



Wetlands and biodiversity

Wetlands are a critical part of our natural environment, and play a key role in supporting Australia's biological diversity.

Wetlands support waterbird, fish, amphibian, reptile and plant species during important life stages by providing roosting, nesting and feeding habitat as well as refuge during extreme weather conditions. They also form corridor or stepping stone habitats that support the migration of species, including waterbirds and marine mammals.

Wetland values

The biodiversity of Australia's wetlands is unique, ranging from waterbirds that migrate thousands of kilometres from Russia and China, to rare plants and animals that have adapted to the highly variable wetting and drying cycles of the Australian landscape.

Biodiversity has environmental and social value. Where wetlands have healthy biodiversity, they provide essential services to the environment and to our communities – providing and purifying water, acting as spawning and nursery grounds for fish, providing a refuge for animals in times of drought and providing recreational, cultural and, in some cases, spiritual benefits.

Pressures

Biodiversity in aquatic ecosystems within Australia and in surrounding coastal waters can be affected by human activities which change natural patterns of wetting and drying, frequency and magnitude of flow and floods, water quality and the condition of fringing and in-stream habitats.

Invasive species also threaten biodiversity by degrading habitat and out-competing or preying on native species.

These cumulative impacts undermine the capacity of wetlands to continue to support biodiversity, as well as reduce the resilience of wetlands to respond to ongoing threats and pressures. They can also undermine the economic benefits of wetlands for nearby communities, for example commercial and recreational fishing.

While these pressures affect a range of wetland species, of particular concern is the impact on waterbirds which rely on healthy wetlands for their lifecycle. Some of Australia's most vulnerable species are waterbirds – the Australian painted snipe (*Rostratula australis*) and the Australasian bittern (*Botaurus poiciloptilus*) are listed as endangered both nationally and globally.

Progress to date

Australia is a signatory to a number of international conservation agreements (in addition to the Ramsar Convention on Wetlands) that support the protection of biodiversity and waterbirds. In addition, Australian, state, territory and local government policies and legislation aim to protect and conserve biodiversity and waterbirds, and many of these include wetland considerations. A number of national strategies also support wetlands and biodiversity: Australia's Biodiversity Conservation Strategy 2010-2030 has a vision to ensure that Australia's biodiversity is healthy and resilient to threats, and valued both in its own right and for its essential contribution to human existence.

In addition, Australian governments and non-government organisations are trialling new approaches to collectively manage biodiversity and the environment, including by enhancing habitat connectivity, supplying environmental water and providing opportunities to share information and experience.

Opportunities

Wetlands provide habitat and refuge for biodiversity, and help build resilience of species to protect them from population decline. While Australia's Biodiversity Conservation Strategy 2010-2030 acknowledges the importance of wetlands and aquatic systems for supporting biodiversity, it is important that the value of wetland ecosystems in helping to halt and reverse biodiversity decline is recognised more widely.

The fact that many community groups and businesses are already working to reduce biodiversity decline is a positive step toward 'mainstreaming' biodiversity in planning and decision-making at the local and regional level. There are a number of ways which community-level wetland projects can contribute to national biodiversity outcomes, including:

- Using citizen science to improve our knowledge of wetland species: Monitoring the distribution and activities of waterbirds in Australia is difficult due to the variable climate and vast area of the continent. This has limited our capacity to measure trends and establish the most critical threats for each region. However, there are opportunities for community and non-government organisations to make a contribution. Citizen science is gaining traction as a viable supplementary means of obtaining ecological data that complements scientific monitoring and research processes and could help to fill current research and knowledge gaps. BirdLife Australia, FrogWatch and WaterWatch all offer citizen science activities, and many private sector projects include monitoring of biodiversity as part of approval and reporting requirements. The Atlas of Living Australia provides resources and tools for biodiversity projects.
- Building community support for wetlands projects through partnership models: Partnerships between wetland education centres and tourism operators can increase local community and visitor awareness of the significance of Ramsar sites and their importance for migratory birds and other wildlife.



Wandering whistling-ducks © the Department of the Environment and Brian Furby.



Photo credit: Waterbirds at Goolwa © the Department of the Environment and Arthur Mostead.

- Being aware of the business risks of wetland and biodiversity decline and taking action to manage risk and implement sustainability measures: For example, housing developments across Australia are increasingly integrating natural or constructed wetlands into their design, in order to provide flood protection, natural filtering and cleansing of stormwater. Restored habitats and increased biodiversity improve the attractiveness of the housing developments and provide opportunities for recreation and enjoyment.

More information

- [Wetlands fact sheets](#)
- [Australia's Biodiversity Conservation Strategy 2010–2030](#)
- [Atlas of Living Australia](#)

© Commonwealth of Australia, 2016.



This fact sheet is licensed by Commonwealth of Australia under a Creative Commons Attribution 4.0 International licence.

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect those of the Australian Government or the Minister for the Environment.