

CHAPTER NINETEEN

INDIGENOUS ASPIRATIONS AND ECOLOGICAL INTEGRITY: RESTORING AND PROTECTING THE HEALTH AND WELLBEING OF AN ANCESTRAL RIVER FOR FUTURE GENERATIONS IN AOTEAROA NEW ZEALAND

LINDA TE AHO

Aotearoa New Zealand¹ is known throughout the world for its beautiful scenery, but behind those scenes there are many stories of how, over time, human activities have degraded the health and wellbeing of our lands and waterways. The Indigenous Māori have long fought to defend the integrity of natural resources who do not have a voice of their own in the processes of law and policy making. Ecological integrity is an ethical concept that values the state of nature being whole and unimpaired such as might be found in places of wild nature, untouched by human exploitation. This paper seeks to provide a domestic example of the application of the environmental ethic of the indigenous Māori which ensures that humans are kaitiaki (guardians) of their surrounding environment by virtue of shared genealogy, and how this ethic is being applied to restore and protect the health and wellbeing of the Waikato River, New Zealand's longest. This particular river restoration project reflects many of the important aspects of ecological integrity. It serves, too, as a domestic example of the most sophisticated attempt at powersharing to date between Māori and the Crown in relation to natural resources, which may be of interest to other jurisdictions.

Everything is One

As soon as I came across the notion of ecological integrity, it struck a chord with me. The similarities with my own indigenous ways of viewing and valuing the environment were striking. According to a leading proponent of the ecological integrity discourse, Laura Westra, one of the most important aspects of integrity is the self-creative capacity of life to organize, regenerate and evolve over time at a specific location. In relation to water, another leading proponent, James R. Karr, has studied the spatial requirements that are needed to maintain native ecosystems. Ecological integrity, it is said, bridges the concerns of science and public policy. It also acknowledges the global connection between human health and the integrity of nature, and the rights of both. It is argued for instance that human health and function are both directly and indirectly affected by disintegrity.²

The indigenous understanding that all things in the physical and spiritual worlds are connected is reflected in the saying from the Nuu Cha Nulth, a first nation people of Canada: *Hishuk is ts'awalk* - everything is one.³ It is an understanding shared by the Indigenous Māori of Aotearoa New Zealand. According to our creation stories which have been passed down via oral tradition, water originates from the pain of separation of our sky father and earth mother who had been bound together embracing their children in absolute darkness. After much debate and deliberation one of the children, Tāne Mahuta, forced his father skywards to separate his parents, and the siblings emerged into the world of light. They included the revered ancestor of the winds, who disagreed with the separation, and who exacts revenge from time to time via violent storms; the revered ancestor of the seas; and the revered ancestor of the forests and all life within. Māori see ourselves as direct descendants of all of these ancestors who operate in a balancing system, and who are personified and incorporated into everyday life in prayer, in song, and in oratory - reflecting a reverence for creation as a whole entity. While each tribal grouping in Māori society maintains its own particular traditions, we all see ourselves as inextricably bound to the environment, including in particular our waterways, by virtue of genealogy which derives from our creation stories. Consequently we see ourselves as not only 'of the land' but 'as the land'. An oft-quoted saying in relation to water, '*ko au te awa, ko te awa ko au*' 'I am the river and the river is me', articulates this interconnectedness that lies at the heart of the way we view the world and our waterways. It is this worldview that Māori have long fought to have

recognised and provided for in the many government policies and programmes that affect the natural world.

Waikato River - An Ancestor, and a Way of Life

The Waikato River is New Zealand's longest River. It winds its way northwards for approximately 425km from its volcanic mountain source in the centre of the North Island and out to the Pacific Ocean at Te Puuaha o Waikato, south-west of Auckland. In 1859 Austrian geologist, Dr Von Hochstetter, spent three months in New Zealand and recorded the following impression:

...[T]he sight of the majestic stream is truly grand. It is only with the Danube or the Rhine that I can compare the mighty river, which we had just entered...Its sources spring from the very core of the land; its waters roll through the most fertile and most beautiful fields, populated by numerous and most powerful tribes of the natives, who have taken their name from it...The Waikato is in truth the main artery of the North Island.⁴

