearing, Melbourne, 21 April 2021, Transcript of Evidence, p.64

⁹ Ibid., p.64/65

¹⁰ Ibid., p.68

¹¹ Ibid., p.67

Brendan Wintle, Professor Of Conservation Ecology at the University of Melbourne, said of the Biodiversity 2037 plan:

“The funding for the plan, as I have just said, is about one-tenth of what we really actually need to fund, maybe a twentieth, because the plan deals very broadly with biodiversity and I am talking about what it takes to keep our threatened species in the game, the ones that have been identified as at high risk”¹²

He also said:

“Biodiversity 2037 is still about a fifth or a tenth of the size of the investment that we would need to see in Victoria as far as I can tell to actually conserve our threatened species, so we are talking about a dramatic upscale. It is transformational change, so we have all got a lot of work to do.”¹³

NEED TO DECLARE A BIODIVERSITY EMERGENCY

Biologist, Dr Nadine Richings of EnRIChed Pursuits said we need to declare a biodiversity emergency:

““We have got to acknowledge the problem; that is what we need to do. We have heard so much evidence here about how significant the problem is. We actually have three global existential crises at the moment, and they are all linked. There is the biodiversity emergency, the climate emergency and the emergence of new diseases, and they are all linked to the way that we exploit the environment and its species. So the first thing we need to do is acknowledge the problem, hence declaring a biodiversity emergency””¹⁴

The Sustainable Australia Party supports this call. There is ample evidence presented to the Committee that we are indeed in a biodiversity emergency.

Dr John Morgan of the Policy Working Group, at the Ecological Society of Australia said:

“the World Economic Forum places environmental risks to the economy in the top 10 risks to the global economy. It is crucial we start to understand ecosystems and the science that underpins their management and long-term recovery. It is not a new problem at all, as you have probably become aware of in this inquiry, but it is one we can begin to fix now.”¹⁵

Therefore this minority report contends that much more urgent and immediate action needs to take place and there is no time available to ask the Victorian government to consider taking more action, the government must be advised by the Committee to take more action on the basis that we need transformational change.

¹² Brendan Wintle, Professor of Conservation Ecology at the University of Melbourne, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.56

¹³ Ibid., p.59

¹⁴ Dr Nadine Richings, EnRIChed Pursuits, Public Hearing, Melbourne, 21 April 2021, Transcript of Evidence, p.26

¹⁵ Dr John Morgan, Co-Chair, ESA Policy Working Group, Ecological Society of Australia, Public Hearing, Melbourne, 21 April 2021 Transcript of Evidence, p.66

Chapter 2 - Administration and Regulation of the Environment

Administration and regulation of the environment was a significant issue of concern for several witnesses. A fundamental conflict of interest at the Department of Environment Land Water and Planning (DELWP) exists; and several witnesses believe that the department as it is currently organised, is not structured to deliver the environmental outcomes that Victoria urgently needs.

DELWP as it is currently constituted, is a mega department and has a conflict of interest and objectives that mitigate against environmental and wildlife protection.

Lisa Palma, CEO of Wildlife Victoria said the:

“department (which) is accountable for protecting wildlife and prosecuting and investigating wildlife crime....is also the department that issues licences to kill wildlife.”¹⁶

Peter Hylands, President of the Australian Wildlife Protection Council said:

“What we have got is a marketing department for killing and not a department that cares about biodiversity conservation. I can say that because I have experienced it ad nauseam in Victoria, and it has got a lot worse.....Victoria has one of the most toxic relationships of anywhere in the country between that department and the wildlife carers. That relationship is typically quite poor, and I think that was reflected by the previous speaker. That is totally unnecessary, and it comes out of that department culture which has developed over the years and has not been managed properly. I mean, there needs to be a just and proper management approach to these issues, and that is what is completely lacking in DELWP. And I think the behaviour of DELWP and Parks Victoria combined in relation to wildlife conservation is appalling, so we need something else going on here.”¹⁷

Mr Hylands, earlier in his evidence also said:

“in creating a new department there may be an opportunity, and I might be being naive here, to actually have a new beginning and do something that is profoundly beneficial to the state of Victoria and to its people and its natural systems.”¹⁸

This is a proposal the Sustainable Australia Party agrees with. Victoria needs a department whose sole responsibility is the environment. DELWP needs to be broken up as there are too many conflicts of interest.

Gerard Drew, Executive Committee Member of the South Gippsland Conservation Society, also spoke of a conflict of interest in the environmental area:

“So a couple of not very specific but just general suggestions for improvements—what can be done: the overarching administrative culture, prioritising the protection of nature—it just must be done; removing the conflict of interest in decision-making.”¹⁹

¹⁶ Lisa Palma, CEO Wildlife Victoria, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.3

¹⁷ Peter Hylands, President of the Australian Wildlife Council, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.47

¹⁸ Ibid., p.47

¹⁹ Gerard Drew, Executive Committee Member, South Gippsland Conservation Society Inc., Public Hearing, Melbourne, 26 August 2021, Transcript of Evidence, p.10

Jill Redwood, Co-ordinator at Environment East Gippsland said:

“I would also like to see a very distinct division between VicForests, forest fire management and DELWP. At the moment they seem to be one very big boys’ club.”²⁰

John Cameron told the Committee on 26 August 2021, said:

“I think there are a lot of talented people in DELWP and Parks, but I think that they need to be released from the shackles of an unfocused mega-department and also they need to be empowered with process-complete roles.....Currently the DELWP secretary reports to four ministers, and I think that violates the Westminster system of ministerial accountability. I think DELWP has too many functions, which means that it lacks focus, which is one of the cornerstone strategies of successful organisations. I would also like to say that it is basically a conglomerate, and conglomerates were proved to be ineffective and discarded by business in the 1980s.”²¹

The Sustainable Australia Party believes that the current mega-department, the Department of Environment, Land, Water and Planning, is not functioning properly to protect the environment.

Dr Brian Coffey of RMIT’s Centre for Urban Research, summed it up well:

“If we do not change our institutions and reform the sense of direction, we are unlikely to be successful on our journey.”²²

Many witnesses called for stronger enforcement of environmental laws and an increase in enforcement officers.

Dr Coffey discussed the need for public environmental accountability:

“I think the important thing is that having these strong foundations for public environmental accountability really contributes to the public accountability of government decision-making at the very centre of government. While we have a Commissioner for Environmental Sustainability in Victoria—it reports through the environment portfolio—the profile is really low. It has been around for 20 years; I do not think anybody really knows about it. Their powers are quite weak.”²³

He went on to say:

“When the office was originally proposed, they were going to have a strategic audit function—that they would systematically assess compliance with environmental legislation. That seemed to not get picked up. So I think there is a lot of room to strengthen the commissioner’s role. You could potentially transfer the office of the Commissioner for Environmental Sustainability into the Auditor-General’s office to fulfil that more central public accountability operation.”²⁴

Dr Jim Radford, Principal Research Fellow at the Research Centre for Future Landscape at Latrobe University, also supported this:

²⁰ Jill Redwood, Co-ordinator, Environment East Gippsland, Public Hearing, Melbourne, 26 August 2021, Transcript of Evidence, p.29

²¹ John Cameron, Public Hearing, Melbourne, 26 August 2021, Transcript of Evidence, p.2

²² Dr Brian Coffey, Vice-Chancellor’s Research Fellow, Centre for Urban Research, RMIT University, Public Hearing, Melbourne, 21 April 2021, Transcript of Evidence, p.35

²³ Ibid., p.31

²⁴ Ibid., p.31

“Yes, well, I think independent auditors or commissioners—whatever you want to call them—is a really good place to start, and I think we are starting to see some traction in Victoria through Auditor-General’s reports. So setting up that independent body that oversees, for example, a monitoring office or the implementation of threatened species recovery plans would hopefully provide some of that. That would come in the governance arrangements associated with that office—and that is not my area of expertise, exactly how you set that up—and the legal and governance mechanisms to ensure that that is in place.”²⁵

The Sustainable Australia Party supports an increased role for the Auditor-General in ensuring accountability for improved environmental outcomes.

