

## NESP NAER impact stories

### Hub

Northern Australia Environmental Resources Hub

### Case study title

Wiltma Nargun Lahan: Walking on Wagiman Land

### Project number(s) & project title(s)/or Hub activity

NESP project 1.3.2 Environmental water needs for the Daly River (current)

NERP project 3.3 Biodiversity patterns, conservation planning and resilience of freshwater fauna

TRaCK project 2.2 Indigenous values and river flows

TRaCK project 5.5 Environmental flows and ecological assets

### Short version

The Daly River 'Fish and Flows' partnership between Wagiman Traditional Owners and researchers from several universities and the NT Government has been running for 13 years and is still going strong. It has increased the capacity of Wagiman people to achieve in training and employment, and to contribute to water planning and other government processes. It has also increased the capacity of researchers across Australia to work with Indigenous organisations and value Indigenous knowledge. The new knowledge produced from the partnership has informed water and catchment planning not only in the Daly River catchment but also more broadly across northern Australia and internationally.



Wagiman fish poster showcasing Indigenous ecological knowledge.

### Narrative

In 2004 a partnership was formed between the Wagiman Traditional Owners and researchers from the Tropical Rivers and Coastal Knowledge consortium (TRaCK, a \$30 million Australian Government funded research consortium). Initially developed with the objective of working together for three years on a project investigating fish and flows in the Daly River, the partnership has continued for over 13 years fostering collaboration among more than 200 people and resulting in multiple benefits well beyond the initial project.

The partnership has increased the capacity of Wagiman people to achieve accredited training and employment as well as to contribute to water and catchment planning at local and Territory levels. These outcomes have been achieved through the long-term nature and strength of the partnership – through years of talking, listening and working together, through Wagiman people being involved in many different aspects of the research, in planning processes and in formal presentations, and through the support and opportunities provided by the strong relationships and mutual trust created by the partnership.

The partnership has also improved Indigenous collaboration across the NESP through its participants sharing and promoting its benefits and attributes. It has increased the desire and capacity of many other researchers to undertake cross-cultural research through hearing about a real example of what can be achieved. For the many scientists involved in the work, the experience of working with Wagiman people has enriched their knowledge and perspectives and, for some, touched hearts.

Partners have together recorded Wagiman traditional knowledge and documented the cultural significance of many fish species, as well as integrated western science and Indigenous ecological knowledge. This has generated greater recognition of the value of Indigenous ecological knowledge, improved research results and facilitated the use of Wagiman language and knowledge for managing country.

This collaboration has resulted in one of Australia's longest-running freshwater fish datasets, and helped determine the environmental water requirements of many species through understanding how much water different species need at different times of year. Research results have been shared with the community and government to support water planning and management of the Daly River. The knowledge generated has resulted in recognition of the nationally significant conservation values of the Daly River, and contributed to improved water planning and catchment management at local to international scales.

The partnership continues today and serves as a model for cross-cultural collaboration in ecological research and natural resource management activities, with its impacts continuing to grow.

### **Testimonials**

“TOs could translate language now of fish and opportunity for younger people to get involved learn about country” (Traditional Owner Elder).

“Science and IEK are the basis for good conservation in the Daly catchment, and this project brought a unique approach through scientists partnering with, and paying real wages to, Traditional Owners to help with the research and build capacity” (Stakeholder).

“Rangers already had training about land management –TOs had cultural knowledge from family passed down – so this was used to put black and white knowledge together to a better understanding” (Traditional Owner Elder).

“The Daly River is the river being targeted for irrigation development and land clearing in the NT; hence I wanted to be involved in supporting the project so it delivered good and useable knowledge” (Stakeholder).

### **Research outputs**

The research has produced multiple outputs which have been actively shared with: (1) Wagiman and other Traditional Owners through presentations, videos, newsletters, a Wagiman language fish poster and a seasonal calendar; (2) NT government and associated groups involved in water planning for the Daly River through publications and meetings; (3) the scientific community through ~150 publications and presentations, often jointly with Wagiman; (4) and the general public through numerous presentations at water advisory committee and other community

meetings, and local media stories. Importantly, the project has served as a model for cross-cultural collaboration in ecological research and led to improved Indigenous engagement across national research programs and scientific societies.

