

**Decolonising settler hazardscapes of the Waipa:****Māori and Pākehā remembering of flooding in the Waikato 1900-1950**

This chapter examines how different social groups within settler colonial societies understood and responded to the perceived environmental risks within particular landscapes and waterscapes. We explore the divergent viewpoints held by Māori and Pākehā (European/white) in the Waipā River catchment of Aotearoa New Zealand's North Island about what constituted safe, productive, and moral landscapes and waterscapes. Such differences were underpinned by important ontological and epistemological differences, which influenced how both groups imagined and engaged with physical, moral, and metaphysical risks. Accordingly, we situate our discussion of flooding within the Waipā catchment not as series of individual disasters but, rather, as events within the wider and ongoing disaster of colonisation for local Māori whanau (families), hapū (sub-tribes) and iwi (tribes). Pākehā settler-led actions to radically remake Māori landscapes and waterscapes also transformed the hazardscapes of the region and resulted in increased vulnerability to flood and decreased capacities to respond to extremes amongst Māori due to increased poverty and socio-political marginalisation.

We adopt an historical geographical approach, drawing on archival sources, diaries, and oral histories, to explore how different groups perceived hazards within different landscapes and waterscapes comprising the Waipā River catchment from the 1860s until the 1940s. We focus particular attention on the period from 1900 until 1930 when widespread drainage and water engineering works took place as a way to erase the existing Māori landscapes and waterscapes of the Waipā and replace them with those of Pākehā. Our study provides an in-depth account of the diverse ways in which Pākehā settlers and Māori individuals, whanau, hapū and iwi imagined, interacted with and responded to environmental changes (both human-induced and natural variability) and how hazards and disasters are socially and culturally situated. More significantly, we seek to de-naturalise accounts of so-called ecological disasters by highlighting the links between colonialism, race and power in historic and contemporary environmental crises (be it flooding, pollution, drought, soil degradation, biodiversity loss) in Aotearoa New Zealand (hereafter Aotearoa).

Environmental risks are not simply biophysical or geological phenomena but also social and cultural and are, therefore, interwoven with different social imaginaries of landscapes and waterscapes. This chapter explores the Waikato region's history and the contrasting Māori and Pākehā viewpoints held about Waipā landscapes and waterscapes. Pākehā efforts to remake the existing indigenous landscapes and waterscapes of the Waipā increased vulnerability to flooding and diminished Māori capacities to maintain their economic, socio-cultural and spiritual connections with their rohe (traditional lands and waters).

### Situating environmental crises within historical landscapes and waterscapes

Both a landscape and a waterscape represent the power relations within a society as well as being an “instrument of cultural power”.<sup>1</sup> Landscapes and waterscapes were and are ideological concepts through which people position themselves and their relationships with the land, water, biota, and nature. Over time, meanings are assigned to and inscribed onto particular landscapes and waterscapes, which come to define how people perceive, relate to, and interact with particular places, and how they expect other people to behave. However, some meanings are privileged over others, with meanings shaped by dominant ideologies (political, social, cultural, economic). This includes how Māori and Pākehā cultures in the nineteenth and twentieth centuries interacted with nature, and made assessments about what constituted a good or bad landscape or waterscape, and how they perceived (and experienced) environmental risks. Flooding within culturally-situated landscapes and waterscapes of the Wāipā, was (and still is) co-constituted by human activities and reflective of struggles between different social groups (in our case study Māori and Pākehā), with inequitable power relations evident in people's differential capacities to access and use environmental resources, to manage hazards, as well as the quality and flow of water supplies.<sup>2</sup> These features shaped, rearticulated and reproduced power inequities.

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<sup>1</sup> Lise Saugeres, “The Cultural Representation of the Farming Landscape: Masculinity, Power and Nature,” *Journal of Rural Studies* 18, no. 4 (2002): 375.

<sup>2</sup> Sue Jackson and Marcus Barber, “Historical and Contemporary Waterscapes of North Australia: Indigenous Attitudes to Dams and Water Diversions,” *Water History* 8, no. 4 (2016): 386.

