Humanities & Social Sciences Communications

ARTICLE

https://doi.org/10.1057/s41599-025-04382-1 OPEN

Untapping the potential of Indigenous water jurisdiction: perspectives from Whanganui and Aotearoa New Zealand

Elizabeth Macpherson [1]✉ & Hayden Turoa[1]

Indigenous peoples have maintained sustainable, longstanding relationships with water and have valuable knowledge to contribute to water management. Still, legal and policy frameworks routinely include only tokenistic acknowledgements of Indigenous water 'values', while ongoing injustices related to the allocation and governance of water resources remain unresolved. Those concerned about the recognition of Indigenous water rights and relationships often point to the case of Aotearoa New Zealand, and specifically the Treaty of Waitangi settlement legislation recognising the Whanganui River as a 'legal person', as a replicable model for improved water governance and Indigenous water rights. In this article we use a sociolegal method to draw out globally relevant lessons from the groundbreaking Whanganui River model about the potential for Western or settler-state law to support and uphold Indigenous rights and relationships in water. Our analysis confirms that enabling Indigenous water jurisdiction could hold the key to more sustainable and equitable futures, but it requires a long-term commitment from states and local communities to relationship brokering, power sharing, and trust building with Indigenous peoples.

[1] Te Whare Wānanga o Waitaha, University of Canterbury, Christchurch, New Zealand. ✉email: elizabeth.macpherson@canterbury.ac.nz

Introduction

The international scientific (Leonard et al., 2023; O'Donnell et al., 2023) and policy (Arrojo-Agudo, 2022; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2022) communities are increasingly cognisant of the relationships that Indigenous peoples celebrate with water and the valuable knowledge Indigenous peoples contribute to water management (Stanly et al., 2024). A diverse range of Indigenous water rights and interests are increasingly recognised in international (Gupta et al., 2014; United Nations, 2007) and domestic legal and policy documents (Jackson, 2018; Macpherson, 2020; O'Donnell et al., 2024). The United Nations (UN) World Water Development Report of 2024, *Water for Prosperity and Peace*, emphasises the need for states to ensure water governance systems respect Indigenous water rights, tenure, governance, and customary law in order to achieve sustainable and equitable water management (UNESCO World Water Assessment Programme et al., 2024, pp. 34–35).

However, as observed by the Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation in 2024, 'mainstream approaches to water management often dismiss indigenous peoples' water knowledge and management systems as unscientific or folkloric, disregarding the fact that their knowledge is based on empirical experience, resulting from living in their territories from generation to generation' (Arrojo-Agudo, 2022, p. 3). Domestic policy frameworks usually only pay tokenistic reference to Indigenous water relationships through acknowledgements of Indigenous 'values', while ongoing injustices related to the allocation and governance of water resources remain unresolved (Acharibasam et al., 2024; Clark & O'Donnell, 2023; Laborde & Jackson, 2022).

The failure to recognise the full extent of Indigenous water rights and relationships can be seen as a dual injustice of 'distribution' (exclusion from substantive entitlements to access and use water for any purpose) and 'jurisdiction' (exclusion from power to exert governance, management and decision-making authority over water and its use) (Macpherson, 2019). The ongoing water injustice experienced by Indigenous peoples around the world is evidence of a significant gap between aspirational policy statements and real-world decisions about who gets to use and govern water and when this occurs (Ballestero, 2019).

As acknowledged by the UN, inequalities in the allocation of water resources and in the distribution of related social, economic and environmental benefits can be counterproductive to peace and social stability (UNESCO World Water Assessment Programme et al., 2024, pp. 2, 114/5). However it can be difficult to implement, monitor and assess progress towards more equitable water governance and allocation systems as opposed to biophysical indicators (Linton & Saadé, 2024; Mdee et al., 2024; Tadaki, 2024), including to enable Indigenous rights and authority pursuant to Indigenous law and knowledge (Quentin Grafton et al., 2023).

Those concerned with the recognition of Indigenous water rights and relationships often point to the case of Aotearoa New Zealand,[1] and specifically the Treaty of Waitangi settlement legislation, *Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 (Te Awa Tupua Act)* (Kramm, 2020). That legislation recognises the rights and relationships of the Indigenous[2] Whanganui iwi and hapū (nations and kin groups) with respect to their river, known by them as 'Te Awa Tupua' (O'Bryan, 2017; O'Donnell, 2017; Tanasescu, 2022; Zartner, 2021). The legislation set a global precedent, by declaring that the river is a 'legal person', with its own rights, interests and authority, as part of a collaborative governance framework devised in negotiations between the Crown in right of New Zealand and Whanganui iwi (Cribb, Macpherson, et al., 2024).

Because of the recognition within the Whanganui River model that the river is a legal person with its own rights, much of the international literature considers its relevance for the recognition of the rights of nature (Kurki, 2022; Marshall, 2019; Zartner, 2021). Within this scholarship, valid concerns have been raised about the limitations of rights of nature as being themselves based on a homogenising, Western concept (Gilbert et al., 2023; Tanasescu, 2022), and some have pointed to a lack of realisable implementation and impact of legal person models in comparative contexts (Cuesta Mosquera & Vallejo Piedrahíta, 2024; González-Serrano, 2024; McNeish & Socha, 2024). In the local context, some have criticised legal personhood models on the basis that they are incomplete responses to injustice experienced by Māori, including through failing to address the inequitable allocation of property rights to land and water (Coombes, 2020; Jones, 2016). However, the Whanganui River model is also regularly cited by scholarly commentators (O'Donnell et al., 2024), environmentalists, and Indigenous and local communities in other countries, as a replicable model for the protection of Indigenous water rights (Rodgers, 2017), because of its firm grounding in an Indigenous worldview predicated on relational closeness between people and water (Arstein-Kerslake et al., 2021; Macpherson, 2022; O'Donnell, 2023a). In this context, we believe that there are significant lessons to be drawn from the Whanganui River model for the goal of more equitable water governance, allocation, and use.

For this article, we use a sociolegal analysis to ask: what lessons can be drawn from the Whanganui River model for the challenge of supporting and upholding Indigenous rights and relationships with respect to water? Our analysis of Aotearoa New Zealand and Indigenous Whanganui law shows how the model arises from and is contingent upon the exercise of place-based legal and political jurisdiction over the river territory by the Whanganui iwi and hapū (Rāwiri, 2022). However, it signals only the beginning of the shift needed within settler-state legal frameworks to accommodate Indigenous water rights and relationships, and more work needs to be done in practice and research settings to uphold and enable Indigenous water jurisdiction (Cribb, Mika, et al., 2024). This will entail a longer process of constitutional and structural adjustments to water governance, decision-making, planning, and judicial appeals processes to support the concurrent exercise of 'plural' (Davies, 2017; Tamanaha, 2021) legal systems as part of sustainable and equitable water governance.

Methods

We are a mixed research team of one Indigenous legal scholar of Whanganui heritage and one Pākehā legal scholar of European settler heritage, both working on water law and policy design and implementation in research and community settings. We used a sociolegal (Davies, 2017), 'law in context' (Cotterrell, 2008; Morgan & Morgan, 2007), research method to draw out lessons from the Whanganui River model for the challenge of supporting and upholding Indigenous rights, relationships, knowledge, and authority concerning water.

