

*Reimagining conservation translocations through Two-Eyed Seeing*

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Now more than ever, creative solutions that bring together diverse ways of knowing and seeing the world are needed to restore and enhance biocultural diversity (interwoven biological, cultural and linguistic systems). Mi'kmaq Elder Dr Albert Marshall describes the Mi'kmaq principle of [Etuaptmumk or Two-Eyed Seeing](#) as 'learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing, and from the other eye with the strengths of Western knowledges and ways of knowing ... and learning to use both these eyes together, for the benefit of all'. Moving plants and animals to establish new populations or strengthen existing ones ('[conservation translocations](#)') can enhance species recovery and build ecosystem resilience. Yet, few studies to date have been led or co-led by Indigenous peoples or consider how centring Indigenous knowledge systems can lead to better conservation translocation outcomes.

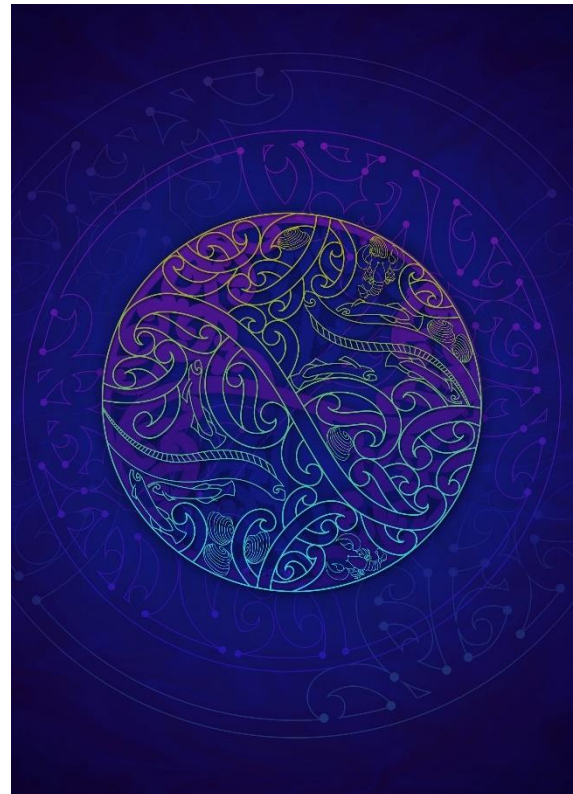
In this Perspective, as Indigenous and non-Indigenous researchers and practitioners working in partnership under [Te Tiriti o Waitangi](#) (The Treaty of Waitangi, 1840), we demonstrate how Two-Eyed Seeing can better inform conservation translocation decisions—such as whether, or how, different populations should be mixed.

We present a new global framework for re-imagining conservation translocations by centring Indigenous peoples and knowledge systems; and show how this framework can be readily extended to local contexts. As a case study, we focus on Aotearoa New Zealand's threatened and under-prioritized freshwater biodiversity.

In doing so, we reflect on Māori (Indigenous peoples of Aotearoa New Zealand) led or co-led restoration initiatives: [Te Nohoaka o Tukiauau](#) and [Tūhaitara Coastal Park](#). In particular, we highlight the co-development of conservation translocations for culturally significant freshwater species in these wetlands as part of strategies to revitalize biocultural diversity—including customary practices, processes and associated language—for future generations.

By bringing together Western science and Indigenous knowledge, practices and processes through Two-Eyed Seeing, Indigenous-led or co-led approaches can enable more nuanced

conservation translocation decisions and build more resilient biocultural heritage.



*Freshwater conservation translocations under a Kāi Tahu (tribe in Te Waipounamu / the South Island of Aotearoa New Zealand) lens. In this illustration, produced by Kaaterina Kerekere ([KEdesign](#)), line art refers to whakapapa (genealogy) and the terminology of whakapapa, while kōwhaiwhai (patterns) symbolize the development, movement and pathways of mātauraka (Māori knowledge systems). The main design sits within a sphere, reflecting Te Pō, Te Ao Mārama and Te Ao Hurihuri (three layers of the Māori world). In the layers of line work beneath the main illustration, the bold circles represent genetic markers, referring to Western knowledge and practice. These repetitive layered designs depict the weaving together of mātauraka and Western knowledge. Within the sphere are tuna (eel), kōwaro (Canterbury mudfish), kēkēwai (freshwater crayfish) and kākahi (freshwater mussel), representing Aotearoa New Zealand's freshwater biodiversity. The colours make reference to relationships between light, land and water. Reproduced with permission.*

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