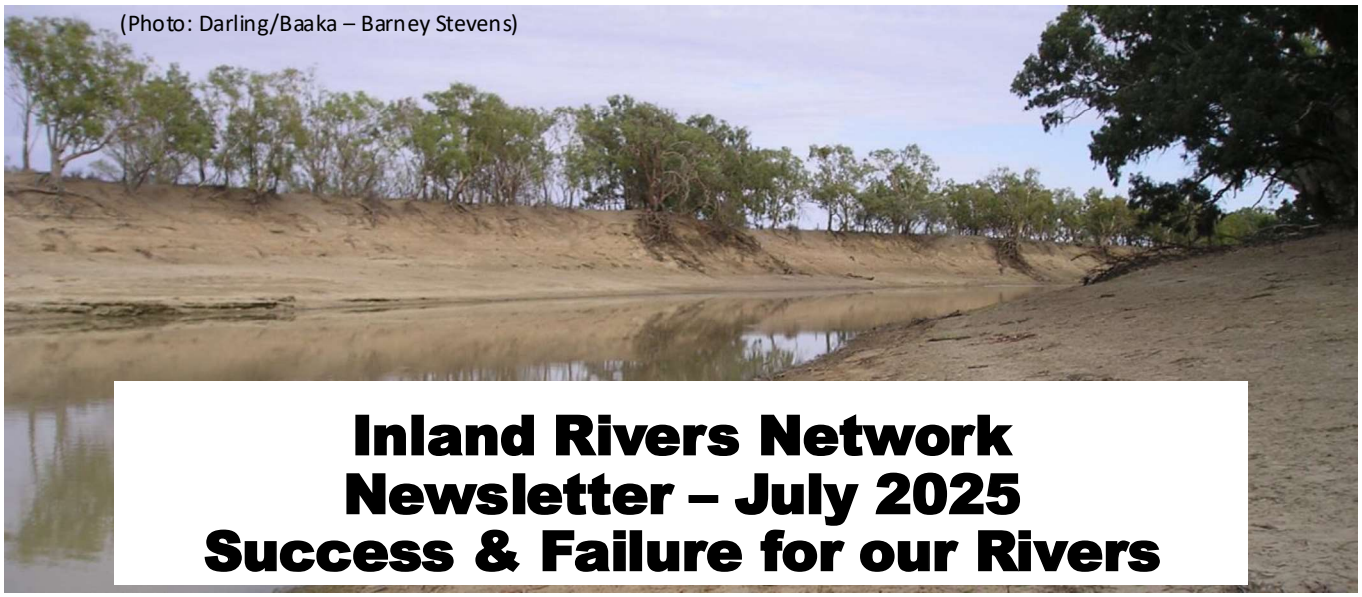
INLAND RIVERS NETWORK


(Photo: Darling/Baaka – Barney Stevens)

Inland Rivers Network Newsletter – July 2025 Success & Failure for our Rivers

ARE THE INLAND RIVERS BEING MANAGED BETTER THAN THEY WERE IN 1991?

The Inland Rivers Network was established in 1991 as a peak organisation for NGOs interested in the health of the inland rivers of the Murray-Darling Basin. What has happened over those 34 years? Has river health and management improved, stayed the same, or become worse? Has progress been made?
Two conflicting forces have been at work – the pressure to make money out of every last drop of water versus the pressure to maintain adequate flow to ensure every other benefit that rivers bring. Overprinted on these are the effects of climate change.

The Cap
Prior to 1986 the water authority in New South Wales was the Water Conservation and Irrigation Commission whose job was to facilitate irrigation. Subsequent organisations inherited this ethos; rivers were just the means of transport to get water to irrigators.

In 1991 the longest continuous outbreak of blue-green algae was observed in the Darling River – 1100 km in length. Everyone, even the water authorities agreed that something needed to be done. Until then there had been unrestricted, ever-increasing irrigation development and associated water extraction.