## Background: Te Tiriti o Waitangi and the Invasion of the Waikato

While Te Tiriti o Waitangi (Treaty of Waitangi), signed by representatives of various Māori iwi and the British government in 1840, was supposed to guarantee Māori rights over (and possession of) their lands, waters, and other natural resource rights, colonial officials did not honour the terms of the Treaty.<sup>3</sup> The settler-led government actively sought to appropriate Māori land and limit the abilities of Māori to exercise rangatiratanga (chiefly authority) over natural resources using military, financial, and legal mechanisms. In the Waikato district, the centre of the Kīngitanga (King Movement) that opposed selling land to Pākehā, the appropriation of Māori land and waterways came first through military actions, with the British military invasion of the Waikato district between July 1863 and April 1864. The result of the Waikato War was the death of approximately 1700 people, as well as the destruction of the Waikato and Waipā Māori economies, and the raupatu (confiscation) of Māori lands (including those within the lower reaches of the Waipā and Waikato River catchments).<sup>4</sup> Iwi aligned with the Kīngitanga movement sought refuge with their kin Ngāti Maniapoto in the area south of the Pūniu River (a major tributary to the Waipā River), which became known as Te Rohe Pōtae by Māori (translated to English as the King Country, the name used by Pākehā).<sup>5</sup>

From 1864 until 1885, Te Rohe Pōtae was effectively off limits to Pākehā due to the aukati (boundary line) imposed by Ngāti Maniapoto in mid-1866.<sup>6</sup> In this way, Ngāti Maniapoto were able to exercise their mana (authority) over Te Rohe Pōtae land, waterways, and resources between 1864 and 1885. By the 1880s, the central government desperately wanted access to construct the central part of the North Island's Main Trunk Railway. Ngāti Maniapoto (and their Kīngitanga guests from other iwi) rejected initial government

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<sup>3</sup> James Belich, *Making Peoples: A History of the New Zealanders, from Polynesian Settlement to the End of the Nineteenth Century* (Auckland: Penguin Press, 1996).

<sup>4</sup> Vincent O'Malley, *The Great War for New Zealand: Waikato 1800-2000* (Wellington: Bridget Williams Books, 2016).

<sup>5</sup> Waikato-Tainui, Ngāti Apakura, and Ngāti Maniapoto all whakapapa (genealogy) trace their ancestry back to the Tainui waka (canoe), which brought their ancestors from Hawaiki. See Moepātu Borell and Robert Joseph, *Ngāti Apakura Te Iwi Ngāti Apakura Mana Motuake, Report for Ngāti Apakura Claimants and the Waitangi Tribunal* (Wellington: Crown Forestry Rental Trust, 2012).

<sup>6</sup> Hirini Moko Mead, *Tikanga Maori (Revised Edition): Living by Maori Values* (Wellington: Huia Publishers, 2016).

proposals for surveys and the railway.<sup>7</sup> After sustained negotiations between government officials, Kīngitanga leaders, and Ngāti Maniapoto chiefs between 1882 and 1885, survey of Te Rohe Pōtae and the construction of the railway line was allowed subject to the government agreeing to certain conditions including the protection of Ngāti Maniapoto's culturally important waterscapes.<sup>8</sup> However, railway construction facilitated the extension of instruments of settler colonial governance into Rohe Pōtae instigating Māori land alienation and loss of decision-making authority over resources. Settler initiatives could remake Māori landscapes and waterscapes.<sup>9</sup> Government policies and actions were directly and indirectly designed to prevent Māori accessing terrestrial and freshwater resources, and control the flow of water.

### Māori waterscapes of the Waipā

Prior to the 1863-1864 war, the Waipā River and its tributaries were highly dynamic and resource rich areas occupied by multiple iwi and hapū. The whakapapa (genealogies) and oral histories of different hapū (affiliated with the iwi of Ngāti Maniapoto, Waikato-Tainui, Ngāti Apakura, and Ngāti Hikairoa) recount that their rohe encompassed landscapes and waterscapes of the Waipā catchment, then and now.<sup>10</sup> These oral traditions and historical and archaeological studies demonstrate how waterscapes were significant places for Māori. Kainga (villages) and pā (fortified settlements) were situated adjacent to rivers, lakes and wetlands. On higher ground, extensive kumara (sweet potato) and taro cultivations were created. Wetlands were places of mahinga kai (food gathering) providing a diversity of flora and fauna including tuna (*Anguilla spp.* – short and long-tailed freshwater eels), fish and shellfish, berries, and bracken root, as well as vital sources of fibre used for clothing, rope and construction of structures. Wetlands were also a place of refuge in times of conflict.

