



Commissioner  
for Environmental  
Sustainability  
Victoria

# State of the Environment Biodiversity Update 2021 Report – findings at a glance

December 2021

Image: Brisbane Ranges National Park  
Credit: Parks Victoria

**The immediate government and community biodiversity response and recovery actions following the 2019–20 bushfires were well-resourced, well-coordinated and targeted threatened species.**

**This brought forward some of the intended actions in the implementation of *Protecting Victoria's Environment: Biodiversity 2037*,\* the State Government's plan released in 2017 to address the long-term decline in Victoria's biodiversity.**

Available online \*[www.delwp.vic.gov.au](http://www.delwp.vic.gov.au)

# Summary


- Indicators from the Biodiversity (35), Forests (2), Fire (4) and Climate Change (2) chapters from *State of the Environment 2018 Report* are updated.
- The report compares the 2018 and 2021 assessments for all indicators.
- Where new data is available, assessments were updated.
- Where no new data is available since 2018, the report includes a summary of the 2018 assessment and updated commentary.
- Data availability remains a challenge with 63% of indicators assessed as insufficient, low or moderate data availability (compared to 65% in 2018).
- Except for the Net Gain target, there was insufficient data to report on the Biodiversity 2037 targets.

# Challenges to Biodiversity Reporting

**The following challenges identified in the State of the Environment 2018 Report (Table 6, Summary Report)\* remain critical obstacles to improving biodiversity outcomes.**

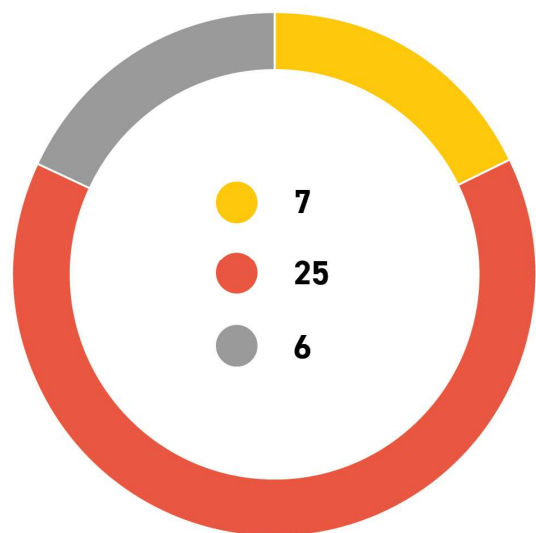
- Various investment programs across multiple land management units have created different, inconsistent data sources and terminologies for reporting on the state of biodiversity, land and forest assets in Victoria.
- Data is inadequate to answer many of the critical questions about biodiversity science in Victoria.
- Victoria's biodiversity science and data capability are undermined by a lack of coordination and a strategic approach to investing in the critical research that will enable an ecosystems approach to decision making and policy interventions.