An Interim North-West Flow Plan was introduced before the 1992 summer to limit water extraction from upstream catchments, to the extent scientists said was needed to prevent a repeat algal bloom. The plan was implemented through the next drought but stopped being implemented in about 1996.

As a result of obvious environmental problems, the Murray-Darling Basin governments decided to limit the total amount of water being extracted from all the rivers of the Murray Darling Basin. In 1995 the Cap was created, based on water usage in the year 1993/1994. However, the Cap was an average and took years to establish in each valley, and delayed implementation was agreed for Queensland. The Cap was not applied in the Lachlan and Barwon-Darling Rivers until 2006.

The Cap was a qualified attempt at limiting extraction from the rivers, and was supposed to include floodplain harvesting, where water is harvested before it reaches the river or when the rivers overflow onto the floodplain. However, floodplain harvesting was not measured and was allowed to increase virtually without limit.

The Living Murray
The first attempt to reduce the extractions from the rivers was the Living Murray program commenced in 2004, in which engineering solutions were adopted to save 500 Gigalitres per year from the Murray River, for the environment.

Changes in Legislation
A number of important changes have been made in legislation, including the 2000 NSW Water Management Act which prioritises water for the environment and for critical human needs, the environmental priority being overwhelmingly ignored by water authorities. In 2007 the Federal Government passed the Water Act, Victoria passed its Water Act in 1989, and South Australia passed its Water Resources Act in 1997.

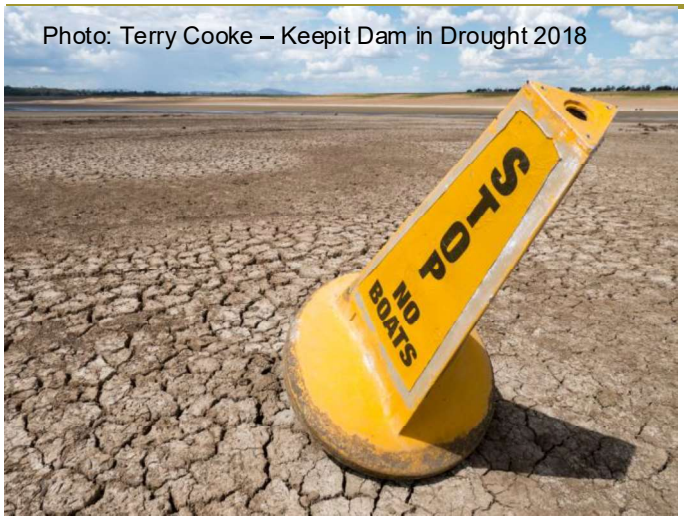


Photo: Terry Cooke – Keepit Dam in Drought 2018

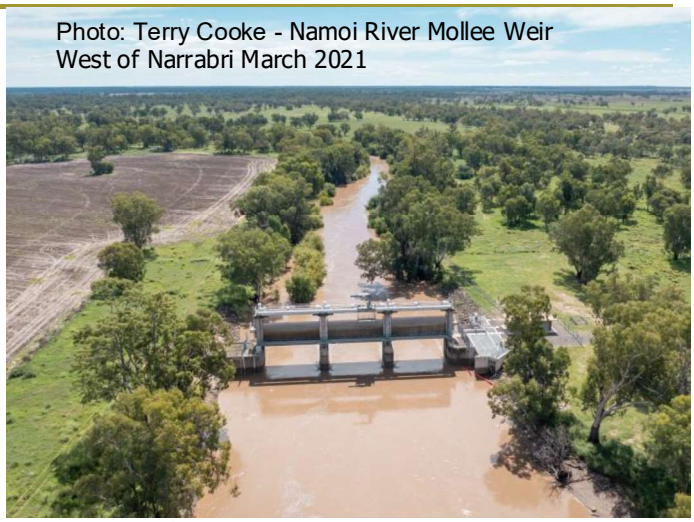


Photo: Terry Cooke - Namoi River Mollee Weir West of Narrabri March 2021

The Murray Darling Basin Plan 2012

The Basin Plan attempted to reduce the volume of water that could be extracted from the rivers. It made some significant improvements for the southern basin, ie. the Murray, Murrumbidgee, Lachlan and the Victorian rivers. A poor attempt was made to improve river health in tributaries of the Darling/Baaka River, but the Darling itself was considered "too hard". Around 2010 the volume of water licences in existence along the Barwon-Darling/Baaka was estimated to be 3 times the capacity of the river.