Dr Nicholas Aberle, Campaigns Manager at Environment Victoria called for the Office of the Conservation Regulator (OCR) to be made a statutory authority:

“We in Victoria do not really have an independent regulator in the same way that some other states do. For example, our Environment Protection Authority is really focused on pollution and the impacts of pollution, so the EPA in Victoria does not look at biodiversity in the way that, for example, the South Australian and I think New South Wales EPAs operate.

“So I think there is definitely scope for greater regulatory oversight there, and independent regulatory oversight. More recently in Victoria we have established the office of the chief conservation regulator —have I got that right?—which is starting to play that role. But as you are probably aware—I think the chief regulator has already given evidence to this Committee—that is not a statutory role, it is not an independent role that sits within the department, so I think there is definitely scope for the scale and breadth of that type of regulation to be expanded.”²⁶

Richard Hughes, Campaigns Manager of the Victorian Wilderness Society, said:

“I think in general we see the need for independent regulation around environmental laws and regulation. In terms of the OCR that is particularly the case. Obviously that is a fairly new office, operating out of the department, which perhaps you would argue is a step forward, or some people might argue is a step forward, but what we are really from our perspective continuing to see is breaches to environmental regulations in the way that forestry operations are conducted, and the OCR is not really successfully addressing those issues. And there would be advantages to actually having a properly resourced independent regulator outside of the department.”²⁷

He went on to say:

“We would very much prefer to see a regulator that is independent and properly resourced and can provide the policing role that is really required to ensure that regulations around forestry operations and other areas of environmental management are properly policed.”²⁸

The Sustainable Australia Party believes that this is the way forward to ensure optimal environmental outcomes for the state.

²⁵ Dr Jim Radford, Research Centre for Future Landscape, Latrobe University, Public Hearing, Melbourne, 21 April 2021, Transcript of Evidence, p.62

²⁶ Dr Nicholas Aberle, Campaigns Manager, Environment Victoria, Public Hearing, Melbourne, 20 April 2021, Transcript of Evidence, p.11

²⁷ Richard Hughes, Campaign Manager, Victorian Wilderness Society, Public Hearing, Melbourne, 11 March 2021, Transcript of Evidence, pp 32-33

²⁸ Ibid., p.33

Many other witnesses to the inquiry gave the same evidence.

Steve Meacher, President of Friends of Leadbeater's Possum, said:

"During the court case the government conducted a review of timber harvesting regulation and responded by setting up the Office of the Conservation Regulator. Being a department within a department, this body does not seem to have the capacity or the will to operate as an independent enforcer. In fact, as the regulator now acts as the delegate for the minister in some decisions.....the OCR now seems to be part of the problem not the solution."²⁹

Tina Lawrence of the Victorian Wildlife Shelters Coalition, said:

"While we do not doubt the commitment of the conservation regulator to compliance and enforcement, the fact is that DELWP and its many predecessors have demonstrated time after time over the past 45 years that they are incapable of properly managing human-wildlife conflict and wildlife crime or meeting the critical moment we are in in terms of biodiversity loss. DELWP policing DELWP via the OCR is not going to fix that."³⁰

She went on to say:

"In my statement I made it clear that I did not think that DELWP policing DELWP would work. It has not worked over 45 years, and I think that the issues relating to human-wildlife conflict and the fact that that is resulting in removing industrial levels of wildlife from the landscape every year needs to be dealt with and managed by another authority. I do not think that they are up to it. I really do not doubt the conservation regulator's commitment to all of these things, but, as I said in my statement, they are completely overcommitted. Their workload is just absolutely enormous, and I really fear that what will happen is wildlife, which has always been the lowest of low priorities within DELWP, will remain at that level."³¹

As mentioned in the majority report, Professor Lee Godden, Director of the Centre for Resources, Energy and Environmental Law, at the University of Melbourne, supports an independent regulator. He told the Committee:

"I would certainly strongly support an independent agency."³²

The Sustainable Australia Party believes in an independent OCR, that one should be established as a result of this inquiry and it also should be a well-resourced one.

Dr Bruce Lindsay, Senior Lawyer at Environmental Justice Australia, said that the OCR needs better resourcing:

"Clearly it needs to be resourced well, and it needs to be resourced effectively."³³

Lisa Palma, CEO of Wildlife Victoria also said funding of the OCR was inadequate:

²⁹ Steve Meacher, President of Friends of Leadbeater's Possum, Public Hearing, Melbourne, 10 March 2021, Transcript of Evidence, p.49

³⁰ Tina Lawrence, Victorian Wildlife Shelters Coalition, Public Hearing, Melbourne, 11 March 2021, Transcript of Evidence, p.39

³¹ Ibid., p.43

³² Professor Lee Godden, Director, Centre for Resources, Energy and Environmental Law, University of Melbourne, Public Hearing, Melbourne, 20 April 2021, Transcript of Evidence, p.23

³³ Dr Bruce Lindsay, Senior Lawyer, Environmental Justice Australia, Public Hearing, Melbourne, 11 March 2021, Transcript of Evidence, p.23

“I know that there will be no, or delayed, action on the majority of the cases that we that we individually report into the Department of Environment, Land, Water and Planning.....In my observation, there are some very dedicated officers that work in the department and at the OCR, but for the level of wildlife crime that we are seeing come through it is apparent to me that resources are quite limited.”³⁴

Dr Jim Radford, Principal Research Fellow, Research Centre for Future Landscapes, at La Trobe University called for a significant increase in funding for DELWP and Parks Victoria:

“That would be around about 1 per cent of gross state product. We think it is reasonable. That is where we get the \$4.5 billion per annum. That would be, as I mentioned, for core funding of the department and Parks Vic, but it would be for doing a lot more than we are doing now. That is the bottom line. As I mentioned, there are dozens of action plans sitting on shelves not being implemented. There is a whole range of landscape-scale threat management that we could be doing. Dr Bach asked about invasive species, and in effect for many of them it is a matter of person power and getting out there and doing, well, if it is weed eradication, the spraying, or laying traps or whatever it might be. That is the approach.....

