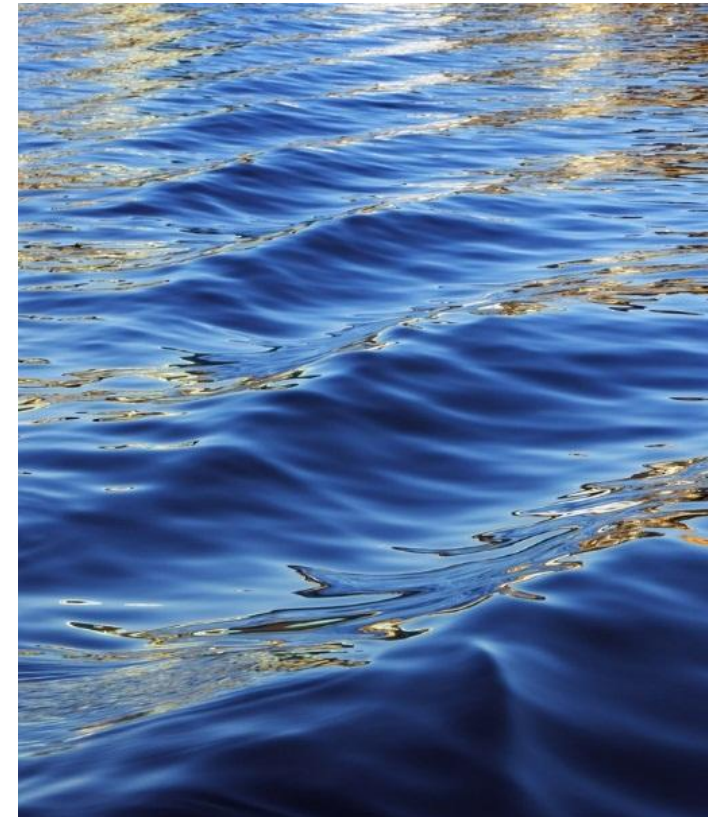
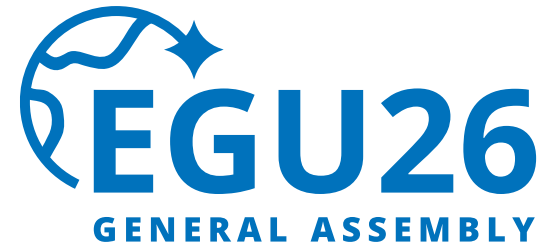