The aim of the Basin Plan was to limit water extractions to a volume that would permit a healthy system of rivers and wetlands. Scientists calculated it would require a reduction of water extraction of about 7000 Gigalites (GL)per year. Politicians decided the number would be 2400 GL. So far only 2100 GL have been achieved.

Buybacks and Water Trading

Prior to the 1980s-1990s Water Licences for the extraction of river water were only issued to people who owned land along a river, or within an irrigation scheme and were tied to that land. Water trading was rare and very restricted. This changed greatly after COAG agreed to the national reform agenda in 1994 as part of National Competition Policy. Economists (National Water Commission 2011, Marsden Jacob Associates) convinced governments that by allowing water to be traded, it would end up going to the most valuable uses and increase overall production.

Given the huge over-allocation of water licences to property owners, it was realised that the many licences that had never been used ("sleeper" licences), or only partly used ("dozer" licences) could be sold and activated under the trading system, leading to disastrous increase in extraction. The Federal Government introduced voluntary buybacks in 2008 in order to reduce the volume of licences. It was party time for many licence-holders, especially those strapped for cash. But there was fierce opposition in some rural areas where people thought the reduction in water available for extraction would destroy rural towns and increase the costs to individual farmers in irrigation schemes that would become "motheaten". The outcome was that large buybacks took place and the total production from the Basin did not decrease. Farmers learned to use water more efficiently.

Outcomes of Water Trading

The decision to separate water licences from land titles was designed to promote both permanent and temporary sale of water licences within the Murray-Darling Basin. The aim was for water to be used for the highest-value commodities. In some areas mining is the highest value use for water. In others it is currently almonds, cotton or wine grapes.

Licences can be moved between valleys in the Southern Basin, but there are restrictions on trading in northern NSW. Areas in which lower-value commodities are produced by irrigation, such as grass for dairy cows, have struggled to retain sufficient water licences. In such areas the government buybacks are often blamed, but the reality is that low-value commodities are being out-bid by almonds and cotton. The irrigation industry is becoming somewhat like mining, leaving ghost towns while it moves elsewhere.

Commonwealth Environmental Water Holder (CEHW) and State Equivalents

A major component of the Basin Plan was that a Commonwealth Environmental Water Holder would take charge of water licences purchased by the Commonwealth, and the water would be used to feed environmental assets: the rivers, lakes and wetlands, including the internationally-listed Ramsar wetlands. This environmental water has partially reversed the sharp reduction in water bird numbers that occurred over previous decades. State authorities have also obtained a limited number of water licences for environmental purposes.

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The Alternatives to Buybacks

There was much opposition to voluntary buybacks, and there was a big push to find alternative "water efficiency" schemes to return water to the rivers via such means as lining irrigation canals or piping water. Especially under Coalition governments the alternatives were highly funded and highly rorted. Very little water was returned to the rivers, but huge amounts were paid towards improvements on irrigation properties run by major companies.

A Queensland cotton grower has recently been sentenced to 9.5 years imprisonment for collecting $8.7 million from the scheme in 'one of Australia's most significant water frauds' (ABC 16/7/25). There have also been questions about large, expensive buybacks not put to public tender. A controversial privately-agreed $78 million buyback involved senior Coalition politicians and a Cayman Islands company. The purchase of the Tandou agricultural company by Websters company, run by a leading figure in the Waterfront Dispute of the Howard years, was also interesting. Less than 2 years after the purchase, Websters sold the Tandou water licences to the Commonwealth for $78 million at a profit of $37 million. The Tandou purchase and water sale coincided with, and concluded a Coalition plan to remove the need for Menindee Lakes.