Our methods included 'doctrinal analysis' of key legal documents (Van Hoecke, 2011), grounded by our contextual study of broader Aotearoa New Zealand and Whanganui legal frameworks. This comprised desktop analysis of relevant legislation, case law, and policy documents using cross-cultural and doctrinal legal interpretation and analysis techniques, complemented by a comprehensive literature review. Our understanding of legal frameworks was deepened and complemented by place-based practice and engagement with Whanganui iwi and hapū using a wānanga (workshop) technique (Cribb, Mika, et al., 2024, p. 12;

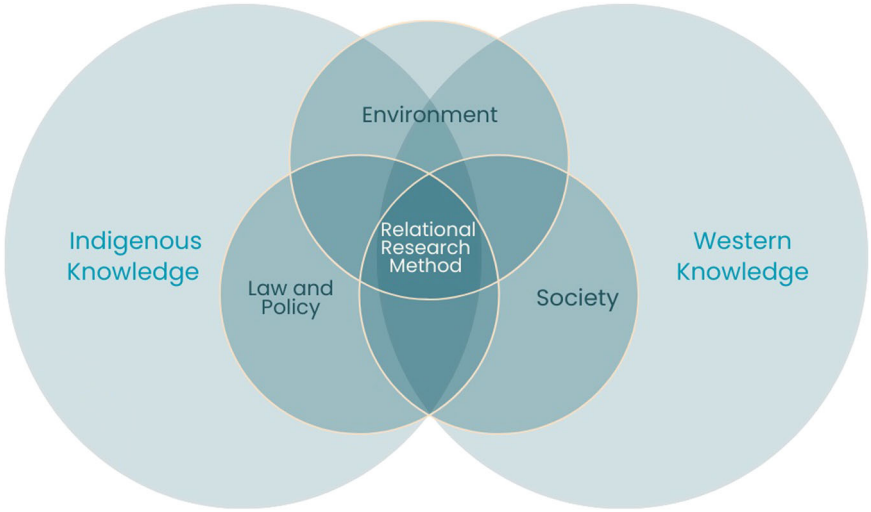

Fig. 1 Our Relational Research Method (*inspired by and adapted from The Independent Working Group on Constitutional Transformation* (The Independent Working Group on Constitutional Transformation, 2016)).

Hoskins & Jones, 2017), and triangulated against semi-structured interviews and engagement with over 50 key Whanganui and Aotearoa New Zealand-based actors and experts working in iwi and hapū, community and recreation, and local and central government settings, conducted during an eight-year period between 2017 and 2024.[3] Documentary analysis of sources relevant to Whanganui water law and rights was concentrated during an intensive research period from December 2023-March 2024 as part of an *Aho Hinatore* Scholarship programme at the University of Canterbury. The analysis of Indigenous and Western (in this context modern, settler-state) law and policy concerning the Whanganui River in this article cannot be separated from our many decades of combined and situated (Haraway, 1988) relationships with both legal systems in Aotearoa New Zealand.

As sociolegal researchers, we are interested not just in the law, but its social and environmental context (Cotterrell, 2008). We adopted the 'reparative' approach advocated by Stein et al. (2024) to our engagement with Indigenous knowledge, including a conscious effort to decentre Western law (Smith, 2021). We decided at the start of this collaboration that if we were going to write substantively about relationships between peoples, laws, and water—then we needed to deliberately apply that same standard of relationality to our research method (Cribb, Mika, et al., 2024), as bound and guided by our relationships with the Whanganui River, iwi and hapū, and to each other (Fig. 1).

The challenge of reconciling with Indigenous water jurisdiction

There is a rich and ever-evolving body of interdisciplinary literature on Indigenous water rights and relationships in comparative contexts (Acharibasam et al., 2024; Boelens, 2003; Leonard et al., 2023; Linton & Budds, 2014; Moggridge & Thompson, 2021; Poelina et al., 2021; Strang, 2023; Viaene, 2021), including in Aotearoa New Zealand (Boast, 2014; Jones, 2016; Muru-Lanning, 2012, 2016; Ruru, 2013; Salmond, 2017). However, as noted by O'Donnell et al. (2024, p. 209), the law 'remains an under-examined field of water scholarship'. Within the field of sociolegal studies, theories of 'legal pluralism' (Davies, 2017, pp. 11–12) are commonly used to help understand and describe Indigenous water rights and relationships in the context of multiple co-existing and intersecting systems of law governing human relationships with water in one place at one time (Benda-Beckmann & Turner, 2018; Berman, 2012; Davies, 2005; Gover, 2009; Tamanaha, 2021; Webber et al., 2020). This 'multi-juridical' context is the natural and inevitable consequence of the fact that Indigenous law and governance over water was not extinguished by, but continues to thrive after, European colonisation and settlement (Borrows, 2010). Relational theories of legal pluralism (Brigg et al., 2022; Gover, 2009; McKerracher, 2023; Webber, 2006) are particularly relevant when considering Indigenous legal rights to and relationships with water (O'Donnell et al., 2024), because they focus on the process of interaction between legal systems (Indigenous and Western law) and between laws and the surrounding natural environment (Boulot & Sterlin, 2022; Macpherson, 2022). Theorists of relational legal pluralism in the context of water emphasise the connectedness of law, people and environment (Davies, 2018), and focus on the ongoing practice of relationships between peoples and waters, through process, protocol, and ritual (Manikuakanishtiku et al., 2022; Tanasescu, 2022).

Nonetheless, critical Indigenous legal theorists are increasingly concerned about demands for settler state-driven recognition of Indigenous rights and relationships in lands and waters through traditional legal pluralism (Webber et al., 2020), which may be simplistic, paternalistic, or reductive (Coyle, 2020; Debelo, 2011; Fraser, 1995). Instead, they emphasise the 'inherent' nature of Indigenous jurisdiction over their territories (Acharibasam et al., 2024), meaning 'the rights of Indigenous peoples to exercise control and decision-making powers over different dimensions of their collectives lives, based on their inherent right to self-determination' (Walqwan Metallic, 2023, p. 7). On this analysis, Indigenous law, and consequent rights to use and govern water, are not limited by the theoretical foundations or boundaries of the settler or colonial legal culture (O'Donnell, 2023b). However, such an accommodation of Indigenous lawmaking authority (jurisdiction) is still regularly resisted by states in providing for Indigenous water rights and relationships, including in Aotearoa New Zealand (Charters, 2009; Norman, 2017).

In Aotearoa New Zealand, there are many laws and policies that recognise rights and interests of Indigenous Māori peoples to varying extents, which are sourced in and arise from Indigenous legal systems (Charters, 2015; Muru-Lanning, 2016). Indigenous scholars in Aotearoa New Zealand, as in other parts of the world (Acharibasam et al., 2024; Beaton et al., 2022; Marshall, 2017), have long been advancing jurisdictional understandings of the relationship between Indigenous law and authority and settler states (Tanasescu, 2022; The Independent Working Group on

Constitutional Transformation, 2016). However, the relationship of Indigenous law, often called 'tikanga' in te Reo Māori (the Māori language), with Western legal and policy frameworks (Charters et al., 2019) is of increasing interest to the judicial (*Ngati Apa v Attorney-General*, 2003; *Peter Hugh McGregor Ellis v R*, 2020; *Takamore v Clarke*, 2012; *Trans-Tasman Resources Limited v The Taranaki-Whanganui Conservation Board*, 2021) and executive branches of government. As jurists and judges continue to grapple with the relationship between tikanga and Western law, there remain unresolved tensions as to the boundaries, cross-fertilisation, and source of authority of each system.