<sup>7</sup> Telegram from Lewis to Bryce, 10 January, 1884, Folio 249, MA 13/93, Archives New Zealand, Wellington; "The Natives and Mr. Bryce's Promises," *Waikato Times*, 10 June, 1884.

<sup>8</sup> Other promises included an amnesty on Māori 'rebels', the right of iwi self-governance, and the prohibition of liquor. The government only honoured its promise to grant the amnesty, all the other promises were not implemented. W. B Otorohonga to Editor, *New Zealand Herald*, 30 June, 1927.

<sup>9</sup> Cathy Marr, *The Alienation of Māori Land in the Rohe Pōtae (Aotea Block) 1840-1920 Waitangi Tribunal, Rangahaua Whānui Series 8* (Wellington: Legislation Direct, 1996).

<sup>10</sup> Miria Tauriki et al., *Ngāti Maniapoto Mana Motuhake, Report for Ngāti Maniapoto Claimants and the Waitangi Tribunal* (Hamilton: Crown Forestry Rental Trust, 2012); Sean Ellison et al., *Wai 898 A99 Tainui Oral and Traditional Historical Report* (Wellington: Crown Forestry Rental Trust, 2012).

Oral traditions illustrate how the region's watercourses and wetlands were not static spaces, but changed with the consequence of variable water flow (drought and flood) as well as hapū-led management and modification. For example, Ngāti Apakura elders recount how their ancestors created Lake Ngāroto in the mid-eighteenth century through damming streams. Their ancestors built an island in the middle of the lake using large logs as the foundations (secured to the lake bed), over which they laid bundles of tree (*mānuka*, *Leptospermum scoparium*) branches and reeds (*raupō*), and soil. A large mound was formed by the deposition of soil over generations of occupancy (home to roughly 200 people).<sup>11</sup> Archaeological studies support these oral traditions and identified there were at least five pā located around the lake edge as well as those constructed on the island, a place continuously occupied by Māori from its creation until residents were forced to flee during the 1863 invasion.<sup>12</sup> Wetlands like Ngāroto were significant resource extraction spaces, not limited to mahinga kai (food gathering sites).<sup>13</sup> In contrast to Pākehā perceptions of wetlands as unproductive and unhealthy spaces, for Māori wetlands were carefully cultivated hydro-social waterscapes central to their iwi and hapū identity, health and wellbeing, and economic security.<sup>14</sup>

Within Māori ontologies, rivers and their tributaries are more than a course of running water; they form indivisible social-ecological-metaphysical wholes rather than individual systems. Unlike western scientific knowledge and dominant post-Enlightenment European intellectual thought, for Māori no clear divisions can be made between different components of freshwater systems. The Waipā catchment (be it the muddy wetlands, running rivers and streams) comprised interconnected (culturally-defined) waterscapes for local whanau, hapū, and iwi, which were (and are still) the embodiment of ancestors to

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<sup>11</sup> Pam Cromarty and Derek A. Scott, *A Directory of Wetlands in New Zealand* (Wellington: Department of Conservation, 1995).

<sup>12</sup> Moepātu Borell and Robert Joseph, *Ngāti Ti Apakura Te Iwi Ngāti Apakura Mana Motuake Report for Ngāti Apakura Claimants and the Waitangi Tribunal* (Wellington: Crown Forestry Rental Trust, 2012); Tauriki et al., *Ngāti Maniapoto Mana Motuhake*.

<sup>13</sup> R.D. Pick, "Waikato Swamp and Island Pa," *New Zealand Archaeological Association Newsletter* 11, no. 1 (1968): 30–35.

