WATER LAW a new statute for a new standard of mauri for fresh water

Abstract

A new statute for fresh water has been proposed by the New Zealand Māori Council to give legal stature to water as elemental to life. This would remove fresh water from governance through the RMA, where it is managed as one among many resources. A new law would also remove water from neo-liberal settings and the wider context of commercial interests that have pervaded the interpretation of the RMA. An independent Freshwater Commission would be the centrepiece of the regime, with iwi/Māori representatives included as commissioners. Mauri is proposed as the standard for water quality, and allocation and commercial use to be accommodated within this standard of ecosystem health. New water councils at catchment and rohe levels would engage hapū interests and have implementation responsibilities. This is a vision with pathways for facing challenging issues that have escaped resolution: Māori rights and interests, equity of allocation and wider public good interests.

Keywords new statute, fresh water, freshwater commission, hapū, Māori, mauri, precautionary principle, internalise costs and impacts, shared authority, te Tiriti o Waitangi, legal plurality

he New Zealand Māori Council has presented a compelling case for a new law for water governance (New Zealand Māori Council, 2019). The proposed law strengthens Māori and public good interests in Aotearoa New Zealand's waterways, safeguarding the mauri (life force) and intrinsic values of fresh water, and provides for commercial use through shared authority for governance.

A separate freshwater law would recognise water as elemental to life, thus calling for a standard of mauri, to safeguard the health of people and nature. Rather than enhance, strengthen or reform the Resource Management Act 1991 (RMA), the intention is to escape from it.

The proposal introduces a national framework with regional implementation which incorporates Māori and hapū relationship with water and envisages an economy of water in which the environmental effects of commercial use and pollution are accounted for and internalised. A funding stream incentivises restoration and enables public education and capability for Māori to contribute to management.

The RMA has failed to safeguard water ecosystems, and their declining state is of wide public concern (Fish and Game New Zealand, 2019). The Essential Freshwater

Betsan Martin is the Director of Response Trust. Her research and publications are in te Tiriti o Waitangi frameworks for integrated governance, public good and education, and an ethics of responsibility. Particular interests are in fresh water and climate justice.

programme currently being undertaken by the Ministry for the Environment aims to reverse past damage and achieve fair allocation (Ministry for the Environment and Māori Crown Relations Unit, 2018; Ministry for the Environment and Ministry for Primary Industries, 2018). However, the incremental changes to the RMA will not substantially alter the philosophy and practice of the existing regime.

The proposed law is of another order from that of the RMA. The precautionary principle, which is at the heart of the new law, is designed to take the governance of fresh water in a new direction, with specific purposes of protection, provisions for into assessments and outcomes and that the interests of peoples and the waterways are held together.

This article considers how social, cultural and economic interests may be best served by a specific law for fresh water, and identifies areas of legal development needed to support such a law.

A new governance structure

This radical proposal for a new act of Parliament in regard to fresh water is designed to give overarching special status to water and replace the multiple and competing resource interests of the RMA. The water act would provide a distinctive

A separate freshwater law would recognise water as elemental to life, thus calling for a standard of mauri, to safeguard the health of people and nature.

equity of access and resource distribution to correct the overriding of Māori interests. This is an order in which the intrinsic values and economic resource benefits are held through concepts of mana and mauri.

Mana, usually interpreted as authority and status (Durie et al., 2017, paras 23, 28), is realised through governance that is charged with responsibility for ensuring sustainable standards for quality and use. The mana of water can be understood in terms of the vesting of the Whanganui River as a person, Te Awa Tupua. Mana is invested with an ethical quality associated with relational values of well-being for the common good (O'Connell et al., 2017, p.16). Mauri is a multidimensional life force incorporating spiritual and physical dimensions: it is inherent in all life forms and arises from the characteristics and qualities of an entity, as well as its interconnection with other life forms (Durie, 2014). By extension, governance that accords mana to fresh water through protecting mauri requires that an account of the full costs of water use are built into the system of use, storage and protection so that all dimensions are incorporated

orientation to governance, specifically to give effect to Māori interests, including with reference to Treaty settlements, to safeguard the mauri of water, and thus provide for future generations and strengthen the public good value of water.

