

Victorian State of the Environment 2023 Report
Report Recommendations



Recommendations in summary

Table 4 provides a summary of the 15 recommendations made in this report. The summary describes each recommendation in full, as well as:

- the theme to which the recommendation relates to
- the challenges the recommendation aims to overcome
- its relationship to the SoE 2018 Report recommendations, whereby:
 - 'expansion' refers to recommendations that build upon SoE 2018 Report recommendations that have been addressed by the Victorian Government
 - 'reiteration' refers to recommendations from the SoE 2018 Report that have not been fully addressed by the Victorian Government and therefore have been repeated in this report
 - 'new' refers to recommendations that have been put forward for the first time in this report
- how the recommendations align with the UN SDG targets and goals.

Table 4: SoE 2023 recommendations, challenges and UN SDG targets for future reporting, by theme.⁸⁴

Lead theme: Cultural landscape health and management	
Recommendation 1	That the Victorian Government resources and supports Victoria's Traditional Owners to implement a program of on-ground assessment and develop contemporary bio-cultural indicators to restore the knowledge system of Traditional Owners in Victoria consistent with policy and legislative requirements. Initially, the Victorian Government would resource and support the Eastern Maar and Wadawurrung Traditional Owners to deliver the legislative obligations of the <i>Great Ocean Road and Environs Protection Act 2020</i> and inform future consultations on bio-cultural indicators with other Traditional Owners in Victoria.
Recommendation category	Expansion
Challenges this recommendation addresses	
<p>Aboriginal existence and identity are underpinned by healthy cultural landscapes. Along with water and other natural resources, the land that is now the State of Victoria was managed for thousands of years according to traditional laws, customs and practices. Shaped by a sustainable-use regime and managed with a deep understanding of natural systems and an embedded lore and culture, Country (land, water, animals, plants, people, spirits and customs) has provided for the material, cultural and spiritual needs of thousands of generations of Aboriginal people.⁸⁵</p> <p>Reporting on Victoria's diverse and valuable ecosystems must acknowledge, and learn from, the long history of Traditional Owner knowledge that has underpinned care for these cultural landscapes. It must reflect the aspirations that Victoria's Traditional Owners have shared with the Victorian Government:</p> <p>Restoring the knowledge system must reflect the fundamental principle that traditional knowledge is owned by Traditional Owners. Traditional Owners as custodians of knowledge and practice continue to decide how consent to share knowledge is given.</p> <p>We need resources for data collection, then will give the state the management objectives. The State and other [land management organisations] need to support our projects, not us supplementing theirs.⁸⁶</p>	
UN SDG targets alignment	1.5, 4.7, 11.4

84. More detail regarding the alignment of the SoE 2023 recommendations with the UN SDG targets can be found within Appendix B of this report.

85. Parks Victoria (PV) 2018, 'Managing Country Together', Melbourne, Victoria, <https://www.parks.vic.gov.au/managing-country-together> Accessed on 9 June 2023.

86. Federation of Victorian Traditional Owner Corporations 2021, 'The Victorian Traditional Owner Cultural Landscapes Strategy', Melbourne, Victoria, https://fvtoc.com.au/wp-content/uploads/2023/03/1258_FVTOC_CulturalStrategy_web.pdf Accessed on 9 June 2023.

Lead theme:	Climate change - Impacts
--------------------	---------------------------------

Recommendation 2	That the Victorian Government downscales and applies the latest climate change modelling and scenarios for Victoria, consistent with the Intergovernmental Panel on Climate Change Sixth Assessment Report. The updated modelling and scenarios will provide a critical foundation to develop a climate hazards decision support tool for Victoria to improve decision-making in adapting to the impacts of climate change.
-------------------------	---

Recommendation category	Expansion
--------------------------------	-----------

Challenges this recommendation addresses

The assessments for the 'Climate projections' indicators in this report are generally based on results from the Victorian Climate Projections project (VCP19) – a collaboration between DELWP and CSIRO that produced new local-scale climate projections for the entire state of Victoria for medium and high-emissions pathways. Since then, a new generation of global climate models have been developed as part of CMIP6, and were featured in the IPCC Sixth Assessment Report, which included a new set of emission scenarios. The new modelling and scenarios are yet to be downscaled and applied for Victoria.

UN SDG targets alignment	2.4, 6.5, 9.5, 13.2, 13.3
---------------------------------	---------------------------

Lead theme:	Air
--------------------	------------

Recommendation 3	That EPA Victoria develops the IT infrastructure and data analytics capacity to interface air-quality sensor monitoring data – including citizen science monitoring data – with EPA Victoria's existing network of standard air monitoring sites. The complete suite of air monitoring data would interface with a regularly updated air pollution inventory, to be provided as an input for air-quality modelling.
-------------------------	---

Recommendation category	Reiteration
--------------------------------	-------------

Challenges this recommendation addresses

Data from EPA Victoria's regional network of sensor monitoring sites are lower quality than the standard monitoring sensors. Data from these lower quality sensors are therefore, not included in this SoE 2023 Report.