<sup>14</sup> Wilfred Shawcross, "The Ngaroto Site," *New Zealand Archaeological Association Newsletter* 11, no. 1 (1968): 2–29; R. D. Pick, "An Island Occupation Site on Lake Ngaroto on Pierce's Farm at the Northern End of the Lake," *The Journal of the Te Awamutu Historical Society* 2, no. 1 (1967): 19–21.

whom iwi and hapū connect through whakapapa. They are home to flora, fauna and hostile or friendly supernatural beings (taniwha) that take the form of eel-like creatures and guard the spiritual wellbeing of the waterways (and the hapū and iwi who are bound to them). A river is a taonga (something treasured and sacred), a more-than-human feminine being that possesses its own life force (mauri) and the provider of material and spiritual health and wellbeing.<sup>15</sup>

The Waipā is thus imbued with multiple meanings that traverse the economic, social, cultural, and metaphysical. To Ngāti Maniapoto, the Waipā River is an indivisible (female) entity commencing its journey from the mountain range at Pekepeke to its joining with the Waikato River and is home to their tribal kaitiaki (guardian) the taniwha known as Waiwaia. Ngāti Maniapoto oral histories emphasise, for example, how Waiwaia saved the lives of Maniapoto children who got into difficulty while swimming in the river. Waiwaia had “hundred lairs or hiding places along the course of the Waipa River”, however, the ongoing reduction in estuarine water levels through settler and colonial government actions and engineering interventions from the late 1860s had negative effects on their kaitiaki, Waiwaia.<sup>16</sup> The centrality of these waterscapes to Ngāti Maniapoto iwi identity and wellbeing, and the indivisibility of social and ecological systems are encapsulated in one iwi members’ oral history recounted to the Waitangi Tribunal:

I turn now then gaze upon the hill that stands forth, [the wetlands of] Te Kawa, the place where eels were distributed to the thousands and to the lands of Ouruwhero. Let my gaze settle upon the running waters of Pūniu, the border between Maniapoto and Waikato. Waipā River the abode of the taniwha Waiwaia and Tuheitia, these are the waters of my elders.<sup>17</sup>

To local Māori floods were not disaster events but part of the functioning of the wider waterscape, with their tribal stories transmitted down through the generations through whakapapa, waiata (songs) and oral histories. A Ngāti Maniapoto waiata (song) highlights

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<sup>15</sup> George Barrett, *Wai 898 A109 Oral and Traditional History Volume Ngāti Tamainupō, Kōtara and Te Huaki* (Wellington: Crown Forestry Rental Trust, 2012).

<sup>16</sup> David Alexander, *An Overview of Selected Environmental and Resource Management Issues in Te Rohe Potae Inquiry District* (Wellington: Waitangi Tribunal, 2014), 286.

<sup>17</sup> Tauriki et al., *Ngāti Maniapoto Mana Motuhake*, 352.

the ways in which people’s understandings of the river and its functioning (including floods) centred on reciprocal relationships between the interwoven social, biophysical, and metaphysical worlds:

Like an atua [god] I wing my way into the heavens above! I gaze down! There below lies my river Waipā, cutting her way over the breast of my native land. My eyes brim with tears at the vision of splendour, ‘tis the love of my river that meanders away. My eyes gaze intently upon the deep pools of the river they are myriad lairs of Waiwaia; the atua who gathers food for the people. The rocks of the river are an easy pillow for my head. The deep stretches of the river are a bed that rejuvenates my spirit and my body. I am sustained by the river, by taking the waters of the ancients, drawing the waters from the atua, by procuring the very water of life!<sup>18</sup>

This stands in marked contrast to the dominant European lexicon that floods are destructive and morally ‘bad’ events. These different views were clear soon after the 1863 invasion of the Waikato, when Pākehā began to experience and report on regular flood events (often during summer). On 25 December 1869, for instance, when a flood destroyed Māori cultivations along the Waikato and Waipā riverbanks (following a flood the same time the previous year), Pākehā remonstrated Māori for their “folly in persisting to cultivate [on] such low lying land”. However, Māori declared floodwaters ensured the fertility of the soils and the “quality” of the low-lying land within their rohe was “so rich that they much prefer it to the hills, which were comparatively barren”.<sup>19</sup>