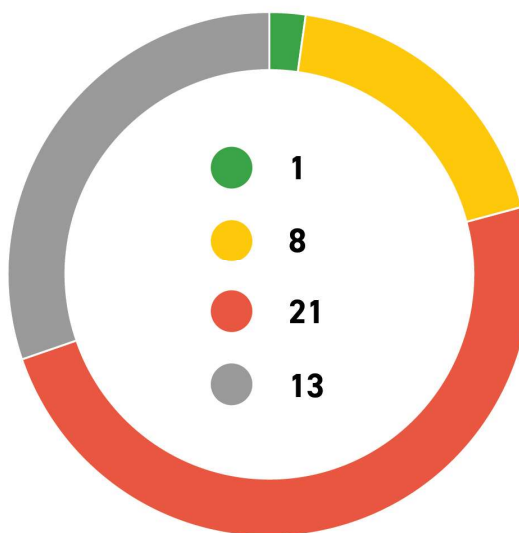
# *Summary of science*

# Summary of Assessments 2021

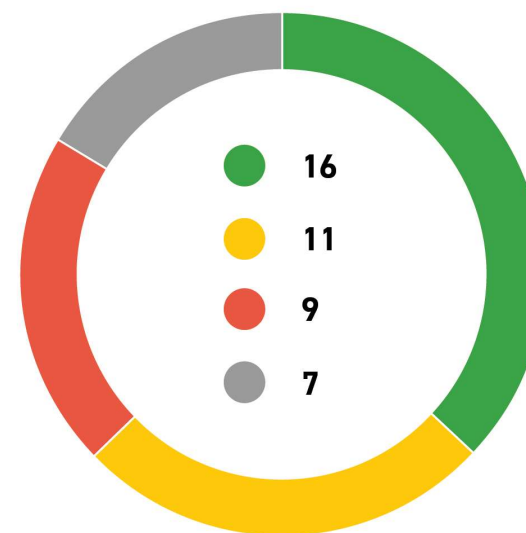


Status Assessment

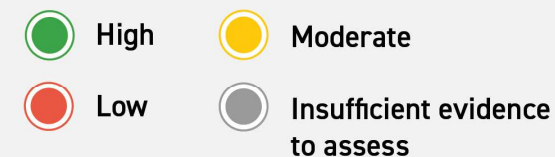
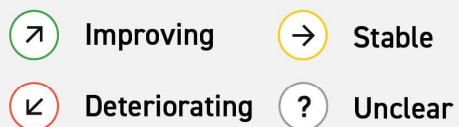
Narratives were provided for indicators where status was not assessed



Trend Assessment

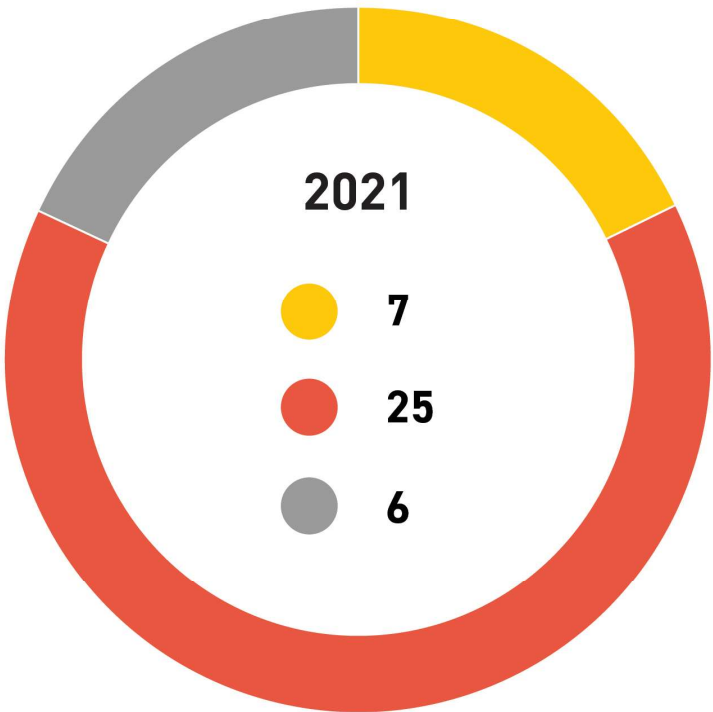
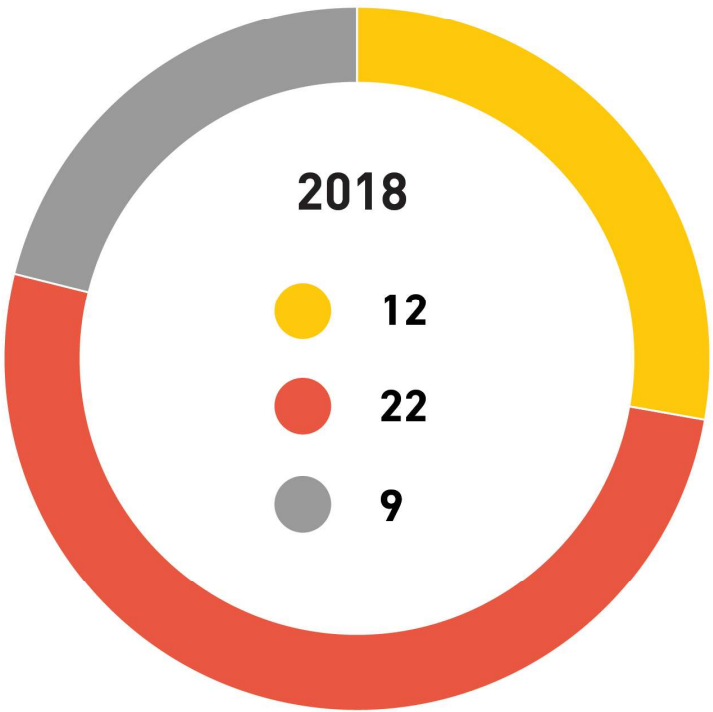