A national waterways commission is the centrepiece of the water governance structure, with representation of iwi and the Crown providing shared authority through this body; it is suggested that representation should be 50% Maori and 50% Crown. The commission would provide national direction and grant allocations, with call-in powers for consent applications at catchment levels. It would administer funds for restoration and for Māori economic development to compensate hapū that are unable to access water resource allocations, and also have an education role (Land and Water Forum, 2018).

Regional and rohe catchment-based water councils¹ would implement national policy, with specialist guidance on local and contextual regulation on water, land use and protection. These councils would sit outside regional councils, which would

be required to consult with water councils. The water councils would enter into agreements with hapū that have interests in water bodies. Establishing rights and interests could be complex, and would require a mana whenua consensual process as far as possible. Contestation over hapū interests in rohe or across rohe would be referred to a dispute resolution procedure. and ultimately may have to be settled in the Māori Land Court. A registry of Māori rights and interests in catchments would be prepared to support resolution of Māori rights and interests. The councils would have a role of information gathering on water quality, allocation and data for public use. Furthermore, an education role would enable these councils to contribute to community interest and knowledge, and thus bring a further dimension to their responsibilities for ensuring the mauri of water

An overarching precautionary and guardianship approach is protective of the biophysical limits and regenerative capacity of the water ecosystem (New Zealand Māori Council, 2019). Principles guiding the legislation would include tikanga and mātauranga Māori (Māori knowledge/wisdom). A hierarchy of purposes gives priority to upholding the mauri of the waterways and, if that were adversely affected, the power to restrict use. The second priority would be to provide water for domestic and customary uses, including water for marae or papakāinga. Commercial use then follows on and is constrained by the priorities of mauri and human needs.

This hierarchical framework sets out the basis of a paradigm shift in water governance. The law is designed to express Crown governance and tino rangatiratanga (governing authority), as envisaged in te Tiriti o Waitangi. While Treaty settlements inspire unprecedented innovation in advancing Māori interests in water and resource management, these are specific to individual iwi and are derived from the need to redress grievances through restitution and compensation. Although they provide a new basis for iwi selfgovernance and enterprise, they only partially restore property and assets that originally spanned the land, waters and seas of Aotearoa.

The water law would be a bold first step in a shared governance framework in which two traditions of knowledge and law work side by side. Its mauri foundations would be a welcome advance and a radical shift from the pressures and compromises of commercial and agricultural priorities. In providing for customary rights, the law would move beyond the entitlement of rights to water towards guardianship of the resource, underlining decision-making responsibilities for the present and future well-being of waterways and their ecosystems.

Examples from elsewhere

Prioritising the mauri of water, or water quality, is not unprecedented. Such a hierarchy identified here has precedence in other jurisdictions. While the detail and the knowledge systems are specific to Aotearoa New Zealand, safeguards for water quality have precedents in Hawaii and South Africa.

In Hawaii water is governed through public trusteeship. The concept has been highlighted through the Waiahole case, brought by indigenous Hawaiians to return to waterways fresh water diverted for the sugar industry in order to restore, use and protect the water. In a landmark ruling in 2000, the Hawaii Supreme Court decided in their favour, citing the public trust doctrine contained in the state constitution and in Hawaiian traditions of spiritual association with water as a resource to be managed for future generations (Sproat, 2015; Sproat and Tuteur, 2019, p.196). The State Water Code reinforces the constitutional requirement that '[t]raditional and customary rights of ahupua a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778 shall not be abridged or denied by this chapter' (Hawaii Revised Statutes §174C–101(c)). It sets out a similar hierarchy of purposes to the one proposed for Aotearoa New Zealand, with water quality as the first purpose, then meeting the needs of indigenous Hawaiians, and domestic use, with commercial use and allocation subject to meeting water quality standards, indigenous interests and domestic use. The long fight to achieve the implementation of these public trusteeship principles continues in an environment

where interests in water are highly contested.

