



Australian Government

**Department of Sustainability, Environment,
Water, Population and Communities**

PLANNING AND MANAGEMENT OF URBAN AND PERI-URBAN WETLANDS IN AUSTRALIA

Australia is one of the most urbanised countries in the world with 89 per cent of its population living in cities, towns and urban centres. This places pressure on the natural environment, including on wetlands that are within or close to urban centres. Protecting and enhancing our urban wetlands now and into the future is a challenge for both planners and the community.

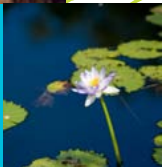
Wetlands are aquatic ecosystems with plants, animals and soils that are adapted to wet conditions which often require and can survive permanent or periodic inundation. Water in wetlands can be still or flowing; it can be fresh, salty or brackish. Wetlands do not have to be continuously wet; many wetlands in Australia remain dry for years at a time.

Australia is a signatory to the Convention on Wetlands of International Importance (Ramsar Convention), which promotes the conservation and wise use of all wetlands. At the eleventh meeting of the Ramsar Convention, in July 2012, Australia and other member countries agreed to a set of principles for the planning and management of urban and peri-urban wetlands¹. This fact sheet provides guidance on how these principles can be applied in Australia.

Australia's urban and peri-urban wetlands

Urban wetlands are those which lie within the boundaries of a city or town. Peri-urban wetlands are located in areas adjacent to cities and towns. It is important to recognise that wetlands rarely exist in isolation from other waterways.

Wetlands may be natural, constructed or a mixture of both. Lakes, swamps, dams, marshes, mudflats, mangroves and coral reefs are all examples of wetlands. Inland rivers and coastal or marine areas with water up to six metres deep at low tide are also examples of wetlands.



Values of urban wetlands

Urban and peri-urban wetlands in Australia provide a variety of benefits and services to the community.

In addition to providing habitat for plants and animals, wetlands provide water storage, improve water quality and reduce pollution. Wetlands also protect against natural hazards, slowing floodwaters, reducing the risk of fire and protecting against erosion of river banks and coastlines. Wetlands and associated vegetation can provide a cooling effect to surrounding areas in summer and also moderate strong winds.

Wetlands can also contribute to the well-being of the community by acting as urban green spaces which provide aesthetic appeal, landscape diversity and recreational opportunities. They can also contribute to cultural heritage, spiritual values and day-to-day living of Aboriginal and Torres Strait Islander peoples. Additionally, wetlands provide easily accessible educational opportunities to learn about the environment.

Potential impacts of urban development on wetlands

Urban and peri-urban wetlands are potentially at risk of:

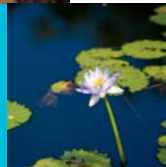
- direct habitat loss (from development, land reclamation, roads, in-stream dredging, etc)
- altered water regime (from dams/barriers, stream redirection, hard surfacing, water extraction, etc)

- pollution (from garbage, sewage, oil and chemical spills, pesticides, airborne toxins, etc)
- biodiversity loss due to the introduction of exotic species (weeds, pests and domestic pets)
- other ecosystem modifications (for example, altered fire regimes, dieback and changes in salinity).

Guidance to decision-makers

The following principles are recommended for decision-makers developing policies and planning for urban and peri-urban development that may impact on wetlands:

- **Maintain wetlands** and the range of services they provide as essential elements of the supporting infrastructure of Australia's towns and cities.
- **Promote the wise use of wetlands** as a means of achieving sustainable urban and peri-urban communities.
- **Where possible, avoid further degradation or loss of wetlands** as a result of urban development or mitigate the impacts. Any residual impacts should be appropriately compensated for by offsets such as wetland restoration.
- **Involve local communities** including Traditional Owners, in urban and peri-urban spatial planning and wetland management decisions.
- **Consider the role of wetlands** when planning urban protection from extreme events (such as fires and floods) which are expected to increase under climate change scenarios.



Guidance for planners and developers

The following practical measures are recommended for urban developers and wetland managers:

- **Conserve wetlands** – where possible, urban development should avoid destroying or degrading wetlands through drainage, infill, water diversion, pollution or the introduction of invasive species.
 - **Restore and create wetlands** – wetlands should be restored and/or created within urban areas as part of water management infrastructure. Ramsar Convention guidance indicates that restoring existing wetlands should be prioritised ahead of creating new wetlands. However, constructed wetlands also play an important and valuable role in water sensitive urban design.
 - **Include the value of wetlands** – the costs of wetland loss and degradation and the value wetlands can add should be taken into account when considering urban and infrastructure development.
 - **Educate the community** – interpretive materials and education programs can help ensure community understanding of the role of wetlands and their values for the wider community.
 - **Engage stakeholders** – decisions on urban planning and wetland management should involve local communities, including Indigenous people.
 - **Undertake integrated planning** – wetland management should be integrated into the wider elements of urban spatial planning
- and development and water resource management. Urban development should avoid wetland loss or incorporate spatial zoning to protect wetland resources. Urban planning should explicitly include wetlands as natural infrastructure for nature conservation, landscape planning and water management (stormwater management, water supply and water treatment).
- **Recognise and address health and safety issues** – wetlands can be associated with mosquito-borne diseases and can pose a drowning risk to children. These issues need to be addressed on a case by case basis. Natural wetlands near urban areas may require specific management to reduce numbers of mosquitoes. Constructed wetlands can be designed and managed to minimise mosquito populations. Appropriate access and signage and community education can also reduce safety risks.





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More Information

Several sets of guidance have been developed, including the CSIRO publication *Urban Stormwater: Best Practice Environmental Management Guidelines*², and DSEWPac publication *Evaluating options for water sensitive urban design – a national guide*³.

Further information about mosquitoes and human health in Australia is available in the *Environmental Health Practitioners Manual*⁴.

The Ramsar Convention has developed a series of *Handbooks*⁵ for the Wise Use of Wetlands. Topics covered include wetland management, impact assessment, participation and public awareness and monitoring.

The Ramsar Convention has also developed *Guidelines for establishing and strengthening local communities and indigenous people in the management of wetlands*⁶ (Resolution VII.8).

1. Ramsar Resolution XI.11, 2012 www.ramsar.org/cda/en/ramsar-documents-cops-cop11-cop11-resolutions/main/ramsar/1-31-58-500%5E25837_4000_0__
2. www.publish.csiro.au/nid/220/issue/3822.htm
3. www.environment.gov.au/water/publications/urban/water-sensitive-design-national-guide.html
4. www.health.gov.au/internet/publications/publishing.nsf/Content/ohp-enhealth-manual-atsi-cnt-l~ohp-enhealth-manual-atsi-cnt-l-ch5~ohp-enhealth-manual-atsi-cnt-l-ch5.3
5. www.ramsar.org/cda/en/ramsar-pubs-handbooks/main/ramsar/1-30-33_4000_0__
6. www.ramsar.org/cda/en/ramsar-documents-resol-resolution-vii-8/main/ramsar/1-31-107%5E20736_4000_0__



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