According to Māori scholar Tom Roa, floods “were not a time of dread” for tāngata whenua (people of the land) but periods of “bounty since the repo (swamp) ... would be teeming with tuna and ducks ... from the flooded Waipā River”.<sup>20</sup> Floods meant reduced time and energy for hapū spent fishing, hunting and harvesting. Māori perceptions of their waterscapes – as places of abundance, safety, health, wellbeing, and identity – wherein flooding was essential part of ensuring the mauri (life force) was maintained contrasted

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<sup>18</sup> Wikitōria Tāne, *Cultural Impact Assessment: An Assessment of Cultural Impacts of the Proposed Happy Valley Milk Ltd Dairy Factory on Redlands Road, Otorohanga* (Ōtorohanga: Nehenehenui Regional Management Committee, 2017).

<sup>19</sup> “Lower Waikato. Flood in the River. – Fire at the Canadian Flax Mills,” *Daily Southern Cross*, 25 December, 1869.

<sup>20</sup> Tāne, *Cultural Impact Assessment*, 47.

markedly with Pākehā perceptions of the Waipā waterscapes as risky and insecure spaces that required mitigative measures be taken as a matter of urgency.<sup>21</sup>

### Colonising waterscapes: Pākehā perceptions of indigenous environments

Prior to the 1863 invasion Pākehā perceived the Waikato region as an agriculturalist's paradise of fertile plains and lush cultivations but by the second half of the nineteenth century landscapes and waterscapes were framed as problematic and even hazardous spaces. As Pākehā sought to establish themselves within the newly acquired 'backblocks' of Waikato and Rohe Potāe, the realities of 'swampy' grounds was a source of ongoing anxiety, with waterscapes having imagined risks to safety, wellbeing, and viability of the settler body politic.<sup>22</sup>

To most Pākehā settlers and visitors, the Waipā catchment, with its stagnant waters, changeable flows, and expansive and seeping wetlands, did not resemble remembered (or imagined) modern European waterscapes of ubiquitous straightened, leveed, and regulated rivers. Wetlands, in particular, were seen to be the host of multiple (collective) environmental risks for which embryonic Pākehā farming communities were especially vulnerable.<sup>23</sup> The mere sight of wetlands, Pākehā travellers and local farmers reported, inspired in them feelings of dismay and melancholy. One traveller narrated his journey through the rivers of the Waipā and Whanganui in the early 1880s as one of hardship through the "great forest wilderness", with the "whole place saturated with moisture for centuries".<sup>24</sup> The "swampy nature of the country and the truly dismal character of the whole surroundings" prompted him and his travelling companions to name the area the "Dismal Swamp".<sup>25</sup>

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<sup>21</sup> Cromarty and Scott, *A Directory of Wetlands in New Zealand*.

<sup>22</sup> For more about settler environmental anxieties see James John Beattie, "Environmental Anxiety in New Zealand, 1850-1920: Settlers, Climate, Conservation, Health, Environment" (PhD diss., University of Otago, 2005).

<sup>23</sup> Geoff Park, "Swamps Which Might Doubtless Easily Be Drained: Swamp Drainage and Its Impact on the Indigenous," in *Environmental Histories of New Zealand*, ed. Eric Pawson and Tom Brooking (Auckland: Oxford University Press, 2002), 176–85.

<sup>24</sup> James Henry Kerry-Nicholls, *The King Country: Or, Explorations in New Zealand. A Narrative of 600 Miles of Travel Through Maoriland* (London: S. Low, Marston, Searle & Rivington, 1884), 265–66.

<sup>25</sup> Kerry-Nicholls, *The King Country*, 265–66.



Settlers and government officials ascribed regular flooding events within the Waipā catchment to the persistence of wetlands, Māori harvesting practices (pā tuna, or eel weirs), and the growth of trees along riparian zones. In response to perceived problems of flooding and wetlands nationally, the central government passed various legislation, beginning in 1875 with the *Napier Swamp Nuisance Act*, to facilitate state-authorized drainage of wetlands.<sup>26</sup> The 1893 *Land Drainage Act* allowed for the creation of drainage schemes with government subsidies. The *Land Drainage Act* 1904 established drainage boards, with members elected by local ratepayers. Given wide ranging powers, drainage boards could acquire private land (including Māori land), construct drainage works (despite local landowners' opposition), manage watercourses, and impose rates (taxes) on landholders. The legislation specifically included provisions that targeted Māori land and made Māori land subject to local government rates.