At least since the early 1300s, the Waikato peoples have lived in settlements along the banks of our river. The river was everything. The personification of the natural world is a fundamental feature of Māori tradition and the river is conceptualised as a living ancestor by the Waikato-Tainui peoples,⁵ and is recognised as having its own life force and spiritual integrity. The river's healing powers are reflected in the words of my elder, Te Kaapo Clark:

Spiritually the Waikato River is constant, enduring and perpetual. It brings us peace in times of stress, relieves us from illness and pain, cleanses and purifies our bodies and souls from the many problems that surround us...⁶

The river's historical significance is captured in the words of Dr Michael King:⁷

More than any others in New Zealand, the tribes of the Waikato Valley are a river people. Five centuries of continuous occupation of its banks have embedded the river deep into the group and individual consciousness. The river's associations grew and ripened with the history of the inhabitants until memories of heroes and villains, of battles, significant journeys and natural disasters.

In addition to its spiritual and historical dimensions, the river was also central to our survival. Over generations the Waikato-Tainui people

developed tikanga (laws and practices) which reflect a profound respect for the Waikato River and the life within. The environmental ethic of the Māori which ensures that humans are kaitiaki (guardians) of their surrounding environment by virtue of our shared genealogical relationship is not restricted to preservation. It extends to sustainable use.⁸ While laws and practices relate to the blessing of children, of cleansing, and of healing, tikanga also recognises that if we care for the river, the river will continue to sustain us as people. Swampy lowlands and the river provided flax for weaving, and water fowl and eels for food.⁹ Elderly tribal members recall being taught not to be greedy, to take only enough food for a meal, and not to mistreat the river. Prohibitions on fishing or other activities were imposed in defined areas to prevent fishing for a time to allow for food species to rejuvenate.

Impacts on Integrity and Avenues for Reconciliation

It is our responsibility as tribal members to protect the integrity of the river as an ancestor and as a way of life. That integrity came to be seriously threatened as a result of the familiar patterns of colonisation experienced by indigenous peoples around the world.¹⁰ Exploratory expeditions by the British and French to this country from 1769 and the establishment of a British colony in nearby Australia, culminated in Te Tiriti o Waitangi (The Treaty of Waitangi), signed between many Māori tribal groups and the British Crown in 1840. By the Māori text of the Treaty, Māori gave up 'kawanatanga' - the right to govern - but retained 'tino rangatiratanga' - sovereignty or the right to self-determination in relation to things that Māori valued, such as lands and waterways. Despite these guarantees, the extant indigenous systems of law and government collapsed. Ways of life and landholdings were devastated. Over decades of rapid change, mining, farming, and hydro-electricity development took their toll on the health and wellbeing of the river. Today, as a result of commercial fishing; the introduction of predatory fish; hydro-electric dams disturbing migration; and the inability to survive industrial pollution, river peoples are simply unable to gather important food species from a river once teeming with life. Apart from the tangible loss of food sources, this also means that knowledge about species and fishing practices has not been passed down to the next generations which in turn results in a loss of connection between youth and the elders who possessed such knowledge, and a loss to our language as names of different species, and different stages of their life-cycles, are no longer spoken.

Generations of Māori have tried different avenues over a number of years to have such breaches of Treaty of Waitangi guarantees addressed by the Crown. Their efforts were rewarded in 1975 with the establishment of the Waitangi Tribunal - a forum that has the power to inquire into such claims then make recommendations to the Crown. Such recommendations, while not generally binding, often form the basis of negotiations between the Crown and Māori claimants to settle grievances.

The main source of grievance in relation to the Waikato River is known as *raupatu* (confiscation). In the Waikato region, the contest for land had become a crucial issue in the 1850s as the British settlers' demand for land grew. A pan-tribal movement known as the Kīngitanga (the King Movement) was established in the 1850s, largely as a unified response by a number of tribes to the upsurge of unauthorised land sales for the ever-growing number of settlers.¹¹ Warrior chief Pōtatau Te Wherowhero of Waikato was raised up as the first Māori King in 1858 and was soon succeeded by his son, Tāwhiao. It was during Tāwhiao's term as second Māori King that the settler Government, seeing the Kīngitanga as a threat to its stability, sent its forces into the Waikato region in July 1863, labelling the Waikato people as rebels and subsequently confiscating millions of acres of Waikato lands and driving people away from their villages alongside our ancestral river.¹²

In the wake of confiscation the Waikato River became subject to a raft of legislation passed by successive governments.¹³ A host of different authorities came to have jurisdiction over the river¹⁴ as the Crown assumed that the English tradition of law applied to rivers in Aotearoa. That law presumed that the Crown owned the beds of tidal rivers as arms of the sea, and that the owners of lands with river frontage owned the beds of non-tidal rivers to the rivers' centre lines.¹⁵ Such distinctions were completely foreign to Māori, who had our own conceptions of rivers, and were imposed without consultation or recognition of prior rights, interests and authority of the indigenous Māori.

