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New research casts doubt on northern food bowl

New research about Australia's tropical rivers has highlighted the importance of free-flowing rivers in supporting biodiversity, fisheries and Indigenous use in northern Australia.

Director of the Tropical Rivers and Coastal Knowledge research hub, Professor Michael Douglas, outlined the key findings from more than five years of research to the National Water Commission's six commissioners today in Cairns.

"Northern Australia contains one of the world's largest networks of free-flowing rivers in the world, and it flows through the world's largest area of high quality tropical savanna. These are globally significant ecosystems," Professor Douglas said.

"Our research shows that people want to keep it this way. A survey of more than 1,000 people across Australia found that most people value a balance between agricultural and other ecosystem services.

"In fact 60% of respondents either wanted to preserve Australia's tropical rivers for biodiversity and natural habitat, or to preserve them for local residents and tourists.

"Politicians keep raising the idea of turning northern Australia into a large-scale irrigated food bowl, but history suggests that the natural constraints of climate, water availability and soils can't be ignored because they can't be easily overcome.

"This is a water-limited landscape. Annual evaporation is more than double the rainfall which means the water that falls is not around for long. A deep swimming pool in the north would dry out completely within a year and only half fill with rain during the next wet season.

"There is a perception that wet season flows in the north are 'wasted', but our research has shown a direct correlation between river flows and the commercial and recreational catches of coastal fish such as barramundi, king threadfin, and prawns.

"Large floods that spill over the banks allow fish to move onto the floodplains to feed then move back out to the river as the floodplains dry.

"This means that much of the meat on barramundi in the upper reaches of river systems may have been 'grown' on the floodplains, potentially many months before and hundreds of kilometres downstream, and similarly, freshwater flows into estuaries play a significant role in determining the numbers and sizes of fish that live there.

"These floods are also necessary to connect the floodplains to the river and allow movement throughout the entire river system, while maintaining dry season flows may be essential for the life cycles of important species such as barramundi and freshwater prawns.

"Indigenous people rely on these healthy ecosystems to support their diets and household incomes, but many of the species that are important for customary harvest, like long-necked turtles, black bream, barramundi and mullet are also the species at high risk from reduced river flows.

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“There is much more that needs to be done to get Indigenous communities more actively engaged in water management decision making.

“Work by some of our economists has shown that Indigenous people living in these catchments have a lot to lose from developments that reduce river flows, but relatively little to gain.

“There is an asymmetric divide between Indigenous and non-Indigenous economic systems, and therefore investments in industries such as mining and agriculture do not necessarily translate to benefits for Indigenous people.

“This new research from TRaCK, which has brought together more than 80 of Australia’s leading social, cultural, environmental and economic researchers, reveals a much broader understanding of the values associated with tropical rivers. In turn it highlights a much greater range of things at risks from dam construction or flood harvesting.

“While much has been learnt, we are only at the halfway point in terms of getting a baseline understanding of these systems – a decade of knowledge generation is needed before we can make informed decisions about northern Australia.”

TRaCK’s [Research Showcase](#) highlights some of the key products emerging from the program, or you can search for all research outputs using the recently launched Digital Atlas at <http://atlas.track.org.au>.