MEDIA RELEASE

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ATTENTION: Chiefs of Staff, News Directors

TRaCK
Tropical Rivers and Coastal Knowledge

North QLD river researchers solve why big floods equal big barramundi

A team of river detectives has confirmed what every keen barramundi fisher knows – big floods equal big fish – and they think they know why.

In an Australian first, river researchers have discovered that the major food source underpinning northern Queensland's tropical river ecosystems is a microscopic algae that is only found growing on plants that have been inundated during wet season floods.

During the summer floods smaller fish like bony bream and catfish feast on this algae. That frenzy of eating and reproducing during a big wet season flood means lots of smaller fish for the barramundi to feed on.

This discovery by researchers in the Tropical Rivers and Coastal Knowledge (TRaCK) program has overturned the theory that tropical river fish feed on algae on the bottom of dry-season rivers.

Researchers solved the fish diet mystery by analysing the chemicals in fish tissues to determine what they had been eating. The fish tissues act as a chemical fingerprint with the history of the fish's diet being integrated into their flesh.

Griffith University's Dr Tim Jardine, who is undertaking surveys of the Mitchell and Flinders Rivers as part of the TRaCK program, says the barramundi take quick advantage of any chance to eat during the short flood season. And because barramundi eat only occasionally during the dry season, they need as much food as they can get in the wet season.

"Flood water comes and goes quite quickly in Queensland's tropical rivers like the Mitchell and Flinders rivers", Dr Jardine says. "That means there is only a short window of time to use nutrients brought by the floods. Bigger floodplains and longer floods mean more opportunities for barra to feed and grow."

Dr Jardine says that changes in fish stock are not immediately apparent after a large flood.

"The response in the fish to flooding may not be as immediate as you think as it takes a few years for the fish to get big enough to be caught. So there is always a time lag between the flood and the end result, which makes studying it very challenging," he says.

TRaCK was established in 2007 as a research hub under the Commonwealth Environment Research Facilities Program to provide the science and knowledge that governments, communities and industries need for the sustainable use and management of Australia's tropical rivers.

TRaCK receives major funding for its research through the Australian Government's Commonwealth Environment Research Facilities initiative; the Australian Government's Raising National Water Standards Program; Land and Water Australia; the Fisheries Research and Development Corporation and the Queensland Government's Smart State Innovation Fund.

For more information, see the website www.track.gov.au.

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