In contrast to the way in which Māori tended to view rivers, the settlers seemed to view rivers as either obstacles to be overcome, evidenced by the draining of wetlands,¹⁶ or convenient avenues for waste-disposal.¹⁷ The mainstem waters and those of its streams and tributaries were polluted by sewage, farm run-off, extensive coal mining and other industrial discharges. Whereas, by tradition, Māori saw rivers as central to their survival and would adapt their needs to suit those of the river, the European settlers would adapt rivers to take advantage of opportunities for economic development. The upper reaches of the river were dammed in the 1900s to produce hydro-electric power inundating significant sites and

causing ongoing problems with unstable flow regimes. The exploitation of the river was to involve a chain of power stations, mostly in narrow gorges. By the mid 1960s the Waikato River produced nearly half of New Zealand's power. Stories about the land and practices of old may not hold true when the landscape has been altered in such ways. They do not make sense to the younger generations. The words of a Cree elder reflecting upon the impact of the James Bay Hydro-Electric Project could easily be attributed to one of my own elders:

A river once so strong and deep and that provided for a lot of families is now all dried up and sad to look at. It's so sad that we have lost all our native source of food and our way of life, and all because he wanted power...¹⁸

In the changing legal and political landscape of New Zealand, Waikato-Tainui has maintained the importance of their unique relationship with the river, and the need to respect the river's integrity and restore its wellbeing. From the 1880s Kingitanga leaders have fought in political spheres and in the courts to address the deeply held grievances of raupatu.¹⁹ Waikato-Tainui also lodged a claim with the Waitangi Tribunal in relation to the Waikato River. It is telling that claims concerning water resources were the first to be heard by the Tribunal, and although the Tribunal's early reports were important precursors to the Waikato River settlement,²⁰ Waikato-Tainui decided to settle their claims by negotiating directly with the Crown, rather than via a full inquiry in the Waitangi Tribunal. A settlement was reached in 1995 focusing upon the return of land.²¹ The claim in relation to the Waikato River was excluded for future consideration and the ensuing settlement is enshrined in the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act passed in 2010 (the Act).

The Waikato River Settlement – A Vision to Heal the River

The ecological integrity discourse recognises that, like people, ecosystems or landscapes can be more or less 'ill'. In the words of James R. Karr,²²

An ill person may be suffering from a cold or dying of cancer ...an ill river may have ...fish populations depleted by overfishing or no fish at all, or only a few of the river's most tolerant invertebrates may remain after severe chemical pollution.

The Waikato River settlement recognises that as a result of human activities the river is degraded. The river is ill. The preamble of the Waikato-Tainui Raupatu (Waikato River) Settlement Act 2010 records that the deterioration of the health of the Waikato River, while under the authority of the Crown, has been a source of distress for the people of Waikato-Tainui and that the pollution, degradation and development of the river, its lakes, streams and wetlands have caused the decline of once rich fisheries that, for generations, had sustained the people's way of life and their ability to meet cultural obligations.²³

The settlement's overarching purpose is to restore and protect the health and wellbeing of the Waikato River for future generations.²⁴ In order to achieve that purpose, the settlement puts forward a vision and a strategy which encompasses an excerpt from a famous lament of the second Māori King, King Tāwhiao in the 1860s. The lament records the significance of the Waikato River as a treasure for all generations and provides a clear vision of what the river once was, and what it could be again:

Tōku awa koiora me ōna pikonga he kura tangihia o te mātāmuri.
The river of life, each curve more beautiful than the last.