Water law in South Africa is of particular interest in its purposes. Although the post-apartheid context is specific to South Africa, the National Water Act 1998 states that its purpose is that the nation's water resources 'are protected, used, developed, conserved, managed and controlled' (s2). It reiterates that water is a national resource which has 'different forms' which are interdependent, and that water belongs to all people but has been subject to discriminatory laws or allocations. The act provides a framework of the centrality of the river to iwi living along the river's reaches. The river is the means of transport, livelihood, tradition and identity, and it defines systems of authority and access by Te Atihaunui a Paparangi and associated iwi. Most eloquently, the report elaborates the system of rangatiratanga as a highly integrated system for the use, protection, access and limits to use of land and rivers and their associated resources. This system has been undermined and broken through the regime of land alienations and Crown governance, which, most notably through legislation, has introduced a fragmented

The precautionary principle, which is at the heart of the new law, is designed to take the governance of fresh water in a new direction, with specific purposes of protection, provisions for equity of access and resource distribution to correct the overriding of Māori interests.

of integrated management. To quote the preamble, the 'aim of water resource management is to achieve the sustainable use of water for the benefit of all users', and the government has the 'overall responsibility and authority' for 'equitable allocation of water for beneficial use' and 'redistribution of water', while enabling local implementation and decision-making.

The priorities for the health of water in Hawaii and South Africa, and the achievements in water quality and indigenous interests through water-specific legislation, correspond with the aspirations of the proposed water law in Aotearoa New Zealand: they provide reference for further research into considering a framework to meet similar aspirations here.

The genealogy of a new law

The case for a new water law has a long whakapapa. It is sourced in the evidence of Waitangi Tribunal hearings in respect of rivers.² The Whanganui report (Waitangi Tribunal, 1999) gives vibrant accounts system to regulate different aspects of resource interests.

The Whanganui River Report documents a clear system of authority over the river; it also substantiates that authority as equivalent to ownership. The concept of Māori ownership of fresh water was introduced into the public arena during the first stage of the Waitangi Tribunal Fresh Water and Geothermal Resources Claim in 2012 (Waitangi Tribunal, 2012), yet the grounds for this view were laid over the series of river claims mentioned above. In its rebuttal of Māori interests, the Crown's position that 'no one owns water', the assumption of water as a commons, is based on a weakly founded precedent in English common law (Salmond, 2019, p.185 and note 15) which leaps over te Tiriti o Waitangi guarantees.

The mantra that 'no one owns water' disguises the property interests built into the system of consents and obscures the pressing issue of government protection of commercial access to freshwater resources. Section 122(1) of the RMA seems consistent with the view of non-ownership – '[a] resource consent is neither real nor personal property' – although the following subsections qualify this statement ('vests ... as if the consent were personal property', 'shall be treated as property'). It can be argued that property interests that arise from the benefit of the consent, whether for coastal space, irrigation or bottling, for example, lead to a logic of property and ownership (Barton, 2009). Richard Fowler QC argues that the RMA does create conditions for decision-making and safeguards with recognition of relationships with the waterway, guardianship responsibilities and resource interests of hapū.

Customary proprietary systems sit uneasily alongside liberal property rights and interests, which, in respect of water, are given effect through consents and through the pragmatics of access through land ownership, but don't have a pre-eminent sanction against harm. Legal academic Prue Taylor refers to the neo-liberal

This radical proposal for a new act of Parliament in regard to fresh water is designed to give overarching special status to water and replace the multiple and competing resource interests of the RMA.

property rights in water, although not for land (personal communication, 18 February 2019). The issue of ownership is not at the centre of this discussion, but it is a discourse that is important to the context of tension and debate about the governance of fresh water in Aotearoa.

Why a new law?

An issue that emerges from preliminary research and discussions with key stakeholders is that our environmental and conservation legislation has been developed in a neo-liberal economic setting in which economic advantage is weighted against environmental values. Neo-liberal economics are inadequate for guardianship and integrated governance, in particular because the externalising of environmental and social factors discounts the costs of damage, cumulative impacts of resource use and destruction, and social inequities (Raworth, 2017).

Although they are not a focus of this article, property rights are a matter of ongoing importance. In some respects, they could be surmounted by introducing a framework that gives effect to rangatiratanga with appropriate authority, economic context of 'law that continues to facilitate and incentivise forms of economic activity that cause widespread ecological harm' (Taylor, 2011; Grinlinton and Taylor, 2011). Taylor identifies the principle of wealth creation in the context of an economic model of growth that externalises and does not measure impacts on ecological systems. For example, the environmental standards in the RMA have been seen by those with aggressive investment interests as an impediment to property development, and they have succeeded with revisions to the legislation to free up the process of consents to further their own interests. (These are in the process of being revoked through the Ministry for the Environment's Essential Freshwater programme (Parker, 2018, 2019).)

