Action statement

Flora and Fauna Guarantee Act 1988

Australian Grayling (*Prototroctes maraena*)

Taxon ID: 4686

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".

Species and Distribution

Australian Grayling. Image by Tarmo Raadik.

Australian Grayling Victorian Biodiversity Atlas (VBA)records since 1970. See NatureKit for an interactive map. The Australian Grayling also occurs outside of

Conservation Status

Vulnerable[1]

Listing criteria: 5.1.2 (a)(b)(ii),(iii),(iv) of the Flora and Fauna Guarantee Regulations 2020.

This means that:

- Its geographic distribution is restricted; and
- there is a continuing decline or reduction in:
  - area of occupancy; and
  - the area, extent or quality of habitat; and
    - the number of locations or subpopulations.

Corresponding International Union for the Conservation of Nature (IUCN) criteria: B2ab(ii,iii,iv).

More information on IUCN listing criteria can be found here: IUCN Red List Criteria.

[1] Updated in September 2025 to reflect amendments made under Section 16E of the FFG Act.

Species Information

Species information such as its description, distribution and ecology are provided in the Conservation Advice Australian Grayling and the Atlas of Living Australia.

Threats

The threats listed below have been identified with input from ecologists, databases, decision support tools and published literature. Traditional Owners may identify additional threats to those listed for this species. Threats are listed in alphabetical order under specific threat categories.

Threat	Description
Altered hydrology	
Altered flow regime	• Changes to riverine flow regimes, such as a reduction in the frequency, durationand magnitude of flow events during autumn that trigger spawning migration behaviour, pose a major threat to reproduction, leading to recruitment failure. Climate change will increase the risk of altered flows.
Climate change	
Water temperature extremes	• Increasing water temperatures could change the distribution and abundance of preferred habitat features and/or food items.
Fire	
Altered fire regimes	• Fire, including planned burns, that are more frequent than the species tolerable fire interval can lead to seedbank exhaustion, reduced recruitment and mortality of recruits.
	• A hotter, drier climate may increase the frequency and severity of fire impacting habitat, with the potential to reduce habitat extent and/or condition.
Bushfires	• Bushfires can result in the loss of key habitat features, food sources, increase the risk of predations, and cause direct mortality of the species from ash deposition, extreme water temperatures, and sedimentation from debris flows that may result from high intensity rainfall events in the species' catchment, following the fire.
Fire management activities	• Fire management operations such as creation of fuel breaks (soil disturbance, slashing) may lead to siltation, remove habitat, cause mortality of individuals, and reduce regeneration.
Habitat loss, degradation or modification	
Barriers to movement	• Physical barriers to instream movement, reduce access to habitat and opportunity for genetic exchange between populations.
Instability of waterway beds and/or banks	• Instability of waterway beds and/or banks can result in habitat degradation and/or loss.
Human disturbance	
Recreational fisheries	• Taking of the species can reduce population size.
Introduced species	
Introduced fish	• Introduced fish, including Brown Trout (Salmo trutta), Rainbow Trout (*Oncorhynchus mykiss*), Redfin (*Perca fluviatilis*), European Carp (*Cyprinus carpio*)and Eastern Gambusia (*Gambusia holbrooki*), can degrade habitat, impact water quality, disrupt ecosystem function, and/or impact directly on individuals through predation, and competition for resources.

Conservation Objectives

Conservation objectives are informed by the conservation status and criteria in 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.

The key objectives of this action statement are:

- Mitigate threats to populations and habitat to increase resilience, increase genetic fitness and minimise future population decline;
- Increase the Australian Grayling's range and/or extent, by providing opportunities for natural movement/dispersal;
- Increase knowledge of biology, ecology, distribution, demography, emerging threats, and conservation requirements; and
- Support community participation and improve awareness of the Australian Grayling and conservation of its habitat.

Conservation Actions

The actions listed below have been identified with input from ecologists, databases, decision support tools and published literature. Actions are listed in alphabetical order to allow all interested parties to prioritise based on their context, capacity and capability. In undertaking actions for this species, consider the full extent of the species' range.

Holistic management of the cultural landscape where this species occurs is encouraged. Traditional Owners may identify other actions including cultural practice that will benefit this species and may also need to review existing actions to ensure they are culturally appropriate.