“So we know what needs to be done for many species, or at least we have got a decent idea, but it is a matter of pulling them off the shelf, funding them and getting on with it. So legislate for mandatory implementation of action statements for all threatened species, all threatened communities and all threatening processes and fund them accordingly.”³⁵

Dr Radford’s call for Victorian government funding of \$4.5 billion per annum for DELWP and Parks Victoria, may seem like a lot of money. However, it must be seen in the context of the biodiversity emergency the state is experiencing and some figures provided by Professor Brendan Wintle of Melbourne University:

“Let us think about it in context. In Australia every year on our pets we spend \$12.2 billion. As a public we spend \$12.2 billion a year on our pets. We spend \$580 million a year on pet grooming, \$1.1 billion a year on just toys for our pets.....\$2.5 billion a year we spend just on cats—our biggest bird killers. Unfortunately Victorians are the biggest spenders. We spend on average twice as much as anybody else on our pet care, including cat care. So we are great pet lovers; we are not very good at spending on threatened species.”³⁶

Matt Ruchel, Executive Director of the Victorian National Parks Association, also endorsed this call for a funding increase in the environment sector:

“One per cent of the state budget is our provocative ambit claim, I suppose. It is about 0.5 per cent at the moment, so we are saying for parks 1 per cent. That point is really in some ways about trying to avoid the argument around—it is not a competition in a sense. Parks provide a whole range of services, both for visitor, economic and ecosystem services. Some of the ecosystem service things like clean water, stopping erosion, pollination are all worth billions of dollars. The health budget is

³⁴ Lisa Palma, CEO, Wildlife Victoria, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.2

³⁵ Dr Jim Radford, Research Centre for Future Landscapes, La Trobe University, Public Hearing, Melbourne, 21 April 2021, Transcript of Evidence, p.58

³⁶ Professor Brendan Wintle, Professor of Conservation Ecology, University of Melbourne, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.52

24 per cent of the state expenditure— something like that—education is in the 20s, security is in the 14s and 15s. You could take a point off each of those without making a huge difference.”³⁷

Gray Ardern of the Friends of Warrandyte State Park, talked about how funding affects his group and a restoration project they worked on:

“we poured a huge amount of effort into that land over three years. But the grant period has finished, the funds have dried up, we have planted all these plants there, but we have no further funding to continue the good work that we have done. We needed to employ contractors to get the huge amount of weeds out of that site, but with the drying up of those funds the site is now deteriorating. We are getting over there and working on it as often as we can, but there are limits to what a voluntary organisation can do out of its own resources. Now, had the same funding been a permanent stream of funding for Parks Victoria, this project could be continuing now, not going backwards.

“That is the kind of point that I am trying to make. The funding of volunteer organisations through grants seems on the face of it to be a good way of harnessing all that enthusiasm, but it does have the limitation that once the funding dries up the projects tend to go backwards. As for the second point, Dr Ratnam, that was really just a further amplification of the need for further funding for Parks Victoria. The fact that it cannot even manage to have rangers on duty every weekend during really busy times of the year demonstrates that there simply is insufficient funding for this very important organisation. I hope that answers your question, but I am happy to elaborate if you desire.”³⁸

Dr Lindsay of Bellarine LandCare Group said:

“one thing I am very much aware of and I do not think has changed is that there is simply inadequate funding and inadequate staff to do the job that these government agencies and local governments and so on need to do. Relatively speaking, I think it has been quite strongly reduced from the past, in particular not just informing but enforcing the law. So there is a considerable amount of illegal behaviour or skating the legalities of behaviour. I am thinking of things like we are required to destroy our noxious weeds, our rabbits, our boars and so on. It does not happen very often. It may not be enforced. But there are other illegal things that happen that are just, well, skated over or a bit of a slap on the wrist or not done at all, and the staff simply are not there to do the job.”³⁹

Shane Howard, Treasurer of the Belfast Coastal Reserve Action Group, mentioned in his evidence that the number of rangers for South West Victoria has dramatically decreased since the 1980s:

“We need government and community to be working together. We need an end to habitat destruction, and strengthened nature laws. We need a tree planting workforce to restore habitat. We need to expand Landcare and Coastcare programs. We need to greatly increase funding for Parks Victoria. In the 1980s there were eight rangers. There are now two rangers for the entire south-western region, such was the decimation of Parks Victoria by the Kennett government, and

³⁷ Matt Ruchel, Executive Director, Victorian National Parks Association, Public Hearing, Melbourne, 11 May 2021, Transcript of Evidence, p.24

³⁸ Gray Ardern, Friends of Warrandyte State Park, Public Hearing, Melbourne, 10 August 2021, Transcript of Evidence, p.46

³⁹ Dr Andrea Lindsay, Bellarine Landcare Group, Public Hearing, Melbourne, 16 June 2021, Transcript of Evidence, p.12

I know there had to be cost cutting was done. This needs to be restored. We need a dedicated program for reviving species facing extinction and we need a huge program of weed and invasive species eradication.”⁴⁰

On the other side of the state, Tom Crook, Facilitator and Programs Manager of the East Gippsland Conservation Management Network said:

“Twenty years ago when I first came to East Gippsland, NRE, the DELWP equivalent of the day, in Orbost was one of the area’s largest employers. Now DELWP’s natural environment team for the whole eastern region is only a handful of people. That is not because the forest management needs and the needs of the ecosystems to be looked after have gone away, it is because governments have decided not to resource those needs or those areas. The task at hand is massive, yet we see a continued reduction in funding for natural area management.

“Another example would be the Snowy River and Errinundra national parks. They are in excess of over 100 000 hectares, and we have got two rangers, who basically have to do all the work for those park areas— supplemented by some others, but that is their core responsibility.”⁴¹

Cam Walker, Campaign Co Ordinator of the Friends of the Earth, said:

“My experience is I know the park system reasonably well, with the exception of the north-west probably. I spend a lot of time in the alpine zones and I am just aware of how stretched the rangers are, and other Parks Vic workers. What they do is absolutely astonishing, but they do not have the resources they need. So I think a priority needs to be an annual commitment in state budgets to adequately fund revolving funds for private land conservation, plus Parks Vic and other land managers to manage the impacts of invasives, to manage the impacts of climate change and to manage the impacts of increased visitation.”⁴²

The Sustainable Australia Party urges the Victorian government to create many more of the types of jobs these witnesses referred to. This would be in the interests of reversing the serious ecosystems and biodiversity decline referred to by multiple witnesses who provided evidence to this inquiry. Since the pandemic, the government has announced job creation initiatives in areas such as housing and infrastructure. However, there are clearly plenty of employment opportunities in the environmental sector, as the evidence above establishes.

Chapter 3- Population

The majority report failed to reflect the contribution of a number of witnesses on the impact of Victoria’s high population growth rates in this century. These have been well above the developed nation average by some margin, let alone being well above the Australian average over the last century. Many witnesses spoke of the impacts of this growth, but nowhere are they sufficiently reflected in the majority report. It is a serious omission, as even a number of witnesses from Victorian

⁴⁰ Shane Howard, Treasurer of the Belfast Coastal Reserve Action Group, Public Hearing, Melbourne, 16 June, 2021, Transcript of Evidence, pp 26/27

⁴¹ Tom Crook, Facilitator and Programs Manager, East Gippsland Conservation Management Network, Public Hearing, Melbourne, 26 August 2021, Transcript of Evidence, pp.16/17

⁴² Cam Walker, Campaign Co-ordinator of Friends of the Earth, Public Hearing, Melbourne, June 17 2021, Transcript of Evidence, p.22

state government organisations said that they took into account the impact of population growth, as part of their efforts to reverse ecosystem and biodiversity decline.

Dr Gillian Sparkes, Commissioner of the Office of Environmental Sustainability said:

"we know that at the end of the day this is a system. It is a systems approach that is required and it is a systems approach that is creating ecosystems decline, and we are trying to look at all aspects of the system, from population to urbanisation to climate change et cetera and all those pressures."⁴³

By failing to include population and the evidence of multiple witnesses on the impact of Victoria's extraordinarily high rates of population growth, the majority report has not taken a "systems approach" to ecosystems and biodiversity decline, and failed to look at all aspects of that system.

