

Interdisciplinary Conservation Science Research Group

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School of Global Urban and Social Studies, RMIT University

ICSRG submission on Victoria's new biodiversity strategy: Protecting Victoria's Environment – Biodiversity 2036

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Coordinating authors:

Alex Kusmanoff (alex.kusmanoff@rmit.edu.au)

Matthew Selinske (matthew.selinske@rmit.edu.au)

Contributing authors:

Dr Luis Mata, Associate Professor Sarah Bekessy, Dr Ascelin Gordon, Dr Georgia Garrard, Helen Corney, Anna Backstrom, Dr Nooshin Toorabi, Mat Hardy, Florence Damiens,

The Interdisciplinary Conservation Science Research Group is a team of academic researchers based within the School of Global, Urban and Social Studies at RMIT University. Our research focuses on understanding the interaction between society and our environment. We recognise that managing biodiversity demands a multidisciplinary approach that reconciles ecological, social and economic concerns.

1. General Comments

We welcome the opportunity to provide a submission on the consultation draft of Victoria's new biodiversity strategy: *Protecting Victoria's Environment – Biodiversity 2036* (the Strategy). The Strategy is to be commended for its ambition in the face of continuing biodiversity loss in Victoria, as well as for recognising the historic and contemporary actions that have induced, and which now perpetuate this loss. In this submission we offer several points on matters already contemplated by the Strategy, as well as some additional considerations.

While the Strategy unavoidably lacks specificity, we applaud the scope with which it intends to confront the challenge of reversing biodiversity loss in Victoria. However, we urge use of objectives (so far as possible) that are specific, measurable, achievable, relevant, and time bound ('SMART'). This includes a need for clear links between priority actions and the objectives and targets they are designed to meet. Specific targets need to be articulated, with internationally agreed targets used as the minimum standard (e.g. protected area (Aichi) targets¹). It is also important that costings to achieve these targets be undertaken during the development of the Strategy so that government can allocate sufficient resources to implement a strong, sound and achievable Strategy.

¹ Maxwell, S.L., Milner-Gulland, E.J., Jones, J.P., Knight, A.T., Bunnefeld, N., Nuno, A., Bal, P., Earle, S., Watson, J.E. and Rhodes, J.R., 2015. Being smart about SMART environmental targets. *Science*, 347(6226), pp.1075-1076.

A key element in the defining of objectives is also to assign responsibility for them. The Strategy rightly identifies the need for engagement and partnerships with both the public and private sectors, but it should be made clear that the taking of measures to ensure persistence of threatened flora and fauna is ultimately the responsibility of the Victorian Government.

Given that the Strategy is for *biodiversity protection*, we feel that this could better be reflected in its structure. For example, the primary way to protect biodiversity is to protect the environment. There are a number of other elements that will help to advance this, including actions aimed at increasing the public's appreciation for the value of nature. The Strategy appears to contemplate how to leverage some of these supporting elements, yet it does not seem to appreciate that the primary objective is the protection of the environment, as it places this section somewhere towards the back of the document, while the public engagement section is at the front.

Recommendation 1 – *The Strategy should use SMART objectives that link actions and targets, with internationally agreed targets as the minimum standard.*

Recommendation 2 – *The Strategy should reverse the order of goals 1 and 2 to reflect the main purpose of the document.*

Recommendation 3 – *The Victorian Government should make it explicit what its roles and responsibilities are in protecting Victoria's biodiversity and convey this to the public.*

2. Saving our most threatened species and ecosystems from extinction

The Strategy notes the increasing pressure that many of Victoria's threatened species and ecosystems face as a result of habitat loss and degradation, invasive plants and animals, and changing climate and fire regimes. We urge the government to pursue an ambitious approach to species protection. Rather than merely 'managing' their inevitable decline through allocation of insufficient resources, the government should instead obtain an understanding of the cost to reverse the declines of our most threatened species, and allocate appropriate funding so as to lower the vulnerability status of every threatened Victorian species. No species should go extinct under your watch and no common species should become threatened!