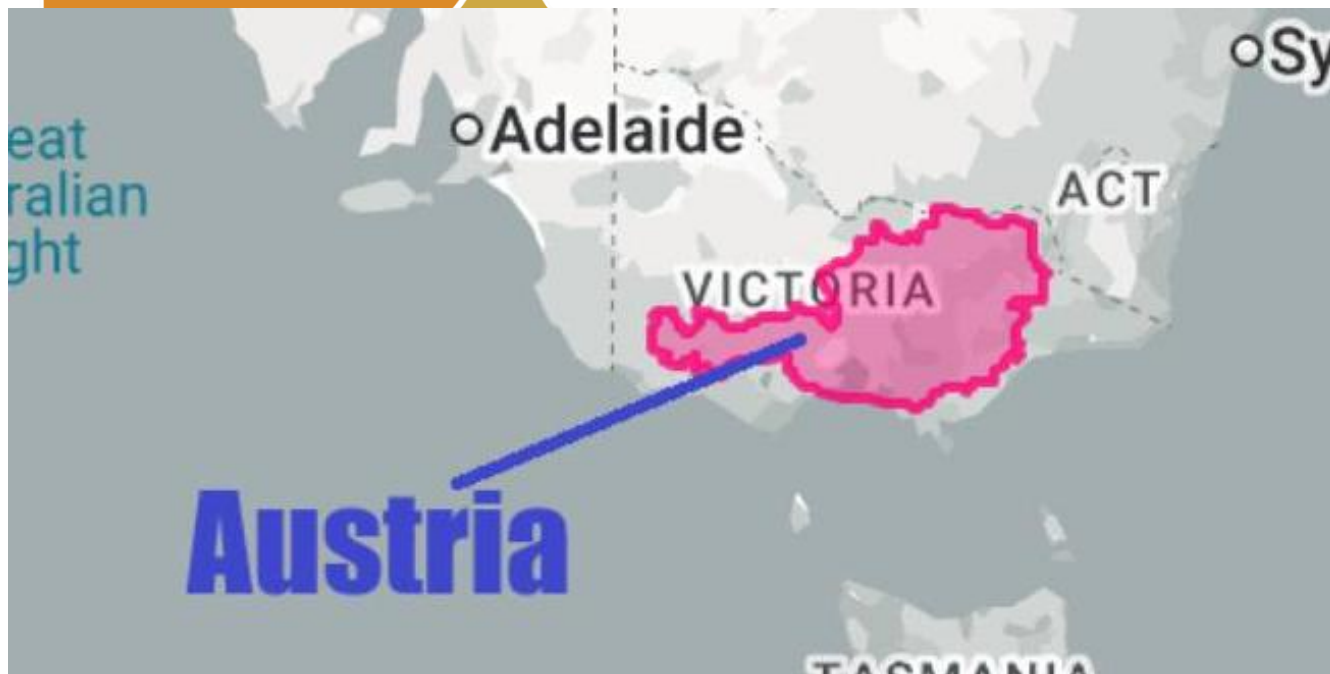
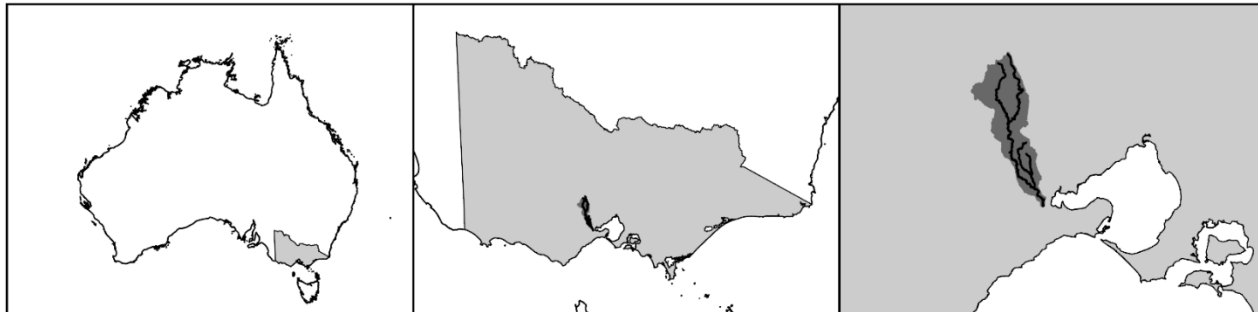
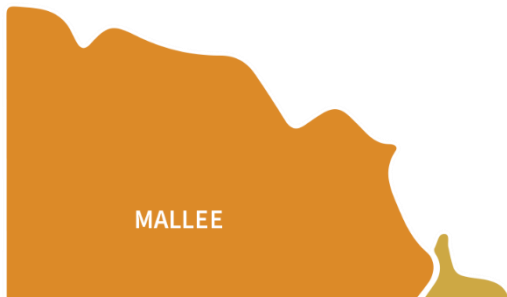
Co-creating Knowledge for Catchment Sustainability: Applied research in South-East Australia



Paulina Ramos and Andrew
Harrison



Moorabool Catchment

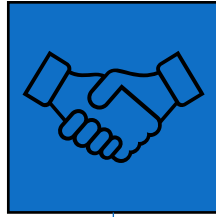


Victoria: 6,680,600 hab.
Regional: 450,000 hab.