The recent Māori Land Court decision of *Re Pokere* is the first New Zealand legal judgment delivered equally in te Reo Māori and English, to 'allow tikanga to speak in its own context, and not one cloaked exclusively by a western legal construct' (*Re Pokere*, 2022, para. [4]). The Court (Judge Aidan Warren together with Dr Ruakere Hond as a tikanga expert or 'Pūkenga') emphasised that '[a]s a court of law, we also need to consistently remind ourselves of the fact that tikanga is the "first law" of this land' (*Re Pokere*, 2022, para. [90]). To decentre Western law, they used a 'tikanga frame of reference' as the starting point for determining the application of law in the case, and then applied it to the facts.

Tensions around determining the content and procedural application of tikanga have led various comparative scholars to underscore the inherently place-based nature of Indigenous lawmaking jurisdiction (Beaton et al., 2022; O'Donnell et al., 2024); sourced in embedded Indigenous relationships with particular lands and waters, and therefore dependent on localised knowledge (Rāwiri, 2022). The international scholarly community increasingly acknowledges the 'relational' nature of Indigenous law and legal systems, especially when talking about water (Bartel, 2018; O'Donnell et al., 2024). The same point has been made by the courts, with the New Zealand Supreme Court recently observing that Māori resource interests, the longest-standing human-related interests which predate the arrival of the common law in Aotearoa, are inherently 'relational', and that we should take care to avoid viewing legal concepts only through a Pākehā (settler) lens (*Trans-Tasman Resources Limited v The Taranaki-Whanganui Conservation Board*, 2021).

In the water context, this would mean that if we are to respect and uphold Indigenous water rights and relationships, then we need to also respect and uphold place-based Indigenous jurisdiction and authority to administer them pursuant to Indigenous law (Leonard et al., 2023; O'Donnell, 2023b). Further, if we are committed to addressing Indigenous water injustice, then we need to not just recognise Indigenous water values but address the fundamental exclusion of Indigenous peoples from the distribution of water resources (Macpherson, 2019). Resolving unresolved injustices in the allocation of water rights and jurisdiction to govern water management will have significant implications for state-based water law and policy frameworks, their implementation, and adjudication. In the following section we explore these tensions through our analysis of the Whanganui River model.

The law of the Whanganui River

Reconciling waters in Whanganui. The Whanganui River is a source of physical and spiritual sustenance for the iwi and hapū of Whanganui. It is their home, with 143 known marae (traditional settlements) along the length of the river; as a means of travel, trade, and social and cultural connection for the people of the river; as a food basket and fishery; and as a source of resources (*Te Awa Tupua Act*, section 69(4)). The iwi and hapū of the Whanganui River have continuously exercised and asserted their jurisdiction for authority, ownership, and control of the river, surrounding territory, and people since prior to the arrival of British settlers in the 1800s (Waitangi Tribunal, 1999, pp. 55–56). This authority stems from their inherent jurisdiction and is exercised through their place-based laws and customs.

The system of Whanganui law and custom is known locally as 'kawa'. The word kawa is also commonly used in Aotearoa New Zealand to denote protocols or ceremonies within the Māori world (Mead, 2013). But in Whanganui, the word 'kawa' is used with reference to a legal, scientific, religious, and political system; described as 'the natural law and value system of Te Awa Tupua, which binds the people to the river and the river to the people' (*Ruruku Whakatupua: Whanganui River Deed of Settlement between the Crown and Whanganui Iwi*, 2014, p. 6). Kawa defines the hapū and iwi relationship with the awa (river), lands, and natural resources and evokes the need to act collectively rather than individually (Te Kōpuka, 2023). It is 'grounded in self-evident truth that people are part of a universal, natural order where respect and reciprocation will ensure sustenance for people and all life in perpetuity—*He Awa Tupua, He Awa Ora*' (Te Kōpuka, 2023, p. 10).

For all of Aotearoa New Zealand's settler-colonial history prior to the Whanganui River settlement, and despite a century of conflict, protest, obstruction of development works, and litigation, New Zealand law failed to recognise the status of the Whanganui River according to kawa, whereby the iwi and hapū relate to the river as a living ancestor (Salmond, 2017, p. 300; Waitangi Tribunal, 1999, p. xiii). Whanganui iwi have consistently emphasised that the intention at the heart of the *Te Awa Tupua Act* was to 'approximate at law what the river is to us in kawa' (Waitangi Tribunal, 1999, p. 57). When English language is needed to explain Whanganui law and the recognition of an inextricably intertwined relationship to the river, from an outsider's perspective, the 'approximate' (Nelson, 2017, p. 25) term used is often 'relational' (Cribb, Macpherson, et al., 2024).

The inherent jurisdiction of the Whanganui hapū and iwi to govern their river and people pursuant to their kawa was largely ignored by incoming settlers and the Crown, producing significant and ongoing procedural and distributive injustices. Whanganui River jurisdiction was undermined by the unilateral and uncompensated 'vesting' of river ownership and regulatory power in the British and colonial Crown, first by assumption and later by legislation in the twentieth century (*Resource Management Act* 1991 *(RMA)*, section 354). Today, local government authorities assume governance power over the river under the *RMA*, not pursuant to a relational worldview, but in furtherance of the Crown's objective of 'sustainable management' (*RMA*, section 5).

Crown management of the Whanganui River has produced a series of devastating environmental, social, and economic impacts, including the obstruction of food gathering, navigation, and traditional uses in favour of the intensification of agriculture, urbanisation, resource extraction, and hydroelectric development (Waitangi Tribunal, 1999). Until recently, the Crown simply assumed that it owned the riverbed and its banks and water. The case for the Whanganui River is often referred to as the longest-running court case in Aotearoa New Zealand, involving multiple judicial hearings, a formal inquiry by the Waitangi Tribunal (Waitangi Tribunal, 1999), and an eventual negotiated settlement with the Crown (*Ruruku Whakatupua: Whanganui River Deed of Settlement between the Crown and Whanganui Iwi*, 2014), which opened the way for an ongoing project of reconciling with Indigenous water jurisdiction.

Securing jurisdiction for Whanganui Law (kawa). *Te Awa Tupua Act* recognises the status of the river (and its tributaries) as

Box 1 | *Tupua te Kawa* from s 13 of *Te Awa Tupua Act*

Ko Te Kawa Tuatahi

(a) ***Ko te Awa te mātāpuna o te ora*: the River is the source of spiritual and physical sustenance**: Te Awa Tupua is a spiritual and physical entity that supports and sustains both the life and natural resources within the Whanganui River and the health and well-being of the *iwi*, *hapū*, and other communities of the River.

Ko Te Kawa Tuarua

(b) ***E rere kau mai i te Awa nui mai i te Kahui Maunga ki Tangaroa*: the great River flows from the mountains to the sea**: Te Awa Tupua is an indivisible and living whole from the mountains to the sea, incorporating the Whanganui River and all of its physical and metaphysical elements.