The language and content of the Strategy should reflect this aspiration and refrain from defeatist language (e.g. "We know we cannot save everything because the impacts of climate change are upon us"). Key elements to reverse declines will be the allocation of sufficient resources to identify and map Critical Habitat for all threatened species, understanding how to best to deploy the resources of the Victorian Government to save our threatened species, and the development of specific plans to improve the threat status of endangered species. The Victorian Government should pursue the ambitious target of improving the threat status of all endangered species listed under the Flora and Fauna Guarantee Act by 2050.

Recommendation 4 – *The Victorian Government should pursue an ambitious target of improving the threat status of all endangered species listed under the Flora and Fauna Guarantee Act by 2050.*

3. A new integrated Vegetation Management and Nature Conservation Act

The link between threatened species persistence and native vegetation is well understood, however, biodiversity conservation and vegetation management are handled under multiple, often-conflicting legislation and policy instruments. As noted in the Strategy, the objectives of the *Flora and Fauna Guarantee Act* and the previous biodiversity strategy have not been met; threatened species are poorly served by the disparate instruments that ostensibly offer them protection.

We believe that there is a need for flagship legislation that protects Victoria's threatened species and their habitats, and ensures the protection of the multiple additional ecosystem services delivered by native vegetation. This Act would subsume and expand current vegetation management and integrate it properly with threatened species regulations and recovery plans. This new Act should be streamlined to avoid duplication and redundancy with the EPBC Act, but also to actively support the objectives of the EPBC Act where it applies to Victorian species. This should include appropriate allocation of resources to administer and enforce the Act, and penalties and fines levied should be commensurate with the environmental impact and sufficient to discourage illegal clearing.

Recommendation 5 – *Enact flagship legislation that protects Victoria's threatened species and their habitats, and ensures the protection of the multiple additional ecosystem services delivered by native vegetation.*

Recommendation 6 – *Provide regulatory powers necessary to properly to enforce compliance with Act on all tenures, including strong protection of critical habitats for listed species.*

4. Engaging all Victorians with our unique biodiversity

The future of Victoria's biodiversity will hinge, in part, on the actions and convictions of all Victorians. With over ninety per cent of Victorians living in urban areas, engagement with nature must focus at least in part on actions in cities. Interacting with nature in biodiverse-rich urban green spaces provides urban residents with numerous health and wellbeing benefits, and these green spaces have the added benefit of improving the resilience of cities to climate change. Urban areas in Victoria contain important biodiversity and are inhabited by more threatened species than nonurban areas (Ives et al. 2016). In urban environments, the challenge of planning new housing developments that avoid threatening biodiversity hotspots will require substantial shifts in planning policy and regulation. These policies must go beyond just green infrastructure as recommended in the Strategy and move towards been explicitly linked with threatened species through biodiversity sensitive urban design².

The potential for engaging indigenous Victorians in the planning, design and implementation of biodiverse urban greening is substantial. In practice, this could mean working with indigenous groups to incorporate traditional knowledge in urban plantings and management, using culturally significant species, such as traditional foods and medicines, reflecting indigenous understanding of landscape and seasons in urban design, and developing programs such as 'caring for country' and urban indigenous ranger programs to engage indigenous populations in the management of urban green spaces.

It is also important that the Strategy includes objectives around empowering Victorians to contribute to biodiversity persistence, rather than assuming that the passive enjoyment of nature will automatically translate into positive environmental attitudes and values. Enjoyment of biodiversity coupled with an increased understanding of native species and habitats can help build community stewardship, yet research shows that this does not necessarily translate to behaviours that positively impact biodiversity. Investment should be directed at research that investigates how to create lasting behavioural changes. Sustained and direct outreach has been demonstrated as an effective tool for this purpose, and thus a (re)investment in both urban and rural outreach (e.g. extension officers and on the ground interpreters) should be a priority. Investment in school education programs is another promising avenue to pursue.

Recommendation 7 – *Biodiversity conservation should be 'mainstreamed' into planning policy documents such as Plan Melbourne.*

² <http://www.theage.com.au/victoria/city-sprawl-or-skyscraper-tall-why-cant-melbourne-do-urban-design-better-20151010-gk65r7.html>

Recommendation 8 – Develop and trial biodiversity sensitive urban design best practices in Victoria’s metropolitan areas through collaborations with innovative developers.