Resource Management Act 1991

The Waikato River settlement also serves as an example of how Māori have turned to the Treaty of Waitangi settlement processes to defend the integrity of natural resources since reliance upon New Zealand's principal natural resources statute, the Resource Management Act 1991, has not produced favourable results.²⁵ The Resource Management Act sets out a comprehensive regime for the sustainable management of land, air and water. Section 5 defines sustainable management of natural and physical resources to mean their use, development, and protection in a way, or at a rate, that enables people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety while:

- (a) sustaining the potential of physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations;
- (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
- (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

Central government retains the power to set national environmental standards and issue national policy statements, but it delegates most of its responsibility for day-to-day management to regional councils and territorial authorities who regulate the use of land, air and water.²⁶ In making decisions under the Resource Management Act, section 6 requires decision makers to recognise five matters of 'national importance'. The first four refer to the protection of coastal marine areas, wetlands, lakes and rivers, outstanding natural features, and indigenous traditions with their ancestral lands, water, sites, significant and sacred sites, and other things treasured by Māori. Those decision makers shall also have regard to eight matters under section 7, the first being 'kaitiakitanga' – the 'exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship'.²⁷ Tangata whenua literally translated means people of the land and refers to the relevant indigenous group(s) of certain locations. The seven other matters include the efficient use and development of resources, protecting the heritage value of sites and buildings, and enhancing amenity values and the environment. There is specific provision for protecting the habitat of introduced species, trout and salmon, but no specific reference is made to indigenous fish. In achieving the purpose of the Resource Management Act with regard to the above principles, section 8 requires that those with decision making responsibilities shall 'take into account' the principles of the Treaty of Waitangi.

Though the Resource Management Act 1991 formalised a range of legal rights that were intended have Māori interests in the environment and the different way in which we view the world recognized and provided for, those rights are particularly vulnerable when presented as just one of many other considerations that decision-makers must take into account. In terms of cases brought under the legislation, the results have not been positive for Māori who have lacked political weight.²⁸

Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010

The preamble of the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, (the Act) records that the Resource Management failed to protect the integrity of the river and the authority of the Waikato Tainui people, and that the Waikato Tainui people have been involved as respondents in many consent hearings, seeking conditions to protect the river.²⁹ For these reasons, much stronger legislative protection for the

Waikato River was sought via the Waikato River settlement. As a result, section 5 of the Act proclaims the vision and strategy to be the primary direction-setting document for the Waikato River and activities within its catchment affecting the Waikato River, and that it prevails over certain sections of the Resource Management Act, and over national policy statements. There is a list of objectives that will help achieve the vision and that list includes the integrated, holistic, and co-ordinated approach to management of the natural, physical, cultural, and historic resources of the Waikato River; and the adoption of a precautionary approach towards decisions that may result in significant adverse effects on the Waikato River.³⁰ In addition twelve strategies are to be followed. The first two strategies are to ensure that the highest level of recognition is given to the restoration and protection of the Waikato River; and to establish what the current health status of the Waikato River is by utilising traditional Māori knowledge and knowledge systems together with the latest available scientific methods. This second strategy is has been undertaken in the form of the Waikato River Independent Scoping Study (WRISS) which reports on the current condition of the river; and identifies restoration scenarios, costs and benefits of the restoration scenarios, and priority actions.³¹

There are a host of provisions in the Act which stipulate that decision-makers under statutes such as the Conservation Act 1987 and the National Parks Act 1980 will be required to give effect to the vision and strategy. Decision-makers under other statutes including the Fisheries Act 1996 and the Local Government Act 2002 will be required to have particular regard to the vision and strategy.

Agreeing to Share Power

The Waikato River settlement is a local example of Klaus Bosselmann's global theory that the central problem facing those who aspire to ecological integrity is not that we don't have solutions to the problems of resource depletion, carbon emissions and so on, but that we are failing to agree to implement those solutions.³² So the problem is not *how* to live in accord with nature, but how to get humans to *agree* on how to live in accord with nature.