Between 1901 and 1926, twenty Commissions of Inquiry were undertaken by the central government to examine the nation's problematic rivers. The Inquiries, which concentrated on flooding, river "improvements" and drainage works were used to justify the decisions taken by drainage boards to systematically drain wetlands and re-engineer rivers, including the Waipā. The government's drainage policy, historian Geoff Park observes, was underpinned by four main ideas. Wetlands in their existing state were unproductive wastelands only valuable because of their development potential as fertile farmlands. Secondly, wetlands did not hold any scenic value and should not be preserved (unlike certain remnants of indigenous forests, birds, lakes, and mountains). Thirdly legally, wetlands were future parcels of land where Māori entitlements (authority over and rights to access and use resources) were considered by both the courts and the government to transfer with land titles (once wetlands were "unwatered"). Fourthly, the value of transforming wetlands to farmland was considered of such national significance to require

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<sup>26</sup> New Zealand Parliament, "Napier Swamp Nuisance Act 1875 (39 Victoriae 1875 No 4)" (1875); New Zealand Parliament, "Land Drainage Act" (1893); New Zealand Parliament, "Land Drainage Act 1904" (1904); New Zealand Government, "Rangitaiki Land Drainage Act" (1910).

governments (central and local governments) and individuals to intervene and fund it to ensure success of the process.<sup>27</sup>

In the Waipā River catchment, drainage districts, overseen by at least 12 separate drainage boards, were quickly created in the first two decades of the twentieth century.<sup>28</sup> Since the majority of land in Rohe Pōtae (upper and middle Waipā catchment) was still Māori land (chiefly Ngāti Maniapoto), Māori landowners were liable to pay rates to their local drainage board, which often included multiple boards. The drainage boards were active in constructing canals and levees to control the flow of water and keep it separate from land, livestock, townships and people. The *King Country Chronicle* stated in January 1932 that the residents of Te Kuiti township were largely unaware of the important work their local drainage board was undertaking on their behalf. The Mangapu Drainage Board, the reporter declared, was “working quietly but effectively in carrying out operations” which involved “clearing and straightening [of] the Mangaokewa and Mangapu Streams” (both tributaries of the Waipā). The board faced early challenges in its activities (due to the large portion of land still held by Māori) but as of 1932 was beginning to “show tangible results”. Furthermore, once the drainage works were completed “the menace of flooding of hundreds of acres of first-class w[ould] be removed, and t[hose] areas w[ould] be suitable for intensive cultivation”.<sup>29</sup>

Informed by colonial hydrological knowledge and technologies, as well as land use, spatial planning, tenure systems, and agricultural approaches imported from Britain, individual farmers and government officials positioned ongoing efforts to “tame” the waterscapes of the Waipā as of critical importance to the creation and maintenance of prosperous settler communities. However, in 1935 local government officials reported that, despite the Mangapu being “unwatered”, the streams and rivers continued to be uncertain fixtures in the landscape. Indeed, after drainage works, the water in the Mangapu Stream was reported to “com[e] down very quickly” and “there [was] a big volume of water joining the

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<sup>27</sup> Park, “Swamps Which Might Doubtless Easily Be Drained: Swamp Drainage and Its Impact on the Indigenous”; Catherine Knight, *New Zealand’s Rivers: An Environmental History* (Christchurch: Canterbury University Press, 2016), 180.

<sup>28</sup> “Tua Tua Moana Swamp,” *Waikato Times*, 25 May, 1915.

<sup>29</sup> “Important Drainage Scheme,” *King Country Chronicle*, 9 January, 1932.

Waipa [River]".<sup>30</sup> Thus, as the wetlands were drained, after heavy rain, with no wetlands or vegetation to absorb and slow down the process into the Waipā River and its tributaries, there were ongoing issues with flooding.