Kate Gavens, Chief Conservation Regulator at the Office of the Conservation Regulator, an office which is part of DELWP told the Committee:

"Of course at the start of the year we had the loss of 1.5 million hectares during the devastating bushfires, but we also had the ongoing issues that are really *critical* to us as a regulator *to be understanding and responding to*—in relation to climate change, population growth, habitat loss and exacerbating biodiversity loss—and we certainly take that into consideration in where we put our regulatory effort."⁴⁴

Clearly, the evidence of the Chief Conservation Regulator is that population growth is a factor that her office looks at, when understanding and responding to ecosystem and biodiversity decline. Yet the majority report, which is a report on this issue, has not regarded population growth as "*critical..... to be understanding and responding to.*"

The Victorian Auditor-General in a report tabled in Parliament in 2017 wrote on Victoria's high rates of population growth:

"Victoria has experienced strong population growth since 2011, with the population forecast to grow from 6.1 million in 2016 to 7.7 million by 2031."⁴⁵

In the first half of the 1990s, the website Property Update, states that Victoria's population growth rate was 0.5 %.

In the second half of the 1990s, it reports that the state's population growth had increased to a rate of 1% a year. By 2016 -17 this growth rate had increased to 2.3%.⁴⁶ This was nearly four times the developed country average figure for population growth.⁴⁷

The Sustainable Australia Party has long considered that Victoria's high rate of population growth is not sustainable, and is a major factor in ecosystem and biodiversity decline in the last two decades. Both the Federal and Victorian Government policy favours high population growth and seeks to return

⁴³ Dr Gillian Sparkes, Commissioner of the Office of Environmental Sustainability, Public Hearing, Melbourne, December 3 2020, Transcript of Evidence, p.5

⁴⁴ Kate Gavens, Chief Conservation Regulator, Public Hearing, Melbourne, 10 March 2021, Transcript of Evidence, p.12

⁴⁵ <https://www.audit.vic.gov.au/sites/default/files/2017-08/20170823-Effectively-Planning-for-Population-Growth.pdf>, page vii

⁴⁶ <https://propertyupdate.com.au/population-growth-in-victoria-from-slow-growth-to-woah-growth/>

⁴⁷ <https://data.worldbank.org/indicator/SP.POP.GROW?locations=OE>

to these high rates of growth as soon as possible. Some of the state government's own senior environmental officials, as quoted above, look at population growth as an issue, and the minority report contends that the majority report should have as well.

Population was mentioned by numerous witnesses in public hearings before the Committee as impacting on Victoria's biodiversity and ecosystems.

Biologist, Dr Nadine Richings of EnRIChed Pursuits told the Committee that increasing population further beyond our current significantly expanded levels, will create significant challenges and these need to be discussed at all levels of government and in the community:

"If people decide that a higher population is required, then you will lower the quality of life. You are correct about the impact of our species and our numbers on biodiversity everywhere and certainly in Australia. Human life is very dependent on biodiversity. We often talk about engaging with nature or reconnecting with nature. We are part of nature and we need to get this idea in our head: we are part of nature. We are nothing without nature; we cannot lose biodiversity. We cannot. This is such a critical issue."⁴⁸

Dr Richings went on to say:

"So we need to tackle these issues and—I do not know what we need, whether they are round tables, whether they are large workshops—seriously get people in a room, whether it is at Victorian government level, council level, federal level, and seriously talk about what population of humans can this country hold for us to have a reasonable quality of life, and our quality of life includes the quality and health and wellbeing of the entire environment. It is such a critical question. I do not have the answer to what that number is, but there is so much that we need to tease out in there.....if we continue to develop this land the way we have, we will just lose more habitat. So I do not know the answer to the number, but there are so many critical things that we must think about before we go just increasing Australia's population."⁴⁹

The Sustainable Australia Party in this minority report is in agreement with Dr Richings that there needs to be a population plan and that this needs to be discussed, including in the majority report. There are, as Dr Richings said, many critical things to think about and little to no evidence that this is occurring.

It is difficult to plan for reversing Victoria's alarming rate of biodiversity decline without a detailed population policy.

Dr Richings said on this subject:

"we need a population policy, but the population policy has got to include indicators for biodiversity in the environment—everything we do. Our health and wellbeing policy should be a far more holistic approach. Have you heard of approaches such as One Health? One Health, Planetary Health, EcoHealth are three examples of holistic health and wellbeing policies that connect humanity back to the rest of the planet and appreciate that we cannot have a healthy, well and safe life without a healthy, safe and well environment. So our health and wellbeing policy should be connected back to all of biodiversity, and one of the elements that has to be considered

⁴⁸Dr Nadine Richings, EnRIChed Pursuits, Public Hearing, Melbourne, 21 April 2021, Transcript of Evidence, p.22

⁴⁹Ibid., p.22

in that, in our health and wellbeing, is: what is an appropriate population number for Australia, what is an appropriate population density?"⁵⁰

Much more attention needs to be paid to this and that includes in the majority report, which ignored the issue.

Geoffrey Goode, who appeared before the Committee on August 10, also provided evidence regarding the need for planning and discussion about what our population level should settle at:

"The main concern I have indicated is the overall adverse effect I consider the very rapid rate of population increase has had and is having on the natural environment and ecosystems of Victoria, as it is having on much of the world. Just as concerning is the open ended nature of this increase, where governments and their planning systems appear to be valuing and encouraging the growth of human populations without even indicating when or where such increase should have a declared upper limit on both its time rate of increase and the absolute level of population in the jurisdiction concerned. Official declaration of figures of that rate of increase and that level of population included in planning and environment legislation could be later amended to either increase or decrease them, but that would at least require that the major question be reviewed and debated publicly by the elected representatives of Victoria's voters."⁵¹

Mr Goode therefore called for discussion about population to be part of the democratic process, which it currently is not. He said the Victorian government is heavily in favour of further environmentally damaging high rates of population growth. This may help explain the lack of weight given in the majority report to the concerns of multiple witnesses about the effect of population growth on the decline of biodiversity and ecosystems in Victoria. Mr Goode told the Committee:

"the Victorian government comes across as saying it is a great thing. They are not unhappy with population growth. There seems to be insufficient concern. This committee is certainly one good sign that things might change.....If you are pushing it and you are nudging it all the time and saying, 'Look, we've got to do this because of the population', it will happen. You will get the population growth, more land will be concreted, more things will happen that are not conducive to ecosystem quality."⁵²

Mr Goode said that many people in Victoria think there should be a limit to our population growth and this is something the Sustainable Australia Party hears often:

"What is hard to contest is that Victoria's fourfold increase in human population in the last 70 years has resulted in a massive expansion of the Melbourne metropolitan area, in area and in density, and extensive environmental effects in many parts of Victoria as a consequence of the state's much larger population and that there is no projected upper limit on that, although many think there should be."⁵³

A number of witnesses including Dr Richings gave evidence that high rates of population growth as projected and indeed encouraged by the Victorian government are not compatible with reversing ecosystem and biodiversity decline. This evidence was nowhere recorded in the majority report.

