

The economic value of rivers

The value of Australia's tropical rivers

Different values for different people

The tropical river systems of northern Australia form a fundamental part of the northern landscape and are of great value to the people of the tropical savannas regions as well as people in other parts of Australia. This value can be seen in river contributions to economic activity such as agriculture, pastoralism and tourism; social and/or cultural activity such as camping and recreational fishing; and environmental outcomes such as healthy floodplains, productive habitat for the northern prawn fisheries, and biodiversity.

Values are often of a very different nature, or are at least expressed very differently by people with different experiences and backgrounds. Some people talk about their aspirations in terms of their needs for a certain livelihood or an emotional or spiritual connection to nature. Others talk about jobs, production and income. How can these different types of value, expressed very differently, be brought together to enable the evaluation of policy alternatives and their potential impacts?

Economic value – a tool for decision-makers

There are some benefits of tropical rivers that may be overlooked when decisions are made about future developments because it is not easy to see their immediate economic value. Examples include the



Photo: Tim Jardine

contribution of healthy waterways to recreational and commercial fishing and the importance of healthy ecosystems to Aboriginal people who undertake customary activities such as hunting, teaching and carrying out religious responsibilities.

This project will work with communities, businesses and the government to identify the uses, values and benefits of three of Australia's tropical rivers and to quantify some of them in dollar terms so that their extent and importance can be accounted for in decision making. The project will also examine how the uses, values and benefits of the river have changed through time so that we can learn from history about how some potential development actions may impact on future uses, values and benefits.

How to compare values?

The project will use a method of economic valuation called "choice modelling" to estimate the value of 'non-market' natural resources in dollar terms. The choice modelling method uses a questionnaire that asks people to choose between several different 'versions' of a natural resource. Each version is described using the same attributes or features, such as area of floodplain in good environmental condition, or quality of the river for recreational fishing. These attributes will vary slightly for each version, and respondents are asked to make hypothetical 'trade-offs' between these attributes. This reveals the relative value of each attribute to respondents. The inclusion of a 'cost' associated with each version allows this value to be translated into a 'price' or indication of how much people are willing to pay.

Who is on the team?

The project is being lead by Dr Anna Straton from CSIRO in Melbourne. She is working with other researchers from CSIRO and Charles Darwin University (Darwin) as well as Griffith University (Brisbane). Other



Photo: Michael Douglas

organisations with a key role in the project include the Daly River Management Advisory Committee, the Mitchell River Watershed Management Group Inc., the Kimberley Land Council and the Kowanyama Aboriginal Land and Natural Resource Management Office.

Where is the research happening?



This research is being undertaken for the Fitzroy River in WA, the Daly River in the NT and the Mitchell River in Qld. This research began in June 2006 and will end in 2009. The project will also draw on an assessment of the social and economic

values of Australia's tropical rivers undertaken previously for Land and Water Australia.

How will this research help?

Communities, industry and government are expected to have a greater awareness of the full value of Australia's tropical rivers, and decision-makers will have improved knowledge about community preferences for the future of Australia's tropical rivers.

Decision-makers will have increased knowledge of the relative value of several tropical river attributes/features/uses in dollar terms and will also have knowledge of the relative value of several options for the future of Australia's

tropical rivers in dollar terms. This can provide direct input into the evaluation of alternative development pathways for Australia's tropical rivers.

Decision-makers will also have more detailed knowledge about the social, economic and ecological components that have historically, and may in the future, contribute to the maintenance of the value of Australia's tropical rivers or the creation of new value. This will provide decision-makers with:

- a. a new conceptual framework for understanding and assessing value, and
- b. inform decisions in the form of recommendations about potential vulnerabilities in the capacity of Australia's tropical rivers to continue to support the activities, uses, services and benefits they do currently.

Team contacts

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