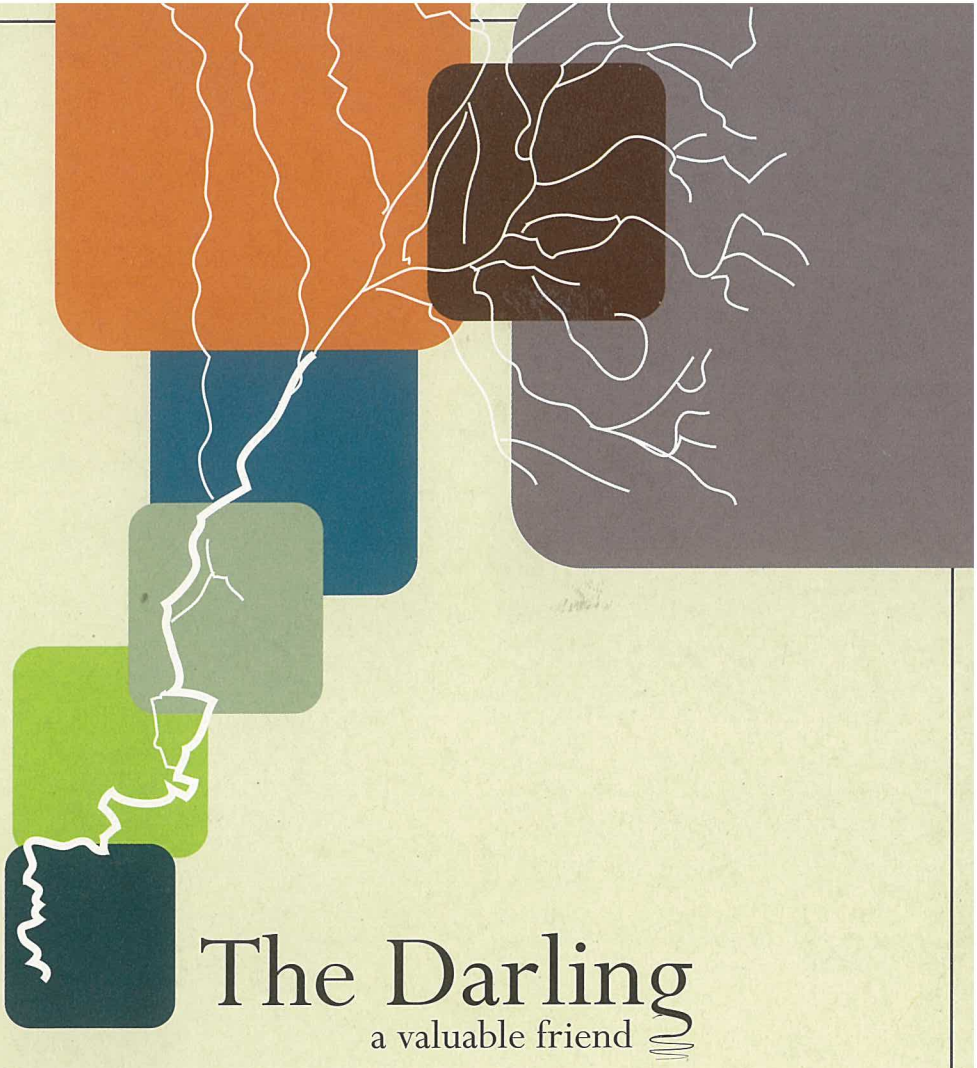


The Darling

a valuable friend

K. Brandis

Why is the Darling Basin valuable?

- The Darling is the longest river in Australia (equivalent to travelling from Sydney to Melbourne 3 times)
- 5 internationally significant wetlands & a host of other highly significant sites.
- Incredibly important for waterbird breeding, with 5 wetlands that have supported over 50,000 water birds & 4 floodplains supporting over 100,000
- Supports 14 migratory bird species that travel
- Contains critical drought & climate refuges for wildlife
- The Darling & Paroo River catchments support more wetlands important for bird breeding than any others in the whole Murray Darling Basin (MDB).