⁵⁰ Ibid., pp.22/23

⁵¹ Geoffrey Goode, Public Hearing, Melbourne, 10 August 2021, Transcript of Evidence, p.40

⁵² Ibid. p46

⁵³ Ibid. p40

Ms Fiona Bell, Vice-President, Protectors of Public Lands Victoria, gave the following evidence:

“Rapid population growth in Victoria has placed more pressure on all ecosystems, accelerated the destruction of some natural habitats and changed the way of life of people in Victoria. Pre COVID-19 Victoria had been receiving a higher proportion of overseas migration than other states, and it has relied on this growing population to drive much of its economic growth and housing construction. However, more people means more land is needed, more natural resources used and more waste and rubbish produced, which causes more pollution. All of these adversely affect many ecosystems. Victoria needs economic growth but not necessarily that dependent on large population growth.”⁵⁴

Dr Ernest Healy, Secretary of the Association For Conservation Of Australian Dingoes said:

“I think that, despite sometimes the best efforts to mitigate the impacts of population growth on the natural world, there is no doubt really that the size of population relates directly to impact on the natural world—the way we either extract resources directly from the natural world or take away the natural world to build cities and suburbs and the many other things we do where we have to clear land for urban development et cetera. Some of the things that could be done to mitigate it that are quite obvious things are not really done well enough. We could do things better. There is some relativity to it, but I tend to agree with the basic observation that rapid population growth and city building and urban development have been a major source of ecosystem loss and decline. It is very significant. I agree with that.”⁵⁵

And the quote in regards to population, of Brendan Wintle, Professor of Conservation Ecology at the University of Melbourne, cited in Chapter One of this minority report, is repeated here in more detail:

“It reminds me of a great report prepared by the WWF, the World Wildlife Fund, called the Great Acceleration, and it shows basically the congruence of population growth, carbon emissions, nitrogen emissions and plastic accumulation in the oceans—these exponential growths that are disturbing, to say the least. When I say we could feed a lot more people, I am not expressing a preference for having lots more people. I think human population growth is key—managing that is key—to conserving, and thinking carefully about sustainable economies that do not just focus on growth as the index of performance is also key. So, yes, I agree that human population growth needs to be very carefully managed. It is the number one or proximal driver behind all of this.”⁵⁶

Mr Boris Iskra, Technical Officer, Wood Products Victoria, told the Committee:

“There are a range of key drivers that can have an impact on ecosystem decline: population growth and urbanisation and the increased propensity for bushfires or wildfires, which, when they become uncontrolled, are the biggest risk to Victoria’s native flora and fauna and to overall forest ecosystems.”⁵⁷

In regards to Melbourne, a number of witnesses gave evidence that the increase in population promoted by the Victorian government leads to more land clearing, both for housing and for farming to feed all the additional people. Melbourne’s tremendous population growth is a factor in biodiversity and ecosystem decline.

⁵⁴ Fiona Bell, Vice-President, Protectors of Public Land Victoria, Public Hearing, Melbourne, 17 June 2021, Transcript of Evidence, p.27

⁵⁵ Dr Ernest Healy, Secretary, Association for Conservation of Australian Dingoes, Public Hearings, Melbourne, 24 February 2021, Transcript of Evidence, p.41

⁵⁶ Brendan Wintle, Professor of Conservation Ecology at the University of Melbourne, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.55

⁵⁷ Boris Iskra, Technical Officer, Wood Products Victoria, Public Hearing, Melbourne, 10 March 2021, Transcript of Evidence, p.21

Former Victorian Treasury economist, Leith Van Onselen wrote that between 2004 and 2018, Melbourne's population grew by 1.3 million people, a staggering 36% increase, with further large increases projected for decades to come.⁵⁸

Rebecca Cook, Head of Prevention at the RSPCA, told the Committee that Melbourne's growth was having negative environmental impacts:

"When considering the impact of ecosystem decline on native animals, we highlighted two case studies in our submission—that of kangaroos and native ducks. We know that Melbourne's growth corridor is having an impact on kangaroo welfare by reducing available habitat for kangaroos. In recent years we have seen examples of kangaroos becoming displaced or landlocked, which significantly impacts the welfare of those individuals. We are concerned that there has been no long-term monitoring of kangaroo populations and that therefore the impacts of increased development through kangaroo habitat is unknown."⁵⁹

Allan Thatcher, member of the Green Wedges Coalition also has significant concerns about the impacts of Melbourne's population growth:

"Overall the Green Wedges Coalition is concerned that without strengthened policy the future land use and development of green wedges could be dominated by urbanisation, resulting in the loss of Indigenous vegetation communities. We see the critical role of indigenous vegetation communities in habitat for indigenous flora and fauna; canopy cover that reduces the heat-island impacts of Melbourne, which is a major issue; critical connections between ecosystems by means of biolinks or wildlife corridors; and protection of green natural infrastructure of our waterways."⁶⁰

Mr Thatcher went on to say:

"Basically the aim is that the primacy of land use in the green wedges is rural, but in fact we are seeing urban uses, whether they be schools or places of worship or tourist developments or whatever. We are seeing those as becoming dominant in the planning applications so that there are quite large structures with parking and associated facilities really dominating the landscape. The issue we see with this is that if this is allowed to continue, it is what they call death by 1000 cuts; it is a cumulative process over time. And we just do not see that that is strong enough in the planning process to actually ensure that the rural land uses have primacy, not the urban uses."⁶¹

Patrick Medway, Chief Executive Officer of the Australian Wildlife Society told the Committee:

"I guess we cannot stop development because there is a constant push across Australia for development—cities expanding, country towns expanding and land clearing for farming. Then that is totally changing the environment for all the species, and the ecosystems that incorporated them and that survived for so long have literally been destroyed."⁶²

Mr Medway also said:

"Certainly development around the cities and the countryside has added to the demise of further bushland habitat in which the wildlife survives."⁶³

⁵⁸ <https://www.macrobusiness.com.au/2019/08/vic-government-dramatically-lifts-melbournes-population-projection/>

⁵⁹ Rebecca Cook, Head of Prevention, RSPCA, Public Hearing, Melbourne, 11 March 2021, Transcript of Evidence, p.54

⁶⁰ Allan Thatcher, member of Green Wedges Coalition, Public Hearing, Melbourne, 12 May 2021, Transcript of Evidence, p.31

⁶¹ Ibid. p.31

⁶² Patrick Medway, Honorary Secretary, Chief Executive Officer and Treasurer, Australian Wildlife Society, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.17

⁶³ Ibid., p.17

Brendan Wintle, Professor of Conservation Ecology at Melbourne University warned of further urban expansion in Victoria:

“If we had decent investment in threatened species management here in Victoria, I reckon we would be spending half of that on getting better biodiversity outcomes on farms, so I think there is an immense opportunity, but you are right—we cannot keep giving up more and more. I will add urban expansion and urban development to that list now. It was not a big deal in the late 1800s, but it sure as hell is now because a lot of the most threatened ecosystems, including basalt plains and grasslands, are in places that are subject to urban expansion.”⁶⁴

Barbara Hall who appeared before the Committee on August 10 said:

“The government’s encouragement of population growth goes against the protection of our environment. The devastation around me, in Oakleigh and around the bay, continues, as I said. The species diversity down the coast is in serious decline. For what reasons? I think that needs to be scientifically investigated. Our population makes us uncomfortable as far as traffic goes, and I would want to raise consciousness about it.”⁶⁵

Ms Hall also said:

“so we are watching extinction of animals in Port Phillip Bay. Common crabs are no longer common. If you know where there are lots of crabs around Port Phillip Bay, I would be very interested to know. So we need to regulate ourselves. We need to rewild a goodly part of Victoria for the sake of replenishment, and we need to think about how we bring about a stabilisation of our population.”⁶⁶

Dr Matt Edmunds, Principal Ecologist at Australian Marine Ecology, also spoke of the impact that Melbourne’s rapid rate of population growth in recent decades is having on Port Phillip Bay:

“The recreational fishing for snapper in Port Phillip Bay—it is just going gangbusters with the increasing population. As far as I am aware, there is no traction on ‘Is it too much? How much is too much?’. That is a complete unknown in terms of the recreational space. And we are all the poorer for abandoning the co-management arrangements that were previously in place earlier in this century. I think there were a lot of benefits there and checks and balances. Conservation to fishers to managers were working together. I thought that was a really good model, and there were issues coming out to work together. We do not have that anymore.”⁶⁷

Melbourne’s high rate of population growth and subsequent urban development, has also seriously damaged its native grasslands ecosystems.