In policy documents, Land and Water Forum reports, Waitangi Tribunal claims, Iwi Leaders Forum documents and other literature there is an underlying binary between economic development and environmental values. This is not the intent of the proposed water act. The purpose of the RMA, as stated in section 5, 'is to promote the sustainable management of natural and physical resources', 'sustainable management' being defined as providing 'for their social, economic, and cultural well-being'. However, the comment of the Board of Inquiry into the Proposed National Policy Statement for Freshwater Management that the RMA's purpose of 'sustainable management' implies use of resources for economic gain (Board of Inquiry into the Proposed National Policy Statement for Freshwater Management, 2010, p.11) is supported by the declining state of water despite the safeguarding provisions of section 5.

As early as 1981, before the RMA was passed, and as recently as 2017, the OECD environmental review identified New Zealand's lack of national-level strategic planning. The weighting of decisions about water resources in favour of the economy while ignoring the long-term implications has been documented in several studies, most recently by Catherine Knight and Forest & Bird (Knight, 2018; Forest & Bird New Zealand, 2018). Knight's important historical analysis of environmental legislation identifies many issues that undermine the effectiveness of what appears to be, to all intents and purposes, legislation intended for integrative policy and sustainable development (Te Aho, 2018; Joy, 2015; Knight, 2018). Marie Brown's research showed the failures in the implementation of the RMA at the regional council level (Brown, 2016).³ Linda Te Aho, Mike Joy and Catherine Knight have identified ways in which the RMA has been interpreted to enable economic development to proceed in the vacuum of clarity about environmental limits. There has been some attempt to rectify this with the National Policy Statement for Freshwater Management and provisions for the management of point source discharges (Te Aho, 2018), but in the wake of land use changes away from forestry towards intensified dairy, and the related investment in irrigation, added impacts of abstraction and diffuse discharges from run-off and leaching, and lags or delayed effects are evident with cumulative effects intensifying freshwater degradation (Knight, 2018, pp.123–4).

The RMA's direction to balance development with environmental protections offers equivocal and contestable guidance and has proved to be inadequate in enforcing a coherent national regime and stopping degradation. Provisions in the RMA for the Treaty of Waitangi and public access are further sources of conflict. Part 2, section 8 directs 'all persons' to take account of the principles of the Treaty in 'managing the use, development, and protection of natural and physical resources'. In section 6 Māori interests are provided for as: '(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga' and '(g) the protection of protected customary rights'.

At the same time, section 6(d) provides for 'the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers'. There is no clarity about different cultural values, nor a Treaty framework to address such differences.

Within the RMA regime there have been incremental changes further recognising Māori interests, specifically of kaitiakitanga, the relationship of Maori to their ancestral lands and protection of customary rights. The inclusion of Te Mana o te Wai in 2014 in the National Policy Statement for Freshwater Management was a response to tangata whenua urging improved recognition of the health and well-being of fresh water (Te Aho, 2018; Ministry for the Environment, 2017). The Mana Whakahono a Rohe provisions were added to the RMA in 2017 to provide a system for regional council and iwi authorities to work together under the act (ss58L-58U),4 including provisions for the involvement of tangata whenua in decision-making processes. This initiative came after a long history of Māori protesting against the decline of water quality and exclusion from regional council processes. This is clearly exposed in the evidence to hearings on the Wai 2358 Freshwater Claim, at which the Ministry for the Environment was questioned about increases in nitrates, decreases in invertebrates and the low engagement of Māori in various regions (De Malmanche, 2018).

Although these RMA measures show evolved engagement with Māori, they are add-ons to the mainstream Western model of resource management. None of them provides sufficiently for a system-wide structure for iwi authority and mātauranga. Safeguards and improved provisions for Māori/iwi engagement, including via water conservation orders, have been implemented in an ad hoc manner through amendments to the RMA in response to emerging crises.

Prioritising ecosystem health and value

The New Zealand Māori Council proposal sets out a design for internalising the costs of freshwater use through charges for commercial use and for pollution. It intertemporal fairness and incentivise a circular economy (Tax Working Group, 2019, pp.9, 35, 53).