Pākehā settlers believed floods were exacerbated by the continued use by Maori communities of pā tuna to catch tuna. Eel weirs, Pākehā protested to government officials, narrowed watercourses, contributed to sedimentation, created snags onto which debris could accumulate and impede the free flow of water, hindered efforts to drain the land and increased the risk of flooding by heightening floodwaters.<sup>31</sup> Complaints were made to local members of parliament and government officials, with settlers demanding the intensification of drainage works and the removal of eel weirs to mitigate flood risk. The Minister of Native Affairs, in response to a letter from the parliamentarian who represented the lower King Country, declared his Department was already well aware "that the weirs form a considerable bone of contention between the Natives and other residents in the locality".<sup>32</sup> However, he argued it was not a matter for central government to resolve but, rather, the responsibility of individual parties to reach legal agreements through the court system (with drainage boards able to remove eel weirs without consultation with or the permission of Māori).

#### Māori contestation of environmental changes

Māori communities resisted, contested, and challenged this privileging of Pākehā settler colonial values and knowledge, Pākehā authority over the Waipā River and the consequences of this privileging in terms of resource rights, environmental degradation and loss of biodiversity. Māori individuals and groups, for instance, regularly submitted petitions to members of parliament to request assistance. Most notably, throughout the twentieth century Māori throughout the Waipā catchment wrote to the Minister of Native Affairs and the Māori Members of Parliament to request that actions were taken to ensure Māori could retain possession of their lands; alongside their demands that their unlawfully acquired

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<sup>30</sup> Folder, C 58 395, BAAS A269 5113 Box 62, 96/434220. Archives New Zealand, Auckland.

<sup>31</sup> W. T. Jennings to Minister for Native Affairs, 24 April, 1909, MA1 973, Archives New Zealand, Wellington.

<sup>32</sup> Minister of Native Affairs to W. T. Jennings, MA1 973, 4 May, 1909, Archives New Zealand, Wellington.

lands were returned.<sup>33</sup> In 1920, for instance, Paiharae Tuhoro and whanau wrote to the Member of Parliament for Western Māori (Dr Maui Pomare) to protest about the local council diverting the river through their land and the construction of flood works. The letter of complaint reported that river engineering works reduced their capacities to access their land and waterways, and the amount the local government paid them in compensation was inadequate to make up for their economic and cultural losses.<sup>34</sup> Māori landowners had little power to challenge the governments' ability to take land under the *Public Works Act*; however, they were able to raise objections and seek better financial compensation than that offered by government. Māori objected to the acquisition of their land for drainage and flood controls works because of the negative physical impacts, and because such works contributed to even more Māori being dispossessed of their rōhe.<sup>35</sup>

The records of Otorohanga flood control works provide detail about the actions that government officials took, but there is a noteworthy deficiency of Māori perspectives on drainage and flood control works in the early twentieth century. Consultation with the local community was limited. There was limited appreciation of Māori cultural values or economic values. Oral histories with local Māori recount how drainage works in the 1920s negatively affected whanau land. Piko Davis recounted: "You can fill the whole river bed but you can't alter the fact that it's a lower elevation than the rest of the paddock and of course it will automatically flood".<sup>36</sup> Drainage operations, Māori residents argued, resulted in increased flood risk, and provided government with justification for further engineering interventions to reduce damage to properties.

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<sup>33</sup> From 1868 until 1996 there were four Māori seats in the House of Representatives reserved for elected Māori MPs (elected by Māori voters). From 1996 the number of seats increased to six Māori seats.

<sup>34</sup> District Engineer Murray to Under Secretary Public Works Department, 16 March, 1920, W1 1211 48/110, 1, Archives New Zealand, Wellington.