The Enablers

Naturally, most irrigators will make use of whatever water is made available to them, even if the water is overallocated. Allocation of water is controlled by politicians and water bureaucrats.

The most influential politicians are the state and federal Water Ministers. Some have come from electorates where irrigation is a major industry, others have little relevant background and Ministers can hold multiple portfolios. All Water Ministers are subject to pressure from other politicians, particularly those who see their election funding and votes being related to the irrigation industry.

All Ministers depend to greater or lesser extent on their Departmental staff. When Ministers are distracted by other portfolios their Departmental heads are left to run the show. Public service water authorities employ many good scientists and other staff, but no matter what the staff recommend, policy is determined at the top, and it can take a long time for a big ship to turn around. In 2020 the NSW Independent Commission Against Corruption (ICAC) found that there had been:

> *"... undermining of the governing legislation's priorities over the past decade by the responsible department's repeated tendency to adopt an approach that was unduly focused on the interests of the irrigation industry."*

Water Theft, ABC Four Corners and Follow-Ups

In 2017 The ABC Four Corners program "Pumped" ran an expose about irrigators in the Northern Basin illegally taking very large amounts of water from the rivers. This water theft had been going on for years, but authorities had not cracked down on it; two major reasons are likely, wealth and influence. The whistle had been blown in a very public manner, investigations occurred, prosecutions occurred, and a senior public servant was found to have been acting in the interests of certain irrigators rather than the people of NSW. The lid had been lifted and consequences followed for some years. ICAC, Corruption Matters, December 2020, Issue 156, 'Water management changes a must'

Metering

One of the consequences of the Four Corners episode was the Matthews Inquiry which recommended that all pumps extracting water from the rivers should have tamper-proof meters. For a long-time the metering was done by simple waterwheels and locally recorded. Putting a stick in the water wheel to stop the recording was relatively common. It is now a requirement to replace the primitive recorders with telemetry and tamper-proof recorders. The process of installing these has taken many years and is not yet complete.

NRAR (Natural Resources Regulator) state-wide metering compliance figures in December 2024, reported that less than half of pumps, that should be metered, are (<47%). These figures do not include floodplain harvesting works. Departmental figures on metering compliance of floodplain harvesting works in the Barwon-Darling showed less than 2%. On top of that inadequate compliance rate, pumps for licences with less than 100 ML/year are not required to be metered at all. Government statements that 95% of water take in NSW will be metered by the end of 2025, include Sydney and Hunter water and other town utilities, and ignore the implications for river catchments with a lot of small pumps.

Photo: Geoff Looney - Mass Fish Kill on the Baaka

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Natural Resources Access Regulator (NRAR)

In 2017, by no coincidence, the office of Natural Resources Access Regulator was created to police the access to water in NSW. Previously the regulation of water access had been carried out within the state water authorities that were controlled by people who thought their job was to prioritise irrigators. Officials involved in inspections could never be sure that their managers would back them up. In a similar situation environmental officer Glen Turner was shot dead in 2014 by elderly farmer Ian Turnbull, while inspecting repeated illegal land clearing near Moree. Faced with dangerous confrontations, NRAR officers can obtain Police assistance.

NRAR officers initially concentrate on educating irrigators on the somewhat complex water regulations, but can and do prosecute where appropriate. Representatives of irrigator peak bodies welcome the establishment of NRAR, in that NRAR acting as intended will weed out the crooks and enhance the reputation of honest irrigators.

More Dams?

After the disastrous Millenium Drought and the sharp 2017-2019 drought, certain politicians found it beneficial politically to propose new dams. Dams were announced for a Mole River dam, a Dungowan dam on the Peel River, enlarging of the Wyangala dam and rebuilding the Gingin weir on the Macquarie River. Business cases were later prepared, but never released, and all were probably unfavourable. All four proposals were actively opposed by community organisations and it appears that all four have been shelved.

