

# Action statement

*Flora & Fauna Guarantee Act 1988*

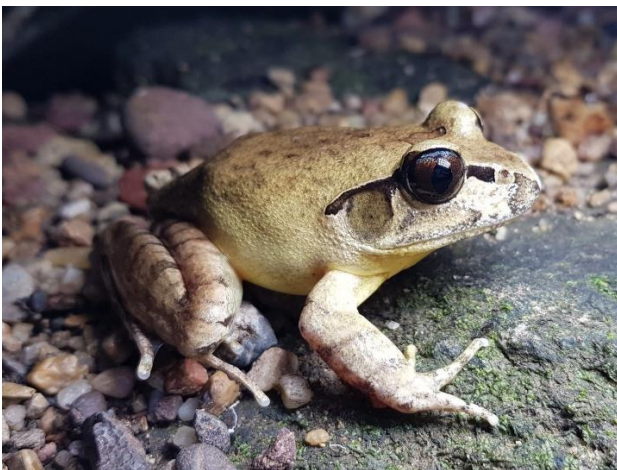
## Southern Barred Frog (*Mixophyes balbus*)

Taxon ID: 13073

Action statements are developed under the *Flora and Fauna Guarantee Act 1988* (FFG Act). Their preparation and implementation complement the FFG Act strategy *Protecting Victoria's Environment – Biodiversity 2037* and its vision that “Victoria’s biodiversity is healthy, valued and actively cared for”.

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### Species and Distribution



Southern Barred Frog. Image by Amaël Borzée.



Victorian Biodiversity Atlas (VBA) records for the Southern Barred Frog since 1970. The species has not been recorded in Victoria since the early 1980s (Victoria is the southern limit of the range of the species. The Southern Barred Frog also occurs in Queensland and New South Wales). See [NatureKit](#) for an interactive map.

### Conservation Status

#### Critically Endangered

**Listing criteria:** 3.1.1, 3.1.2(a), (b)(i,ii,iii,v), 3.1.3(b)(i)(ii), 3.1.4 of the Flora and Fauna Guarantee Regulations 2020.

This means that:

- The Southern Barred Frog has undergone, is suspected to have undergone, or is likely to undergo in the immediate future, a very severe reduction in population size; and
- its geographic distribution is extremely restricted; and
- the distribution of the population or habitat of the taxon is severely fragmented; and
- it is restricted to a limited number of areas that are subject to the same threat or suite of threats that can impact all individuals present; and
- there is a continuing decline or reduction in:
  - its extent of occurrence; and
  - area of occupancy; and
  - the area, extent or quality of habitat; and
  - the number of mature individuals; and

- the total number of mature individuals is very low, the number is likely to continue to decline; and:
  - each subpopulation is extremely small; and
  - most of the individuals are in one subpopulation.

**Corresponding International Union for the Conservation of Nature (IUCN) criteria:** A2ace+3ce+4ace; B1ab(i,ii,iii,v)+2ab(i,ii,iii,v); C2a(i,ii); D.

More information on IUCN listing criteria can be found here: [IUCN Red List of Threatened Species](#)

## Species Information

The Southern Barred Frog is at the southern limit of its range in Victoria, and has not been observed since the early 1980s. Species information such as its description, distribution, ecology and references are provided in the [Southern Barred Frog Species Forecast Report](#).

## Threats

Threats listed below have been identified through expert consultation and published literature.

Threat	Description
<b>Pathogens and disease</b>	
Chytrid fungus	<ul style="list-style-type: none"> <li>• Chytridiomycosis is an infectious disease caused by the introduced amphibian chytrid fungal pathogen <i>Batrachochytrium dendrobatidis</i>. The pathogen is well established in Victoria, and across much of the current range of the Southern Barred Frog outside Victoria. The impact of this pathogen is greatest under cooler, moist conditions. The Southern Barred Frog may be highly susceptible to the pathogen as much of its historic distribution in Victoria was in cool, moist upland habitats.</li> </ul>
<b>Climate change</b>	
Altered rainfall regime	<ul style="list-style-type: none"> <li>• Decreased rainfall will reduce the extent and suitability of breeding habitat and impact the species' ability to disperse.</li> </ul>
Increased frequency and/or length of droughts	<ul style="list-style-type: none"> <li>• Drought conditions will reduce the extent and suitability of available habitat for all life stages, by changing water levels, drying of streams, changing water temperatures, and affecting vegetation.</li> </ul>
<b>Fire</b>	
Fire management activities	<ul style="list-style-type: none"> <li>• Fire retardant chemicals may be harmful to adults, eggs, and tadpoles.</li> <li>• Disturbance associated with fire suppression operations can remove, modify and degrade habitat, fragment populations, and facilitate the introduction and spread of introduced species.</li> </ul>
Increased fire frequency and intensity	<ul style="list-style-type: none"> <li>• Many frog species have little defence against fire, as they are slow and unable to flee, have a low tolerance to extreme temperatures.</li> <li>• Fire can degrade larval habitat by increasing water temperature, altering water chemistry and creating sediment/ash runoff that smothers habitat.</li> <li>• Severe fire, increasing fire frequency, and a changing climate can alter the ecological community, vegetation type, structure, and thermal characteristics of the habitat.</li> </ul>