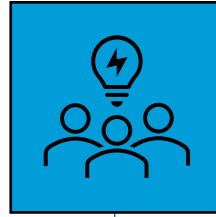


Credit: <https://viccatchments.com.au/regions/>

Knowledge co-creation



Collaboration



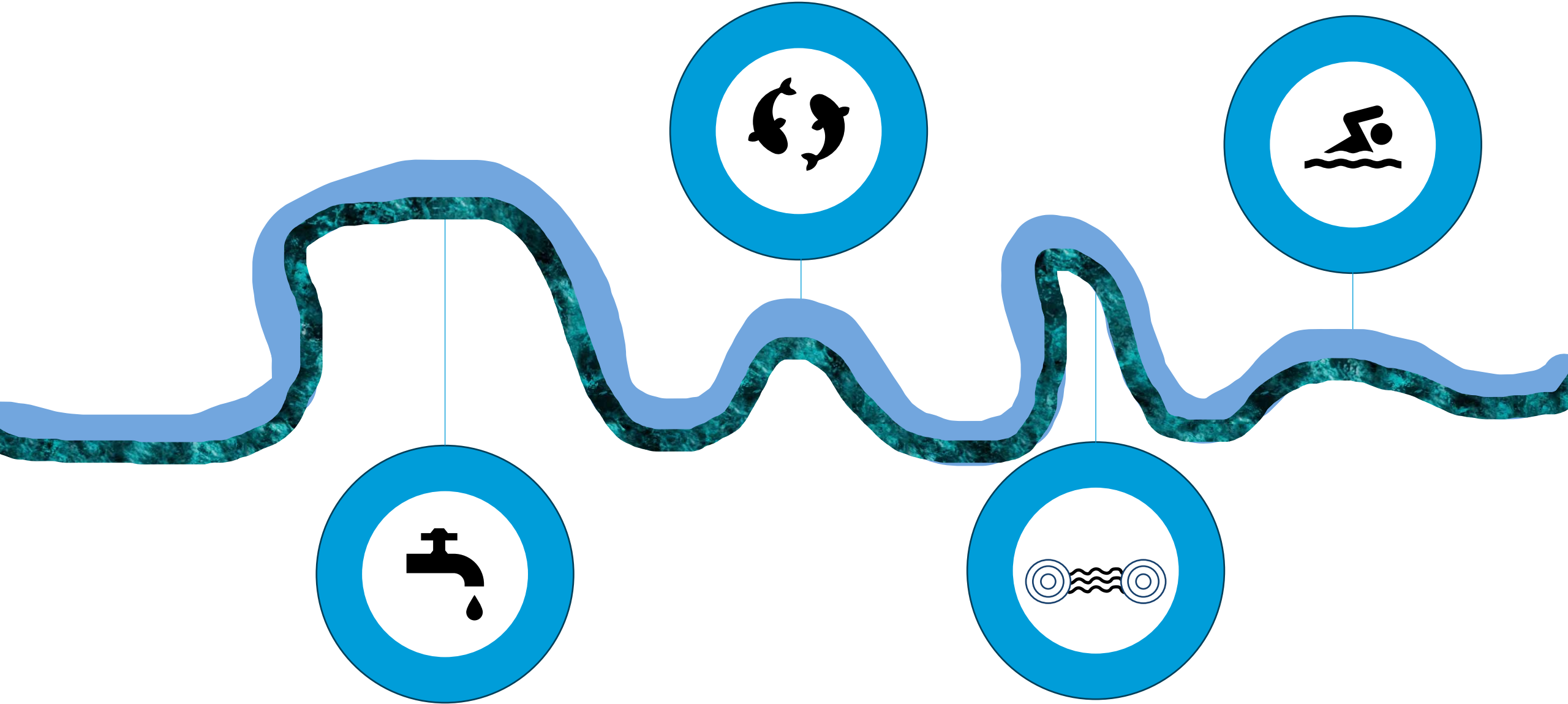
Joint projects



From knowledge to policy



The Moorabool River: A vital regional waterway



Challenges facing the Moorabool River



Credit: CCMA



Credit: CCMA

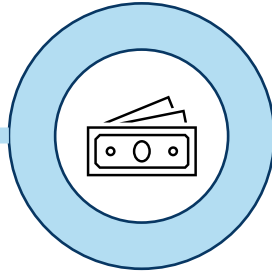
CCMA Aim 1: Environmental Flow Releases



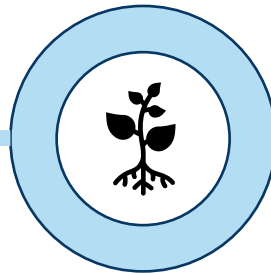
CCMA Aim 2: Riparian Vegetation



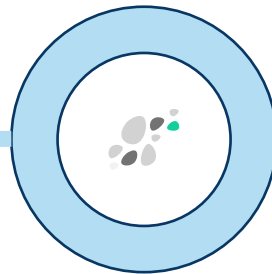
Credit: Paulina Ramos



- Incentives for landowners to fence waterways



- Weed control and native vegetation replanting



- Enhances riverbank stability and habitat

CCMA Aim 3: Community Empowerment



- Citizen-Science monitoring programs



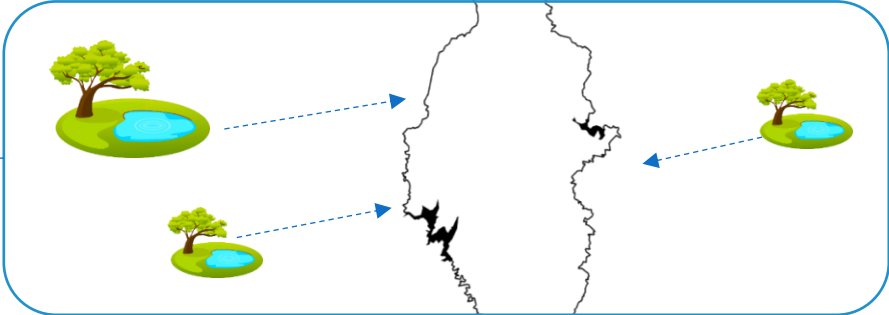
- Builds local knowledge and stewardship



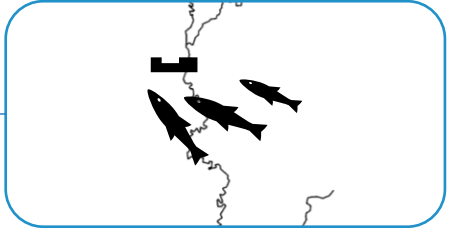
- Supports long-term river health monitoring

Research Case Study

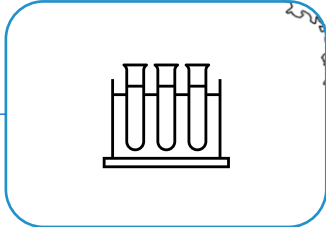
What are the impacts of agricultural dams on river flow?



Do small in-stream weirs create a barrier during low flows?