A selection of key research outputs is listed below.

### Journal articles

- Crook, D.A., Douglas, M.M., King, A.J., & Schnierer, S. 2016. Towards deeper collaboration: stories of Indigenous interests, aspirations, partnerships and leadership in aquatic research and management. *Reviews in Fish Biology and Fisheries* 26, 611-15. IF = 3.222 <https://doi.org/10.1007/s11160-016-9449-7>
- Jackson, S.A. & Douglas, M.M. 2015. Indigenous engagement in tropical river research in Australia: The TRaCK program. *The International Indigenous Policy Journal* 6(2) <http://ir.lib.uwo.ca/iipj/vol6/iss2/3>
- Campbell, A., LeFroy, T., Douglas, M.M., Possingham, H.A., Specht, A., & Johnson, D. 2015. Designing applied environmental research for impact. *Science of the Total Environment* 534: 4-13 <https://doi.org/10.1016/j.scitotenv.2014.11.089>
- Jackson, S.A., Douglas, M.M., Pusey, B.J., Kennard, M.J. Huddleston, J., Harney, B., Liddy, L., Liddy, M., Liddy, R., Sullivan, L., Huddleston, B., Banderson, M., McMahon, A. & Allsop, Q. 2014. 'We like to listen to stories about fish': improving aquatic system understanding and management with Indigenous knowledge. *Ecology and Society* 19:43 <http://dx.doi.org/10.5751/ES-05874-190143>

### Presentations

- Douglas, M.M. & Jackson, S. 2017. Socio-hydrology and water resource management in northern Australia. European Geophysical Union, Vienna, Austria.
- Kennard, M.J. 2015. Balancing water needs for people and nature. Mini-Symposium hosted by the Federation of Industries of Minas Gerais (FIEMG) & Secretary of Science and Technology for State of Minas Gerais (SECTES), Belo Horizonte, Brazil.
- Douglas, M.M. & Liddy, M. 2014. Talking together, working together, walking together: The benefits of cross-cultural collaboration. Australian Society for Limnology-Australian Society for Fish Biology, Darwin, NT
- Douglas, M.M. 2013. The future of Australia's tropical rivers: outcomes of the TRaCK research program. RiverSymposium. Brisbane, Qld. Invited speaker.

### Media coverage

- ABC NT Country Hour radio 6/9/17. [Kurt Liddy and Michael Douglas on the 13-year celebration of the Daly Fish and Flows project.](#)
- ABC Rural 26/10/15. [Fish sampling shows Daly catchment one of most species-diverse in northern Australia.](#)
- ABC Radio National 11/12/10. [The rivers project.](#)

### Newsletters

- Daly River Fish & Flows project newsletters: [May 2007](#) & [Sept 2007](#)
- Indigenous socio-economic values & river flows newsletters: Aug 2009 & Oct 2010

### Articles & workshop reports

- [Flows & fish in the north.](#) 2015 article in RipRap.

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### **Indigenous focused products**

- Wagiman fish poster
- Wagiman plants & animals seasonal calendar
- Daly River Fish & Flows project – an information book for Aboriginal peoples living in the Daly & Katherine areas

### **Videos & audio**

- [Aboriginal water values & management in northern Australia.](#)

### **Reports**

- Jackson et al. 2011. [Indigenous socio-economic values and river flows: A summary of research results 2008-2010.](#)

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### **Attributions**

This research has been going for 13 years (and counting) and has fostered collaboration among more than 200 people including Wagiman Traditional Owners and researchers from Charles Darwin University, Griffith University, The University of Western Australia and the Northern Territory Government. Other key collaborators include Wardaman, Malak-Malak and Jawoyn Traditional Owners, the Northern Land Council, CSIRO, Monash University, Texas A&M University and the University of Washington.

Key individuals include Mona Liddy and Lizzie Sullivan (Wagiman Traditional Owners), Michael Douglas and Brad Pusey (The University of Western Australia), Mark Kennard and Sue Jackson (Griffith University), Alison King and David Crook (Charles Darwin University), Bryan McDonald, Thor Saunders and Simon Townsend (NT Government) and John Childs (chair of the NESP Northern Australia Environmental Resources Hub steering committee).

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