EPA Victoria's air pollution inventory has proven to be a very useful tool; however, it has not been updated since the base year of 2016.

Align with UN SDG targets	3.9, 9.5, 11.6
----------------------------------	----------------

Recommendation 4	That the Victorian Government leads the establishment of a contemporary pollen-monitoring network that incorporates forecasting and publishes monitoring information and pollen forecasts in real time, to provide the community with timely and accessible information on pollen levels.
-------------------------	---

Recommendation category	Reiteration
--------------------------------	-------------

Challenges this recommendation addresses

Victorians are currently unable to access information about real-time pollen levels, except for people in inner Melbourne who can pay for a subscription to the Melbourne Pollen app developed and maintained by the University of Melbourne. Pollen forecasts are currently provided for each day, but details such as what time during the day that peak pollen levels will occur are not provided.

UN SDG targets alignment	3.9, 9.5, 11.6
---------------------------------	----------------

Lead theme:	Biodiversity
--------------------	---------------------

Recommendation 5	That the Victorian Government (i) establishes independent biennial reporting to the Parliament of Victoria on the Biodiversity 2037 targets, (ii) oversees an integrated and comprehensive biodiversity monitoring program for the state with an emphasis on arresting threatened species decline, and (iii) evaluates the implementation and outcomes of Biodiversity 2037 and the efficiency of investment in threatened species.
-------------------------	---

Recommendation category	Expansion
--------------------------------	-----------

Challenges this recommendation addresses

In its 2020 submission to the Parliament of Victoria Inquiry into Ecosystem Decline in Victoria, DELWP reported that one-quarter to one-third of 'Victoria's terrestrial plants, birds, reptiles, amphibians and mammals, along with numerous invertebrates and ecological communities, are considered threatened with extinction.' This fate has already occurred for 18 mammal, two bird, one snake, three freshwater fish, six invertebrate and 51 plant species since European settlement.

The DELWP submission states, 'The longer-term outlook for many threatened species and habitats that rely on Victoria's approximately eight million hectare public land estate for their conservation is poor,' and that protecting the state's biodiversity, habitats and public lands estate will 'require biodiversity conservation being given greater consideration in decisions involving competing public land uses as well as increased, better targeted and coordinated investment to manage key threats within a tenure-blind ecosystem-based framework.'

UN SDG targets alignment	2.5, 4.7, 6.3, 6.4, 6.5, 6.6, 6.b, 11.4, 11.7, 12.2, 12.8, 13.1, 13.3, 14.4, 15.1, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 16.6, 17.14, 17.17
---------------------------------	---

Recommendation 6	That the Victorian Government establishes multiple safe havens in Victoria to protect and restore critical habitats for nature and wildlife. These will be world-class refuges, free from feral predators and herbivores. They will be conservation flagships for threatened species that will demonstrate the best in network governance, where the government's environmental and emergency management bodies, Traditional Owners, scientists and all Victorians valuing nature can work together to protect habitats and species.
-------------------------	--

Recommendation category	New
--------------------------------	-----

Challenges this recommendation addresses

Ecosystems are transforming under climate change, with substantial shifts in ecological processes (e.g fire, landscape connectivity) and important ecosystem services (e.g. pollination, water filtration) occurring at unprecedented rates.⁸⁷ The evidence in this report demonstrates that biodiversity decline is continuing in Victoria despite the ongoing commitment and effort from the Victorian Government, community groups, scientists and environmental managers.

UN SDG targets alignment	15.5, 15.8
---------------------------------	------------

Recommendation 7	That the Victorian Government commissions the Victorian Environmental Assessment Council to investigate and recommend additions to the protected area network to support the achievement of Priority 18 in Biodiversity 2037, which is to maintain and enhance a world-class system of protected areas. This will involve accelerating the establishment of new, permanently protected areas on private land, especially in high-priority ecosystems and landscapes.
-------------------------	--

Recommendation category	New
--------------------------------	-----

Challenges this recommendation addresses

In 2017 VEAC identified a gap of 2.1 million hectares between the coverage of the existing protected area network and what is needed for a world-class system that is comprehensive, adequate and representative. This was acknowledged in Biodiversity 2037. Increasing the conservation of native vegetation on private land can assist in filling that gap; however, most of the expansion will need to occur on public land. Before that can occur, VEAC will need to investigate, identify and recommend sites for inclusion in the protected areas network. The Parliament of Victoria Inquiry into Ecosystem Decline in Victoria final report, published in 2021, found that the major threats to biodiversity were invasive plant and animal species, habitat loss and fragmentation, and climate change. This assessment came four years after the Victorian Government released Biodiversity 2037. To date, the implementation of Biodiversity 2037 is not meeting its targets and data on its progress are limited.⁸⁸

UN SDG targets alignment	4.7, 6.6, 12.2, 12.8, 15.1, 15.3, 15.4, 15.5, 15.8
---------------------------------	--

87. Jackson ST 2021, 'Transformational ecology and climate change: Management of imminent ecosystem shifts demands adaptive, translational approaches', *Science*, 373(6559), pp. 1085–1086, <https://www.science.org/doi/pdf/10.1126/science.abc6777> Accessed on 9 June 2023.