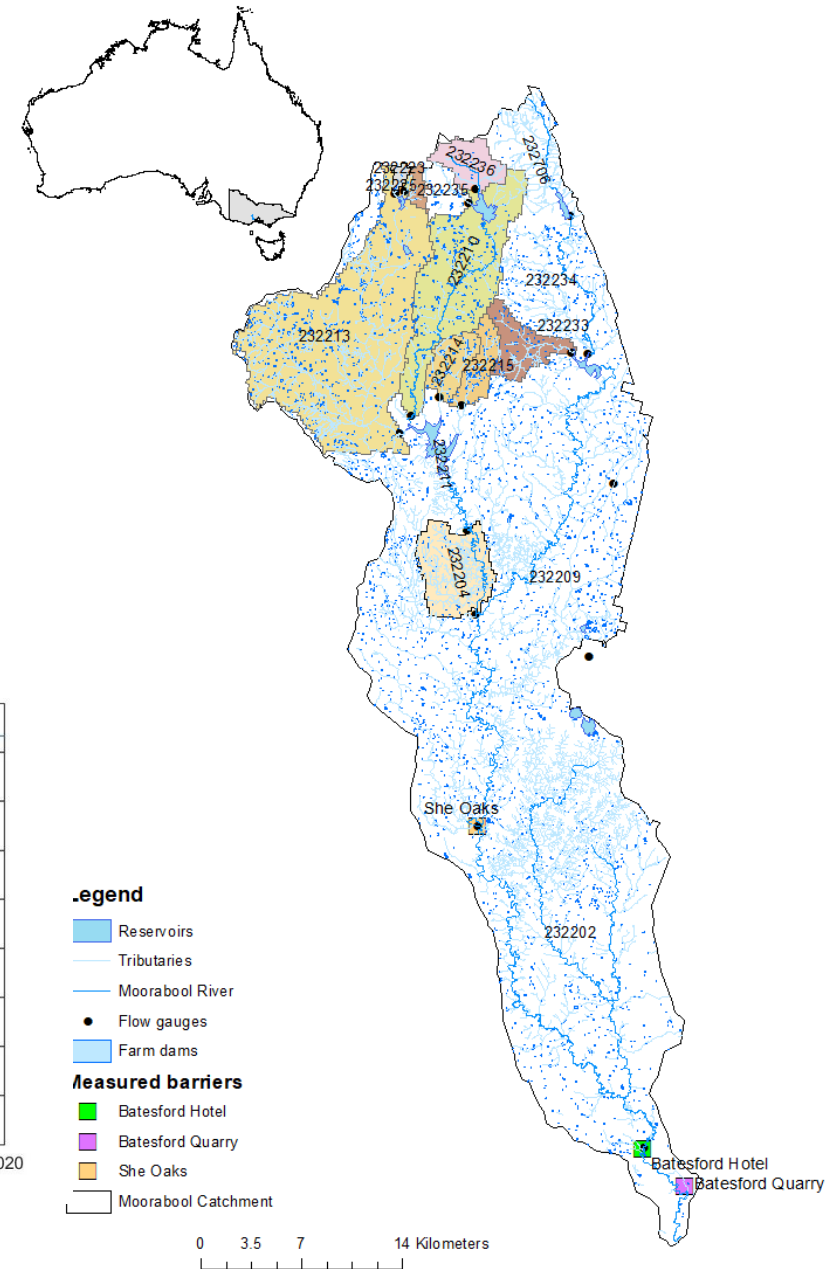
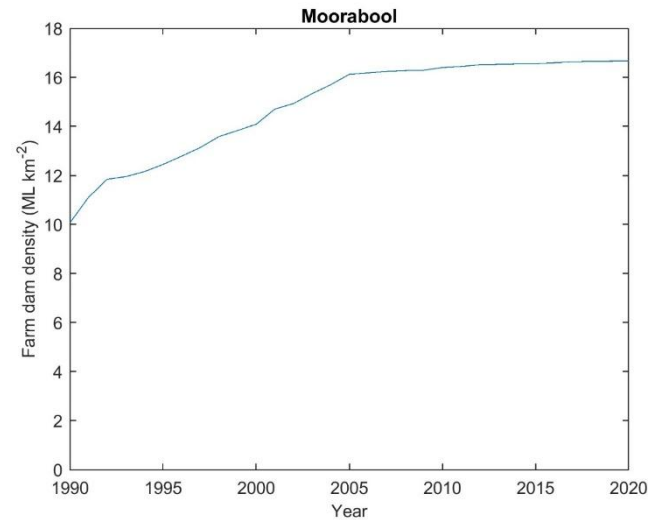
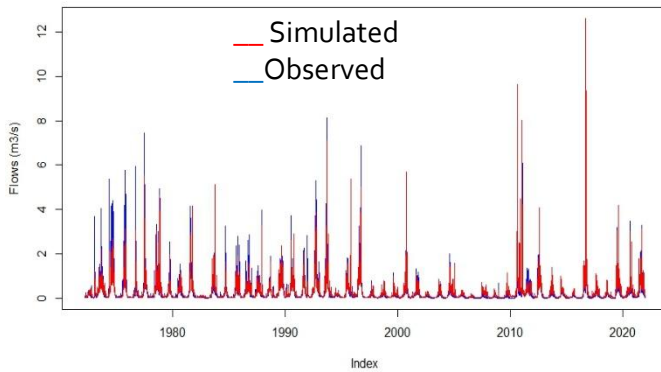


Does environmental flow influence water quality?



Project 1 Results: impact of farm dams

- Farm dams reduce streamflow by 33%
- Increase in low-flow periods



Project 2 Results: In-stream weirs as barriers



Credit: She Oaks Weir | Paulina Ramos