While there is a growing number of these sorts of agreements at a domestic level the Waikato River settlement is the most sophisticated example of powersharing in Aotearoa New Zealand.³³ Powersharing enables indigenous peoples and local communities to have greater rights and responsibilities in the governance and management of the landscapes and ecosystems they live in and near on the basis that enhancing peoples'

rights will lead to more effective governance and management of resources. The Act provides for co-governance and co-management in relation to the Waikato River. Governance functions are to be carried out by a new entity, the Waikato River Authority, which will be made up of equal numbers of members appointed by the Crown (including regional and local councils) and members appointed by those tribal groups currently recognized by the Crown. The Waikato River Authority is responsible for monitoring and implementing the vision and strategy and will also administer a contestable clean-up fund for restoring and protecting the health and wellbeing of the Waikato River.³⁴ The authority is to make decisions by consensus. Māori appointed commissioners are to participate in hearing committees and boards of inquiry in respect of applications for resource consents for activities which include taking, using, damming, or diverting water in the Waikato River, and certain discharges to the river.³⁵

At a co-management level, joint management agreements are required between Waikato-Tainui and the relevant regional council and between Waikato-Tainui and relevant territorial authorities for specified functions under the Resource Management Act insofar as those functions relate to the Waikato River and activities within its catchment.³⁶ As well, certain customary activities such as the use of traditional whitebait stands and eel weirs, and the right to continue traditional ceremonies are explicitly recognised.³⁷

Positive Practical Effects

How might the new administrative arrangements and policy objectives operate in a practical context? Over time, changes to more intensive land uses have increased the amount of nutrients entering the river from the vast tracts of agricultural land, the municipalities, and the industries within the catchment of the Waikato River. High nutrient concentrations contribute to problems with excessive growth of algae which can be unsightly and damage the ecosystems of streams and shallow lakes. The direct discharge of human waste to water is culturally offensive to Māori. Without wanting to pre-empt the findings of the Waikato River Independent Scoping Study and the review of the vision and strategy that will follow, the management and reduction of nutrient sources from human activities is likely to feature strongly in both documents. There have been significant improvements to the waste treatment systems of municipalities and industries. And, to be fair, much is already being done by landowners to protect the river by fencing streams and removing stock from wetlands and lake margins, and by riparian planting. Unfortunately,

these efforts have not been enough to counter increases in nutrient leaching from farmland, so the obvious restoration actions of riparian planting and fencing streams are likely to be highly prioritised by the new Waikato River Authority when making decisions on allocating the publicly contestable clean-up fund. The Authority may also explore ways of assisting research and development of low nitrogen leaching land uses, ways to permanently reduce nitrogen outputs from farming, and more modern treatment systems for nutrient removal. Given the significant contribution that dairy farming makes to the economic wealth of both the country and the region, for short term political reasons, regional councils have refrained from compelling changes to farming practices. However, assuming stronger provisions in the vision and strategy, the regional council will be legally required to give effect to those provisions in their policies and plans which could, in turn, lead to caps on nitrogen outputs from land in the catchment forcing reductions in stock or changes to land use (e.g from pasture to trees). Policies and plan provisions that require land based disposal of sewage would help to meet Māori aspirations.

Enhancing our Future Existence

As well as these anticipated positive effects at a practical level, the Waikato River Settlement also serves to illustrate at a higher level, how we can live wisely on the earth together. Around the world there are many studies relating to river restoration. Some study methods are at a catchment wide scale, some use social science, and some incorporate indigenous environmental knowledge. The Waikato River Independent Scoping Study that identifies restoration scenarios and priority actions has all those features. Its findings will be used by a decision-making body on which indigenous and non-indigenous people have an equal say. I have argued elsewhere that the Waikato River Settlement is far from perfect.³⁸ It is nonetheless bold and innovative. The settlement aims to restore the health and wellbeing of the Waikato River for future generations. Health and wellbeing is broad enough to include peoples' economic, social, cultural, and spiritual relationships with the river. The settlement provides for the ability to exercise rights and responsibilities of guardianship according to indigenous custom. It weaves together traditional environmental knowledge with western science and heralds a new era of participation for Māori in relation to the catchment. The settlement promotes inclusion rather than exclusion. It promotes mutual respect for Māori and non-Māori values, perceptions and aspirations.

The settlement provides a model for combining the contributions of different knowledge systems which in turn provides hope for the enhanced management of our future existence in Aotearoa New Zealand, hopefully bringing to an end a paradigm of excluding³⁹ Māori from engaging in decision-making processes that affects the environment of which we form an integral part.