Threat	Description
<b>Human disturbance</b>	
Firewood collection	<ul style="list-style-type: none"> <li>Collection of large woody debris for firewood removes refuge habitat for frogs and invertebrates. Invertebrates are the main food source for frogs.</li> </ul>
Road and track maintenance	<ul style="list-style-type: none"> <li>Disturbance associated with road construction and maintenance can remove, modify and degrade habitat, fragment populations, and facilitate the introduction and spread of introduced species.</li> </ul>
<b>Introduced species</b>	
Feral pigs and deer	<ul style="list-style-type: none"> <li>Grazing, trampling and wallowing by feral pigs (<i>Sus scrofa</i>) and deer, particularly Sambar Deer (<i>Cervus unicolor</i>) damage and degrade habitat.</li> </ul>
Foxes and feral cats	<ul style="list-style-type: none"> <li>Foxes (<i>Vulpes vulpes</i>) and feral cats (<i>Felis catus</i>) are known to prey on large terrestrial frogs in south-eastern Australia and are suspected to prey on the Southern Barred Frog.</li> </ul>
Introduced freshwater fish	<ul style="list-style-type: none"> <li>Introduced species such as Brown Trout (<i>Salmo trutta</i>) and Eastern Gambusia (<i>Gambusia holbrooki</i>), may prey on egg and tadpole stages, which will have a significant impact on the species as it is an obligate stream breeder with a long aquatic larval period.</li> </ul>

## Conservation Objectives

Conservation objectives are informed by the conservation status and criteria under which the species was listed under the FFG Act. This provides a framework to understand how we can work towards recovery and improve the species' conservation status over time as per the objectives of the FFG Act.

As the Southern Barred Frog is at the southern limit of its range in Victoria, and has not been observed since the early 1980's, the key objectives of this action statement are:

- Increase knowledge of the distribution, demography, emerging threats, and conservation requirements.
- Support community participation and improve awareness of the Southern Barred Frog and conservation of its habitat.

## Conservation Actions

The actions below have been identified through expert consultation, published literature and spatial analysis. Actions are listed in alphabetical order to allow all interested parties to prioritise based on their context, capacity and capability. Landscape scale actions may mitigate threats for other species. For more information on where to undertake actions that benefit multiple species and identify the most beneficial locations to undertake actions for this species, please refer to [NatureKit](#).

Action	Description
Develop, update and apply forestry protections	<ul style="list-style-type: none"> <li>Maintain prescriptions for this species under the <i>Code of Practice for Timber Production 2014 (as amended in 2022)</i> (the Code).</li> <li>Where relevant, incorporate species-specific protection measures into plans and permits relating to timber harvesting operations in native forest on private land.</li> </ul>

Action	Description
Research	<ul style="list-style-type: none"> <li>Determine the feasibility of reintroducing the Southern Barred Frog to Victoria, including identifying appropriate sources of frogs for any reintroduction.</li> <li>Resolve the taxonomy and genetic structuring of populations.</li> </ul>
Survey and monitoring	<ul style="list-style-type: none"> <li>Undertake surveys using multiple methods, including eDNA, in and around the locations of previous Victorian and nearby NSW records, and other newly identified habitat, to attempt to re-discover the species in Victoria.</li> </ul>

If the species is detected, the following further actions are applicable:

Further Action	Description
Enhance and increase the area and quality of habitat	<ul style="list-style-type: none"> <li>Determine whether the area and quality of habitat should and can be enhanced and/or increased.</li> </ul>
Ex-situ management	<ul style="list-style-type: none"> <li>Determine the need for population augmentation or genetic 'rescue' and undertake emergency salvage if required to establish a captive breeding program with Victorian genetics.</li> </ul>
Identify and protect key habitat	<ul style="list-style-type: none"> <li>Designate protection zones around known site locations. Avoid and mitigate activities that disturb habitat (such as forestry operations, road construction and maintenance, planned burns).</li> </ul>
Identify refuges	<ul style="list-style-type: none"> <li>Identify refuge areas to support the species in periods of extreme temperatures and drought.</li> </ul>

## Past Actions

The key conservation management actions listed below have been delivered in the past 10 years.