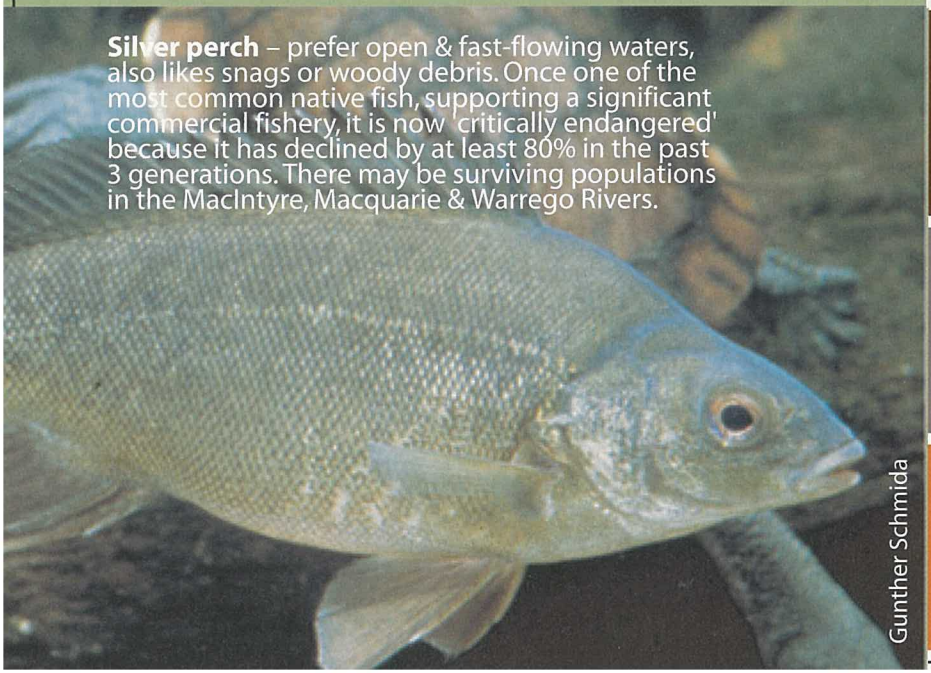
The Darling contains a highly unique & variable river system that has huge floods as well as very dry spells, making it very different from most other rivers in the world.

The Darling Basin is far larger than the Darling River. It has a number of major tributary rivers that flow into the Darling river, which eventually joins the Murray to flow out to sea in South Australia.

Darling River

Whilst only a small part of the total area of a river, the channel is critical for connecting all parts of the system together, & transporting nutrients, food & wildlife.

- Fish in the Darling River system are more abundant than those in the Murray system
- Many native fish migrate up or down the river channel & require flood pulses as triggers for migration & breeding
- 21 native fish species are found in the Darling Basin, 5 are threatened



Silver perch – prefer open & fast-flowing waters, also likes snags or woody debris. Once one of the most common native fish, supporting a significant commercial fishery, it is now 'critically endangered' because it has declined by at least 80% in the past 3 generations. There may be surviving populations in the MacIntyre, Macquarie & Warrego Rivers.

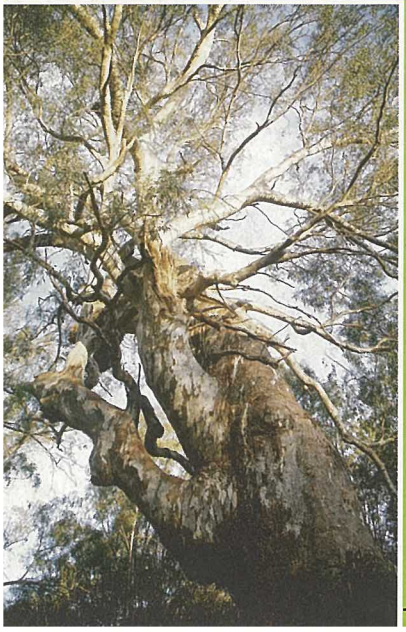
Gunther Schmida

Floodplains are one of the key parts of the Darling River system. They support most of the flora & wildlife & when flooded they teem with life that is rich & diverse.

- Many woodlands & shrubs critical for wildlife shelter & breeding depend on occasional or frequent floods spilling out of the river chanel.

- Incredibly important for waterbird breeding, with 5 wetlands that have supported over 50,000 waterbirds & 4 floodplains supporting over 100,000

- Floods trigger fish & waterbird breeding, growth of floodplain vegetation, essential nutrient cycling & widespread invertebrate production. They also recharge groundwater reserves.



River Red gums – these iconic & majestic trees are water-thirsty & require flooding for 2-3 months for 7 years out of 10 to remain healthy. They can live for between 500 & 1000 years, & provide very important hollows & habitat for a wide range of mammals & birds.

These woodlands have undergone a decline in area in the Darling system due to reduced flooding & clearing. In the Macquarie Marshes about 2,000 hectares of the largest river red gum forest in northern NSW is dead or dying due to lack of water.

Floodplains are biodiversity hotspots, with at least 100 times more species than the river channel, & possibly up to 1000 more species.

Darling system floodplains support some of the most signifigant areas for waterbird breeding in the entire MDB.

Narran Lakes: David Heap

Gwydir Wetlands

Coolibah & Black Box woodlands – important wildlife habitat found in areas such as swamp margins or higher on the floodplain. They are endangered due to the massive reduction in range. Impacts include clearing & reduced flooding.