Another approach is to attach ecosystem values to economic investment in fresh water (Emertin and Bos, 2004). Such an approach encompasses environmental, social, economic and spiritual values and could mean payment for non-exploitation. Those with permits to discharge or use water and with land use consents that impact negatively on waterways would be

The proposal is for a te Tiriti-informed law utilising Māori knowledge to develop integrative approaches to the governance of fresh water.

proposes calculating the charge based on a commercial resource holder's consent for an allocated volume of water. Outcomes from this policy include the likely surrender and relinquishment of unused allocation, with the provision of more room for Māori to be offered allocations. It would ensure the economically beneficial use of water (reducing water banking), provide for trading and remove uncertainty over commercial rights. A charge for the discharge of wastewater and pollutants is included in these proposals.⁵

Further bold and far-reaching approaches to economic value need to be reviewed for internalising environmental costs and impacts. Some possibilities are discussed in the 'Environmental and ecological outcomes' section of the Future of Tax report, which identifies negative externalities as a means to incorporate the value of ecosystem services into the costs of resource use: 'Environmental taxes can be a powerful tool for ensuring people and companies better understand and account for the impact of their actions on the ecosystems on which they depend.' The report notes that Aotearoa New Zealand is exceptional in not having such taxes. It recognises natural capital as a nonsubstitutable basis for the economy and identifies possible avenues for tax as methods to reduce pollution, achieve

paid for diminishing their use to offset loss of income. Equally, Māori interests in allocation could be via direct access to resources for sustainable exploitation (with access made available through surpluses of existing consents), as well as via the ecosystem benefit of 'under-development' with an associated payment.

The International Union for the Conservation of Nature (IUCN) has investigated valuing water ecosystems in governance and law (Grieber and Schiele, 2011), and through responsible investment preventing degradation. Valuing ecosystems with associated land management includes the intrinsic value of healthy waterways, flood and sediment control, development opportunities such as diversified agriculture and tourism, and spiritual values. Responsible investment may have wider benefits. For example, conserving or planting an upstream forest may cost less than investing in a new water treatment plant or managing the expense from silting; maintaining wetlands is usually less expensive than repairing roads, bridges and buildings that get damaged by floods (Emertin and Bos, 2004, p.23). Working with private sector investors can secure the ecosystem value: the IUCN gives the example of a mineral water bottling business at risk from contaminated aquifers caused by nutrient

and pesticide run-offs from surrounding farms, where an ecosystem valuation determined that reforesting sensitive zones and financing farmers to convert to organic farming was more cost-effective than building treatment plants, resulting in reduced chemical use and sustainable land use management and maintaining high water quality standards (Smith et al., 2006).

Further development of valuation methods needs to retain critique of the commodification aspect of ecosystem services. The proposed new water law includes the framework for internalising resource use and costs.

Fresh water and climate change

Climate change is a cross-cutting issue par excellence, and pre-eminently in relation to water. Changing patterns of rainfall will affect domestic supply and agriculture, and the drive to zero carbon emissions puts further pressure on water as our primary source of renewable energy (Long, 2017). The Climate Change Response (Zero Carbon) Amendment Bill 2019 introduced in May signals wholeof-system accountabilities which are to take shape in policy. The bill anticipates a climate change commission to take forward carbon budgets and whole-of-government planning and accountabilities for net zero carbon by 2050. A preliminary suggestion would be for this commission to be linked with the water commission with provision for sharing research and consulting on matters relevant to both and linked to responsive and adaptive management for water and climate (Godden, Ison and Wallis, 2011; Godden, 2005).

Conclusion

The proposal is for a te Tiriti-informed law utilising Māori knowledge to develop integrative approaches to the governance of fresh water. The proposed law offers a new trajectory for public policy and the multiple dimensions of freshwater governance. Remedies that focus on one component, such as quality or allocation, bring a risk of failure to an ecosystem. A whole-of-system approach counters 'stationarity', or more static legal and governance structures, and offers an enabling environment for the responsibilities of guardianship and for commercial interests and access.

Māori rights and interests have been upheld by courts in principle but are yet to be given substance and shape in practice. The NZMC, through the Waitangi Tribunal, offers an architecture for law specific to fresh water, at the same time bringing the wider lens of a mauri standard beneficial to water bodies and human health, along with a more integrative economy of fresh water. The role of a commission will need to encompass systems specific to water governance as well as to other policy areas which interact with water. Regional implementation through local boards or water councils is designed to be contextually responsive with provisions for expert advice, public engagement and procedures for recognising Māori relationship with water. Such a statute can be seen as enabling Māori rights and interests in fresh water to be given effect.

