



Wetlands and coastal/urban development

The Australian population is highly urbanised, with most people living close to the coast. However, draining and filling of wetlands to provide land for residential housing and urban and coastal infrastructure is one of the largest causes of wetland loss and, ironically, loss of the very features that attract many people to coastal living.

Wetland Values

Australia's coastal and urban wetlands are environmental assets which contribute significantly to the Australian lifestyle and economy. These wetlands help improve water quality, provide habitat for threatened, marine and migratory species, have cultural and recreational values, and support both recreational and commercial fishing.

Urban wetlands act as green infrastructure which provides ecosystem services such as:

- flood control and removal of contaminants from stormwater runoff (both natural and constructed wetlands)
- support for biodiversity, as some of the few remaining systems in urban areas providing habitat for wildlife and connectivity across the landscape

- creation of microclimates which help to mitigate extreme weather conditions through shading, evapotranspiration and wind speed modification
- aesthetic and amenity values, including mental relaxation, artistic inspiration and recreational opportunities.

Coastal wetlands provide services that include:

- production of fish and seafood, by providing conditions for critical stages in the life cycles of commercially valuable fish and crustaceans
- protection from storm surges, with coastal wetlands, such as reefs, mangroves and saltmarshes, acting as frontline defences against storms and tidal waves
- carbon sequestration, with inter-tidal wetlands such as saltmarshes and mangroves proving highly effective as carbon stores, both in their soil and vegetation
- tourism and recreation, by providing natural beauty, birdlife and the opportunity for fishing, diving and photography

Freshwater and coastal wetlands also hold important cultural and spiritual values for Indigenous people.

Pressures on coastal/urban wetlands

Australia's biggest cities are mostly located near the coast, especially around the estuaries of major river systems, meaning that the vast majority of the Australian population (85 per cent) lives within 50 kilometres of the coast. According to the most recent Australian Bureau of Statistics population projections, the proportion of people living in the capital cities will continue to increase. Population pressures on urban and coastal wetlands include:

- direct habitat loss due to urban expansion in capital cities and major regional coastal cities, including housing and commercial development, land reclamation and built infrastructure
- changes to natural water flow (because of dams/barriers, stream redirection, hard surfacing, water extraction, etc)
- pollution (garbage, sewage, oil and chemical spills, pesticides, airborne toxins) and nutrients from catchments
- introduction of exotic species (weeds, pests and domestic pets)
- disturbance of acid sulfate soils
- increasing use of coastal areas for food production (aquaculture)
- fishing and intertidal harvesting

- low levels of recognition and understanding of what is culturally significant
- loss of cultural values due to wetland degradation.

In addition, urban and coastal environments are likely to be subject to greater effects of climate change than other regions, including rising sea levels and increasing flood and storm events.

Progress to date

At the national level, the National Water Initiative, Australia's blueprint for national water reform, establishes an objective of "better and more efficient management of water in urban environments, for example through the increased use of recycled water and stormwater". Wetlands can be part of these management solutions.

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides protection for particular coastal and urban wetlands as matters of national environmental significance, including Ramsar wetlands, threatened species and ecological communities, migratory species and areas owned or controlled by the Commonwealth Government (including a number of islands and reef reserves). Actions that could have a significant impact on a matter of national environmental significance need to be referred for assessment.



Photo credit: Aerial view of North Stradbroke Island and Jumpin Pin Channel (part of the Moreton Bay Ramsar wetland area) © the Department of the Environment.



Under the EPBC Act, the Australian Government also assesses the environmental performance of fisheries and promotes ecologically sustainable fisheries management. For example, the Australian and Queensland governments have recently undertaken a comprehensive strategic assessment of the Great Barrier Reef World Heritage area to create an agreed, long-term plan for sustainable development in the region.

The Australian Government has recognised the importance of the ecosystem services provided by coastal wetlands by investing in the management and protection of wetlands. Relevant programmes include the National Landcare Programme, the Green Army and the Reef Trust. At the Global Landscapes Forum held in Paris on 6 December 2015, Australia

announced the establishment of an International Partnership for Blue Carbon. The partnership will be a collaborative network of governments, non-profit organisations, intergovernmental agencies and scientists to increase understanding of, and accelerate action on, the important role of coastal blue carbon in climate change action.

State, territory and local governments take various actions to improve land and water management practices at the local level. These include incorporating water sensitive urban design into planning processes, improving stormwater management, controlling weeds and feral animals, restoring habitat and increasing habitat connectivity, managing public access and fire regimes and monitoring and managing water quality.

Photo credit: Sea birds on the sandbar at the mouth of the Wellstead Estuary adjacent to the Bremer Bay town site © the Department of the Environment and Michael Marriott.

Opportunities

Given the pressures on coastal and urban wetlands, which are a reflection of broader pressures on these environments, there are opportunities to take a more strategic approach to managing these areas, including through strategic assessments, increased understanding and valuing of the ecosystem services provided by wetlands, promotion of sustainable tourism and capacity-building for planners and decision-makers.

More information

- [Wetlands fact sheets](#)
- [Environment Protection and Biodiversity Conservation Act and Regulations](#)



Photo credit: Aerial view of Caloundra and the entry to Pumicestone Passage in the Moreton Bay Ramsar wetland area © the Department of the Environment.

© 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.