Managing Environmental Water in the Barwon-Darling system

The Barwon-Darling system

The Barwon–Darling system flows from Mungindi on the Queensland / NSW border to the Menindee Lakes near Broken Hill. (The lower Darling flows from the Menindee Lakes to the Murray River at Wentworth).

The Barwon-Darling is often referred to as 'unregulated' as it does not have large storage dams 'regulating' river flows. Without large storages, water managers have less control over flows within seasons and between years.

The Barwon–Darling supports a significant native fish community including endangered species like silver perch and Murray cod. The Barwon-Darling is part of the 'Lowland Darling River Aquatic Endangered Ecological Community', listed under NSW legislation for protection, and home to culturally significant species like golden perch.

Murray Cod (guduu), 2017. Photo NSW DPI Fisheries and QDAF

Sharing Water in the Barwon-Darling

Barwon-Darling Water Sharing Plan:

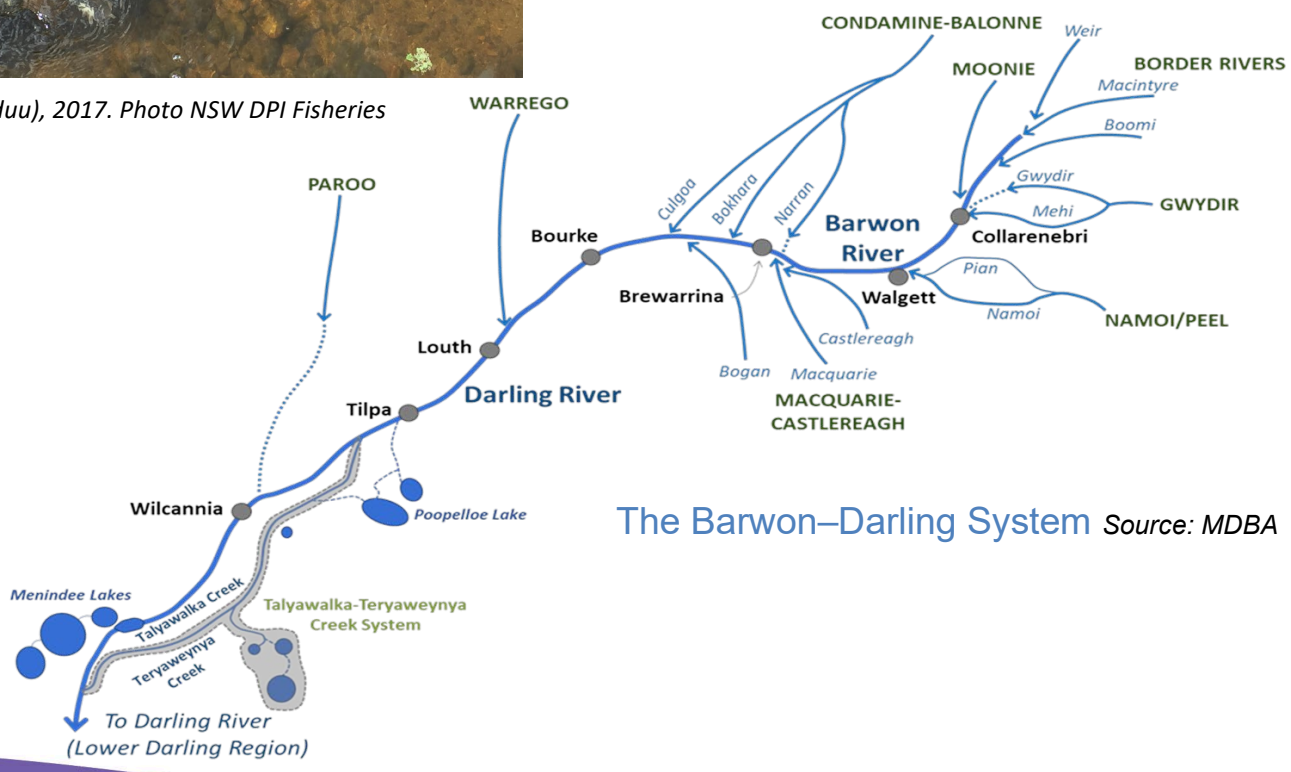
How much water each user can access varies a lot and is determined by flows in a river reach and rules in the Water Sharing Plan for the Barwon-Darling set by NSW. The Plan outlines when and how much water can be used by licence holders in each section (or zone) of the river. These arrangements apply equally to all users (including the environment). The Plan also provides rules which increases the amount of water available to the environment.

Unregulated water access licences:

Along the Barwon-Darling system, unregulated water access licences determine when a license holder can use water and their long- term share of flows.

New arrangements:

Recent amendments to the Water Sharing Plan for the Barwon-Darling will see new management arrangements put in place. These new arrangements include active management rules, where WaterNSW announces when water in a section of the river (or zone) can be accessed by licence holders.



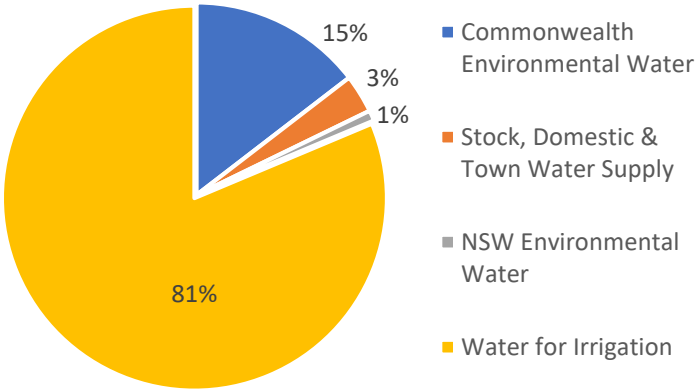
The Barwon–Darling System *Source: MDBA*

Water for the environment in the Barwon–Darling

Instead of taking water out of the river, licences held by the Commonwealth along the Barwon-Darling keep water in the river to build on natural flows. These flows help native fish to have healthier habitat and travel along the Barwon and Darling rivers. Commonwealth water for the environment can help fill pools and improve water quality.

Barwon River at Brewarrina Weir (May 2018). Photo: CEWO

As with water available for other uses, the amount of water available for the environment varies depending on the size of flows along the Barwon–Darling. The chart below shows how water is shared between users in the Barwon–Darling.



What the new active management arrangements mean for the environment

The new arrangements mean that the additional flow in the river due to water for the environment is protected from extraction. This means water for the environment can remain in the river to meet its intended purpose.

From 1 December 2020, water users will be able to indicate if they wish to either protect or take water from unregulated flows through an expression of interest (EOI) process. Based on information submitted through the EOI's, WaterNSW will:

- announce and share access to unregulated flows between users.
- determine the amount environmental water that will be left in the river.
- adjust each users' opportunity to take water so that they and the environment each gets its share.

How the CEWO will manage water for the environment using active management may evolve through time – but our current expectation is that we would use active management more in drier years than in really wet years.

Monitoring responses to water for the environment

A long-term monitoring and evaluation program has been undertaken by environmental water managers at the junction of the Darling and Warrego Rivers. Monitoring data from this site helps water managers use the latest science to improve their understanding of how the environment responds to environmental flows.

Specific monitoring of environmental watering events has been undertaken on several occasions over recent years. These short-term monitoring activities measured flow, water quality, water bugs, and native fish responses. Monitoring of these events has provided valuable learnings about specific issues such as how much water is needed to re-start rivers after dry times.

Brewarrina Weir fishway (November 2020). Photo: CEWO

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