Recommendation 9 – Develop and trial strategic biodiverse urban greening practices that optimise health and wellbeing benefits while providing habitat for threatened species.

Recommendation 10 – Engage Indigenous groups in biodiverse urban greening and management efforts.

Recommendation 11 – Investment in both urban and rural outreach (e.g. extension officers, on the ground interpreters and school education programs) should be a priority.

5. Vegetation clearing, offsets and exemptions

Over 80% of private lands within the State of Victoria have been cleared, making Victoria the most cleared state in Australia. This highlights the importance of ensuring that all remaining native vegetation be properly protected from clearing.

We recently provided a submission on the Review of Victoria’s Native Vegetation Clearing Regulations, and note that biodiversity offsetting is intended to remain a cornerstone strategy for achieving ‘no-net-loss’ of biodiversity. This is problematic for a number of reasons. Firstly, there is growing evidence that offsetting is incapable of delivering no-net-loss, other than in very limited circumstances.³ Indeed Figure 2 of the draft Strategy identifies that native vegetation continues to be lost each year at a greater rate than it is ‘gained’, indicating that this policy is already failing to achieve the no-net-loss objective.

Secondly, while urban areas harbour a disproportionately high number of threatened plant and animal species,⁴ the current native vegetation clearing regulations do not adequately consider these environments. As a result, biodiversity offsetting will not achieve the no-net-loss objective in cities and simultaneously rob us of the best opportunity to engage the general public with nature.⁵

We understand that in some exceptional cases vegetation clearing is necessary and in those cases offsetting is preferable to nothing. Yet, clearing should only be permitted where it is absolutely unavoidable. The Strategy would do well to emphasise the ‘precautionary principle’, which in this context, requires that native vegetation be protected and clearing avoided, as far as possible prior to consideration of other options (i.e. clearing and offsetting). Giving greater emphasis to the precautionary principle would better communicate that the role of offsets is to help achieve compensate for loss of biodiversity where clearing cannot be avoided; *offsets should not be used simply as biodiversity compensation wherever vegetation clearing is desired.*

³ Bekessy, S.A., Wintle, B.A., Lindenmayer, D.B., McCarthy, M.A., Colyvan, M., Burgman, M.A., Possingham, H.P., 2010, 'The biodiversity bank cannot be a lending bank', *Conservation Letters*; Curran, M., Hellweg, S., Beck, J., 2014, 'Is there any empirical support for biodiversity offset policy?', *Ecological Applications*; Gibbons, P, Evans, M, Maron, M et al 2015, 'A loss-gain calculator for biodiversity offsets and the circumstances in which no net loss is feasible', *Conservation Letters*; Gordon, A., Bull, J.W., Wilcox, C., Maron, M., 2015, 'FORUM: Perverse incentives risk undermining biodiversity offset policies', *Journal of Applied Ecology*; Maron, M., Bull, J.W., Evans, M.C., Gordon, A., 2015, 'Locking in loss: Baselines of decline in Australian biodiversity offset policies', *Biological Conservation*; Quétier, F., Regnery, B., Levrel, H., 2014, 'No net loss of biodiversity or paper offsets? A critical review of the French no net loss policy', *Environmental Science & Policy*.; Department of Sustainability and Environment, 2008, *Native Vegetation Net Gain Accounting: first approximation report*, State of Victoria, Department of Sustainability and Environment, East Melbourne

⁴ Ives CI, Lentini PE, Threlfall CG, Ikin K, Shanahan DF, Garrard GE, Bekessy SA, Fuller RA, Mumaw L, Rayner L, Rowe R, Valentine LE, Kendal D, 2016, Cities are hotspots for threatened species. *Global Ecology and Biodiversity*, 25: 117-126.

⁵ Miller JR., 2005. Biodiversity conservation and the extinction of experience. *Trends in Ecology & Evolution*, 20(8), 430-434.

