

Balnggarrawarra Lagoon: A wetland rehabilitation case study



This resource has been developed through interviews with Traditional Owners, and case studies and reports published by them for this rehabilitation project. We would like to thank the [Balnggarrawarra Melsonby Rangers](#) for sharing their project with us and wish them continued success with their restoration efforts.

In 2018 a flooding event filled the Balnggarrawarra Lagoon with sand and soil washed in from a property track. The Balnggarrawarra Melsonby Traditional Owners have strong cultural connections with their wetlands, creeks and the Normanby River in the south-eastern Cape York Peninsula, and have been working to restore this wetland.

The Balnggarrawarra Lagoon, a vital water and food source for native animals in the area, holds immense cultural significance for the Traditional Owners. Additionally, it provides hunting and fishing opportunities and serves cultural purposes. Unfortunately, flood-induced sedimentation transformed the lagoon, reducing its ecosystem function and leading to the need for urgent rehabilitation efforts.

To restore the lagoon, the Balnggarrawarra Melsonby Rangers secured funding from the Great Barrier Reef Foundation. Before commencing restoration activities, a wetland assessment was conducted with support from South Cape York Catchments and the Queensland Department of Environment and Science. This assessment served as a baseline to evaluate the effectiveness of their rehabilitation efforts and allowed the Rangers to develop a targeted restoration plan.



Balnggarrawarra Lagoon

The Rangers used an excavator to remove the accumulated sand and soil from the lagoon, effectively restoring its natural depth and profile. To prevent future erosion and sedimentation, the drainage system leading into the lagoon was reshaped, ensuring that the property track would not deposit further eroded sediment during future floods. By carefully considering erosion control measures, the Rangers aimed to recreate a resilient wetland ecosystem. Following the removal of sediment and reshaping of the drainage system, the restored lagoon was left untouched during the 2022/23 wet season, providing an opportunity for natural revegetation.

Over the wet season, many native plants recolonised the area. To assess the effectiveness of their restoration efforts, the Rangers conducted another wetland assessment in 2023. The condition score of the lagoon indicated a significant improvement compared to the pre-restoration assessment. Native aquatic vegetation, such as water lilies (*Nymphaeae* species), marshworts (*Nymphoides* species), bladderwort (*Utricularia* species) and bulburu sedge (*Eleocharis* species), now flourished within the lagoon. This proliferation of plant life indicated improved water quality and habitat suitability for native fauna.

The successful rehabilitation of the Balnggarrawarra Lagoon holds promising implications for the ecosystem and the Balnggarrawarra Melsonby Traditional Owners. The restoration efforts have ensured that the lagoon will once again serve as a vital water and food source for native animals, contributing to the area's overall biodiversity.

Moving forward, the Balnggarrawarra Melsonby Rangers remain committed to maintaining the restored lagoon's condition. They plan to manage feral animals such as pigs and cattle, ensuring that feral animal impacts do not compromise the lagoon's recovery. By proactively addressing potential threats, the Rangers aim to preserve the lagoon as a thriving ecosystem and safeguard its cultural significance for future generations. The restoration of the lagoon stands as a testament to the dedication of the Balnggarrawarra Melsonby Rangers and the resilience of these ecosystems and offers inspiration for similar projects.

Questions:

How did the Balnggarrawarra Melsonby Rangers 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?