Ko Te Kawa Tuatoru

(c) ***Ko au te Awa, ko te Awa ko au*: I am the River and the River is me**: The *iwi* and *hapū* of the Whanganui River have an inalienable connection with, and responsibility to, *Te Awa Tupua* and its health and well-being.

Ko Te Kawa Tuawhā

(d) ***Ngā manga iti, ngā manga nui e honohono kau ana, ka tupu hei Awa Tupua*: the small and large streams that flow into one another form one River**: Te Awa Tupua is a singular entity comprised of many elements and communities, working collaboratively for the common purpose of the health and well-being of Te Awa Tupua.

'an indivisible and living whole, comprising the Whanganui river from the mountains to the sea, incorporating all its physical and meta-physical elements' (*Te Awa Tupua Act*, section 12). It establishes a framework for river governance called Te Pā Auroa, made up of a range of legal entities involving iwi, hapū, government, and community/recreational interests (*Te Awa Tupua Act*, sections 27–35), working under a common set of fundamental legal principles called Tupua Te Kawa (*Te Awa Tupua Act*, section 15). The legislation also recognises the living status of the river as a 'legal person' with all corresponding rights, powers, duties, and liabilities (*Te Awa Tupua Act*, section 14), as represented by Te Pou Tupua (the human face of the river) (*Te Awa Tupua Act*, sections 18–19). One representative on Te Pou Tupua is nominated by the Crown and the other by the Whanganui iwi, who are required to make decisions by consensus.

Te Awa Tupua Act is the first example of kawa being recognised and enabled in New Zealand legislation. The Crown acknowledgements and apology included within the settlement legislation acknowledge (*Te Awa Tupua Act*, section 69(2)):

> that to Whanganui Iwi the enduring concept of Te Awa Tupua—the inseparability of the people and the River—underpins the responsibilities of the iwi and hapū of Whanganui in relation to the care, protection, management, and use of the Whanganui River in accordance with the kawa and tikanga maintained by the descendants of Ruatipua, Paerangi, and Haunui-a-Paparangi.

Section 13 of the Act recognises four kawa (Box 1), as the 'intrinsic values that represent the essence of Te Awa Tupua'. These acknowledge the direct link between the health of the river and the health of the people, emphasize the living, integrated and holistic nature of the river, and acknowledge the responsibility of the Whanganui iwi to work collaboratively with other river interests to further the river's health and wellbeing (Cribb, Macpherson, et al., 2024).

The recognition of kawa in *Te Awa Tupua Act* presents significant implications for the exercise of jurisdiction over decision-making about the river. The range of governance entities established as part of the collaborative governance framework called Te Pā Auroa (including the entities Te Pou Tupua (the human face of the river, section 19), and advisory groups Te Karewao (section 27) and Te Kōpuka (section 30)) must uphold, act consistently with, and have particular regard to Tupua Te Kawa (respectively). But any person exercising or performing a function, power, or duty under a broad range of legislation that impacts the river and its use must recognise and provide for the Te Awa Tupua status and Tupua te Kawa (*Te Awa Tupua Act*, section 15).

The practical implication of the Pā Auroa framework established by the legislation is that a wide range of public and private entities engaged in resource management and decision-making activities that affect the river need to make a 'paradigm shift' (Gerrard Albert, 2020). The need and means for this paradigm shift is detailed in Te Heke Ngahuru, the first collaborative Strategy for the river developed by Te Kōpuka in 2023, which provides (Te Kōpuka, 2023, p. 29):

> The legal recognition and status of Te Awa Tupua and Tupua te Kawa will create a significant change in the way in which people interact with and make decisions affecting the River. It will change the lens, both legally and philosophically, through which people must view and relate to the River.

But the paradigm shift shared with the world by Whanganui is not just a shift from exploiting to valuing relationships with natural resources. It is also a 'subtle and incremental shift in the Crown–Māori constitutional relationship' (Coates, 2018, p. 169; Sanders, 2018, p. 231; Tanasescu, 2022). This is necessary to provide for the Indigenous law of the Whanganui iwi and hapū—a pre-existing legal framework that is underpinned by Whanganui worldview as distinct from Western law (Cribb, Mika, et al., 2024). It throws into sharp focus the relationship between Western and Indigenous law, and the jurisdiction for kawa carved out for the future.

Take for instance the question of dispute resolution—where there is a dispute as to whether a particular activity affecting the river is consistent with kawa—who can be the arbiter? Surely not just the national courts, with their procedures and presiders steeped in the common law of England developed some 18,000 km away? Māori scholars have warned of the dangers of Indigenous knowledge being institutionalised away from Indigenous communities where it began and continues to inform ways of living and being (Cribb, Mika, et al., 2024, p. 2). Cribb et al., in the first study of implementation of the *Te Awa Tupua Act*, have argued that the use of kawa in this legislation is an act of resistance and assertion of authority by Whanganui Iwi, which

safeguards their jurisdiction for ongoing and evolving authority over the river's use and governance (Cribb et al., 2024). They argue that if *Te Awa Tupua Act* enables jurisdiction for kawa, then no national court or legislature has the authority to determine what it means or how it should be applied without the people that hold the appropriate knowledge about it. There remain significant uncertainties, but also opportunities, for the fuller exercise of Indigenous jurisdiction under the Te Awa Tupua framework in the future, and important work yet to be done to overcome ongoing injustices with respect to resource distribution in the region.

Future channels for Whanganui River jurisdiction. It would be remiss to overlook the fact that *Te Awa Tupua Act* is itself Crown legislation. Although it is an attempt to reconcile historical injustice, it is still a political compromise arising out of a negotiated settlement between Whanganui iwi and the Crown (Jones, 2016; Te Aho, 2019). It does not, in and of itself, transfer full political power or ownership over the river territory (land and water) to the iwi (*Te Awa Tupua Act*, sections 41–46). The regional council (local government authority) remains the decision-maker for allocating water permits for the river, using the framework of the *RMA*. Yet nor does *Te Awa Tupua Act* allow the Crown or local government, alone, to make decisions with respect to the river. In fact, local authorities have various obligations under the legislation to engage Whanganui iwi and hapū in resource consenting processes affecting the river (*Te Awa Tupua Act*, sections 19, 72), and must revise their regional planning documents in line with the 2023 strategy for the river, Te Heke Ngahuru (*Te Awa Tupua Act*, section 38).

Perhaps more significantly, decision-makers under the *RMA* must recognise and provide for the river's status and have particular regard to the Tupua te Kawa values (*Te Awa Tupua Act*, section 15). This requires them to adopt the Whanganui legal framework, founded on relationships, principles, and values at a systemic level across every stage of their planning, policymaking, and decision-making processes that affect the river and people related to it. This means that the law, rights, and interests of the Whanganui iwi and hapū are not just an arbitrary, box-ticking exercise at the final decision stage of consenting development activities, as may have been the case under the *RMA* prior to the Treaty settlement. This underscores the magnitude of the paradigm shift required for the Crown, local government, and broader local and business community in order to comprehend and enable Kawa in action, within their regulatory and planning processes. Cribb et al. (2024) emphasise the potential of Tupua te Kawa as a methodological tool to help non-Indigenous organisations connect water governance to Indigenous worldviews, peoples, knowledges, values, and practices. Achieving the necessary shift can only happen through a relational and incremental process of relationship and trust building, and will require '[p]ower sharing [as] a fundamental principle, empowering communities to actively participate in decision-making processes' (Te Kōpuka, 2023, p. 25).