Action	Description
Avoid and/or mitigate impacts associated with fire management	• Ensure that species distribution data and ecological information is available and considered in fire management activities.
	• Undertake biodiversity values check prior to fuel management in areas of the species' habitat, to confirm treatment suitability and timing.
Community engagement and awareness	• Work with key stakeholders to reduce the threats of human disturbance and encourage behaviours that support a healthy environment.
	• Install signs to inform the community of the presence and importance of the species.
Compliance and enforcement	• Undertake risk-based compliance and enforcement activities of fishing regulations for 'no-take' statusand non-targeting of the species across its range.
Control introduced fish *	• Implement and maintain effective control of introduced fish in priority areas.
Ex-situ management	• Establish and maintain ex-situ populations in suitable secure sites, to achieve the conservation objectives of the species.
Install fishways	• Assess fish passage barriers (weirs, dams, locks and barrages) and install appropriate engineering solutions (such as fishways) to aid the Australian Grayling in areas where the species is known or likely to occur.
Manage environmental water	• Explore options for the provision of environmental water where required to provide an appropriate flow regime that supports the requirements of the species and its habitat.
	• Ensure life history requirements (such as promoting/triggering spawning and migration) are included in waterway management plans.
Protect key habitat	• Ensure that species distribution data and ecological information is available and considered in planning for developments, land use changes and utilities maintenance. Ensure that incremental losses are included in consideration of potential losses.

Action	Description
Research	• Identify spawning cues and sites, and the influence of water flow parameters for triggering a spawning response, to inform management plans and actions.
	• Investigate the ecology of the larval and juvenile phase in marine/estuarine environments to inform management actions.
Manage road and track works	• Protect habitat from disturbances caused by track, bridge and ford construction and maintenance.
Survey and monitoring	• Use a combination of eDNA techniques and conventional monitoring to improve knowledge of the species' distribution and abundance in areas where the species occurs, to inform management priorities and actions. Ensure all data is lodged in the Victorian Biodiversity Atlas (VBA).
	• Monitor representative populations to determine trends and management needs.
Translocation	• Design and implement a translocation program to meet the objectives of the action statement.
	• Investigate options for linking, supplementing or establishing additional populations in the context of a future climate.

**Indicates landscape-scale actions that may deliver benefits to multiple species*

Past Actions

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

Past Action	Description
Install fishways	• Fishways have been installed in the Thomson, Yarra, Tarwin and Barwon riversand in other coastal rivers.
Manage stocking of Introduced fish	• Stocking of Trout has ceased in the Barwon River.
Monitoring	• Since 2017 annual autumn surveys have been undertaken in the Mitchell,Thomson, Yarra and Gellibrand Rivers targeting Australian Grayling.
Provide adequate environmental flows	• Environmental flow releases have occurred to facilitate Australian Grayling spawning in the Snowy, Thomson, Tarago-Bunyip and Yarra River catchments.
Research	• Genetic studies in 2021 investigated the extent of genetic connectivity in streams across Victoria's coastline.
	• Migration studies were undertaken in 2012, 2013 and 2018 using radiotelemetry.
	• Spawning and recruitment studies were undertaken in the Thomson River in2013-14 and 2020.

Decision Support Tools

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 the following decision support tools:

- Choosing actions for nature
- Biodiversity Knowledge Framework

Further Information

- Conservation Advice Prototroctes maraena Australian Grayling
- Commonwealth Species Profile and Threats database
- Victoria's changing climate - understanding the impacts of climate change in Victoria
- Genetic Risk Index
- Commonwealth Threat Abatement Plans
- Flora and Fauna Guarantee Regulations 2020
- IUCN criteria summary

Get Involved and Take Action

If you are interested in supporting this species' recovery, there are some important things 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 and/or 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)

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

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

Reporting Actions

Activity data are 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 or introduced animals, as they carry out their projects.

For further information see: Victorian Biodiversity Atlas (environment.vic.gov.au)

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

Indigenous Data Sovereignty

DEECA is committed to recognising and enabling Indigenous Data Sovereignty (IDS). Indigenous data comprise any information or knowledge of species and Country collected or recorded by, or about, Traditional Owners. IDS asserts Traditional Owner rights to access and have governance over the collection, ownership and use of their data, including that which is included or referred to in this Action Statement.

Acknowledgement

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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Accessibility

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