New dams do not create new water and they cause great environmental damage on the rivers. Alternatives include increased recycling of water, and changing the way that water is released from existing dams. The official policy in NSW has been to almost empty the dams in two years in order to make space for more water that might or might not arrive. The emphasis has been on growing annual crops such as cotton and rice, rather than perennials such as grapes and fruit trees. This policy is a huge gamble and has been disastrous in drought years.

Communication Between Authorities, NGOs and the Public

In 1991 there were no Water Sharing Plans. Landholders could take as much water as their Water Licences allowed. This situation was not sustainable; firstly, the Cap was imposed, then with the NSW Water Management Act 2000, Water Sharing Plans (WSPs) were developed for each river valley and commenced operation in 2004. Naturally, affected irrigators were consulted by state water authorities. In the early years there was beneficial formal and informal interaction between NSW water authorities and NGOs, including the Inland Rivers Network. More recently this has evolved into a very formal system of written submissions prior to new 10-year Water Sharing Plans being implemented. The Inland Rivers Network has been very active in preparing submissions.

Natural Resources Commission (NRC)

"The Natural Resources Commission is an independent body that provides robust, evidence-based advice to help the NSW Government address these issues using the latest science, research and best practice." (from their website)

The NRC was established in 2003. Amongst other duties, it reviews proposed WSPs before implementation and can investigate public comments on the proposed WSPs. IRN members have been interviewed by NRC on a number of occasions. The NRC makes recommendations to the state water authorities. Some of those recommendations are adopted.

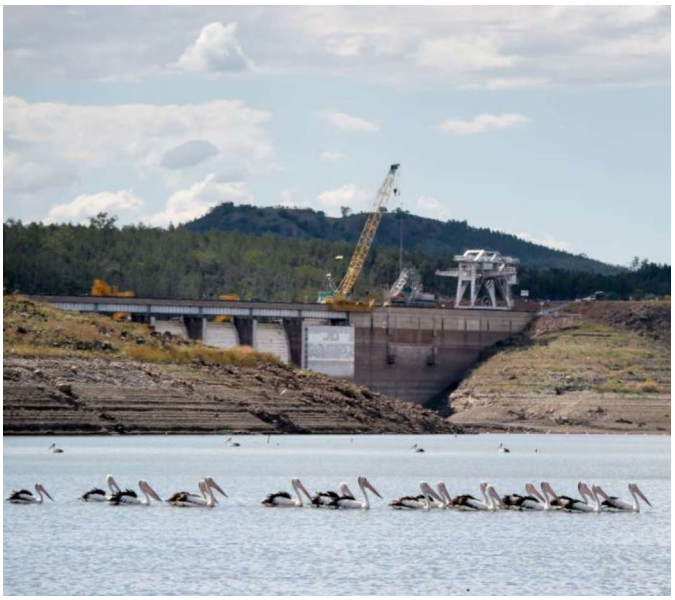

Photo: Terry Cooke – KeepIt Dam in Drought – Namoi River

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Floodplain Harvesting "Restricted"

On 24th March 2020, Melinda Pavey, then NSW Minister for Water, Property and Housing stated: *"There is currently very limited data on the volume of water that has been extracted through floodplain harvesting in New South Wales because such volumes have not been required to be reported by landholders."*

While the regulation of water extraction from the rivers was being tightened, there was neither regulation, nor licencing of floodplain harvesting, which occurs when water is captured before it reaches a river, or when the river overflows. Typically, earthen banks were used to direct floodplain water into private storages and water harvesting was only limited by the volume of these storages. Between 1994 and 2020 the total volume of private storages in the Northern Basin increased from 574 GL to 1,395 GL (Slattery & Johnson 2019) Notably floodplain harvesting was not effectively included in implementation of the 1995 Cap, so it grew unrestricted. After many years of dithering, the practice was "limited" in 2023 by way of granting of licences for floodplain harvesting.