Aside from its procedural implications, the carving out of Indigenous jurisdiction through the Act's enabling of kawa, suggests untapped potential for resolving longstanding distributive injustices with respect to the river. In the broader Aotearoa New Zealand legal and political context, the New Zealand Government has still not responded to the substantive claims of Māori iwi and hapū with respect to freshwater, including claims to sovereignty, authority, governance, management, and proprietary rights and interests (Macpherson, 2019). The Waitangi Tribunal has emphasised the need for the Crown to address Māori proprietary rights and interests in water, which it characterised as 'more than ownership', rather rangatiratanga (full legal and political authority, sovereignty) (Waitangi Tribunal, 2012). The urgency of a remedy on Māori freshwater rights and interests was noted by the Supreme Court more than a decade ago (in 2013) (*New Zealand Māori Council v Attorney-General*, 2013). A number of cases are pending before the New Zealand courts, which seek various remedies for ongoing distributive injustice with respect to water (*Mercury NZ Ltd v Cairns* (2022) *277 Waiariki MB 174*, 2022; *Tau v Attorney-General* [2021] *NZHC 3108*, 2021).

Te Awa Tupua Act leaves it open for the Whanganui iwi and hapū to make a legal claim to the water in the river in the future. The legislation includes a Crown acknowledgement of the ongoing rights and interests of the Whanganui iwi (*Te Awa Tupua Act*, section 69). It provides that nothing in it or the Deed of Settlement 'limits any existing private property rights in the Whanganui River' or 'creates, limits, transfers, extinguishes, or otherwise affects any rights to, or interests in', water (which, in both cases, could include an Indigenous right or interest in water) (*Te Awa Tupua Act*, section 16). Section 46 provides that the vesting does not create or transfer a proprietary interest in water, but also that 'existing private property rights, including customary rights and title' are 'preserved and not affected'.

Such a claim, if made out, would have significant distributive implications for the activities of a range of third-party interests in the river (eg drinking water, hydro, tourism). The existing rights of other, extractive river users are preserved by section 46 but only with respect to their existing rights, without giving them any future entitlement to a resource consent. In the future, when longstanding distributive injustices over who gets to use the water in the Whanganui River come, once more, before the courts (*In re the Bed of the Wanganui River*, 1962), the case will turn, not on Western legal objectives like the *RMA*'s principle of 'sustainable management' (section 5), but on the interpretation and application of kawa. This means that the jurisdiction of the Whanganui iwi and hapū—Whanganui law based on Whanganui worldview - would be pivotal to the case.

Conclusion—untapping the potential of Indigenous water jurisdiction

For this article, we used a case study of the Whanganui River in Aotearoa New Zealand to draw out lessons for policymakers seeking to improve water governance systems through protecting and upholding Indigenous water rights and relationships. The Whanganui River model is best known internationally for its recognition of river personhood, but provides broader lessons relevant to objectives of more sustainable and equitable water governance.

Although our focus has been on Whanganui, the case provides important lessons for the global community about the multi-juridical context of water management in settler-colonial states and the potential and for, and significance of, Indigenous peoples having the jurisdiction to govern their water rights and relationships pursuant to their own legal and knowledge systems (like kawa). The implication of our findings here, is that if policymakers are genuinely committed to meaningfully engaging with, and ultimately reconciling with (Jones, 2016; Walqwan Metallic, 2023), Indigenous water rights and relationships, they should focus their efforts on enabling the necessary conditions for the exercise of Indigenous water jurisdiction. Doing so could help policymakers move beyond aspirational or tokenistic acknowledgements of Indigenous values, in which Indigenous peoples and their knowledge are invited to participate in limited ways in State-determined legal frameworks, and finally reckon with ongoing inequalities in the allocation and governance of water. While international engagement has sometimes identified the failure of

the Whanganui model to disturb the allocation of substantive water rights in the river, the carving out of Indigenous jurisdiction through the Act's enabling of kawa, provides untapped potential for resolving longstanding distributive injustices in the future.

As noted in section 3, there is broad consensus amongst interdisciplinary scholars, including those working in the sociolegal field of legal pluralism, that Indigenous lawmaking jurisdiction (especially in the water context) is inherently place-based (Beaton et al., 2022; O'Donnell et al., 2024), and relational (Bartel, 2018; O'Donnell et al., 2024), and therefore dependent on localised, cultural knowledge (Rāwiri, 2022). Our Whanganui analysis confirmed that enabling Indigenous water jurisdiction requires inclusive, collaborative governance arrangements and power-sharing, legal dispute resolution processes utilising place-based Indigenous expertise, and adequate funding to make it all work. This has structural implications for state-based water law and policy frameworks, their implementation, and adjudication. It requires a decentring of Western law and a commitment from governments and communities to work together to uphold the values and principles of a legal system that is grounded in a distinct, relational worldview from the current Western law approach. To enable that 'shift' (Cribb et al., 2022), we need to respect and support the jurisdiction for Indigenous water law to be practiced on its own terms (Acharibasam et al., 2024), so it can be shared for the benefit of others. There are promising developments in this respect within the New Zealand Courts considering the relationship between Indigenous and Western law, to 'allow tikanga [Indigenous law] to speak in its own context, and not one cloaked exclusively by a western legal construct' (*Re Pokere*, 2022, para. [4]).

More research is needed around the optimal combination of legal and policy conditions and processes to support the exercise of Indigenous water jurisdiction. Further empirical analyses of the legal obstacles and enablers of innovative governance models like that for the Whanganui as it operates over time would also be welcome, noting the impending judicial engagement with unresolved issues of distributive water injustice in Aotearoa New Zealand. Ultimately, enabling Indigenous water jurisdiction could hold the key to more sustainable and equitable futures, but this will require a long-term commitment from states and local communities to relationship building, power sharing, and trust building with Indigenous peoples.

Data availability

The datasets generated during and/or analysed during the current study are not publicly available due to ethical and cultural requirements.

Received: 29 August 2024; Accepted: 13 January 2025;
Published online: 25 January 2025

Notes

1 We use the term Aotearoa New Zealand to refer to the place, and just New Zealand when referring to particular constitutional offices such as the New Zealand Courts, New Zealand Parliament, the Crown in Right of New Zealand, or the New Zealand Government.

2 We note that the Whanganui iwi and hapū are Māori peoples Indigenous to Aotearoa New Zealand, and their experience doesn't necessarily reflect the experiences or legal situation of Indigenous peoples in other places.

3 Human Ethics approval for this sociolegal analysis was obtained from the University of Canterbury (NZ): HEC 2017/31/LR-PS and HEC 2022/19.