Past action	Description
Community engagement and awareness	<ul style="list-style-type: none"> <li>The Southern Barred Frog is one of Zoo's Victoria's Fighting Extinction priority species, and was part of the 'Love your locals' campaign led by Zoos Victoria since 2012.</li> </ul>
Develop, update and apply forestry protections	<ul style="list-style-type: none"> <li>The species has a current species-specific prescription in the Code: <ul style="list-style-type: none"> <li>In the East Gippsland Forest Management Area: Where records of Southern Barred Frog are located on first-order streams or sites away from streams, protect approximately 50 ha (preferably the entire sub catchment unit) with a protection area. Where records of Southern Barred Frog are located on second or higher order streams, apply a protection area of 100 m width each side of the stream for 1 km upstream and downstream of the detection site. Avoid constructing new roads in the protection area.</li> </ul> </li> <li>The risk of forestry operations was considered for this species in 2020 under the Victorian Government Threatened Species and Communities Risk Assessment. Additional permanent protections were not found to be required.</li> </ul>
Ex-situ management	<ul style="list-style-type: none"> <li>Captive husbandry has been developed for the New South Wales clade of the Southern Barred Frog, with an ex-situ population maintained at Zoos Victoria.</li> </ul>

Past action	Description
Survey and monitoring	<ul style="list-style-type: none"><li>Surveys were undertaken in 2010, 2011 and 2012 at and near the location of previous records in Victoria. No animals were found.</li></ul>

## Decision Support Tools

Decision making for conservation actions is supported through the following Victorian Government tools which may be of assistance in choosing the most appropriate or beneficial actions for biodiversity:

- [Choosing actions for nature: NatureKit](#)
- [Biodiversity Knowledge Framework](#)

## Further Information

- [Southern Barred Frog Species Forecast Report](#)
- [Threatened Species Assessment report – Southern Barred Frog \(\*Mixophyes balbus\*\)](#)
- [Commonwealth Species Profile and Threats database](#)
- [Code of Practice for Timber Production 2014](#)
- [Victoria's changing climate – understanding the impacts of climate change in Victoria](#)
- [Flora and Fauna Guarantee Regulations 2020](#)
- [IUCN Red List criteria descriptions](#)

## Get Involved and Take Action

If you are interested in supporting this species' recovery, there are some important things you need to consider.

The Department of Energy, Environment and Climate Action (DEECA) is committed to engaging and partnering with Traditional Owners on how they wish to be involved in the planning and implementation of actions for this species. Steps must be taken to avoid harm and where appropriate ensure actions can deliver cultural benefits.

You can find advice about required approvals, land manager / owner permissions, options and incentives for private land conservation, and engagement with Traditional Owners and public land managers here: [Action statements \(environment.vic.gov.au\)](http://environment.vic.gov.au)

To identify the relevant Traditional Owners, use the [Aboriginal Cultural Heritage Register and Information System \(ACHRIS\) Welcome to Country and Acknowledgements Map](#).

Interested parties are encouraged to work together across community, government, private and public land managers and Traditional Owners to undertake these actions and secure funding for their implementation.

You can also register your interest in taking action so we can connect you to other people or organisations working to help us secure the future for this species at [threatened.species@deeca.vic.gov.au](mailto:threatened.species@deeca.vic.gov.au)

## Reporting Actions

Activity data is critical to monitoring the implementation and progress of actions and evaluating action statements. These data are also used to:

- Determine progress towards achieving the contributing targets for [Protecting Victoria's Environment – Biodiversity 2037](#).
- Inform the five-yearly State of the Environment Report.

For guidance on reporting actions undertaken on this species, refer to [Activity Data](#).



## Submitting Monitoring Data

The Victorian Biodiversity Atlas (VBA) provides a foundational dataset showing where biodiversity occurs across the Victorian landscape and how it may have changed over time. As a core input for decision support tools that inform conservation action, public land management, research activities and reporting, we encourage all participants in the delivery of on-ground actions to submit species records and observations, including for weeds and introduced animals, as they carry out their projects.

For further information see: Victorian Biodiversity Atlas ([environment.vic.gov.au](http://environment.vic.gov.au))

Sign up and begin submitting your data today at: <https://vba.biodiversity.vic.gov.au/>

### Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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