

Birrarung (Yarra River): Urban Billabong Restoration Benefits from Traditional Owner Involvement and Regular Flooding



Source: Greet J et al. (2023) [Marine and Freshwater Research](#), 74(4), 398–408. doi:10.1071/MF22195

In Melbourne/Naarm, Australia, there was a three-year project focused on the restoration of urban wetlands, known locally as billabongs, along the Birrarung (Yarra River). These ecosystems are rich in both ecological and cultural significance but have suffered extensive degradation due to urban expansion and reduced flooding. Recognising the need for a holistic approach to restoration, a project team including researchers from the University of Melbourne and members from the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation, sought to combine scientific research with traditional ecological knowledge.

The study aimed to observe how the wetland vegetation, particularly understory plants and river red gums, responded to different flooding regimes. It also sought to enhance the role of the Wurundjeri Woi Wurrung people, the Traditional Owners of the land, in managing these wetlands. To achieve this, the team surveyed seven billabongs, assessing the health and reproduction of flora over the course of various flooding events, both natural and managed. The research found that "regular (at least two in three years) and longer-duration (up to eight months) flooding promoted native wetland plants, suppressed weeds, and improved the condition and reproductive output of river red gums."

Key to the project was the 'On Country' days - workshops where knowledge was exchanged among scientists, Traditional Owners, and land and water managers. These workshops not only facilitated deeper understanding and collaboration but also ensured that the project's directions were beneficial for both the community and the environment. The importance of these interactions was highlighted in the research: "Monitoring by Indigenous Rangers facilitated the cultural practice of caring for Country."

The findings from the study were clear: regular flooding, occurring at least two out of every three years, was crucial for the suppression of invasive species and the promotion of native wetland plants. This regular flooding also contributed significantly to the health and reproductive success of the river red gums. Importantly, the project demonstrated that both naturally occurring and environmentally managed flooding had beneficial impacts on the ecosystems.



The involvement of the Wurundjeri Woi Wurrung people was instrumental in the project's success. Their insights into traditional land management practices helped shape the restoration efforts, ensuring they were culturally sensitive and ecologically effective. This collaboration also facilitated a transfer of knowledge and skills, with Traditional Owners taking on survey roles and participating actively in decision-making processes.

As a case study, the project exemplifies how integrating traditional knowledge with scientific research can lead to more effective environmental management practices. The findings have influenced local policies, advocating for management strategies that incorporate regular flooding and active participation of Traditional Owners. This approach not only helps restore ecological health but also supports cultural revival, allowing the Wurundjeri Woi Wurrung people to continue their stewardship roles and cultural practices linked to the land. This model of collaborative restoration has potential applications in similar projects globally, emphasising the importance of local involvement and integrated management strategies in environmental conservation efforts. The research underscores this integration, noting: "Collaborative research and knowledge sharing with Traditional Owners advances wetland restoration practice and improves care of Country."

Questions:

How did the Wurundjeri Woi Wurrung people display resilience?

What benefits did the flooding provide? (Think about the final result, for the wetland, for the Ranger team and for the community).

How was future harm mitigated?

What concepts or ideas from this case study could we apply to flood management elsewhere in Australia?