References

Acharibasam JB, Datta R, Hurlbert M, Strongarm ES, Starblanket EE, Mckenzie ED, Favel EV, Starr R, Starr V (2024) Community-led water governance: Meanings of drinking water governance within remote First Nations and Métis communities in Saskatchewan. Environmental Science & Policy 157:103790. https://doi.org/10.1016/j.envsci.2024.103790

Arrojo-Agudo, P (2022) *Human rights to safe drinking water and sanitation of indigenous peoples: State of affairs and lessons from ancestral cultures: Report of the Special Rapporteur on the human rights to safe drinking water and sanitation* (A/HRC/51/24). Human Rights Council. https://documents.un.org/doc/undoc/gen/g22/390/39/pdf/g2239039.pdf

Arstein-Kerslake A, O'Donnell E, Kayess R, Watson J (2021) Relational personhood: A conception of legal personhood with insights from disability rights and environmental law. Griffith Law Review 30(3):530–555. https://doi.org/10.1080/10383441.2021.2003744

Ballestero A (2019) *A Future History of Water*. Duke University Press. https://andreaballestero.com/wp-content/uploads/2019/06/ballestero-2019-afuturehistoryofwater-open-access.pdf

Bartel R (2018) Place-speaking: Attending to the relational, material and governance messages of Silent Spring. The Geographical Journal 184(1):64–74. https://doi.org/10.1111/geoj.12229

Beaton R, Hamilton R, Nichols J (2022) Aboriginal Title, Self-Government, and Indigenous Jurisdiction in Canadian Law. University of New Brunswick Law Journal 73:93–132. HeinOnline

Benda-Beckmann KV, Turner B (2018) Legal pluralism, social theory, and the state. The Journal of Legal Pluralism and Unofficial Law 50(3):255–274. https://doi.org/10.1080/07329113.2018.1532674

Berman, PS (2012) *Global Legal Pluralism: A Jurisprudence of Law beyond Borders* (1st ed.). Cambridge University Press. https://doi.org/10.1017/CBO9781139028615

Boast R (2014) Customary title to waterways—Further comment. *The Maori Law Review*, *Journal Article*, 11–14

Boelens R (2003) *Local Rights and Legal Recognition: The Struggle for Indigenous Water Rights and the Cultural Politics of Participation*. Third World Water Forum

Borrows, J (2010) *Canada's indigenous constitution*. University of Toronto Press

Boulot E, Sterlin J (2022) Steps Towards a Legal Ontological Turn: Proposals for Law's Place beyond the Human. Transnational Environmental Law 11(1):13–38. https://doi.org/10.1017/S2047102521000145. Cambridge Core

Brigg M, Graham M, Weber M (2022) Relational Indigenous systems: Aboriginal Australian political ordering and reconfiguring IR. Review of International Studies 48(5):891–909. https://doi.org/10.1017/S0260210521000425. Cambridge Core

Charters C (2009) Do Maori Rights Racially Discriminate against Non Maori? Victoria University of Wellington Law Review 40(3):649–668

Charters C (2015) Maori rights: Legal or political? Public Law Review 26(4):231. edsgao

Charters C, Kingdon-Bebb K, Olsen T, Ormsby W, Owen E, Pryor J, Ruru J, Solomon N, Williams G (2019) *He puapua: Report of the Working Group on a plan to realise the UN Declaration on the Rights of Indigenous Peoples in Aotearoa/New Zealand* (Unedited version.)

Clark C, O'Donnell E (2023) Property in water? In *The Routledge Handbook of Property, Law and Society* (Vol. 1, pp. 276–286). Routledge; Routledge Handbooks Online. https://doi.org/10.4324/9781003139614-27

Coates N (2018) Future contexts for Treaty interpretation. In M. Hickford & C. Jones, *Indigenous peoples and the state: International perspectives on the Treaty of Waitangi* (pp. 166–186). Routledge

Coombes B (2020) Nature's rights as Indigenous rights? Mis/recognition through personhood for Te Urewera. Espace Populations Sociétés. Space Populations Societies, 2020/1-2 2020:1–2. https://doi.org/10.4000/eps.9857

Cotterrell R (2008) Subverting Orthodoxy, Making Law Central: A View of Sociolegal Studies. In R. Cotterrell (Ed.), *Living law: Studies in legal and social theory*. Ashgate; cat00006a

Coyle M (2020) 805E Pluribus Plures: Legal Pluralism and the Recognition of Indigenous Legal Orders. In P. S. Berman (Ed.), *The Oxford Handbook of Global Legal Pluralism* (p. 0). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780197516744.013.5

Cribb M, Mika JP, Leberman S (2022) Te Pā Auroa nā Te Awa Tupua: The new (but old) consciousness needed to implement Indigenous frameworks in non-Indigenous organisations. AlterNative: An International Journal of Indigenous Peoples 18(4):566–575. https://doi.org/10.1177/11771801221123335

Cribb M, Macpherson E, Borchgrevink A (2024) Beyond legal personhood for the Whanganui River: Collaboration and pluralism in implementing the Te Awa Tupua Act. Intl J Hum Rts, 1–24. https://doi.org/10.1080/13642987.2024.2314532

Cribb M, Mika JP, Leberman S, Bennett A (2024) Tupua te Kawa: Indigenous methodologies for non-Indigenous (and Indigenous) organisations. *Qualitative Research*, 1. Academic Search Complete. https://doi.org/10.1177/14687941241297404

Cuesta Mosquera A, Vallejo Piedrahíta C (2024) Take me to the River: Have riverine rights enhanced community participation in environmental governance within the Atrato River basin? *The International Journal of Human Rights*, 1–19. https://doi.org/10.1080/13642987.2024.2367468

