



Turquoise parrot

The Murray-Darling Basin

The Basin Plan – Protecting biodiversity

The Murray–Darling Basin is Australia’s largest river system and is significant to Australia for many reasons. Over three million people rely on it for their basic needs, such as drinking water, and farmers and communities depend on it for their livelihoods.

The Basin supports approximately 40% of Australia’s agricultural production, and exports from the region are worth over \$9 billion a year. All Australian rice is produced within the Basin, as are most of our cotton, sorghum (a grain crop), stone fruit, oranges, almonds and grapes.

The Basin contains:

- Australia’s three longest rivers and its highest mountains
- The world’s largest river red gum forest
- Sixteen internationally-significant wetlands
- Aboriginal sites of world heritage significance

The Basin is of great environmental, economic, social and cultural significance to Australia.



Fat-tailed dunnart

The Basin – then and now

The water resources of the Murray–Darling Basin have been used for tens of thousands of years by Aboriginal people. When Europeans settled within the Basin, communities grew and the reliance on its water increased significantly. This has caused a steady decline in the health of the Basin system.

Some Basin facts

- Within 100 years, the amount of water taken from the Basin has increased from 2,000 GL (two billion litres) per year to over 10,000 GL per year in later years.
- Building dams and weirs has affected the flow of rivers in the Basin.
- 2006 to 2009 were the driest years for the Basin since records began 180 years ago.
- Under natural conditions (with no water removed) about half the Basin’s water would reach the sea in South Australia, while the other half would sustain wetlands and floodplains.
- Currently, 80% of the Basin’s water is used for drinking and farming, leaving little for the environment.
- The quality of the water in the Basin has declined dramatically due to the decrease in river flows – causing increased salinity levels and outbreaks of blue-green algae.
- Of the 23 river catchments in the Basin, only one is considered to be in good health.
- Scientists have estimated that 90% of the floodplain wetlands have already been lost, having a devastating effect on plants and animals.
- The number of native fish in the Basin is estimated to have fallen by 90% since European settlement.
- The number of birds migrating to wetlands at the Murray Mouth has declined from 250,000 to under 13,000 over the past 40 years.

Quick Quiz

Test your general knowledge of the Basin

1. What is the approximate area of the Basin?
2. How many of Australia’s longest rivers are in the Basin?
3. How many states and territories does the Basin pass through?
4. What type of animal (that relies on wetlands) has shown a dramatic decline in numbers over the past 40 years?
5. What tree species has the largest forest of its type in the world in the Basin?
6. Approximately what percentage of Australia’s agriculture is produced in the Basin?
7. What were the driest years on record in the Basin?
8. How many internationally-significant wetlands are in the Basin?
9. What percentage of the Basin’s water is currently taken for drinking and farming?
10. What is the name of the new management plan being devised by the MDBA?

Answers: ① Over 1,000,000 km² ② 3 ③ 5 ④ Migratory birds ⑤ River red gums ⑥ 40% ⑦ 2006 to 2009 ⑧ 16 ⑨ 80% ⑩ The Basin Plan



Bynoe's gecko

All pictures courtesy of MDBA.

The Murray-Darling Basin Authority

For the first time in Australia's history, there is a single body responsible for coordinating the sustainable management the water resources of the Murray-Darling Basin.

The Murray-Darling Basin Authority (MDBA) was formed in response to the growing understanding of the serious decline in the Basin's health.

A major step for the MDBA is the development of an overall Basin plan outlining the sustainable use of the Basin's water.

The Basin Plan

The Murray-Darling Basin Authority is developing a plan to ensure the sustainable management of water in the whole Basin system – the Basin Plan.

The plan involves setting new limits on how much water can be taken from the river system – called Sustainable Diversion Limits. This will be done by determining the needs of the environment, and then remaining water will be allocated for other use.

The Basin Plan will ensure:

- Better water security and quality
- Sustainable water use
- More natural flow rates in rivers
- Healthier floodplains, rivers and wetlands.

A draft of the plan will be released in mid-2010. The MDBA will ask communities to contribute to the final version of the plan which will then be released in 2011.

These new arrangements will help to ensure the long-term future of the Basin and the many communities who rely on it.

Fast Facts



- The Basin covers over one million square kilometres of south-east Australia
- It is Australia's largest river system, and one of the largest catchments in the world
- It is the area that collects water draining west of the Great Dividing Range that flows across inland floodplains, before it outlets to sea in Goolwa, South Australia
- The Basin passes through five states and territories – Queensland, New South Wales, Australian Capital Territory, Victoria & South Australia
- The two longest rivers in the Basin are the Murray and Darling rivers
- The Basin contains 23 major rivers and hundreds of creeks and tributaries
- Approximately 40% of Australia's food is produced in the Basin
- The Basin has a high level of biodiversity – it is home to thousands of species of fauna and flora that rely on the flooding and drying cycles of the river



Fish highways and ladders

Over time, barriers such as locks and weirs along the Murray River have prevented fish from moving along the river, effecting their populations. In response to declining numbers and diversity of native fish in the Murray-Darling Basin, the MDBA developed the Sea to Hume Dam Project.

This installation of fish passages at 12 weirs and five barrages on the Murray River between Albury, New South Wales, and the Murray Mouth in South Australia has had great success. An estimated 20 fish species are now able to, once again, swim along the 2,225 kilometres of river.



Conceptual illustration of vertical slot fishway at a weir showing chambers of the 'ladder' structure that enables fish to move up the river.