88. Victorian Auditor-General's Office (VAGO) 2021, 'Protecting Victoria's biodiversity', Melbourne, Victoria.

Lead theme: Land	
Recommendation 8	That DEECA leads the design and delivery of a state soil and land condition monitoring and mapping program.
Recommendation category	Reiteration
Challenges this recommendation addresses	
<p>The growth of urban areas, the spread of invasive plants and animals, and the expansion of agriculture have led to the loss of native vegetation and have significantly degraded Victoria's land health due to soil erosion, dryland salinity, soil acidification and reduction of soil organic carbon.</p> <p>Few long-term datasets exist to inform our knowledge of Victoria's land health and to assist decision-making and land management practices.</p>	
UN SDG targets alignment	2.4, 6.5, 9.5, 12.2, 15.3

Lead theme: Inland waters – Water quality	
Recommendation 9	That DEECA works with its portfolio agencies to ensure consistent statewide methodologies in monitoring, data analysis and timely public reporting of water quality.
Recommendation category	Reiteration
Challenges this recommendation addresses	
<p>Urban development, population growth, agricultural land management, irrigation and climate change are impacting on water quality and aquatic biodiversity in Victoria.</p> <p>A disaggregated water-quality monitoring regime undermines evidence-based decision-making.</p>	
UN SDG targets alignment	6.3, 6.6, 9.5

Lead theme: Inland waters – Water resources	
Recommendation 10	That DEECA, in consultation with the Victorian Commissioner for Environmental Sustainability, (i) delivers a framework for future reporting on environmental watering outcomes consistent with Action 3.6 of Water for Victoria, (ii) develops metrics and thresholds for the agreed indicators to enhance reporting on environmental watering outcomes, and (iii) integrates the framework into an improved and integrated system of inland waters health reporting, including updating of the Index of Stream Condition by 2025.
Recommendation category	New
Challenges this recommendation addresses	
<p>Recognising the importance of reporting progress towards expected environmental outcomes from environmental watering, Action 3.6 from Water for Victoria contains a requirement that the CES 'report on the outcomes of environmental watering in Victoria, as part of the five-yearly State of the Environment Report' and 'recommend ways to improve future public reporting'.</p> <p>As per the <i>Water Act 1989</i>, water for the environment is delivered for the purpose of preserving the environmental values and health of water ecosystems, including:</p> <ul style="list-style-type: none"> • their biodiversity • ecological functioning • the quality of water • the other uses that depend on environmental condition. <p>Current monitoring and reporting of environmental watering by the Victorian Government is intended to improve the use of environmental water at a given time in a particular location. This contributes to better localised management of environmental water. However, there is a knowledge gap, with no quantitative analysis of environmental watering outcomes available (both environmental and community outcomes) to be produced on a statewide scale.</p>	
UN SDG targets alignment	6.4, 6.5, 9.5, 13.2, 15.1

Lead theme: Energy	
Recommendation 11	That DEECA collects and publishes data annually to monitor progress on the development of variable renewable electricity and to report on the biodiversity impacts of this transition.
Recommendation category	New

Challenges this recommendation addresses

In its 2022 election, the Victorian Government committed to legislating 65% variable renewable generation in Victoria by 2030 and 95% by 2035. The quality and completeness of data on wholesale electricity production and consumption provided by the Australian Energy Market Operator is excellent. These data are publicly available and can be compiled and reported (as report has done).

However, data on distributed (behind-the-meter) electricity generation and storage are neither complete nor high quality. In most cases behind-the-meter electricity generation data are estimated rather than measured, and it is not centrally reported. Reliable data on behind-the-meter storage capacity and its operation does not exist.

Furthermore, the allocation of land for new infrastructure to support the transition to renewable electricity (e.g. solar and wind farms and transmission installations) will impact on biodiversity, and this impact should be understood.

UN SDG targets alignment	7.1, 7.2, 7.3, 7.a, 15.9
---------------------------------	--------------------------

Recommendation 12	That DEECA collects and publishes data annually on the electrification of water heating and transport.
Recommendation category	New

Challenges this recommendation addresses

To enable monitoring of the transition away from the use of natural gas in residential water heating and space heating, it will be critical to report data on the energy consumed by water heaters installed in each year, and in the total residential sector, classified by fuel type. Decarbonising private transport is likely to require electrification. To monitor progress it will be valuable for the Victorian Government to annually publish data on vehicle type, GHG intensity and fuel consumption of the passenger vehicle stock and new passenger vehicles sold.