Davies M (2005) The Ethos of Pluralism. Sydney Law Review 27(1):87–112

Davies M (2018) Extra-Legal Theory: A Reply to the Commentators. Australasian Journal of Legal Philosophy 43:145–153. HeinOnline
Davies M (2017) Law Unlimited: Materialism, Pluralism, and Legal Theory
Debelo AR (2011) Contrast in the Politics of Recognition and Indigenous People's Rights. AlterNative: An International Journal of Indigenous Peoples 7(3):258–271. https://doi.org/10.1177/117718011100700306
Fraser N (1995) From Redistribution to Recognition? Dilemmas of Justice in a 'Post-Socialist' Age. New Left Review 21(2):68
Gilbert J, Macpherson E, Jones E, Dehm J (2023) The Rights of Nature as a Legal Response to the Global Environmental Crisis? A Critical Review of International Law's 'Greening' Agenda. In D. Dam-de Jong & F. Amtenbrink (Eds.), *Netherlands Yearbook of International Law 2021: A Greener International Law—International Legal Responses to the Global Environmental Crisis* (pp. 47–74). T.M.C. Asser Press. https://doi.org/10.1007/978-94-6265-587-4_3
González-Serrano MX (2024) The Atrato River as a Bearer and Co-creator of Rights: Unveiling Black People's Legal Mobilization Processes in Colombia. *Law and Social Inquiry*. Scopus®. https://doi.org/10.1017/lsi.2024.31
Gover K (2009) *Legal pluralism and state-indigenous relations in Western settler societies*. International Council on Human Rights Policy
Gupta J, Hildering A, Misiedjan D (2014) Indigenous people's right to water under international law: A legal pluralism perspective. SI: Sustainability Science 11:26–33. https://doi.org/10.1016/j.cosust.2014.09.015
Haraway D (1988) Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. Feminist Studies 14(3):575–599. https://doi.org/10.2307/3178066. JSTOR Journals
Hoskins TK, Jones (Eds.). (2017) *Critical Conversations in Kaupapa Māori*. Huia
In Re the Bed of the Wanganui River (1962) NZLR 600 (Court of Appeal)
Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. (2022). *Summary for policymakers of the methodological assessment of the diverse values and valuation of nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (Version 1)*. IPBES Plenary at its ninth session (IPBES 9). https://ipbes.net/media_release/Values_Assessment_Published
Interview with Gerrard Albert. (2020)
Jackson S (2018) Water and Indigenous rights: Mechanisms and pathways of recognition, representation, and redistribution. WIREs Water 5(6):e1314. https://doi.org/10.1002/wat2.1314
Jones C (2016) *New Treaty, New Tradition: Reconciling New Zealand and Maori Law*. UBC Press
Kramm M (2020) When a River Becomes a Person. Journal of Human Development and Capabilities 21(4):307–319. https://doi.org/10.1080/19452829.2020.1801610
Kurki VAJ (2022) Can Nature Hold Rights? It's Not as Easy as You Think. Transnational Environmental Law 11(3):525–552. https://doi.org/10.1017/S2047102522000358. Cambridge Core
Laborde S, Jackson S (2022) Living Waters or Resource? Ontological differences and the governance of waters and rivers. *Local Environment*, 1–18. https://doi.org/10.1080/13549839.2022.2044298
Leonard K, David-Chavez D, Smiles D, Jennings L, Anolani Alegado R, Tsinnajinnie L, Manitowabi J, Arsenault R, Begay RL, Kagawa-Viviani A, Davis DD, van Uitregt V, Pichette H, Liboiron M, Moggridge B, Russo Carroll S, Tsosie RL, Gomez A (2023) Water Back: A Review Centering Rematriation and Indigenous Water Research Sovereignty. Water Alternatives 16(2):374–428
Linton J, Budds J (2014) The hydrosocial cycle: Defining and mobilizing a relational-dialectical approach to water. Geoforum 57:170–180. https://doi.org/10.1016/j.geoforum.2013.10.008
Linton J, Saadé M (2024) Global water and its (anti)political consequences. Water Alternatives 17(2):491–509
Macpherson E (2020) Indigenous Water Rights in Comparative Law. Transnational Environmental Law 9(3):393–402. https://doi.org/10.1017/S2047102520000291. Cambridge Core
Macpherson E (2019). *Indigenous Rights to Water in Law and Regulation: Lessons from Comparative Experience*. Cambridge University Press
Macpherson E (2022) Can Western water law become more 'relational'? A survey of comparative laws affecting water across Australasia and the Americas. *Journal of the Royal Society of New Zealand*, 1–30. https://doi.org/10.1080/03036758.2022.2143383
Manikuakanishtiku, Gagnon J, Desbiens C, Kanapé É (2022) A river of names: The multiple voices of an Innu Riverscape. River Research and Applications 38(3):412–421. https://doi.org/10.1002/rra.3876
Marshall V (2019) Removing the Veil from the 'Rights of Nature': The Dichotomy between First Nations Customary Rights and Environmental Legal Personhood. Australian Feminist Law Journal 45(2):233–248. https://doi.org/10.1080/13200968.2019.1802154. (2)
Marshall V (2017) *Overturning aqua nullius: Securing Aboriginal water rights* (UniM Bail 346.9404691 MARS). Aboriginal Studies Press; cat00006a
McKerracher K (2023) Relational Legal Pluralism and Indigenous Legal Orders in Canada. Global Constitutionalism 12(1):133–153. HeinOnline
McNeish JA, Socha JM (2024). Muddy waters: On the problematic political ecology of the Atrato ruling, Colombia. *International Journal of Human Rights*. Scopus®. https://doi.org/10.1080/13642987.2024.2324121
Mdee, Ofori A, Cohen AD, Kjellén J, Rooney M, Singhal E, Amezaga S, Ankush J, Figueroa-Benítez A, Gupta S, Tamiru Haile A, Haileslassie A, Kongo V, Kumar A, Mafla Noguera SA, Nagheeby M, Noor ZZ, Polaine X, Singh N, Zúñiga-Barragán J (2024) Obscuring Complexity and Performing Progress: Unpacking SDG Indicator 6.5.1 and the Implementation of IWRM. Water Alternatives 17(2):391–414
Mead HM (2013) *Tikanga Maori: Living by Maori Values*. Huia NZ Ltd
Mercury NZ Ltd v Cairns (2022) 277 Waiariki MB 174 (Māori Land Court)
Moggridge BJ, Thompson RM (2021) Cultural value of water and western water management: An Australian Indigenous perspective. Australasian Journal of Water Resources 25(1):4–14. https://doi.org/10.1080/13241583.2021.1897926. (1)
Morgan B, Morgan B (2007) *The Intersection of Rights and Regulation: New Directions in Sociolegal Scholarship* (1st ed.). Routledge
Muru-Lanning M (2012) The Key Actors of Waikato River Co-Governance: Situational analysis at work. AlterNative: An International Journal of Indigenous Peoples 8(2):128–136. https://doi.org/10.1177/117718011200800202
Muru-Lanning M (2016) *Tupuna Awa: People and Politics of the Waikato River*. Auckland University Press
Nelson M (2017) I am the river and the river is me. Forest & Bird Magazine 363:24–26
New Zealand Māori Council v Attorney-General [2013] NZSC 6; (2013) 3 NZLR 31 (Supreme Court)
Ngati Apa v Attorney-General [2003] NZCA 117; (2003) 3 NZLR 643 (Court of Appeal)
Norman ES (2017) Standing Up for Inherent Rights: The Role of Indigenous-Led Activism in Protecting Sacred Waters and Ways of Life. Society & Natural Resources 30(4):537–553. https://doi.org/10.1080/08941920.2016.1274459
O'Bryan K (2017) Giving a Voice to the River and the Role of Indigenous People: The Whanganui River Settlement and River Management in Victoria. Australian Indigenous Law Review 20(1):48–77
O'Donnell E (2017) Competition or Collaboration? Using Legal Persons to Manage Water for the Environment in Australia and the United States. Environmental and Planning Law Journal 34:503
O'Donnell E (2023b) Water sovereignty for Indigenous Peoples: Pathways to pluralist, legitimate and sustainable water laws in settler colonial states. PLOS Water 2(11):e0000144. https://doi.org/10.1371/journal.pwat.0000144
O'Donnell E, Clark C, Killean R (2024) Rights and relationality: A review of the role of law in the human/water relationship. Water Alternatives 17(2):207–238
O'Donnell E, Kennedy M, Garrick D, Horne A, Woods R (2023) Cultural water and Indigenous water science. Science 381(6658):619–621. https://doi.org/10.1126/science.adi0658
O'Donnell E (2023a) Re-Setting Our Relationship with Rivers: The High Stakes of Personhood. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4395970
Peter Hugh McGregor Ellis v R [2022] NZSC 115 (Supreme Court)
Poelina A, Wooltorton S, Guimond L, Sioui Durand G, Unamen Shipu Romaine River, Martuwarra RiverOfLife. (2021) Hearing, voicing and healing: Rivers as culturally located and connected. *River Research and Applications*, *Journal Article*. https://doi.org/10.1002/rra.3843
Quentin Grafton R, Biswas AK, Bosch H, Fanaian S, Gupta J, Revi A, Sami N, Tortajada C (2023) Goals, progress and priorities from Mar del Plata in 1977 to New York in 2023. Nature Water 1(3):230–240. https://doi.org/10.1038/s44221-023-00041-4
Rāwiri H (2022) Te Awa Tupua, Indigenous law and decolonisation. Victoria University of Wellington Law Review 53(3):431–462. https://doi.org/10.26686/vuwlr.v53i3.7998. Academic Search Complete
Re Pokere (2022) 459 Aotea MB 210 BC202264221 (Māori Land Court)
Resource Management Act 1991 (NZ)
Rodgers C (2017) A New Approach to Protecting Ecosystems: The Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 [article]. Environmental Law Review 4:266
Ruru J (2013) Indigenous Restitution in Settling Water Claims: The Developing Cultural and Commercial Redress Opportunities in Aotearoa, New Zealand. Pacific Rim Law & Policy Journal 22(2):311. edsggo
Ruruku Whakatupua: Whanganui River Deed of Settlement between the Crown and Whanganui Iwi. (2014)
Salmond A (2017) *Tears of Rangi: Experiments Across Worlds*. Auckland University Press
Sanders K (2018) Beyond Human Ownership'? Property, Power and Legal Personality for Nature in Aotearoa New Zealand. Journal of Environmental Law 30(2):207–234. https://doi.org/10.1093/jel/eqx029
Stein S, Ahenakew C, Valley W, Sherpa PY, Crowson E, Robin T, Mendes W, Evans S (2024) Toward more ethical engagements between Western and Indigenous sciences. FACETS 9:1–14. https://doi.org/10.1139/facets-2023-0071
Smith LT (2021) *Decolonizing methodologies: Research and indigenous peoples* (Third). Zed Books