Health and Wellbeing

What is more, in setting out to improve the health and wellbeing of our ancestral river, the settlement enhances human health and wellbeing. As recognised in the discourse of ecological integrity, there is a global connection between human health and the integrity of nature. Human health and function are both directly and indirectly affected by disintegrity.⁴⁰ From a broader indigenous perspective, our health and that of our communities is linked to the health of our land and our waters. Land and water must be healthy so that we can be healthy too. A convenient example comes from the western United States where Native American Tribes rely heavily upon salmon. Rachael Paschal Osborn explains that clean, cool, flowing waters are essential to virtually every aspect of the salmon life history. Conversely, the degradation of rivers brought about through post-contact human activities has caused major adverse impacts on salmon abundance and, consequently, on the health and well-being of salmon-dependent tribes.⁴¹

In the case of the Waikato River, the affirmation and validation of our cultural and traditional knowledge, of our values and ways of viewing the world, and in particular our ancestral river, has had a positive impact on our self-esteem and confidence. We walk a bit taller, we feel a bit stronger. This must have a positive impact on our own health and wellbeing - illustrating that nature is a world wide web of relationships between humans, spirits, and species. Everything is one.

Closing comments

The Waikato River is an ancestor. It is the source of my people's cultural identity and our spiritual and physical wellbeing. It is our duty to guard and protect this gift left to us by our ancestors, and to use its resources wisely and sustainably. Our own health and wellbeing is directly and indirectly linked to the health and wellbeing of the river. For the most part the Waikato River settlement provides a sense of optimism with its overarching purpose of restoring and protecting the health and wellbeing

of the river for future generations. The language and purpose of the settlement clearly resonate with the notion of ecological integrity. The Māori ethic of kaitiakitanga will be resoundingly familiar to other indigenous peoples around the world. The resemblance between kaitiakitanga and the notion of ecological integrity leads me to believe that those who aspire to ecological integrity have strong allies in indigenous peoples. There are many lessons to be drawn from traditional knowledge systems built up over generations, which, when combined with contributions from other knowledge systems, provides hope for a shared existence on this earth.

Notes

¹ Aotearoa is a Māori name for New Zealand.

² Laura Westra, *Ecological Integrity Encyclopedia of Science, Technology, and Ethics*. Ed. Carl Mitcham. Vol. 2: D-K. Detroit: Macmillan Reference USA, 2005. p574-578 and the references cited therein, as viewed at www.globalecointegrity.net [date accessed: 7 December 2010].

³ As recorded in the Museum of Anthropology, Vancouver, Canada.

⁴ Ferdinand Von Hochstetter, *New Zealand: its Physical Geography, Geology and Natural History* (JG Cotta, Stuttgart, 1867) pp 294-5; cited in Ann Parsonson, *Waikato River Claim Report* (A confidential working document to assist the negotiating team following the 1995 Settlement).

⁵ I descend from the peoples of Waikato-Tainui and Ngāti Korokī Kahukura.

⁶ Statement of Evidence of Te Kaapo Clark of Ngāti Korokī Kahukura, prepared on behalf of Waikato-Tainui for the Watercare Hearing before the Franklin District Council, Tuakau, December 1996.

⁷ Michael King *Te Pūea: A biography* (Hodder and Stoughton, Auckland 1977) 50.

⁸ Mere Roberts, et al. "Kaitiakitanga: Māori Perspectives on Conservation" (1995)

² *Pacific Conservation Biology* 7 at 7, as cited in Jacinta Ruru, 'Indigenous Peoples' Ownership of Mountains' (2004) 3 *Indigenous L.J.* 115.

⁹ Te Kaapo Clark and Lyn Tairi *Te Ihingarangi A History of the Karapiro-Maungatautari Area* (1992, Electricity Corporation of New Zealand).

¹⁰ Patricia Monture-Angus 'At the Boundary: Indigenous Lawyers in the 90s' in Mikaere and Milroy (eds) *Ki te Ao Marama 10th Anniversary Hui a Tau Conference Proceedings*, p5. I make the point here that indigenous peoples must take responsibility for hunting certain species to extinction, such as the moa - a giant flightless bird; and for using fire to clear forests. On this point Jacinta Ruru argues that this does not disqualify the ethic, just as non-indigenous peoples are not disqualified from seeking to improve environmental conditions today. See Ruru, above note 8 at 130 and the references cited therein.

¹¹ See Michael King, *The Penguin History of New Zealand* (2003) chapter 15, and see www.teara.govt.nz for historical accounts of the King Movement; David McCan, *Whatiwhatihoe The Waikato Raupatu Claim* (2000).