Data Confidence





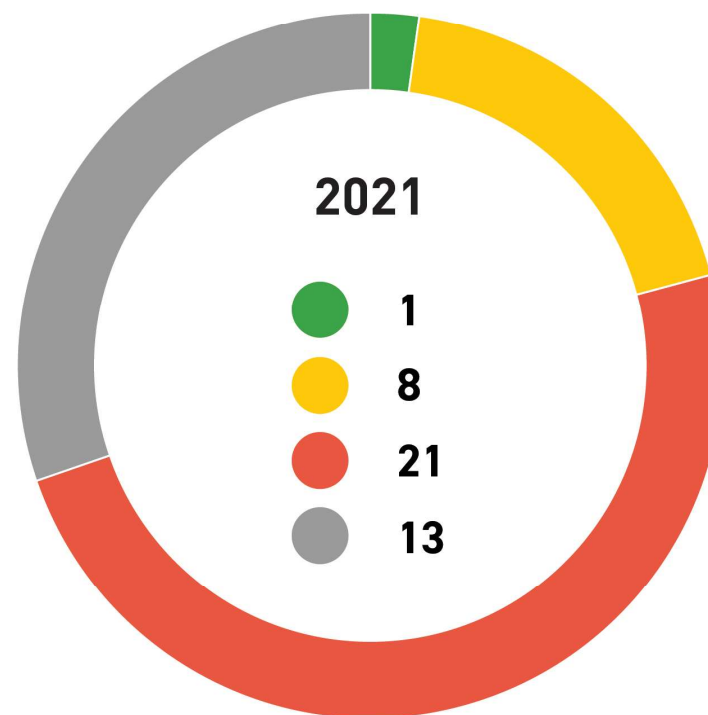
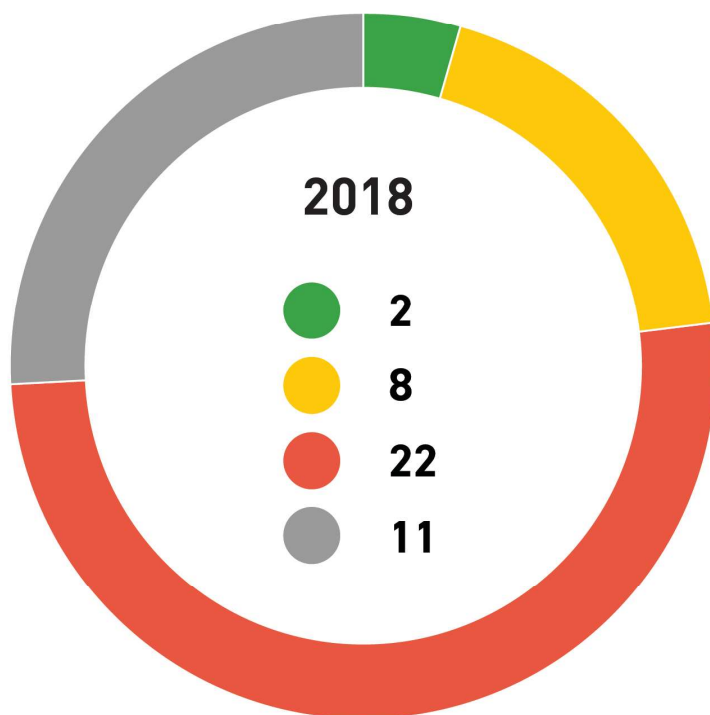
# Biodiversity Status Assessments: 2018 v 2021



