



Save the Murray

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Coorong / Lower Lakes / Murray Mouth



The Murray River flows into lakes Alexandrina and Albert before entering the Southern Ocean south east of Goolwa in South Australia. The Coorong is an extensive estuary system located at the Mouth of the Murray River and extending for 140km along the coast in a southeasterly direction towards Kingston.

What is important about the Coorong?

The Coorong is ecologically and culturally very important. The Coorong is a unique ecosystem and estuary with significant conservation values. Most significantly, it was declared a Wetland of International significance in 1985 under the Ramsar Convention.

The Coorong provides a mosaic of habitats for birdlife. 33 of the 85 species of birds found at the Coorong are listed under international treaties.

The Australian Government, in recognising the importance of the Coorong for migratory birds, has established agreements with the governments of Japan and The Peoples Republic of China to protect the habitats of migratory birds.

Additionally, Australia is a member of the East Asian-Australasian Shorebird Reserve Network, which seeks to conserve key wetlands such as the Coorong, in the migration route.

Such is the Coorong's importance in providing habitat for migratory birds, some species will migrate from as far away as Siberia and Alaska to the Coorong.

The Coorong also provides irreplaceable habitat for 14 threatened species of bird, and an important drought refuge. It also supports the world's largest breeding colony of Australian Pelicans.

How have the Coorong, Lower Lakes and Murray Mouth changed?

Since European settlement, river regulation within the Murray-Darling Basin has caused a dramatic change to the Coorong, Lower Lakes and Murray Mouth.

Being at the end of the Murray River, the area receives, directly or indirectly, the impact of actions and decisions made throughout the entire Basin.

There are now over 100 regulatory devices in the Murray-Darling system, including five barrages, which separate the fresh (but increasingly salty) water from the lakes and salt water from the Murray Mouth and Coorong.

Land clearance, soil salination, erosion and polluted drainage into rivers have changed the water quality of the Murray-Darling system. The abstraction of water for irrigation has altered the flow regime, resulting in a much-reduced overall flow, and diminished flooding events.

Consequently, the river system is now a steadier one. Simple habitats have replaced once complex ones, resulting in less habitat types and thus fewer species.

Reduced flows have also resulted in long periods when no fresh water reaches the Coorong via the barrages. This causes a change in the salinity levels of the estuary, deprives it of nutrients and allows sand to



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Coorong / Lower Lakes / Murray Mouth Continued

accumulate inside the river mouth.

Consequently, many estuarine species, (species found at the Murray Mouth) which relied on variable, brackish conditions, are being replaced with marine species.

The Lower Lakes

The Lower Lakes constitute the largest freshwater body in South Australia. They provide permanent and ephemeral, highly productive wetland ecosystems and highly important habitat.

The Lower Lakes are fringed with tall weeds that provide unbroken habitat which fulfils a critical role in allowing birds safe movement, reducing the risk posed by predators. Additionally, the Lower Lakes are used to store water for irrigation and some town water.

The Lower Lakes region is growing as a tourist destination and this is reflected by the, at times, heavy use for recreational pursuits, such as boating activities and fishing.

The Lower Lakes are used for irrigation and extensive recreation these days. However, in the mid-late 1800s and early 1900's the River and Lower Lakes formed an important part of the commercial River transport system.

The town of Goolwa, located on the north-western side of Lake Alexandrina at the end of the River system, was an important river trade port.

Why does the Murray Mouth close?

Sand accumulation in the area of the mouth has been more prevalent since the construction of the barrages in the 1940's. This reduced the area of water that would have once been open to tidal influence.

The incoming tides at the Mouth are significantly stronger than the outgoing tides, resulting in a net accumulation of sand.

Other factors influencing the increased sand deposition in the area include upstream development which occurred throughout the 1980s, coupled with prevailing long term dry weather conditions which have had an effect on river flows to South Australia.

Reduced flows as a consequence of development within the Basin has also reduced the capacity of the Mouth to be cleared. Subsequently, the accumulation of sand at the mouth has become a significant ongoing problem over the last 20 years and recent attempts to maintain an open Mouth for the health of the Coorong have meant constant and expensive dredging of the Murray Mouth.

How salty is the Coorong?

The salinity levels of the Coorong varies between different areas and within different seasons. On average, the Southern Lagoon of the Coorong is nearly twice as saline as the Northern Lagoon.

Coorong habitats range from seasonally fresh near the barrages when large quantities of water are released during high flows, to brackish in the Murray Mouth area, grading to hypersaline (extremely salty) in the Southern Lagoon. The salinity level of the Southern Lagoon is 140 parts per thousand (ppt), the Northern Lagoon is 80ppt – far greater than South Australia seawater which is only 35ppt.

Most species of birds and fish have a definite range of salinity in which they can survive. The fluctuations in the salinity levels of the Coorong favours some species, whilst disadvantaging others.

Some estuarine species of birds and fish that rely on the high productivity of a variable, mostly brackish water ecosystem are replaced by marine species, which can tolerate higher salinity levels. The lower productivity of higher salinity levels supports fewer numbers of waders and other estuarine water birds, which must either find resources elsewhere or die.