¹² By Orders in council under the New Zealand Settlements Act 1893, the Crown unjustly confiscated approximately 1.2 million acres of land in the Waikato area.

¹³ Alan Ward, *National Overview*, Vol 2 Waitangi Tribunal, Rangahaua Whaanui Series (1997), pp 348-353.

¹⁴ Early examples include river boards with powers to control rivers under the River Boards Act 1884 and catchment boards established under the Soil Conservation and Rivers Control Act 1941.

¹⁵ See in particular the Whanganui River Report (Wai 167) 1999; and *Muellar v Taupiri Coalmines Ltd* (1900) 20 NZLR 89 (CA) in respect of the Waikato River.

¹⁶ The Land Drainage Act 1893 enabled wetlands to be drained for agricultural and pastoral production.

¹⁷ The Public Works Amendment Act 1889 vested powers in river boards to declare rivers and streams public drains.

¹⁸ Kreg Ettenger "A River That Was Once So Strong So Deep" Local Reflections on the Eastmain Diversion, James Bay Hydroelectric Project" in John Donahue and Barbara Rose Johnston (eds) *Water, Culture, & Power Local Struggles in a Global Context* (1998) 47.

¹⁹ *Te Kīngitanga The People of the Māori King Movement* from *The Dictionary of New Zealand Biography* (Auckland University Press, 1996) Te Rata, 103. See also *Tainui Māori Trust Board v AG* [1989] 2 NZLR 513 (CA).

²⁰ Waitangi Tribunal, Manukau Harbour Report (Wai 8) 1985; Kaituna River Report (Wai 4) 1984; Motunui-Waitara Report; (Wai 6), 1983.

²¹ The Waikato Raupatu Claims Settlement Act 1995.

²² James R. Karr Vignette 11.2 Biological Integrity and ecological health, in M.C. Neuman *Fundamentals of Ecotoxicology* (3rd ed) 2010 324-329.

²³ Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, Preamble, Paragraphs (k) and (l).

²⁴ Above, s3.

²⁵ Jacinta Ruru "Undefined and Unresolved: Exploring Indigenous Rights in Aotearoa New Zealand's Freshwater Legal Regime" (2009) 20 JWL 236, 238-241.

²⁶ Resource Management Act 1991, s2.

²⁷ Ruru, above note 25 at 237-238.

²⁸ Prue Kapua "Review of the Role of Māori under the Resource Management Act 1991" [2007] *Resource Management Theory and Practice* 92, 106-108.

²⁹ Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, paragraph 14.

³⁰ Above, Schedule 2 (1) (3)(e) and (f).

³¹ See www.river.org.nz for reports relating to the Waikato River Independent Scoping Study. The first major report, *The Waikato River – Current Condition and a Framework for Restoration*, January 2010 records that over time, human activities have degraded the health and wellbeing of the Waikato River, iv. The WRISS has been completed and is due to be publicly released in 2010.

³² Klaus Bosselman 'Earth Democracy: Institutionalizing Sustainability and Ecological Integrity, in Engel, J.R et al *Democracy, Ecological Integrity and International Law*, Ch6,1.

³³For more information about other examples of co-management and co-governance regimes in relation to natural resources, see Linda Te Aho 'Indigenous Challenges to Enhance Freshwater Governance and Management in Aotearoa New Zealand – The Waikato River Settlement' (2009) 20 *JWL* 285, 288-290.

³⁴Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, ss22-24.

³⁵Above, sections 25-31.

³⁶Above, sections 35-55.

³⁷Above, sections 56-63.

³⁸Linda Te Aho "Contemporary Issues in Māori Law and Society The Tangled Web of Treaty Settlements Emissions Trading, Central North Island Forests, and the Waikato River" (2008) 16 *Waikato Law Review* 229, 242-246.

³⁹I have borrowed the expression 'paradigm of exclusion' from the work of Dr Kepa Morgan. See for example "Exploring Knowledge System Synergies for Integrated Decision Making" (2009) 12 *Journal of Australian Indigenous Issues* 299.

⁴⁰Laura Westra, above, note 2.

⁴¹Rachael Paschal Osborn, 'Native American *Winters* Doctrine and Sevens Treaty Water Rights: Recognition, Quantification, Management' (2009) 20 *JWL* 224.