Narratives were provided for indicators  
where status was not assessed

 Good    Fair    Poor    Unknown

# Biodiversity Trend Assessments: 2018 v 2021



Improving



Stable



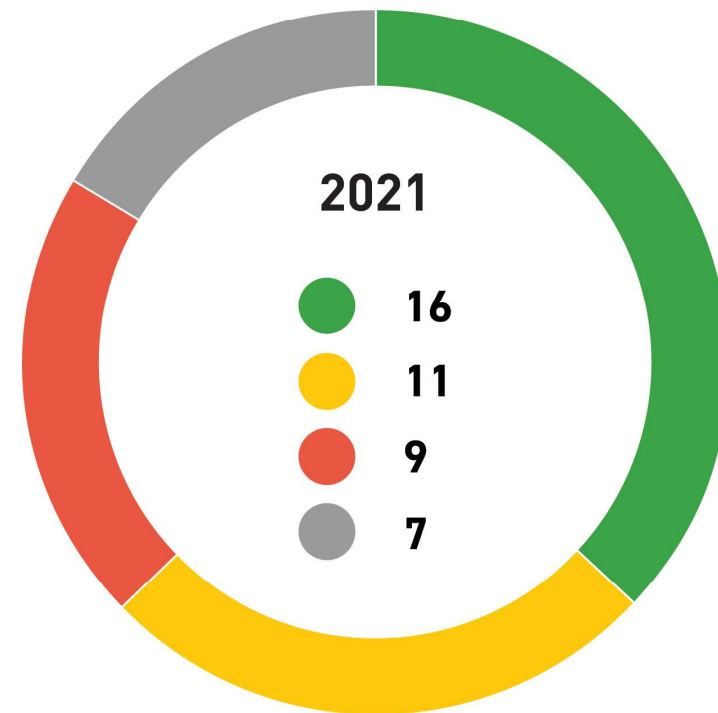
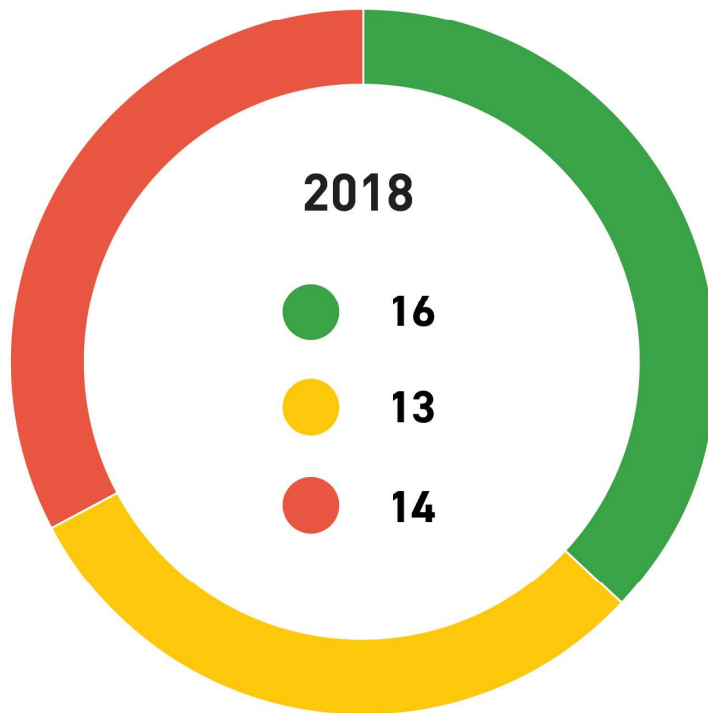
Deteriorating