It is worth noting that beyond the Tribunal process, frameworks informed by tikanga, manākitanga, waiora and ōhanga are being proposed to inform governance for well-being. Outstanding contributions are already on the table for the Living Standards Framework with the report *He Ara Waiora* (O'Connell et al., 2018), and in *Whakamana Tāngata*, the report of the Welfare Expert Advisory Group, which uses the notion of kia piki ake te mana tangata, or raising the dignity or mana of people (Welfare Expert Advisory Group, 2019).

A standard of mauri for the health and well-being of freshwater bodies requires intersectoral policy design and dialogue, cultural respect and capacities to recognise and account for complex systems with much more open, dynamic, adaptive approaches to law and governance. Water flows into every dimension of life. At the most vital level, it is the source of human and environmental health and well-being. A new water law brings the prospect of lifting water from the reform agenda of the RMA and according it premiere status with its own statute.

- 2 Rangitikei ki Rangipo Inquiry (Wai 2180), Whanganui River Inquiry (Wai 167), the National Fresh Water and Geothermal Resources Claim (Wai 2358), Kaituna River (Wai 4), and Motonui–Waitara River Claim (Wai 6), Manukau Claim (Wai 8), Mohaka River (Wai 119), Rangitaiki and Wheao Rivers (Wai 212).
- 3 Throughout the life of the RMA, court cases taken by the Environmental Defence Society, Forest & Bird and Fish and Game have created pressure on regional councils to deliver on the RMA: Joy, 2018, p.8.
- 4 The provisions were inserted into the RMA by the Resource Legislation Amendment Act 2017.
- 5 New Zealand Māori Council (2019) 'Closing submissions in reply to Waitangi Tribunal National Freshwater and Geothermal Resources Inquiry Wai 2358, #3.3.52', 22 February.

References

- Barton, B. (2009) 'The nature of resource consents: statutory permits or property rights', University of Waikato
- Board of Inquiry into the Proposed National Policy Statement for Freshwater Management (2010) 'Report and recommendation of the Board of Inquiry into the Proposed National Policy Statement for Freshwater Management', Wellington: Ministry for the Environment, https://www.mfe.govt.nz/sites/default/files/boi-proposed-npsfreshwater-management.pdf
- Brown, M.A. (2016) Last Line of Defence: compliance, monitoring and enforcement of New Zealand's environmental law, Auckland: Environmental Defence Society

- De Malmanche, S. (2018) 'Brief of evidence Waitangi Tribunal Freshwater Claim, second hearing', Wai 2358, November
- Durie, E.T. (2014) 'Discussion paper on law and responsibility for water: towards reconciling Māori proprietary interests and public interests in water', unpublished paper
- Durie, E.T., J.R. Erueti, V. Toki, J. Ruru, C. Jones and G. Hook Raumati (2017) 'Ngā wai o te Māori, ngā tikanga me ngā ture roia. The waters of the Māori: Māori law and state law', paper for the New Zealand Māori Council, January
- Emertin, L. and E. Bos (2004) Value: counting ecosystems as an economic part of water infrastructure, Gland; Cambridge, UK: IUCN, https:// www.iucn.org/sites/dev/files/import/downloads/10_value.pdf

These are referred to as catchment boards in the original document, but should not be confused with the earlier system of catchment boards.

Fish and Game New Zealand (2019) 'Water pollution is now New Zealanders' number one concern', https://fishandgame.org.nz/news/ water-pollution-is-now-new-zealanders-number-one-concern/

Forest & Bird New Zealand (2018) *Cleaning Up: fixing compliance,* monitoring and enforcement in the dairy sector, Forest & Bird

Godden, L. (2005) 'Water law reform in Australia and South Africa: sustainability, efficiency and social justice', *Journal of Environmental Law*, 17 (2), pp.181–205

Godden, L., R.L. Ison and P.J. Wallis (2011) 'Water governance in a climate change world: appraising systemic and adaptive effectiveness', *Water Resources Management*, 25 (15), pp.3971–76

