



Australian Government

Commonwealth Environmental Water Office

Lower Balonne flow 2020 – Update # 6 (Wrap Up)

Final flow update – 29 June 2020

Objectives	Reconnect rivers in the Lower Balonne and further downstream. Ensure more water stays in the Lower Balonne to reach Narran Lakes to rebuild critical habitat.
Target areas	Lower Balonne rivers, Narran Lakes Ramsar Site, and the Darling River.

Snapshot of the flows

The recent prolonged drought has meant areas in the Lower Balonne floodplain have been under stress for years. For example, prior to the flows in early 2020, large areas of the Narran Lakes had not had a decent inflow since April 2013.

Welcome rain returned to the Condamine-Balonne catchment in January 2020. Follow-up rainfall then fell in February 2020. Beardmore Dam, near St George, filled and then started to spill on 15 February and peaked at major flood level around two weeks later. A total of 1,442 gigalitres (GL) flowed past St George in this flow event (between 11 February and 25 April).

The flows in the Lower Balonne split into multiple river channels, including the Culgoa, Bokhara and Narran rivers, and over the floodplain. These flows supported the ecological values of large areas of the Lower Balonne floodplain, including sections of the Culgoa National Park and the Narran Lakes.

Flows from the Culgoa and Bokhara rivers provided around 205 GL to the Barwon-Darling, a significant contribution to help extend river connectivity all the way to the Menindee Lakes. Additionally, around 90 GL of water passed into the Narran Lakes.

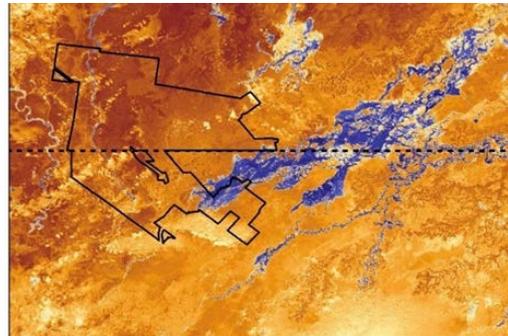
Around 163 GL of Commonwealth water for the environment was delivered against permanent entitlements, including 95 GL from overland flow licences. An additional 9 GL reached Narran Lakes from a pilot project where an upstream licence holder was reimbursed for not pumping.

Early outcomes

Waterbirds	Over 30 waterbird species have been recorded at Narran Lakes this year including the freckled duck, blue-billed duck and black necked stork, which are all listed as threatened species.
Vegetation	All key waterbird breeding habitat inundated at Narran Lakes - 4,500 hectares of the Ramsar site (within the Narran Lake Nature Reserve) watered.
Habitat	Reconnected important waterholes providing refuge, supporting native fish throughout the Lower Balonne system and into the Barwon-Darling.

This water delivery has been the largest Commonwealth watering event in the northern Basin in the ten-year history of the Commonwealth Environmental Water Office (CEWO), and the third largest in the Murray-Darling Basin this year.

The addition of water for the environment has meant that a larger area of floodplain in the Lower Balonne was able to get a good drink. Cubbie Station voluntarily contributed a further 10 GL.



The flow arriving at the Culgoa National Park on the border of Qld and NSW (11 March 2020). Photo: Sentinel image sourced by MDBA



Culgoa River. Photo: Melissa Hams, NSW National Parks and Wildlife Service



Narran River. Photo: Joanne Ocock, NSW National Parks and Wildlife Service



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Narran Lakes – on the road to recovery

After a seven-year dry spell, flows finally returned to the internationally significant Narran Lakes. The majority of this inflow was protected for the environment either under the Queensland water plan or under licences held by the Commonwealth.

Due to the extended drought, many were concerned about the health of key habitat in Narran Lakes and whether it could support a waterbird breeding event. Although waterbird breeding has not occurred this time, we are seeing positive signs of recovery, such as the flowering of shrubs like *lignum*.



Flowering *lignum*. Photo: University of New England

This event will replenish and reinvigorate habitat that was in critical condition. Next time significant inflows arrive at the right time of year, we hope this will support breeding of many thousands of waterbirds, as witnessed during past floods.

A collaborative effort

Many people and agencies have helped throughout this flow event in various ways. We would like to pass on our sincere thanks to you all. This really has been a joint effort.

- NSW National Parks and Wildlife Service (NPWS) has conducted on-ground and aerial waterbird surveys.
- Vegetation monitoring is being undertaken with NSW NPWS, NSW Department of Planning, Industry and the Environment (EES), and the University of New England.
- Local indigenous representatives from the Joint Management Committee have provided cultural insights into the plants, animals, and artefacts encountered during the vegetation surveys.
- The Murray-Darling Basin Authority (MDBA) has been monitoring the inundation of this event.
- Queensland Department of Natural Resources, Mines and Energy has provided advice.
- The local water users who contributed additional water to the flows.