In NSW, floodplains equate to about 88% of a rivers area.

Squirrel Glider – this little mammal can glide up to 15 metres, & inhabits woodlands such as river red gum & box. Threats include a loss of habitat

Gwydir Wetlands

Kate Brandis

Balonne floodplain -
An expansive system of rivers, channels & lakes that is home to some 500 different flora species, 24 frogs & a rich array of wildlife, including 41 threatened species. It has supported tens of thousands of breeding waterbirds. It includes the Culgoa floodplain National Park & Ramsar-listed Narran Lakes.

Lindsay Hansch

Superb Parrot – an eye-catching bird that relies on tree hollows & woodlands that require frequent flooding, particularly river red gums, as well woodlands such as black-box & coolabah. A threatened species, there may only be a few thousand breeding pairs left in the wild.

Wetlands can be permanently wet or get water only occasionally. They can be next to the river channel or out on the floodplain. Wetland plants such as lignum, reeds & water couch are very important species for waterbird breeding.

Morella Watercourse, Boobera Lagoon, Pungbougal lagoon. Near Boggabilla, the lagoon is a permanent water body & considered to be the most important aboriginal site in SE Australia. It also provides an important drought refuge for wildlife. Over 30 species, including mammals such as the Northern Brown bandicoot & Sugar glider, depend on this wetland.

Peter Merritt

Sharp-tailed Sandpiper - A migratory waterbird found in the wetlands of the Darling River system, as well as a range of other inland and coastal sites. This small wader travels long distances, spending its summers in Australia and then travelling back to the northern hemisphere Arctic regions of Siberia to breed. Its return flight will usually be made in a group of waders, travelling south over Russia and China.

Straw necked ibis – this waterbird depends on prolonged floods in wetlands for breeding these birds can travel long distances around Australia to find suitable conditions. Alarmingly breeding opportunities have been very infrequent in the Darling Basin in the last decade raising concerns about a potential population crash. Also known as the 'farmer's friend', they are widely recognised for their economic value to farmers for insect control.

Julian Robinson

Macquarie Marshes – a massive, internationally important wetland complex that contain the largest River red gum woodlands & reed beds in northern NSW. They are probably the most important site for colonially nesting waterbird breeding in Australia, & once supported 20 million birds that bred every year. The Marshes are also a major drought refuge for waterbirds & wildlife.

However there has been a significant long-term decline in river flows, & less than 10% of the wetland is now considered healthy, with 40-50% of the wetlands already lost.

About 2,000 hectares of river redgums are dead or dying due to lack of water There are now fewer waterbirds, & fewer species of waterbird – in the last few years waterbird numbers have been at a record low.

Peter Merritt

Other internationally significant Ramsar wetlands in the Basin include Gwydir wetlands, Narran Lakes, Paroo River Wetlands and Currawinya Lakes.

Threats to the Darling and its wildlife.

The extent of water extraction & seriousness of its impacts in the Darling are comparable to those in the Murray. Over-extraction of water has led to a decrease in river flows & flows to wetlands by 20 – 60%.

It is clear from these alarming facts that protecting the Darling River system & its values should be a priority for all governments. The values in the Darling River system have been put in jeopardy by a range of threats.

Sarah Moles

Dried out & dying reed bed, Macquarie Marshes

Dead river red gums, Macquarie Marshes

Some wetlands have already shrunk to half their size or worse, others are disconnected from the river over 30% more often.

Bird numbers are in dramatic decline, & have fallen by 80% in 25 years on average across the MDB.

Native fish populations are only about 10% of their levels just over 200 years ago.

The entire aquatic ecological community in the lowland Darling system is endangered as current threats are so major that it is highly likely to become extinct unless they are dealt with.

Key Threats

- **Dams & weirs** - along with over-extraction they have reduced flooding to all of the high biodiversity floodplain wetlands. They prevent fish from migrating, & cause localised extinctions of some native fish while allowing invasive species to flourish through cold water pollution.

- **Over-extraction of water** – has led to a loss of environmental flows, leading to much smaller & far less frequent flows that connect wetlands & floodplains with the river & trigger wildlife breeding. This problem could get worse through an expansion of farm dams, groundwater use & floodplain extraction.

- **Floodplain development** - severs floodplains & their woodlands from the river. E.g. in the Macquarie Valley there is well over 2320km of earthworks on the floodplain. Over 60% of the floodplain has not received flood waters for over 28 years, resulting in river red gum death.

- **Climate change -** is estimated to reduce average flows by about 20% by 2030. This will worsen existing issues & possibly cause more extreme floods & droughts.

- **Clearing -** removes habitat & food sources, isolates areas & makes them less productive, significantly limiting areas available for wildlife survival. In some areas it has been amplified by a loss of environmental flows.