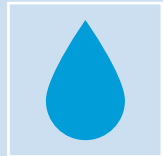


Credit: Batesford Weir | Paulina Ramos

Project 3 Results: Water quality



- Integrated water quality and environmental flow data from four agencies.

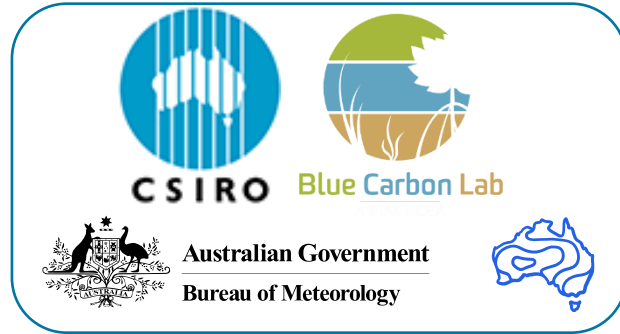


- LME model analysis of environmental flow impacts on water quality.

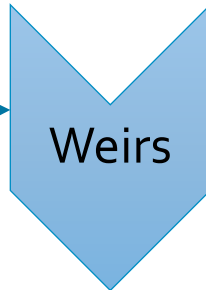


- Preliminary results: ↓EC, ↑ N, P, Turbidity.