Dr Megan O’Shea, spoke about the native grasslands to the Committee:

“So I have got a very long association with that environment and my submission has really been centred around the grasslands in the greater Melbourne area, but a lot of the points that I make are relevant to grasslands across western Victoria.....

“So the main points are around the fact that this ecosystem is in decline. There is estimated to be between 0.5 and 2 per cent of that ecosystem remaining, and this is well below the CAPAD target of 10 per cent for each bioregion. So that is already problematic. The two main causes, from my perspective, associated with the decline of this ecosystem are, by far and away, habitat destruction and habitat clearance, and the other is associated with a lack of management, poor management or inappropriate management regimes. So they are the two main themes associated with this

⁶⁴ Professor Brendan Wintle, University of Melbourne, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.54

⁶⁵ Barbara Hall, Public Hearing, Melbourne, 10 August 2021, Transcript of Evidence, p.25

⁶⁶ Ibid., p.25

⁶⁷ Dr Matt Edmunds, Principal Ecologist at Australian Marine Ecology, Public Hearing, Melbourne, 20 April 2021, Transcript of Evidence, p.7

system. In terms of habitat destruction and clearance, obviously in Melbourne urban development is really the big driver of that.”⁶⁸

Dr Nicholas Aberle, Campaigns Manager of Environment Victoria told the Committee:

“We have finite space and we have finite resources, so the idea of never-ending growth on a finite planet is very challenging. I think in terms of population growth, economic growth, we need to stay within our limits, and from a population perspective urban growth is a challenge. I mean, we see the continued expansion of Melbourne is impacting some very important and sensitive ecosystems.”⁶⁹

Fiona Bell, vice-president of the Protectors of Public Land, said having the construction industry as the backbone of the economy and the resultant need for ever more people to sustain that industry, is not wise:

“Well, I mean the population of the world has gone up enormously since I was born. But I do not think that actively encouraging too many people here is necessarily the right way to go. But also having the construction industry as a backbone of it, it is building more things for the more people you bring in. It is kind of chasing your tail. I think we could be putting more money into developing other sorts of industries and things and perhaps being more careful as to how many people do come in from overseas, because we know it is migration that is causing the population rise, not people in Victoria having terribly many babies. We know that because of the ageing population, of which I am one, there is a need for younger people who are working even to help look after the older people when we are unable to look after ourselves. But I think it probably needs to be a bit more of a gentle rise and a sustainable sort of rise.”⁷⁰

Nina Earl who appeared before the Committee on August 10, also questioned the wisdom of basing the state economy on ever increasing population numbers:

“One problem with the population issue is Victoria has lost a lot of its manufacturing capacity, which once drove the economy, and now we rely on population increase, i.e. the development industry, to drive the economy. That is my reading of it. So one way is if manufacturing is again encouraged, then there would be less reliance on development and population. And let us remember that we are voluntarily bringing people in from overseas to add to our population pressure. Is that really necessary to drive the economy, when we could encourage manufacturing?”⁷¹

Clearly, relying on population growth to drive the construction industry means more demand for timber for housing, which also means more damage to eco systems.

Patrick Medway, Chief Executive Officer and Treasurer, of the Australian Wildlife Society said:

“Systematically the need for timber is such that in almost every state the forestry commission or its equivalent in each state has worked its way through to log, selectively log and in some horrible places clear-fell whole environments, and then we counter that by putting in forestry plantations of pines, any of the pine systems that they like, quick-growing pines. They then clear the native

⁶⁸ Dr Megan O’Shea, Public Hearing, Melbourne, 10 August 2021, Transcript of Evidence, pp.29/30

⁶⁹ Dr Nicholas Aberle, Campaigns Manager, Environment Victoria, Public Hearing, Melbourne 20 April 2021, Transcript of Evidence, p.11

⁷⁰ Fiona Bell, vice-president of the Protectors of Public Land, Public Hearing, Melbourne, 17 June 2021, Transcript of Evidence, p.29

⁷¹ Nina Earl, Public Hearing, Melbourne, 10 August 2021, Transcript of Evidence, p.44

forest to replant. New Zealand does it. Canada does it. We do it, because timber is perceived to be an economic benefit.”⁷²

Regional city growth and the expanding population there, is also posing challenges. Shane Moseley, Chief Executive Officer of the Victorian Planning Authority, said:

“.....there is a looming issue this committee should probably have in its scope, that we are now seeing growth of scale in regional cities—Ballarat, Bendigo and Geelong—where that sort of strategic assessment has not been done and it is already appearing that there is uncertainty. Geelong have identified northern and western growth areas. One of them at least is already in an urban growth zone, which is a holding zone, and now they are finding they have significant biodiversity issues, whereas if an BCS (Biodiversity Conservation Strategy) had been done first, that would have helped that situation.”⁷³

It would appear that regional city growth is not being strategically planned in terms of environmental protection and this growth, which by all reports is significant in the last few years, is having adverse environmental impacts.

Clearly, the majority report did not adequately reflect the evidence of these witnesses: the size of the population relates directly to impact on the natural world. Several times, biodiversity loss was mentioned in the timeframe since European colonisation but that is a timeframe so vague as to have little meaning. The timeframe of this century when Victoria’s population has grown enormously was nowhere adequately considered in the majority report. Nor how the policy of continuing this rapid growth will further damage our fragile environment.

On 7 November 2021, The Age reported that a statement from the Treasurer’s office indicated that the Victorian government is committed to present population and urban growth policies. Those policies, as stated previously, are for population growth rates as much as four times the average population growth rates for other developed countries.⁷⁴

From this, it can be assumed that the continuation of the present alarming rates of ecosystem and biodiversity decline can be accepted in pursuit of the government’s economic policy.

Dr Brian Coffey from the RMIT Centre of Urban Research, as previously quoted elsewhere in the report said:

“For too long we have tried to fit nature into the economy. I would argue that we need to fit the economy into nature.”⁷⁵

Clearly, this emphasis of attempting to fit nature into the economy is set to continue. The Sustainable Australia Party does not believe this is sustainable or wise. The economy must fit into nature. If that is to happen, then growing our population at levels four times the growth rate of the average developed country, can not continue. It is clear from evidence presented to the Committee that high levels of population growth are a big factor in ecosystem and biodiversity decline, and that this evidence was not adequately covered by the majority report.