Unfortunately, the licenced volumes were largely based on history of use, another huge rort, and with the generous five year carry-over allowance and management rules that don't actually limit extraction at all; there is little practical limit.

Increased Penalties for Water Theft

Until recently the penalties for water theft were quite small, even maximum penalties were trivial for large corporate irrigators. Apart from damage to reputation, large-scale irrigators could treat the penalties as minor operating expenses, the production value created by the stolen water being far in excess of the penalties.
In 2025 the scale of penalties is being increased markedly, with maximum penalties for individual operators being $5 million and for corporations nearly $10 million. There are provisions that penalties can be up to 5 times the value of water stolen, or even loss of water access.

First Nations Water Rights

First Nations people were stripped of all rights to land and water through colonisation. Traditional Owners won back their land title through the arduous native title process and initiated by Eddie Mabo's challenge to 'Terra Nulius', however water has not been returned.

Despite being a signatory to the Closing the Gap agreement since 2021, the NSW government has yet to agree on a Closing the Gap Inland Waters Target for NSW.

The Commonwealth Government in 2018 promised Basin Nations the purchase of $40 million of water rights (increased to $100 million in 2023) under the Aboriginal Water Entitlements Program. The first purchases were of 200 ML of water in 2025 from the Macquarie/Wambuul catchment, 10 ML from the Lachlan and 80 Megalitres from the Goulburn-Broken Catchment.

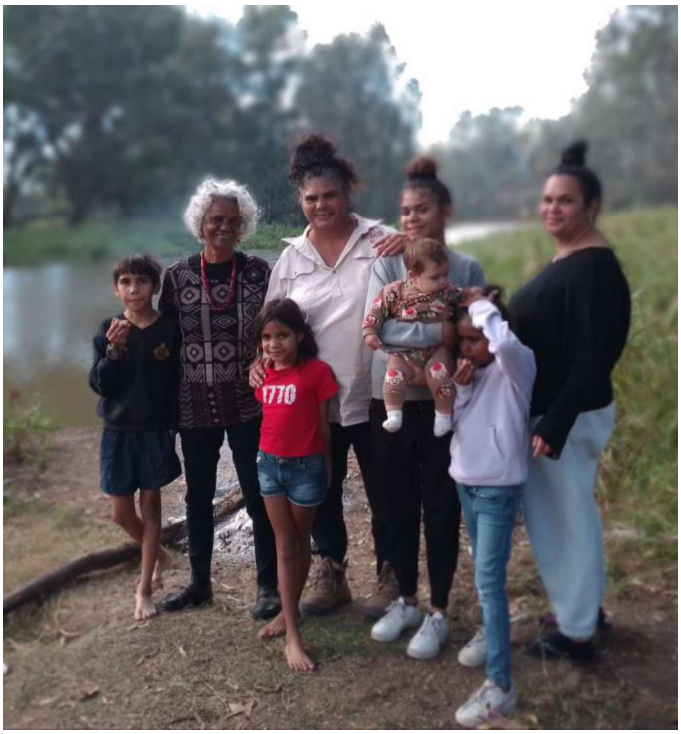

Photo: Maria Polly Cutmore, Co-Chair Murray–Darling Basin Aboriginal Water Entitlements Program Interim Governance, cousin Kerrie Saunders and family members – David Paull

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The Barwon-Darling/Baaka River

The Barwon-Darling/Baaka River (the Baaka) is a special case; it joins the Northern and Southern basins, it is the passage-way for fish and other freshwater organisms to move from one part of the Murray-Darling Basin to another and is critical in their survival. The Baaka is also special in that it depends almost entirely on separately-managed tributaries delivering flow from rainfall far-away. It has been treated as if the Baaka is just a drain for floods, not a river whose inflows should sustain thriving ecosystems and resident human communities.

