



Australian Government

WATER for the FUTURE

Coorong and Lakes Alexandrina and Albert Ramsar Wetland

The Coorong and Lakes Alexandrina and Albert wetland is one of Australia's most important wetland areas. Australia designated the site, covering approximately 140,500 ha in South Australia, as a Wetland of International Importance under the Ramsar Convention on Wetlands in 1985. Parts of the Coorong also form the Coorong National Park and Game Reserve.

Values of the wetland site

The Coorong is a long, shallow saline lagoon that stretches more than 100 km and that is separated from the Southern Ocean by a narrow sand dune peninsula. It marks the termination of Australia's longest river, the Murray. The Lakes Alexandrina and Albert are comprised of fresh to brackish/saline waters.

With its diversity of ecological features, the site provides a wide range of habitats. Waders and waterfowl are the predominant species, including the Curlew Sandpiper, Banded Stilt, Red-capped Plover, Masked Lapwing, Red-kneed Dotterel, Black Swan, Cape Barren Goose, Musk Duck, Straw-necked Ibis, Royal Spoonbill, Rufus Night Heron and Australian Pelican.

The site has a unique mosaic of 23 wetland types and provides habitat for nationally threatened species such as the Orange Bellied Parrot, Southern Mount Lofty Ranges Emu Wren and the Murray Cod. It also contains the threatened Gahnia sedgeland ecosystem and part of the endangered Swamps of the Fleurieu Peninsula.

The area is used for professional and recreational fishing, camping, boating, walking, wildlife observation and research. It has extensive Aboriginal, historic and geological sites. The Ngarrindjeri people continue to have a close association with the area and some of the northern islands within the Coorong lagoon are reserved for their use. Most of the edge of Lakes Alexandrina and Albert is used for farming.



Pelicans at Coorong National Park (B Gray & DEWHA)

Changes to ecological condition

The ecological characteristics of the area have been altered significantly since extensive water extraction from the Murray-Darling Basin commenced in the 1800s and barrages were constructed to separate the lakes from the estuary in the 1930s. Extracting high volumes of water for human consumption has left insufficient water for the environment. More recently, extended drought and the early impacts of climate change have added to the site's ecological stress.

CSIRO in its 2008 report *Water Availability in the Murray-Darling Basin* found that consumptive use in the Basin has reduced average annual stream flow at the Murray mouth by 61 per cent. Where historically the Murray ceased to flow at its mouth only 1 per cent of the time, this has increased to 40 per cent of the time. Climate change is anticipated to increase the incidence of cease-to-flow conditions.

Water for the Future is preparing Australia for a future with less water. The 10-year initiative is addressing four key priorities:

- Taking action on climate change
- Using water wisely
- Securing water supplies
- Supporting healthy rivers

Since 2006, flows down the Murray River into the Coorong Ramsar site have been significantly less than the volume of water extracted, and losses from evaporation and seepage. This has caused the water levels of Lake Alexandrina and Lake Albert to fall to unprecedented levels, exposing thousands of hectares of actual and potential acid sulfate soils.

Modelling has indicated that if the lake levels continue to drop, there is a risk that water bodies may acidify, causing catastrophic and permanent damage to the lakes. Falling lake levels and lack of flow over the barrages into the Coorong lagoon have also resulted in reductions in vegetation, disconnection and drying of wetlands, reductions in threatened fish species numbers and significant decreases in shorebird numbers.

Responding to ecological stress

Under the Ramsar Convention, Australia has an obligation to promote the conservation of listed wetlands. The Australian Government agreed to provide up to \$200 million to develop an enduring response to the long-term ecological management of the Lower Lakes and Coorong. In addition, the Government is providing \$120 million for piping works to connect towns, communities and irrigators currently relying on the Lower Lakes to a higher point on the Murray.

Bioremediation trial sites were implemented to investigate the role of carbon in generating additional alkalinity. This technique could play an important role in managing acid sulfate soils within the Ramsar site, but is unlikely to be able to address these issues across the whole expanse of the site. The Australian Government has committed \$10 million for bioremediation and revegetation around the Lower Lakes and this work is underway.

The South Australian Government has initiated a series of responses, including:

- Emergency pumping of freshwater from Lake Alexandrina to Lake Albert to prevent acidification of the latter lake;
- Implementation of the Goolwa Channel Water Level Management Project to manage acidification risk in the Goolwa Channel, Finniss River and Currency Creek; and
- Investigation of short, medium and long-term solutions to address the ecological stress of the site.

South Australia released a draft Long Term Plan for the Coorong, Lower Lakes and Murray Mouth in late 2009. The Plan was developed with funding support from the Australian Government and will be finalised in early 2010.

On 14 November 2008, the Murray-Darling Ministerial Council approved a strategy to prevent acidification of Lakes Alexandrina and Albert. The strategy follows an expert review recommending that, in addition to monitoring lake levels, it was important to also monitor alkalinity as a measure of the capacity of water to neutralise acids.

The Council agreed that if critical acidification thresholds are reached, and in the absence of freshwater inflow, South Australia will operate the barrages in accordance with operating procedures prepared by the Murray-Darling Basin Commission (since replaced by the Murray-Darling Basin Authority). Any actions by the South Australian Constructing Authority are dependent on having secured the necessary approvals under the Environment Protection and Biodiversity Conservation Act 1999 (*EPBC Act*).

Applying Commonwealth legislation

South Australia has lodged several referrals under the *EPBC Act* including the transfer of sea water to Lake Alexandrina, the construction of the Wellington Weir, and the long term placement of flow regulators near Goolwa. The Commonwealth's concerns in the Lower Lakes area relate to the potential for actions to have a significant impact on several matters of National Environmental Significance including: wetlands of international importance; listed ecological communities; listed threatened bird species; listed threatened plant species; listed migratory species; and listed fish species. There are opportunities for the public to be involved in the assessment processes for actions referred under the *EPBC Act*. Invitations for public comment will be advised via the department's website.

More Information

For more information about the Coorong and Lakes Alexandrina and Albert Wetland site, call 1800 218 478 or visit:

www.environment.gov.au/cgi-bin/wetlands/ramsardetails.pl?refcode=25

For more information about the EPBC referral and assessment, visit: www.environment.gov.au/epbc

Published by the Australian Government Department of the Environment, Water, Heritage and the Arts, May 2010.