

National and state legislation have adopted different combinations of the categories for assessment and listing, as outlined below.

National

The Australian Government uses a Common Assessment Method (CAM) to assess the extinction risk and list nationally threatened species and ecological communities, under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This method is based on the internationally recognised IUCN approach, with adjustments for Australian conditions.

Under the EPBC Act, fauna, flora and ecological communities may be listed in one of six categories:

- 1. **Critically Endangered**
- 2. **Endangered**
- 3. **Vulnerable**
- 4. **Conservation Dependent***
- 5. **Extinct**
- 6. **Extinct in the Wild.**

* The Conservation Dependent category is unique to Australia and applies to fish (bony fish, rays, sharks, molluscs and crustaceans) and other marine organisms (excluding marine mammals and marine reptiles) that meet the criteria for listing as a threatened species but are subject to an approved management plan approved under State, Territory or Commonwealth law to prevent decline and support recovery.

State

In South Australia species are listed under the threatened species schedules of the *National Parks and Wildlife Act 1972* (NPW Act). The categories are:

- 1. **Endangered (E)**
- 2. **Vulnerable (V)**
- 3. **Rare (R).**

The Rare category is not recognised in the IUCN structure, but is similar to the IUCN definition of 'Near Threatened'.

In South Australia, freshwater and marine fish, along with some marine invertebrates and crustaceans, are protected under the *Fisheries Management Act 2007*. While some of these species are known to be threatened, they do not currently have a legal conservation status listed under the NPW Act. The Action Plan for South Australian Freshwater Fishes 2009 (Hammer et al., 2010) provides a comprehensive overview of issues and actions to protect and restore populations of threatened fish species and ecological communities.

For this Action Plan, additional sources were used to help identify species likely to be threatened and potential priority species for the Hills and Fleurieu region. These include the Department for Environment and Water (DEW) threatened species assessment database (DEW, 2025), state and national recovery plans, and expert opinion.

Published regional ratings (e.g. Gillam and Urban, 2014) were not used because they cover an area that does not align with the Hills and Fleurieu region, and have not be updated for over a decade.

Ecological communities are not listed under state legislation, however the Provisional List of Threatened Ecosystems of South Australia (DEH, 2005) is in use and has informed threat status and priorities in this plan.

The upcoming *Biodiversity Act 2025* will absorb wildlife provisions of state legislation, and will include threatened fish, invertebrates, fungi and ecological communities. This Action Plan will be updated once the Act is in operation.

Why are there so many threatened species and ecological communities in the Hills and Fleurieu region?

The Hills and Fleurieu region includes the Mount Lofty Ranges, Fleurieu Peninsula, and part of the Coorong, Lower Lakes and Murray Mouth Ramsar area. Its varied topography, rainfall and temperature gradients, and diverse habitats support exceptionally high biodiversity and endemism.

Many species and ecological communities are now threatened due to historical impacts following European colonisation, particularly extensive habitat clearance. Ongoing fragmentation, isolation and reduced population sizes and extent continue to make species and communities more vulnerable to additional pressures, including:

- Inappropriate water management and extraction
- Invasive weeds
- Predation and competition
- Grazing pressure and disturbance from livestock and overabundant herbivores
- Residential and agricultural development
- Pollution
- Disease, viruses and pathogens
- Altered fire regimes (including absence of fire)
- Drought, heatwaves (including marine), and severe weather.

In some habitat types, even well-intended revegetation activities can pose risks to local biodiversity. Most of these threats stem from management practices that can be improved or modified to reduce negative impacts.

Building resilience to climate change and biosecurity threats

Threatened species and ecological communities are particularly vulnerable to climate change because their populations are already low.Limited genetic variation reduces their ability to adapt to environmental changes, new diseases or habitat alterations. When populations are low and ranges are restricted, a single extreme event, or prolonged extreme weather event, can cause local extinctions, making recovery even harder, and increase extinction risk.

Climate projections for the Hills and Fleurieu region indicate:

- higher temperatures
- reduced rainfall (particularly in spring)
- increased frequency of extreme events such as droughts and bushfires.

These changes can disrupt breeding cycles, food availability, and habitat integrity. Species with specialist habitat requirements and limited dispersal ability will be most at risk. Amphibians and fish face compounded threats from reduced water flows and salinity, both worsened by climate variability. An example is the marine heatwave in 2025, which triggered a harmful algal bloom in South Australia. The effects of the bloom had catastrophic impacts on coastal and marine ecosystems and species.

Biosecurity threats, including H5 bird flu and pathogens

Threatened Plants

Priority, conservation status and recovery interventions

*Data extracted September 2025. Primarily based on rapid expert assessment workshops held in 2015 and 2016, with some subsequent refinements, and subject to ongoing revision DEW (unpublished data).

Based on recent data and expert opinion, predominately from staff from the South Australian Seed Conservation Centre (SA SCC) who provided significant notes on priority level and regional context for the majority of species.

SA SCC = South Australian Seed Conservation Centre

SA = South Australia

CP = Conservation Park

NE = Not evaluated

NP = National Park

EPBC Act = Environment Protection and Biodiversity Conservation Act 1999

CAM = Common Assessment Method

NPWS SA = National Parks and Wildlife Service South Australia

Common Name	Scientific Name	Priority	Regional Context #	EPBC Act Status	NPW Act Status	Provisional SA Status *	Recovery Interventions
Aquatic and Amphibious							
Large River Buttercup	<i>Ranunculus papulentus</i>	High	Hills and Fleurieu populations are few, disjunct and isolated from other occurrences and don't produce viable seeds. Appear to be clonal. Has been utilised in some swamp/wetland restoration projects during previous investment.		V	EN	- Reduce threats to existing populations. - Conserve and/or restore critical habitats at priority sites. - Undertake surveys and monitoring for high priority species. - Increase and maintain seed bank. - Where appropriate, support land managers, NGOs and other agencies to propagate and include in revegetation programs. - Where required, support knowledge gathering and research to inform interventions. - Support and/or undertake targeted surveys/monitoring. - Support climate resilience research and planning for high priority species. - Engage land managers for wetland stewardship, and increase community awareness of, support for and involvement in the implementation of recovery actions. - Support capture of sightings in BDBSA.
Spotted Knotweed	<i>Persicaria praetermissa</i>	High	In SA there are only a few small disjunct populations in Hills and Fleurieu region. No seeds banked to date and not utilised in any recovery work to date by SA SCC. A candidate species for planting in swamp recovery projects.			EN	
Small Bladderwort	<i>Utricularia lateriflora</i>	Medium	Very rarely observed annual. Most of the Hills and Fleurieu records are likely historic. Most recent observation was a swamp in Nangkita.		V	VU	
Waterblinks	<i>Montia fontana ssp. chondrosperma</i>	Medium	All SA populations in wetter sites of the Mount Lofty area. Annual species that is only detectable in above average rainfall years. Very difficult to locate and observed populations very small.		V	VU	
Water Plantain	<i>Alisma plantago-aquatica</i>	Medium	A single known extant population for SA occurs in Mt Bold Reservoir in Hills and Fleurieu region. Recent observation of a single plant in a swamp in the Kuitpo area. Outside of the region there is 1996 record from Millicent, and the next known populations occur in Victoria.			RA	
Horned Pondweed	<i>Zannichellia palustris</i>	Low	In Hills and Fleurieu region, it is only known from a single record by Ron Taylor from near Victor Harbor.		R	VU	
Wing Pennywort	<i>Hydrocotyle pterocarpa</i>	Low	Very few records in SA for this swamp species and many are historic. A candidate species for planting in swamp recovery projects.			VU	