Unclear



## Biodiversity Data Confidence: 2018 v 2021



High



Moderate



Low



Insufficient evidence to assess



# *Key findings by theme*

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# Fire

- Approximately 20% of above-ground biomass and debris was burnt in the 2019–20 bushfires, some of which may be returned as forests regrow, although this is uncertain.
- The severity, extent, frequency and duration of bushfires have all increased, fire seasons are now longer and more dangerous, and the window for fuel management is closing, changes that are driven by climate change.
- Many areas have increased frequency of fires, the area of public forests below the minimum Tolerable Fire Interval (TFI) is increasing, and the area with a no-burn history decreasing. This threatens species and communities that lack resilience to fire.



*Key findings by theme*

## Climate Change

- Climate change impacted the scale and intensity of the 2019–20 bushfires and increases stress on species and ecological communities already under extreme pressure from other threats.
- Rainforest communities are sensitive to climate change, were severely impacted by the 2019–20 bushfires and could take decades or longer to recover.
- Maintaining or increasing forest carbon stocks will be critical in the mitigation of climate change. Native forest regeneration, carbon and environmental plantings, soil carbon removal and restoration of degraded lands could help maintain and increase carbon stocks.

*Key findings by theme*

## Invasive Plants and Animals

- Invasive plants, predators and herbivores are increasing in abundance and range and are the major threat to most threatened species.
- The full effect of the 2019–20 bushfires on invasive species is yet to be determined, however there is concern that they could exploit the post-fire vulnerability of native species.
- There remains very limited data on the number, abundance and distribution of invasive species.
- Various government and community projects are targeting the control of invasive plants and animals.

*Key findings by theme*

# Threatened Species and Communities 1

- The 2019–20 fires burnt areas of high biodiversity value. Many species and ecological communities could in future be added to the Flora and Fauna Guarantee Threatened List.
- Up to 30 plant species could be threatened because of the damage caused by the 2019–20 bushfires, and some could become extinct.
- Five threatened frog species had significant percentages of their modelled habitats within the fire extent, while the eastern bristlebird, threatened small-bodied native fish and macroinvertebrates were the focus of emergency post-fire extractions.



*Key findings by theme*

## Threatened Species and Communities 2

- Victoria's native fish, frogs and freshwater invertebrates remain threatened by the loss and degradation of their habitats and the introduction of invasive predators such as trout and disease.
- The fires also impacted existing recovery efforts, such as the Southern Ark's long-nosed potoroo.
- More rigorous assessment criteria has resulted in many threatened species having their conservation status upgraded.
- Expanding the conservation of native vegetation on private land can make an important contribution to filling the gaps that currently exist in Victoria's protected areas network.

*Key findings by theme*

## Wetlands and Rivers

- The upper reaches of eastern Victorian rivers were most affected by the fires, impacting frogs and small-bodied fish (e.g. galaxiids).
- A combination of threats are leading to declines in the abundance and distribution of native fish, frog and waterbird species.
- Long-term surface water availability in Victoria has declined, and is projected to continue due to climate change.
- CMAs and other agencies are working in regional communities to improve river health, the extent of riparian vegetation and the abundance and distribution of native freshwater species.

## *Key findings by theme*

# Forests

- Large areas of forest in north-eastern and far-eastern Victoria were impacted by the 2019–20 bushfires.
- Forest-dependent threatened species are continuing to experience declines in abundance due to habitat loss, bushfires and drought.
- With large areas of forest severely impacted by fire, those areas that remain unburnt are now more critical to species recovery as refuges and genetic storehouses for genetic rescue.
- Additional evidence will be presented in the RFA MER report due to be released in early 2022.



*Key findings by theme*

# Victoria's Biodiversity Targets

- The assessment of B:18 Net gain in the extent of native vegetation revealed an ongoing net loss.
- Biodiversity 2037 has five-yearly milestone targets for each of its key indicators. The initial data suggest that except for weed and pest control, considerable effort will be needed to meet the 2022–23 milestone targets (refer Appendix Two).



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