Grieber, T. and S. Schiele (eds) (2011) *Governance of Ecosystem Services,* IUCN environmental policy and law paper 79, Gland: IUCN

- Grinlinton, D. and P. Taylor (eds) (2011) *Property Rights and Sustainability,* Leiden: Brill
- Joy, M. (2015) Polluted Inheritance, Wellington: Bridget Williams Books

Joy, M. (ed.) (2018) Mountains to Sea, Wellington: Bridget Williams Books

Knight, C. (2018) *Beyond Manapouri: fifty years of environmental politics in New Zealand,* Christchurch: Canterbury University Press

Land and Water Forum (2018) 'Land and Water Forum advice on improving water quality: preventing degradation and addressing sediment and nitrogen', www.landandwater.org.nz/Site/Resources.aspx

Long, M. (2017) 'New Zealand's future in renewable energy', *Newsroom*, 16 November, https://www.newsroom.co.nz/2017/11/16/61282/ nzs-future-in-renewable-energy

Ministry for the Environment (2017) Next Steps for Fresh water, Wellington: Ministry for the Environment

Ministry for the Environment and Māori Crown Relations Unit (2018) Shared Interests in Freshwater: a new approach to the Crown/Māori relationship for freshwater, Wellington: New Zealand Government, https://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/ shared-interests.pdf

Ministry for the Environment and Ministry for Primary Industries (2018) Essential Freshwater: healthy water, fairly allocated, Wellington: New Zealand Government, https://www.mfe.govt.nz/sites/default/files/media/ Fresh%20water/essential-freshwater.pdf

New Zealand Māori Council (2019) 'Closing submissions in reply to Waitangi Tribunal National Freshwater and Geothermal Resources Inquiry, Wai 2358, #3.3.52', 22 February

O'Connell, E., T. Greenaway, T. Moeke and S.P. McMeeking (2018) *He Ara Waiora/A Pathway Towards Wellbeing*, discussion paper 18/11, Wellington: Treasury Parker, D. (2018) 'Two-step RMA reform to start by fixing the previous government's blunders', speech, 9 November, https://www.beehive. govt.nz/release/two-step-rma-reform-start-fixing-previous-government's-blunders

Parker, D. (2019) 'Speech at the launch of the Resource Management Reform Synthesis Report', 12 February, https://www.beehive.govt.nz/ speech/speech-launch-resource-management-reform-synthesis-report

Raworth, K. (2017) *Doughnut Economics: seven ways to think like a* 21st-century economist, London: Penguin Random House

Salmond, A. (2019) 'Rivers as ancestors and other realities', in B. Martin, L. Te Aho and M. Humphries-Kil (eds), *ResponsAbility: law and* governance for living well with the Earth, New York: Routledge Taylor and Francis Group

Smith, M., D. De Groot, D. Perrot-Maître and G. Bergkamp (eds) (2006) Pay: establishing payments for watershed services, Gland: IUCN, https://portals.iucn.org/library/sites/library/files/documents/2006-054. pdf

Sproat, D.K. (2015) 'From wai to kānāwai: water law in Hawai'i, in M.K. MacKenzie, S.K. Serrano and D.K. Sproat (eds), *Native Hawaiian Law: a treatise,* Honolulu: Kamehameha

Sproat, K. and M. Tuteur (2019) 'The power and potential of the public trust: insight from Hawai'i's water battles and triumphs', in B. Martin, L. Te Aho and M. Humphries-Kil (eds), *ResponsAbility: law and governance for living well with the Earth,* New York: Routledge Taylor and Francis Group

Tax Working Group (2019) *Future of Tax: final report,* volume 1, Wellington: New Zealand Government

Taylor, P. (2014) 'Notes on responsibility and law', personal communication, October

Te Aho, L. (2018) 'Te mana o te wai : an indigenous perspective on rivers and river management', *River Research and Applications*, October

Waitangi Tribunal (1999) *The Whanganui River Report,* Wai 167, Wellington: GP Publications

Waitangi Tribunal (2012) *The Stage 1 Report on the National Freshwater and Geothermal Resources Claim,* Wai 2358, Wellington: Waitangi Tribunal

Welfare Expert Advisory Group (2019) *Whakamana Tāngata: restoring dignity to social welfare in New Zealand,* Wellington: Welfare Expert Advisory Group, www.weag.govt.nz