This quote from Rob Smith, Director Northern Inland Branch, NPWS highlights how important collaboration has been throughout this event:

“Narran Lake Nature Reserve is a hugely valued reserve for us, and it was great to see the wetlands full. This event also reinforced the importance of connections and collaborations across government agencies, to ensure we documented and therefore improved our understanding of the environmental benefits from these flows. Let’s hope they keep coming!”



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Flows may have wound up – but the important monitoring work continues

[Update 5](#) provided info on the great monitoring being undertaken to understand responses to these flows. The information collected through this monitoring will inform planning for future water deliveries.



Members of the vegetation monitoring team, traditional owners, NSW and Commonwealth reps. Photo: CEWO

Vegetation monitoring will continue at Narran Lakes to assess the effect of the flows on vegetation health.



Back Lake – December 2019 (above) and April 2020 (below). Photos: Jason Wilson, CEWO

Waterbird data will continue to be collected. Additional surveys will be undertaken if colonial waterbirds start to nest.



Black-necked Stork seen in Narran Lakes – June 2020. Photo: Neal Foster, CEWO

In addition, CEWO is working on a project with the Queensland government to improve our understanding of how native fish are moving back into key waterhole habitats and particular river reaches after the extended dry.

The story does not end here. Recent flows have replenished the rivers in the northern basin, many of which had previously dried down to a chain of waterholes or dried out completely. It is wonderful to see these rivers re-connected. Yet these systems will take some time to return to full health.



Narran Lake 'Dharriwaa'. Photo: Brendan Odee Welsh

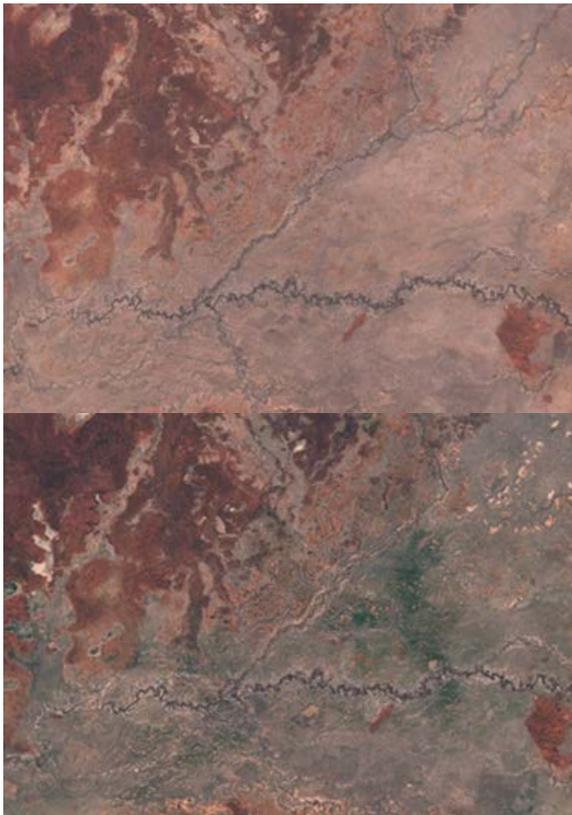


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The below images of the Culgoa and Barwon-Darling Rivers highlight the positive response of vegetation after the flows. The first image, taken on 21 January, shows vegetation areas as brown. The second image, taken exactly two months later on 21 March, shows vegetation areas greening up.



The Culgoa River meets the Barwon-Darling on 21 January and 21 March 2020. Images: Sentinel images sourced by MDBA

Traditional owner, Brendan Odee Welsh summed the event up well:

“Our Yuwaalaraay country has been galingin (thirsty) for the longest time. It’s always special to be out at Dharriwaa (Narran Lakes) but even more so after these water events.”



Sunset at Clear Lake, in the Narran Lakes system (Narran Lake Nature Reserve). Photo: Joanne Ocock, NSW National Parks and Wildlife Service

Want to know more?