- **Land use** – much of the Darling Basin has been heavily modified for agriculture, particularly irrigation, as well as grazing. The more intensive the industry the more damage caused to the land, vegetation & its wildlife.

What can be done to save the Darling?

The threats facing the Darling are large, but there are a range of opportunities to protect the unique wildlife & values in the Darling River system & enable them to flourish in the future:

1. **Return more water to the environment** - by reducing the amount taken out for irrigation – this will reconnect its flood-plains & wetlands, & revive wildlife & vegetation.

2. **Protect environmental water** - by regulating all forms of water extraction & stopping increases in future extraction, having plans that protect this water all the way through the Darling system, & having good compliance teams to protect it from theft

3. **Manage floodplain development** - reduce development & levee banks on the floodplain, & reconnect floodplains & wetlands through better management of this development

4. **Identify & protect our high value freshwater assets** – greater recognition of the great range of these high value areas along with good plans for their management & protection will help to coordinate & expand action for tackling the full range of threats to these areas.

5. **Support & encourage landholder stewardship** – to get cooperation & improvement in the quality of riparian areas, floodplains & helping these areas & their wildlife recover.

6. **Protect areas in reserves** - Include of key high conservation value assets in public reserves, including drought & climate refuges for our wildlife

7. **Modify & remove barriers in the river** – including through adding fish ladders & removing redundant barriers. This is critical for fish passage & improving the natural variability of river flows.

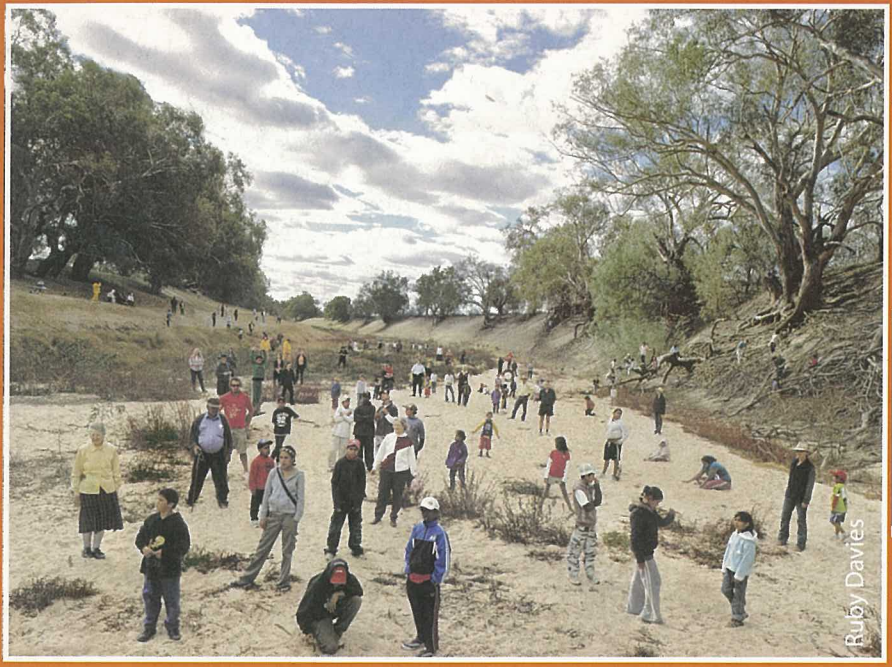
8. **Resnag the rivers** – an easy solution with big results for our native fish.

More than 95% of NSW floodplains are owned by landholders who will be affected by changes in river flows.

The Darling contains some of the highest priority bioregions in Australia for increased protection.

Climate Change: The key way of building the resilience of the environment to the threat of climate change is to tackle existing issues to ensure that the system becomes healthy & robust.

If these problems are not tackled then the wildlife in this unique part of our country will be facing a bleak future, with or without climate change.



Act Now to Save the Darling!

Write to your local members of Parliament, State and Commonwealth, and to the Ministers for Water and Environment to ask them to make saving the Darling a priority, particularly returning water to the rivers and tributaries.

The terrible 2018/2019 fish death events reinforce the urgency to halt loss of the Darling's natural and cultural values. This booklet, produced by IRN in 2008 through a Norman Wettenhall Foundation grant, is as relevant today as when first written.

The watercourses of the Darling with their wetlands and floodplains, have sustained first nations from time immemorial.

Healthy communities depend on a healthy river system: no water, no fish, no future.

Inland Rivers Network ("IRN") is a coalition of environment groups and individuals that has been advocating for healthy rivers, wetlands and groundwater in the Murray-Darling Basin since 1991.

For more information go to: https://inlandriversnetwork.org
Email: inlandriversnetwork@gmail.com
Address: PO 528, PYRMONT NSW 2009

The Norman Wettenhall Foundation

INLAND RIVERS NETWORK