



Australian Government

Commonwealth Environmental Water Office



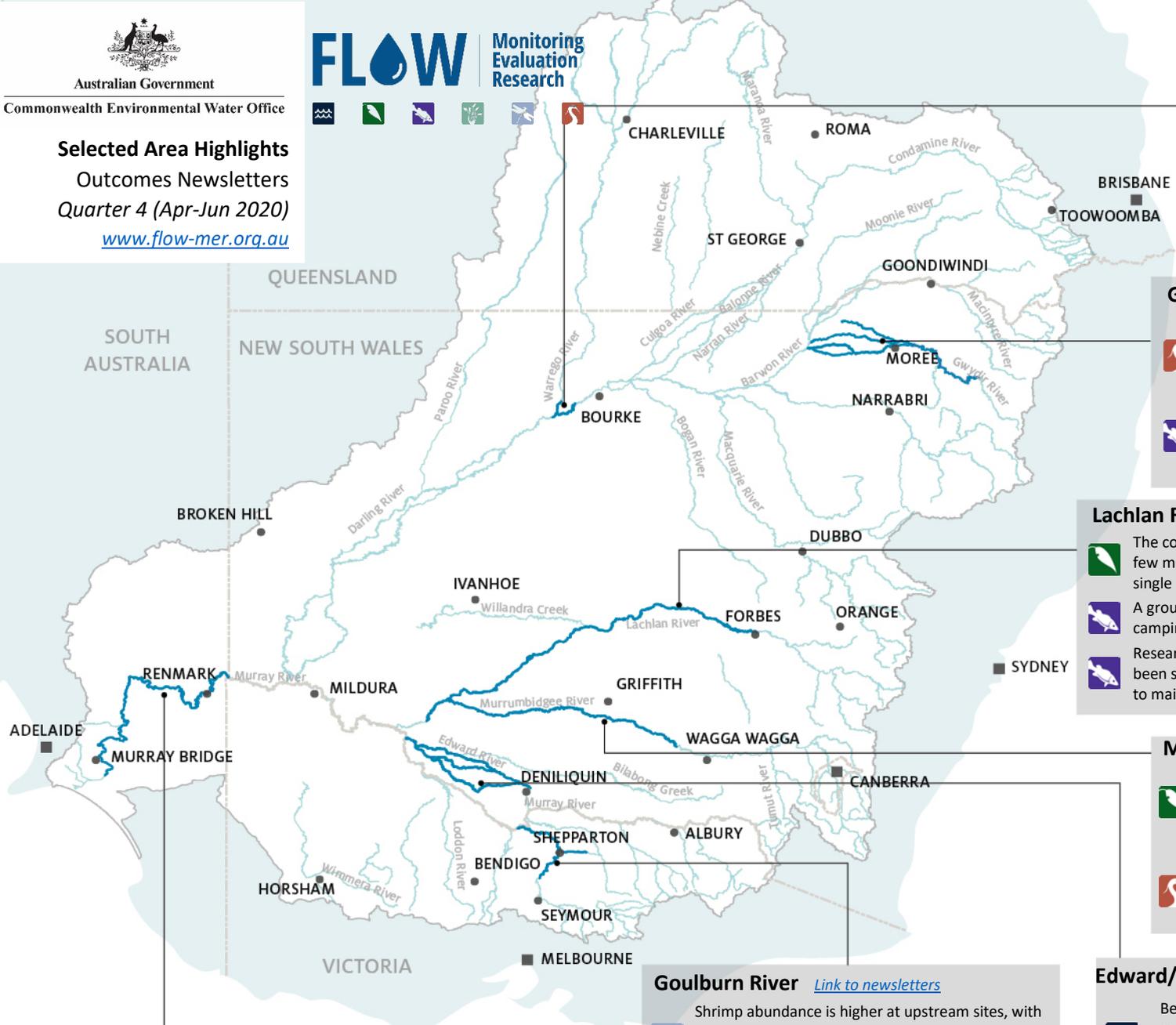
Monitoring Evaluation Research



Selected Area Highlights

Outcomes Newsletters
Quarter 4 (Apr-Jun 2020)

www.flow-mer.org.au



Junction of Warrego and Darling [Link to newsletters](#)

The Warrego flowed into the Darling and over 10,000 ha of the western floodplain was inundated. Higher mapping accuracy, new tools and methods provide a deeper understanding of inundation events.

The Warrego offers the right conditions to nurture Golden perch eggs to larval stage to small fish. [2rog Short Stories](#)

Gwydir River System [Link to newsletters](#)

An abundance of waterbirds flocked to the Gwydir and Mallowa Wetlands. Observations indicate the importance of good flow, namely rainfall and water for the environment, in these dynamic wetland environments. [2rog Short Stories](#)

Findings confirm Murray cod and Freshwater catfish have spawned within the past 12 months in the lower Gwydir and their offspring have survived and grown, demonstrating resilience under extreme conditions.

Lachlan River System [Link to newsletters](#)

The combination of surface water from flooding and higher rainfall over the last few months resulted in the highest number of plant species (54) ever recorded at a single site. This site received water for the environment in May prior to monitoring.

A group of local teenagers were involved in fish survey work in an overnight camping trip to Robinson Crusoe Island, Lake Cargelligo.

Research showed limited natural recruitment of Golden perch (almost all have been stocked), showing how important it is to understand river conditions required to maintain natural populations and provide flow cues for spawning.

Murrumbidgee River System [Link to newsletters](#)

Wetlands that do not receive water regularly enough result in too many young trees growing where plants like spike rush and common reed would normally grow. Wetland trees are being benchmarked to guide delivery of water for the environment to improve vegetation diversity.

Chytrid infection is caused by a fungus which can result in frog death. Water temperature and depth is being measured in several wetlands to understand how the fungus persists. This will guide when water can be delivered to mitigate its spread.

Edward/Kolety-Wakool river system [Link to newsletters](#)

Between mid-May and early June 2020 there was significant rainfall that caused the Murray to reach levels not observed for several years. This caused a flow pulse that was evident throughout the Wakool-Yallakool, Colligen-Niemur and Edward/Kolety rivers.

Annual fyke net sampling found Australian smelt, bony herring, carp gudgeon, Murray-Darling rainbowfish and unspotted hardyhead. Environmental flows, used in conjunction with a range of other actions, help to maintain and enhance native fish populations to ensure connectivity of habitats, maintain suitable water quality, provide habitat and food for native fish, and provide cues for spawning and facilitating movement.

Lower Murray River [Link to newsletters](#)

Laboratory processing of Murray cod otoliths (ear bones) can determine when they were born, how old they were and how well they grew in relation to river flow conditions.

Algae, plants, fish and shrimp muscle tissue were collected, freeze-dried and ground to a fine powder to investigate the influence of energy transfer through the food web on Murray cod and how this process is affected by flow.

Goulburn River [Link to newsletters](#)

Shrimp abundance is higher at upstream sites, with Kirwans Bridge supporting the largest number, suggesting vegetation is important.

Fieldwork slows down over winter and attention turns to reporting the outcomes achieved by water for the environment. A big part of reporting is statistical analysis where the year's observations are rigorously tested to see if first impressions are supported by the full data sets.