

Executive Summary

The Queensland Murray Darling Committee and the Border Rivers Gwydir Catchment Management Authority are in the process of establishing a Demonstration Reach on the Macintyre River System. A key component of the investigative stage is to determine the appropriate length of the Demonstration Reach. This document informs the debate on demonstration reach length by characterising the species present within the geographical scope. The geographical coverage of this review is the Border Rivers region of southern Queensland and Northern New South Wales. It includes waters from the Dumaresq and Macintyre Rivers, and Macintyre Brook and their tributaries downstream of Glen Lyon Dam, Pindari Reservoir, and Coolmunda Dam respectively. The downstream limit is between Toobeah on the Macintyre River.

Ten datasets were identified from research projects in this area. These projects have collectively identified 16 native and 4 alien species in this section of the Border Rivers catchment. Although data collection has occurred between 1901 and 2007, very few of the data sets have spatial, temporal or technical continuity, limiting their usefulness for direct comparisons.

At least five native fish and one alien species have a restricted distribution within the Border Rivers region. Species such as *Philypnodon grandiceps*, *Gadopsis marmoratus*, *Ambassis agassizii* and *Bidyanus bidyanus* are rare species in both river systems. Where as *Hypseleporis sp.*, *Melanotaenia fluviatilis* and *Craterocephalus amniculus* are all relatively abundant in the Border Rivers region. Other species have variable distributions and abundance, being common in one river system, but not the other.

The Border Rivers region would be suitable for the proposed demonstration reach. Three large bodied species are known to undertake extensive migrations during their life-cycle, but populations could be accommodated within any demonstration reach site. Many of the lesser native species would not require extensive longitudinal distances to complete their life-cycle. Rather it is the presence or absence of critical habitat over a short spatial scale that would be a key influence to their population success. However, there is still a concern about adequate offstream access. Many smaller species require access to either instream or offstream backwaters for some of their life-cycle. Both the habitat and access have diminished with the advent of flow regulation and strategies addressing this issue must be considered if we are to adequately accommodate the full suite of native freshwater fish present in the Border Rivers region of the Murray-Darling Basin.

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