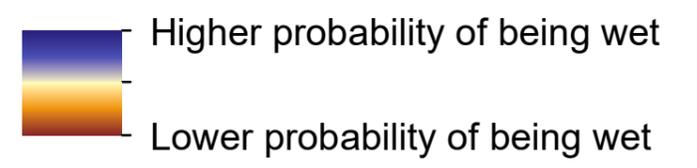
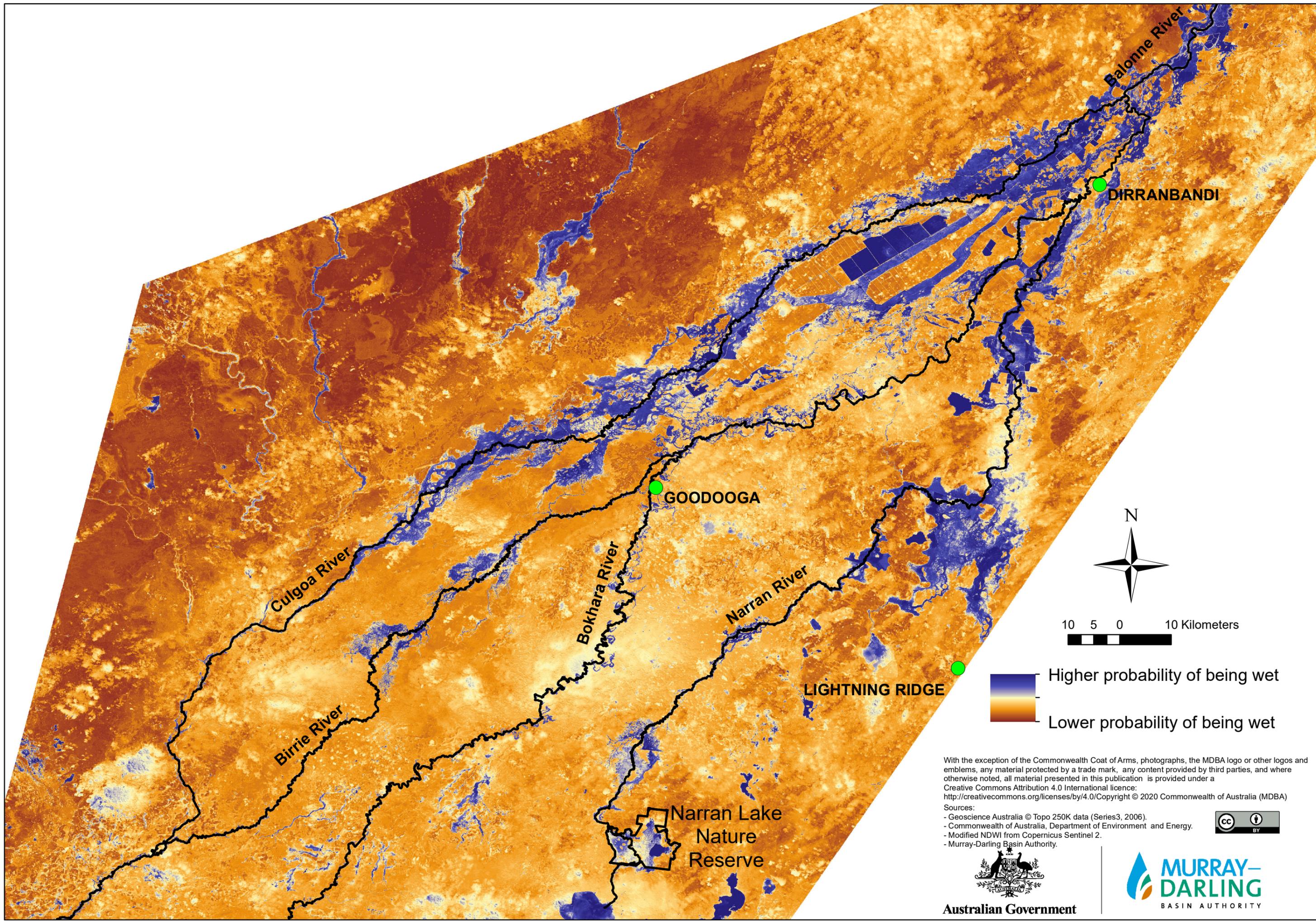
- <https://www.environment.gov.au/water/cewo/catchment/rebuilding-waterbird-habitat-narran-lakes>
- <https://www.environment.gov.au/water/cewo/catchment/lower-balonne-updates>

Feedback wanted!

Feedback and information about this flow event from local community, landholders, and managers is always welcome. Please contact:

- Email: ewater@environment.gov.au
- Follow us on Twitter: @thecewh
- Contact our Local Engagement Officer Jason Wilson on Jason.Wilson@environment.gov.au or 0418 210 389 or Jane Humphries on Jane.Humphries@environment.gov.au or 0437 141 495.

The Department acknowledges the traditional owners of Yuwaalaraay/Euahlayi First Nations people country and all country throughout Australia and their continuing connection to land, sea and community. We pay our respects to them and their cultures and to their elders both past and present.



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- Sources:
- Geoscience Australia © Topo 250K data (Series3, 2006).
 - Commonwealth of Australia, Department of Environment and Energy.
 - Modified NDWI from Copernicus Sentinel 2.
 - Murray-Darling Basin Authority.



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