Stanly S, Rasana N, Rajendrakumar S, Nithya K (2024) Eco-Centric Approaches: Integrating Indigenous Agricultural Wisdom and Practices in Realizing the Sustainable Development Agendas. Water, Air & Soil Pollution 235(11):1–30. https://doi.org/10.1007/s11270-024-07525-3. GreenFILE

Strang V (2023) Making Waves: The Role of Indigenous Water Beings in Debates about Human and Non-Human Rights. Oceania 93(3):216–240. https://doi.org/10.1002/ocea.5375. Academic Search Complete

Tadaki M (2024) Limits to measurement: Rethinking the role of monitoring in environmental governance. Environment and Planning E: Nature and Space 7(4):1647–1671. https://doi.org/10.1177/25148486241248012

Takamore v Clarke [2012] NZSC 116; (2012) 2 NZLR 733 (Supreme Court)

Tamanaha BZ (2021) *Legal Pluralism Explained: History, Theory, Consequences*. Oxford University Press. https://doi.org/10.1093/oso/9780190861551.001.0001

Tanasescu M (2022) *Understanding the Rights of Nature: A Critical Introduction*. /z-wcorg/

Tau v Attorney-General [2021] NZHC 3108 (High Court)

Te Aho L (2019) Te Mana o te Wai: An indigenous perspective on rivers and river management. River Research and Applications 35(10):1615–1621. https://doi.org/10.1002/rra.3365

Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 (NZ)

Te Kōpuka (2023) *Te Heke Ngahuru ki Te Awa Tupua: Te Awa Tupua Strategy*. https://www.tekopuka.co.nz/_files/ugd/0523ac_ff32b5345af448cea2c27a5261164c40.pdf

The Independent Working Group on Constitutional Transformation. (2016). *He Whakaaro Here Whakaumu mō Aotearoa: The Report of Matike Mai Aotearoa*. https://nwo.org.nz/wp-content/uploads/2018/06/MatikeMaiAotearoa25Jan16.pdf

Trans-Tasman Resources Limited v The Taranaki-Whanganui Conservation Board [2021] NZSC 127 (Supreme Court)

UNESCO World Water Assessment Programme, Programme mondial de l'UNESCO pour l'évaluation des ressources en eau, Programa Mundial de la UNESCO de Evaluación de los Recursos Hídricos, Всемирная программа ЮНЕСКО по оценке водных ресурсов, برنامج اليونسكو العالمي لتقييم الموارد المائية, 联合国教科文组织世界水评估计划, WWAP, ВПОВР, World Water Assessment Programme, UNESCO WWAP, Programme mondial pour l'évaluation des ressources en eau, Programa Mundial de Evaluación de los Recursos Hídricos, Всемирная программа по оценке водных ресурсов, ВПОВР-ЮНЕСКО, 世界水评估计划, البرنامج العالمي لتقييم الموارد المائية, & WWAP: World Water Assessment Programme. (2024). *The United Nations World Water Development Report 2024: Water for prosperity and peace*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000388948

United Nations. (2007) *United Nations Declaration on the Rights of Indigenous Peoples, GA Res 61/295 UN Doc A/61/L.67 and Add.1 (13 September 2007)*. https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

Van Hoecke M (2011) *Methodologies of legal research: Which kind of method for what kind of discipline?* Hart

Viaene L (2021) Indigenous Water Ontologies, Hydro-Development and the Human/More-Than-Human Right to Water: A Call for Critical Engagement with Plurilegal Water Realities. Water 13(12):12. https://doi.org/10.3390/w13121660. (12)

Waitangi Tribunal. (1999) *The Whanganui River Report (WAI 167)*. GP Publications

Waitangi Tribunal. (2012) *The Stage 1 Report on the National Freshwater and Geothermal Resources Claim (WAI 2358)*. Legislation Direct

Walqwan Metallic NS (2023) Aboriginal Rights, Legislative Reconciliation, and Constitutionalism. Review of Constitutional Studies 27(2):1–39. Academic Search Complete

Webber J (2006) Legal Pluralism and Human Agency. Osgoode Hall Law Journal 44(1):167–198. HeinOnline

Webber J, Napoleon V, Fournier M, Borrows J (2020) Sally Engle Merry, Legal Pluralism, and the Radicalization of Comparative Law. Law & Society Review 54(4):846–857. https://doi.org/10.1111/lasr.12518. Cambridge Core

Zartner D (2021) Watching Whanganui & the Lessons of Lake Erie: Effective Realization of Rights of Nature Laws. Vermont Journal of Environmental Law 22(1):1–39

Acknowledgements

We acknowledge the support of the University of Canterbury for funding the *Aho Hinatore* Scholarship (2023), New Zealand Law Foundation funded project *Indigenous Water Rights in Comparative Law* (2018/45/2), Norwegian Research Council-funded project *Riverine Rights: Exploring the Currents and Consequences of Legal Innovations on the Rights of Rivers* (301916), and Jazmynn Hodder-Swain for her helpful research assistance.

Author contributions

These authors contributed equally to this work. Corresponding author Elizabeth Macpherson. Correspondence to elizabeth.macpherson@canterbury.ac.nz.

Competing interests

The authors have both undertaken a range of remunerated and unremunerated policy and consulting roles for Indigenous peoples and governments in Aotearoa New Zealand and abroad. They declare no conflict of interest.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Ethics approval granted by University of Canterbury (NZ): HEC 2017/31/LR-PS and HEC 2022/19.

Informed consent

All participants in the research provided informed consent in writing in accordance with the ethical standards of the institutional and/or national research committee.

Additional information

Correspondence and requests for materials should be addressed to Elizabeth Macpherson.