⁷² Patrick Medway, Chief Executive Officer and Treasurer, Australian Wildlife Society, Public Hearing, Melbourne, 23 February 2021, Transcript of Evidence, p.20

⁷³ Shane Moseley, Chief Executive Officer of the Victorian Planning Authority, Public Hearing, Melbourne, 11 May 2021, Transcript of Evidence, p.11

⁷⁴ <https://www.theage.com.au/national/victoria/big-melbourne-is-coming-back-but-do-we-still-want-it-20211104-p595w7.html?btis>

⁷⁵ Dr Brian Coffey, Centre for Urban Research, RMIT, Public Hearing, Melbourne, 21 April 2021, Transcript of Evidence, p.30

This minority report has presented the evidence of multiple witnesses that growing populations and human impacts are adverse to the wellbeing of ecosystems biodiversity levels, and is contributing to their significant decline. And under current policies, will continue to do so.

Chapter 4 – Timber Industry/Native Vegetation Removal Permits

One area this minority report would like to highlight is the international dimension in regards to Victoria's logging industry and specifically the free trade agreements to which Victoria is subject to.

Tom Crook, Facilitator and Programs Manager, at the East Gippsland Conservation Management Network, gave the following evidence to the Committee:

"we are competing with countries who have invested more heavily in technology to make all sorts of dimensions of woods—laminated veneers and glulam and all those technologies. We are competing with them, and with free trade agreements that will not let us impose tariffs to provide a market incentive to buy local products, then it is very difficult for our industry to compete without the revenue from the pulp and fibre."⁷⁶

Mr Crook said that while our timber industry is supposed to be a sawlog industry, which leaves residual timber standing, a tariff free regime on international timber imports does not make this possible. He said it is necessary to clear big areas of forest in Victoria, not only for sawlogs but also for residual timber for pulp and fibre. This is so the industry can be economically viable and competitive with these international producers under Australia's free trade agreements. Therefore, a selective harvest regime, he said, is not viable for our Victorian timber industry. Our unprotected industry can not compete alone on the revenue from sawlogs, it also has to destroy a lot more forest to harvest residual trees for pulp and fibre.

This is a little known aspect of our timber industry which needs to be investigated and the role of Australia's free trade agreements in ecosystem and biodiversity decline needs to be reviewed and clarified. It would appear from the evidence of Mr Crook that our free trade agreements are causing negative impacts on Victoria's ecosystems and biodiversity.

Exemptions to Native Vegetation Removal Permits

There is ample anecdotal evidence that developers are able to remove all the native vegetation on suburban blocks prior to development. Sharon Terry, Manager of Environment at Shepparton Council, expressed concerns about the exemptions available for the removal of native vegetation:

"Another exemption of concern for us is the 4,000 metre square exemption for native vegetation removal. So on a development - urban residential development space – if you are dividing up land of 4,000 metres square or less, you do not require an exemption to – you do not require a permit to remove native vegetation. So there is an exemption that applies there. This is a really significant area of land, it is around an acre. It is a big bit of land to put a house and a shed and a driveway and design can allow for those trees to remain but because that exemption applies, we are losing significantly large trees. And these trees are our habitat trees, which are crucial for biodiversity in our area."⁷⁷

⁷⁶ Tom Crook, Facilitator and Programs Manager, East Gippsland Conservation Management Network, Public Hearing. Melbourne. 26 August 2021, Transcript of Evidence, p.20

⁷⁷ Sharon Terry, Manager Environment, Greater Shepparton City Council, Public Hearing, Shepparton, 28 April 2021, Transcript of Evidence, p.24

The Sustainable Australia Party agrees with Ms Terry that an area of land which is 4,000 square metres in size, should require a permit before native vegetation can be cleared. The area before someone clearing land is exempt from applying for a native vegetation removal permit, should be far smaller than 4000 square metres. We are in a biodiversity emergency and this needs to be reflected in the state's permit system for land clearing.

Conclusion

The Sustainable Australia Party believes the majority report had much good to say and examined the evidence from many witnesses and submissions.

This minority report has been drawn up to reflect the view of the Sustainable Australia Party, having considered all the evidence, that Victoria is in a biodiversity emergency. And that this emergency needs to be addressed in a more immediate and comprehensive fashion, in terms of funding, independent regulation, and enhanced environmental law enforcement. And any fair minded consideration of this biodiversity emergency, must take into account that our rapidly growing population has been and will continue to be a significant contributory factor to this biodiversity emergency.

Minority Report - Samantha Ratnam MLC

Inquiry into ecosystem decline in Victoria

Introduction

The health of our environment underpins the health, wellbeing and prosperity of all Victorians.

The Planning and Environment Committee's inquiry into Ecosystem Decline in Victoria was proposed by the Victorian Greens in October 2019 in response to the 2018 Victorian State of the Environment report. This report found that Victoria's biodiversity is largely poor and not improving.

A 2021 audit by the Victorian Auditor General's Office found that programs run by the Victorian Government to address biodiversity loss and restore threatened species can't demonstrate if they are having any impact. This audit highlighted that funding for biodiversity and threatened species is inadequate and that the Victorian Government is failing to utilise existing tools in legislation that could be used to protect biodiversity, habitat and threatened species.

This inquiry has been one of the biggest in the history of the Victorian Parliament and has shone a light on the scale of biodiversity loss and the urgent need to address this crisis.

The importance of this topic was demonstrated by the breadth and depth of interest in this inquiry from members of the public, to local community groups to scientists and experts. It was unfortunate that because of the COVID-19 pandemic, the inquiry was largely unable to undertake regional hearings in person or site visits.

I want to thank all those individuals and organisations who made submissions to the inquiry and particularly the witnesses who appeared at inquiry hearings. The wealth of knowledge, information, expertise, local knowledge and passion that has been brought to this inquiry has been invaluable.

The majority report is largely a fair representation of the evidence presented. However, there are several shortcomings that I wish to expand on in this minority report. These include:

- The report downplays the role of the State Government as a direct driver of ecosystem decline. This role needs to be explicitly acknowledged and addressed.
- The report doesn't adequately reflect the harm caused by native forest logging and doesn't include recommendations to address this harm.
- The report lacks ambition in the recommendations to restore Victoria's 2000 threatened species
- The report doesn't reflect the evidence of harm that can occur to biodiversity and threatened species due to poorly managed planned burning activities

In the following sections, I will outline findings and recommendations that I moved to be included in the majority report but were not supported by the committee as detailed in the appendices of the committee's deliberations on the report.

Chapter 5 - Climate change

Chapter 5 deals with climate change and ecosystem decline. It finds that climate change is a major driver of ecosystem decline. It also finds that climate change is almost exclusively driven by burning fossil fuels for energy. However, a weakness of the report is that it doesn't include the calls from many submitters and witnesses that Victoria stop approving new fossil fuel projects and transition as

quickly as possible away from all use of coal, oil and gas. Victoria's timeline of 45-50% emissions reduction by 2030, and net zero emissions by 2050, does not respond to what scientists say is necessary. To do our share in limiting global warming to 1.5 degrees, Victoria should be aiming for a 75% reduction in emissions by 2030, net zero by 2035 and complete coal phase out by 2030. These are reflected in additional recommendations. Therefore, the majority report should have been stronger and included a recommendation that the Victorian Government immediately cease all new fossil fuel approvals, plan to phase out the state's three coal power stations by 2030 and set emissions reductions targets of 75% by 2030 and net zero emissions by 2035.