UN SDG targets alignment	7.2, 13.2, 13.3
---------------------------------	-----------------

Lead theme: Waste and resource recovery	
Recommendation 13	That the Victorian Government fulfils Key Commitment 11 of Recycling Victoria: a New Economy by developing and implementing a circular economy monitoring and evaluation framework to track the state's progress in transitioning to a circular economy. Biennial reporting would support tracking progress and enable strategic adaptive management, with the first report to be delivered by the end of 2025.
Recommendation category	Reiteration

Challenges this recommendation addresses

To evaluate the effectiveness of policy initiatives in meeting Victoria's targets and track progress towards a circular economy, a monitoring and evaluation framework will be developed in fulfilment of a key commitment under the circular economy policy as well in response to part of Recommendation 13 of the SoE 2018 report.

Without such a framework, underpinned by appropriate data collection and analysis, the level of circularity within the state cannot be effectively assessed, nor can policy adjustments be made to address lags within sectors or societal needs.

UN SDG targets alignment	12.3, 12.4, 12.5
---------------------------------	------------------

Lead theme: Data and information	
Recommendation 14	That DEECA (i) delivers a data integration strategy for state of the environment reporting, and (ii) coordinates collection, validation and calculation of critical data from Victorian Government departments and agencies to improve outcomes in evidence-based environmental management in Victoria.
Recommendation category	New

Challenges this recommendation addresses

There is a lack of comprehensive and reliable data across the Victorian Government to report on the state's natural assets. This is mainly due to inconsistent data collection, validation and calculations as well as lack of timely interpretations. The volume of data is growing exponentially through improved technology and the contributions of citizen scientists. Unfortunately, the capacity of researchers and scientists to conduct comprehensive analyses of the data, to support evidence-based environmental policy and management, is not keeping up with this growth. Investment is needed to interpret and analyse the output data in a timely manner. The number of publicly available databases is increasing; however, many of these databases are not analysed and interpreted, or combined and integrated with other cultural, social or economic datasets.

UN SDG targets alignment	Underpins improvement on reporting on all selected SDG targets
---------------------------------	--

Lead theme: Space and spatial analysis	
Recommendation 15	That the Victorian Government develops an environmental Digital Twin for Victoria building on the existing Digital Twin Victoria program.
Recommendation category	Expansion

Challenges this recommendation addresses

The Victorian Government has no centralised spatial system to store, manage and analyse environmental data, and there is limited in-house expertise to generate actionable insights from data. These gaps result in a convoluted process for indicator assessment that relies on external groups for interpretation of data, which limits reliability of analysis for reporting. There is also a critical shortage of high-quality, up-to-date data for the assessment of biodiversity targets and indicators, and Victoria is not leveraging existing biodiversity-related spatial tools and datasets to their full potential.

UN SDG targets alignment	Underpins improvement on reporting on all selected SDG targets
---------------------------------	--



Female King Parrot and Koala, Victoria.
Credit: Darren Donlen.

Authorised by the Commissioner for Environmental Sustainability

Level 36, 2 Lonsdale Street
Melbourne, Victoria 3000
Copyright © The State of Victoria, 2023

Accessibility

If you would like to receive this publication in an alternative format, please telephone the Commissioner for Environmental Sustainability office on 136186, email info.ces@ces.vic.gov.au or call 03 9948 2846, or via the National Relay Service on 133 677 www.relayservice.com.au. This document is also available on the internet at www.ces.vic.gov.au.

Disclaimer

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

For further information contact:

Commissioner for Environmental Sustainability
Level 36, 2 Lonsdale Street
Melbourne Victoria 3000

Email: info.ces@ces.vic.gov.au
www.ces.vic.gov.au



This work is licensed under a Creative Commons Attribution 4.0 International licence. You are free to re-use the work under that licence, on the condition that you credit the State of Victoria as author. The licence does not apply to any images, photographs or branding, including the Victorian Coat of Arms, the Victorian Government logo and the Commissioner for Environmental Sustainability logo. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>

Published by the Commissioner
for Environmental Sustainability,
Victoria, 2023

Level 36, 2 Lonsdale Street
Melbourne Victoria 3000

info.ces@ces.vic.gov.au
www.ces.vic.gov.au



© The State of Victoria, Commissioner for Environmental Sustainability 2023. This publication is copyright.
No part may be reproduced by any process except in accordance with the provisions of the *Copyright Act 1968*.
For further information about the Commissioner for Environmental Sustainability, visit www.ces.vic.gov.au