In 2002, recognising the degree of historical land clearance in Victoria, the Victorian Government created the Native Vegetation Management Framework, one of the first net gain biodiversity-offset policies in the world, with a stated goal for "reversal across the entire landscape of long-term decline...of native vegetation". Despite the strong aspirations, subsequent governments have weakened the Framework. We welcome the renewed goal of net vegetation gain and the "rebuilding of natural capital". To ensure the best chance of achieving net biodiversity gain, a far more rigorous approach to the mitigation hierarchy needs to be designed and implemented. Ideally this would be undertaken by a taskforce chaired by an independent scientist, tasked to design a scientifically rigorous net-gain strategy.

The Strategy (at page 15) identifies the biggest components of the annual loss of native vegetation occurs as a result of clearing that is exempt from needing a permit across private land (most) and public land (second most). As such, we are of the view that the Strategy should include a review of the current exemptions, with a view to maintaining them only where they are:

- necessary for public safety; or
- necessary for some other purpose and subject to an alternative approval process that adequately considers biodiversity impacts.

In addition, because many of the exemptions relate to work undertaken by public authorities, all Victorian Government agencies should commit to become 'no net loss agencies', providing an example of world-class land management to which private landholders might aspire. Each agency should be fully accountable for their own vegetation losses, including best-practice avoidance, mitigation and offsetting practices.

Recommendation 12 – Consider how best to account for and protect biodiversity in *urban environments so as to ensure environmental justice for all Victorians such that they have the opportunity to engage with native vegetation on a regular basis.*

Recommendation 13 – *Give greater prominence to the precautionary principle in biodiversity protection in general, and specifically with respect to protecting remaining native vegetation.*

Recommendation 14 – *Establish a net-gain taskforce, chaired by an independent scientist, to design a scientifically rigorous net-gain strategy.*

Recommendation 15 – *Current vegetation clearing exemptions should be reviewed, with a view to maintain them only where: i) necessary for public safety; or ii) where necessary for some other purpose and also subject to an alternative approval process that adequately considers biodiversity impacts.*

Recommendation 16 – *All Victorian Government agencies should commit to become 'no net loss agencies', providing an example of world-class land management.*

6. Biodiversity information tools used in decision making and offset rules

The strategic biodiversity score map and the habitat importance maps for the 1,750 rare or threatened species' habitats are based on predictive modelling. Most records used in the models come from public land, with very few records on private land. The significant and systematic environmental differences between public and private land (e.g. private land is much more likely be in agriculturally productive areas), means the model predictions for habitat are likely to be more accurate for public land than private land. Despite this, the modelling is used to determine biodiversity values on private land, where they have the least predictive accuracy. In addition, this over-reliance on public land records results in the allocation of higher strategic

biodiversity scores on public land. This will tend to drive offsets to be implemented on public land, rather than private land and further exacerbating the issue of threatened species habitat loss on private land.

Given the acknowledged limitations to the modelled data, we suggest consideration be given to re-instating on-site assessments for determining native vegetation value. This would ideally be a permanent measure, but should at least persist until such time as the modelled data is demonstrably fit for purpose. This includes ensuring that the predictive accuracy of these models is clearly understood and accounted for, with the limitations factored into the clearing regulations.

Evaluating the limitations could be achieved by randomly selecting a proportion of clearing applications (and associated offsets) and having detailed on-site assessments undertaken to test the predictions of the modelled habitat. Over time this would allow a clear picture of what biodiversity values might be being missed, especially on private land. Once this is understood, this can then be accounted for in the offset requirements, for example by using an offset multiplier. Ongoing improvements to the modeled habitat maps may be evaluated using this approach and may gain sufficient accuracy to be appropriately used as a stand-alone tool for assessing low risk pathway applications.

Recommendation 17 – *Evaluate the accuracy of the habitat modelling for private and public land to understand how much important habitat may be being lost as a result of inaccuracies in the habitat predictions on private land. Particular focus should be given to the performance of the modelled habitat on private land.*

Recommendation 18 — *On-site vegetation assessments should be re-instated for low risk pathway applications permanently, or until such time as the modelled vegetation maps are of sufficient quality to be fit for purpose.*