Co-creating knowledge in Integrated catchment management



- Identifying impacted areas that need more support

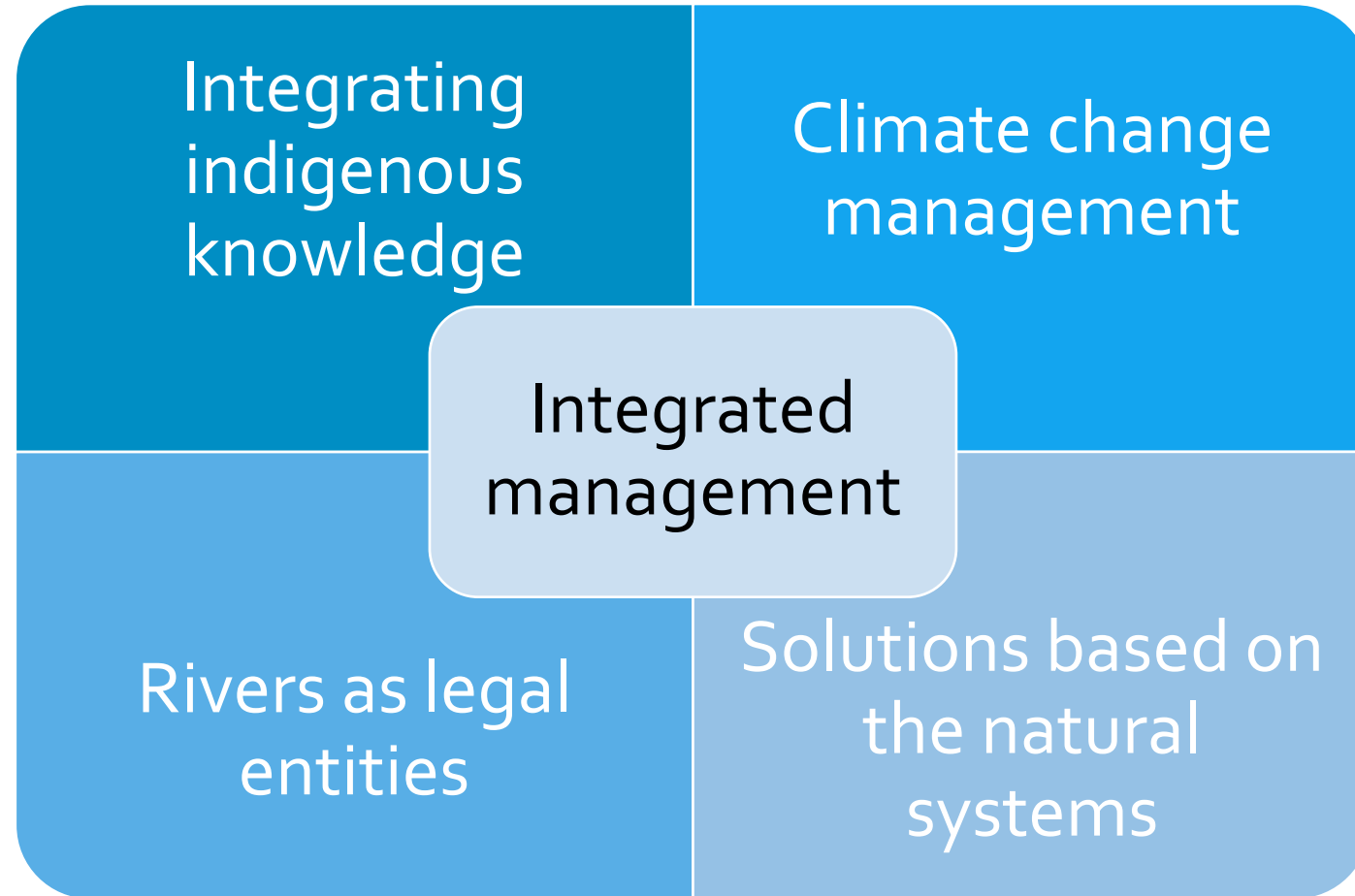


- Optimizing weir modification and design



- Ongoing synergistic monitoring to achieve ecological goals

Next steps: Challenges and opportunities



Thank you for your attention

Questions?

Keep the conversation going
pgutierrezramos@deakin.edu.au



Moorabool River | P. Ramos