The Murray-Darling Basin Plan was a letdown for the Baaka, considered just too hard to recover the necessary water from upstream irrigators and local irrigators. Some water was recovered via buy-backs, but not sufficient to stop no-flow events, major fish-kills and algal outbreaks. Water quality problems from reduced flows have been ignored.

The Cap was implemented for most rivers in NSW by 1999, but not until 2006 for the Baaka. As a result, the extractions for irrigation continued to increase and the volume of private off-river storages increased to 300 GL. From a flow in January 2006, irrigators on the Baaka extracted a record 268 GL. The eventual Cap was 173 GL for the Baaka, but this was only an average. In addition to the Cap amount, the irrigators were given a bonus 170 GL. As a result of the ability to carry-over unused allocations, holders of 43 licences have more than 10 times their water allowance in their accounts. These people will have permission to drain the river until their water account comes down to equal to or less than 10 times their allocation. The recently-adopted Water Sharing Plan sets a long-term average annual extraction limit of 204.4.

Management of the Barwon-Darling/Baaka River is a national disgrace.

The Connectivity Report

The Connectivity Expert Panel handed in its final report in July 2024, focussing on connections from tributaries into downstream rivers. Water Sharing Plans for each NSW river valley are created in isolation from each other, such that WSPs for the tributaries of the Barwon-Darling/Baaka were created without regard for the Baaka itself.

> *"The system is currently being operated in a way that runs it dry and then restarts it much more frequently than would have historically occurred."*

In addition to providing baseflow during or soon after dry times, the report recommends: *"providing baseflows, and occasional small and large freshes, which we feel should be met during non-dry times".* (From the report)
Factors that affect connectivity of the rivers include irrigation extractions, floodplain harvesting and interception of water flows by big government dams on the tributaries.

Aquatic Species and Water Birds

The natural flow through the rivers of the Murray-Darling Basin has been disrupted by extraction of water for irrigation, industry and town water supply, plus the building of dams and many weirs, and drainage from farmland adding soil, fertiliser and agricultural chemicals to the rivers. Mass fish-kills have become a regular feature. Forty percent (1000 km) of the Baaka is now in weir pools which replace flowing fish habitat, needed for native fish and mussels, creating conditions that suit European carp. Carp now comprise 80-90% of the fish biomass and fresh-water mussels are in serious decline.

Some efforts have been made to reverse these problems. Fishways of limited effectiveness have been built on some weirs and re-snagging has begun. Back in paddleboat days, rivers such as the Darling were de-snagged – dead trees were removed from the water and rock bars were dynamited. Now logs are being placed back into the rivers, because such objects are important native fish habitats.

Dr Richard Kingsford AO (UNSW) has surveyed the numbers of water birds in the Murray Darling Basin for many years. In the 2024 survey the number of water birds counted was about half that in 2023.

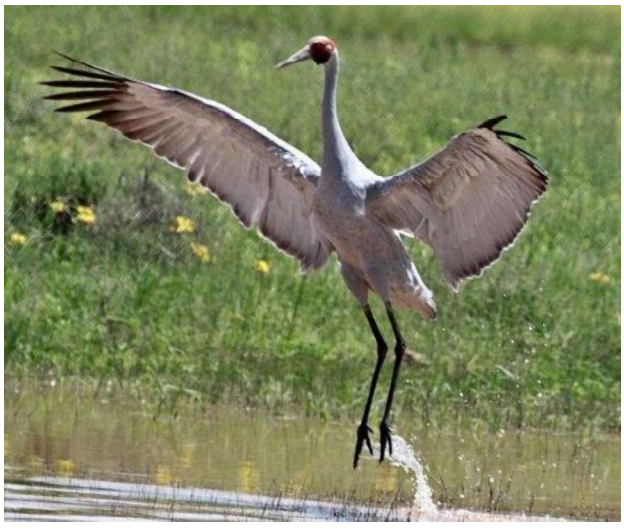

Image : Brolga Macquarie Catchment Neil Zoglaven

A quote from the Birdlife Australia website:

> *"While it's normal for waterbird numbers to fluctuate in response to the boom–bust cycles of Australia's inland wetlands, the latest Eastern Australian Waterbird Survey results are well below the long-term average – pointing to higher temperatures and drier conditions across eastern Australia in 2024. Three of the four major markers of waterbird health (overall numbers, numbers of species breeding and total wetland area) were also down, with the abundance of breeding birds among the lowest on record.*
> *While this continues a concerning trend of significant long-term declines, the sudden and dramatic decline in waterbird numbers in the region is alarming."*

This serious decline in water birds has occurred despite the Commonwealth Environmental Water Holder (CEWH) supplying large volumes of water to critical lake systems such as Narran Lakes.

Climate Change, the Elephant in the Room

While all sorts of reforms are happening, the climate is not so slowly changing, with alternations between terrible droughts and equally terrible downpours and floods.

From Colloff et al. 2024

> *"Grafton et al. (2022) found that climate change had resulted in a 20–30% reduction in flows of rivers in the northern Basin. The MDBA acknowledges that climate change has resulted in reduced inflows in the 20 years between 1998–99 and 2018–19, particularly in the southern Basin (Murray–Darling Basin Authority 2020a, pp. 20–22). Despite such findings, climate change is not factored into the hydrological models, nor are issues with return flows or losses of water from unlicenced diversions and theft (Wheeler et al. 2020).*
>
> *The Wentworth Group (2020) reported substantial deficits between observed and expected flows for water returned to rivers under the Basin Plan (average 20% less than expected) after accounting for climate variability. Environmental water requirements (the frequency, magnitude, duration, and timing of flows required to achieve environmental outcomes) were not met at 65% of river gauge sites assessed."* Sheldon et al. 2024)

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What Went Forwards and What Went Backwards?

In the second half of the 20th Century the Murray-Darling Basin rivers resembled a gold rush with uncontrolled water exploitation. Once development occurs it is difficult to wind back, with farmers, workers, corporations, towns, councils, governments becoming dependent.

In the 1990s the first steps were made to limit growth in water extraction from the rivers, then in 2004 and 2012 respectively, the Living Murray and Basin Plan were implemented to return water to the rivers. Along came Water Sharing Plans to regulate use, but these gave preference to irrigation rather than to the environment. The Basin Plan failed to meet its minimal target of 2400 Gigalitres returned to the rivers by 2024 and totally failed the still-overallocated Barwon-Darling/Baaka River. Water theft continued largely unchallenged until exposed in 2017. Serious deterrence is now undertaken by NRAR.

While some progress has been made with limiting, then reducing extractions from the rivers, in the background there has been the relentless growth in floodplain harvesting that by-passes the rivers, and the process of climate change. Floodplain harvesting in NSW has now been licenced and perhaps its enormous volume will stop increasing. Climate change is unlikely to turn around, so we can expect severe droughts interspersed with disastrous floods. Can the Murray-Darling Basin adapt?

Management of dams in NSW improved a little in the 1990s, when the rush of cold water from the dams was shut down more slowly, but the NSW dams are still being emptied quickly to promote maximum irrigated cropping and to make space for next season's water which might or might not come.

What is left to achieve?

Clearly the low target of the Murray Darling Basin Plan to acquire 2400 Gigalitres for the environment needs to be achieved.

All recommendations of the Connectivity Panel report must be implemented. A plan needs to be put in place to repair the Barwon-Darling/Baaka River, and that plan should include drastic changes to the Water Sharing Plans for that river and its tributaries.

The priorities listed in the NSW Water Management Act 2000 need to be followed, and all players in water use and administration need to understand the importance of a healthy environment for the benefit of all those who rely on the rivers. Specific items that must be achieved include the metering of all water extraction and especially metering of floodplain harvesting.