

SPOTLIGHT ON: CATCHMENT SOLUTIONS

MACKAY-WHITSUNDAY HEALTHY RIVERS TO REEF PARTNERSHIP



WHO: Catchment Solutions (environmental consultant and service provider)

WHAT: Fish Passage and Fishways - identifying barriers to fish passage, prioritising and then remediating to improve fish passage for migratory life cycle

AREA: Several fish barrier prioritisations have been undertaken throughout Queensland. Recent areas include Mackay and Whitsundays, South-east Queensland and Sunshine Coast (underway). However, the vast majority of the State's waterways are still to have their barriers prioritised.

AIMING HIGH:

It is becoming increasingly understood that connectivity plays an important role in fisheries sustainability. Fish barrier prioritisation projects are the first step in reducing the impacts barriers have on our fish populations. Working with NRMs, local, state and federal governments to remediate priority barriers provides tangible benefits to fisheries productivity and sustainability.

IN ACTION:

All freshwater fish are required to move along waterways to make use of available habitat and resources. Some fish (diadromous species) also have to migrate between salt water and freshwater to complete their life-cycle.

Fish barriers prevent this migration and reduce fish populations. Some of Queensland's most iconic and important socio-economic species undertake this life-cycle dependent migration. Fish such as barramundi, mangrove jack, sea mullet, jungle perch and Australian bass are all diadromous and rely on good connectivity between saltwater spawning grounds and freshwater nursery habitats. These fish are not only important to Recreational and Indigenous fisheries, but also Commercial fisheries. Barramundi and sea mullet comprise the two most valuable Inshore net commercial species in QLD, contributing millions of dollars to the state economy every year.

Barriers to fish passage prevent these important fish species from accessing crucial upstream freshwater streams and wetlands, which the juveniles utilise as nursery areas, before migrating back to the estuary, where they enter the fishery.



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Catchment Solutions undertake Fish Barrier Prioritisation and assessments that produce a list of the highest priority fish barriers in each region/ catchment.

This allows groups (e.g. local NRMs or councils) to make objective decisions about the most suitable locations to undertake remediation work. Most commonly this involves the construction of fish ladders, but in some instance where the barrier is redundant (e.g. old weir or road crossing), the barrier may be completely removed.

TALK ABOUT IT:

Matt Moore, a Fisheries Biologist with Catchment Solutions, recently conducted some post construction monitoring that showed fish streaming through the underwater environment in droves.

“The results have shown unbelievable numbers of fish migrating through the system,” Mr Moore said.

“We thought our initial catch was pretty good, with 3,653 fish recorded successfully ascending the fishway at the Mackay Gooseponds wetlands.

“However, this was trumped the following day at the same site with over 18,000 fish captured in four hours in the morning, and over 13,000 fish in the afternoon - bringing the total to over 31,000 in 8 hours.

“This is by far the most fish we have ever recorded in any local fishway, and would be up there with the highest ever recorded in Australia that we know of - fishways in the Murray River have recorded up to 4,415 fish per day and in the Burnett River 4,500 fish per day.

“These are exciting results that demonstrate the importance of facilitating connectivity past fish barriers - particularly the first barrier located upstream from the estuary, even on small ordered streams.”



Lagoons Creek Fishladder, Mackay Qld



Trent Power, Fish Monitoring



Matt Moore with a Tarpon, Hilliards Creek Fishladder, Brisbane QLD

STATS AND FACTS

- Mackay Whitsunday region identified 3964 potential barriers to fish passage
- Fitzroy Basin Region 10,632 barriers
- Greater Brisbane region 13,628 barriers



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