Chapter 6 - Habitat loss and fragmentation

Chapter 6 deals with the impact of habitat loss and fragmentation on the decline of biodiversity in Victoria. While the information about what drives continued habitat loss in Victoria was largely comprehensive, this information was not reflected in a finding. The majority report should have included the following additional finding:

Additional finding: Habitat loss in Victoria is caused by agricultural uses, development and urban expansion, for example the construction of houses, roads and other major infrastructure, native timber harvesting, resource extraction, degradation related to invasive pest species, erosion, climate change and bushfires.

The report provided detailed background on the failure of the Victorian Government to deliver the Western Grassland and Eucalypt Woodland reserves by 2020 as required. This failure was also subject to a VAGO audit in 2020. Grasslands are Victoria's most threatened ecosystem, with just 3-5% remaining. Further, what is left is rapidly degrading. Therefore the recommendation related to delivery of these reserves should have been strengthened from "consider funding" to "fund" as follows:

Amended recommendation: That the Victorian Government fund the immediate purchase or leasing of remnant high quality grasslands within the proposed Western Grasslands Reserve and the 36 reserves proposed by the Melbourne Strategic Assessment within Melbourne's urban growth boundary. These areas should be urgently acquired to facilitate ecologically sound management to conserve and restore biodiversity values.

This chapter also deals with the impact of native forest logging in Victoria. The inquiry heard extensive evidence, both in submissions and from witnesses, that native forest logging is driving ecosystem and threatened species decline. For example, evidence provided by Professor David Lindenmeyer included the following:

"There is work that indicates in Australia—published by James Watson—that over 70 species are at risk from logging operations. There is also a significant effect of logging in the wet forest ecosystems in Victoria. It undermines the ecological integrity of mountain ash ecosystems, alpine ash ecosystems. Logging in East Gippsland has fundamentally changed the composition of the forest, and so that it is dominated in those lowland areas by tree species which are not edible for animals such as koalas and greater gliders. So the evidence is clear, and it is compelling to indicate that logging has significantly altered ecosystems and has contributed to the decline of species." Transcript, page 42.

In addition, Environment Justice Australia provided the following evidence:

“Unsustainable extraction of natural resources will continue to drive ecosystem decline in Victoria and cannot be addressed by simply improving current environmental protection regulations or their implementation. In the case of native timber harvesting in Victoria, for example, the appropriate policy response is to bring forward the cessation of harvesting, particularly following this past summer’s catastrophic fires.” Environment Justice Australia, Submission Page 25

The lack of a finding about native forest logging’s ecological impact or any recommendation to accelerate Victoria’s transition out of native forest logging is a significant weakness of the majority report. The finding around logging that “Victoria has the balance right” may reflect the political reality for the Victoria Labor party but does not reflect the ecological reality. In 2021, as climate change, water shortages and the extinction crisis accelerate, the protection and restoration of remaining natural forests is absolutely vital. Therefore the following finding and recommendation should have been included in the majority report:

Additional Finding: Native forest logging is a significant driver of habitat loss, ecosystem decline and loss of forest dependent threatened species in Victoria. Native forest logging is contributing to ecosystem decline by fragmenting forest ecosystems and reducing habitat, reducing diversity and habitat values such as hollow-bearing trees, causing large scale soil disturbance, erosion and weeds, increasing fire frequency and severity and negatively impacting water quality.

Additional Recommendation: In light of the catastrophic impacts of the 2019/20 bushfires, the Victorian Government should bring forward the Victorian Forestry Plan to cease native forest logging in Victoria by 2024.

Chapter 7 - Threatened species

Chapter 7 of the report focuses on threatened species in Victoria. Victoria has 2000 threatened species and ecological communities that represents an increase from around 700 just 5 years ago.

This chapter lacked ambition in several regards. It downplayed the need for additional funding and resources for developing action plans for threatened species and doesn’t adequately state that new funding is needed to improve threatened species recovery. The majority report should have included the following amended findings and recommendations:

Amended finding: Only a small proportion of Action Statements for threatened species and communities and potentially threatening processes are in place, despite these being a mandatory requirement under the Flora and Fauna Guarantee Act 1988 (Vic). Further, even where action statements are in place, they are rarely implemented, monitored or reported on. Lack of adequate funding is a key reason for this.

Amended recommendation: That the Victorian Government ensure, as a matter of urgency, that all threatened species and communities and potentially threatening processes listed under the Flora and Fauna Guarantee Act 1988 (Vic) have Action Statements in place within one year and that significant new funding is allocated to their implementation. An action plan which identifies priority Action Statements should be developed to facilitate this process.

Amended recommendation: That the Victorian Government allocate significant new resources to administer and fully implement the Flora and Fauna Guarantee (Amendment) Act 2019 (Vic), including communicating the Act’s changes to relevant stakeholders and the broader community.

This inquiry also highlighted that Victoria's current policy approach to threatened species conservation, largely occurring within the framework of Biodiversity 2037, prioritises landscape interventions over programs focused on individual species restoration. Witnesses to the inquiry highlighted that while both approaches are vital, the balance in Victoria is too skewed towards landscape approaches. The report and evidence examine the model of the Saving our Species program currently operating in NSW which has delivered transparent threatened species recovery programs. The majority report should have included the following additional findings and recommendations to address these issues:

Additional finding: The NSW Saving our Species program is well regarded as an example of effective policy around threatened species. Key attributes of the program include focus on individual species needs, publicly accessible information and clear monitoring and reporting on performance.

Amended Finding: Both landscape-scale and individual species approaches are important in threatened species management to ensure the best outcomes for species. However, Victoria's approach under Biodiversity 2037 favours landscape scale interventions. It involves some, but limited, individual species interventions.

Amended Recommendation: That in delivering Biodiversity 2037, the Victorian Government reviews and incorporates features of New South Wales' Saving our Species program to bolster Victoria's individual species conservation efforts.

Chapter 8 - Land management

Fire management is a key issue discussed in the land management chapter in the report. Witnesses gave evidence that planned burning activities by Government Agencies can have a significant impact on biodiversity and threatened species where they are not properly planned or managed. However this evidence is not reflected in the report. Examples of this omission of evidence include evidence from BirdLife Australia that highlighted that planned burning activities can have an adverse impact on ecosystems and threatened species. They stated that "and whilst it is great that the Victorian government is working with BirdLife on many of those recovery projects for those species, the logging of native forests and poorly planned prescribed burns are undermining some of that great work. Just for an example, BirdLife recently stepped in to prevent planned burns of she-oak refugees in East Gippsland, which are critical for the survival of glossy blacks, which were impacted by the fires."

Further, evidence from Friends of Bats and Habitat Gippsland highlighted the ecological risks of planned burning. They stated that "Gippsland accounts for the largest area of planned burns, with over 800 000 hectares or 39 per cent of the total area. We have grave concerns that precious unburnt forest is being damaged by planned burns, by roadside clearing for planned burns and by logging. The cabbage tree palms flora reserve is the site of a 2000-hectare planned burn. This is a refuge for threatened species, and it is an old, historic flying fox colony."

This and other similar evidence should have been reflected in the majority report and so too a finding that responds to that strong evidence as follows:

Additional finding: Poorly managed planned burning, particularly where on-ground biodiversity assessments have not been conducted, can have significant negative impacts for native species.