Talking together, working together, walking together: Collaboration & environmental flows research

M. Douglas\textsuperscript{1,2}, M. Liddy\textsuperscript{3}, L. Sullivan\textsuperscript{3}, K. Liddy\textsuperscript{3}

S. Jackson\textsuperscript{4}, M. Kennard\textsuperscript{4}, B. Pusey\textsuperscript{1,2}

1. University of Western Australia,
2. Charles Darwin University,
3. Wagiman Tjuwaliyn Land Managers,
4. Australian Rivers Institute, Griffith University
Daly River, Northern Territory

- 250 km south of Darwin
- 50,000 km² catchment
- “Iconic” river
  - Tourism
  - Conservation significance
  - Recreational fishing
  - Agriculture
Research to support sustainable development in northern Australia
Aboriginal people and the Daly River

• Aboriginal people
  – Own 30% of catchment
  – Are 30% of population
  – Wagiman are largest Indigenous land owners
  – 10% of the catchment (5,000 km²)

• Strong connection with land and the river

• Knowledge of aquatic systems
  – Not well documented or recognised
Daly River Fish and Flows Project

• **Project Aims:**
  1. Predict how changes in river flows will affect fish
  2. Document indigenous knowledge and cultural significance of fish

• **Project partners:**
  – CSIRO, CDU, GU, Uni of Washington, NT Government, Monash University
  – Wagiman & Wardaman Traditional Owners

• **Timeline**
  – 2004-05 Project planning
  – 2006- Collected fish twice a year (June and Sept.)
September 2018: Reflect on the collaboration after 13 years
Indigenous people are respectfully advised that this video contains photographs of people who have since passed away.

Their families' have granted permission to use these images.
Research to support sustainable development in northern Australia
Summary

• Two-way knowledge sharing
• Ongoing collaboration
• Clear communication & benefits
• Long-term view
Research benefits of collaboration: this project

• Building capacity of researchers
  – New approach for most ecological researchers

• Local knowledge
  – —where to work and when?

• Knowledge integration
  – Jackson et al. (2014) Ecology and Society
Broader research benefits from this project

• Influence on other northern programs
  – TRaCK, NERP, NESP

• Indigenous engagement strategies and protocols

• Over 100 projects in NT, WA, Qld

• Over 300 researchers
Community Development Approach – Focus on Wagiman people/Not paper

- Empowerment
- Pride
- Leadership
- Aspirations of the Traditional owners
- Ownership and Control
- Transfer of Indigenous knowledge

- Maintain cultural Traditions
- Training
- Education
- Employment
- Have a political voice
- Back on country
- Spiritual well being
- Appropriateness
Extended timeline

• 2004 Project planning
• 2005 Secure funding and continue planning
• Collect fish twice a year (June and September)
  – 2006-07 (Land & Water Australia)
  – 2008-10 (CERF Tropical River & Coastal Knowledge)
  – 2011-14 (NERP Northern Australia Hub)
  – 2015- (NESP Northern Australia Hub)
  – >40 researchers involved

• Project steering committee 2006-09
• Wagiman steering committee 2011-
• Review by Mona Liddy (2011)
Benefits of knowledge integration

• Indigenous knowledge (IK) and scientific knowledge (SK) from Daly congruent
  – Greater confidence in short term SK study

• IK from Daly congruent with SK from elsewhere
  – Greater confidence in extrapolating SK to Daly

• IK and SK both limited
  – Need more research

• Incongruence between knowledge systems
  – Differences in spatial scale of observation