<sup>35</sup> AJHR, *J1-Petition of Maniapoto, Raukawa, Tūwharetoa, and Whanganui Tribes* (Wellington: New Zealand Parliament, 1883); Department of Maori Affairs, "Petition No. 237-15 Raukete Te Hara and 27 Others," 4 September 1915, R22405777, AC1H, 16036, MA1, 1145, 1915/2835. Archives New Zealand, Wellington; Bamford & Brown to Kawa Drainage Board Clerk, 4 December, 1909, BCDG A1492 Box 1, A16, Archives New Zealand, Auckland; E. J. Best to Mr Jennings, MP, 7 April 1909, MA1 973, Archives New Zealand, Wellington; Mr Fisher to Grace, 14 January, 1909, MA1 973, Archives New Zealand, Wellington; AJHR, *G-06f Native Land Amendment and Native Land Claims Adjustment Act, 1922. Report and Recommendation on Petition No. 187/1922* (Wellington: New Zealand Parliament, 1923); Wahanui and 415 Others, "The Petition of the Kingites," *New Zealand Herald*, 16 July, 1883.

<sup>36</sup> Michael Belgrave et al., *Te Rohe Pōtae Environmental and Wāhi Tahu Report* (Wellington: Crown Forestry Rental Trust, 2011), 202.

In submissions to government inquiries, Māori spoke out for more than a century about the consequences of drainage and flood control schemes in terms of the environmental degradation and negative impacts on their health and well-being.<sup>37</sup> Many of the flora and fauna species harvested by Māori from wetlands declined as a consequence of drainage and flood control works, dredging operations, gravel extraction and the removal of vegetation. As a result, the traditional livelihoods of local Māori communities (which were subsistence-based and involved trading relationships with other groups) could not be sustained. Yet, while officials sometimes recognised that Māori complaints possessed merit, they continued to advocate that land development, wetlands drainage and flood defences were of greater importance to the district and nation (socially, economically, and politically) than Māori livelihoods, cultural values and wellbeing.<sup>38</sup>

One of the most significant damages and losses for local Māori was the destruction of tuna habitats and a decline in tuna numbers, closely linked to structural interventions to re-make wetlands into grasslands and straighten meandering watercourses. Elders of Ngāti Apakura and Ngāti Maniapoto recalled how tuna provided more than food to their hapū, with the practices of harvesting and preserving serving to maintain important socio-cultural and spiritual connections between whanau, hapū, and iwi, their ancestors, and atua (gods). For Ngāti Maniapoto, in particular, tuna were and are still culturally significant animals. Their oral histories record that their tūpana (ancestor) Maniapoto (the namesake of the iwi) had a pet tuna in Te Ana-Ureure.<sup>39</sup> Accordingly, the decline and loss of tuna from the Waipā catchment, which was interlinked with wider losses in native terrestrial and freshwater biodiversity, was felt by local Māori in terms of loss of mana (power, authority), mauri (life force), and relationships with each other (their whanau, hapū, iwi, and other iwi), their

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<sup>37</sup> *Hone Te Anga v Kawa Drainage Board*, 33 NZLR 1139 (High Court 1914); E. J. Best to Mr Jennings, MP, 7 April, 1909, MA1 973, Archives New Zealand, Wellington.

<sup>38</sup> Throughout the late-nineteenth and twentieth centuries individuals and governments operated within Te Ao Pākehā (the Pākehā world), which contrasted with the Māori world (Te Ao Māori), and sought to apply their scientific knowledge and technologies to transform the perceived hazardous areas (wetlands, waterways, and marginal land) into productive pastures, contributing to a 92 per cent decline in total area of wetlands (from pre-colonial era). See Meg Parsons, “Environmental Uncertainty and Muddy Blue Spaces: Health, History and Wetland Geographies of Aotearoa New Zealand,” in *Blue Space, Health and Wellbeing: Hydrophilia Unbounded*, ed. Ronan Foley et al. (London: Routledge, 2019), 205–27.

<sup>39</sup> Tauriki et al., *Ngāti Maniapoto Mana Motuhake*.

rohe, and the living (and non-living) beings. As Ngāti Maniapoto report:

For many of the Ōtorohanga Māori community there remains a keen sense of loss relating to their land. With the loss of land came the destruction of pā, burial sites, living spaces, place names that recorded their tupuna oral history, ceremonial places, waterways, pā tuna, mahinga kai, horticultural kai, horticultural gardens, repo pātaka kai (wetland food baskets) destruction of native bush (used for pātaka kai – food basket), and puna (fresh water springs) and waters that were used for all manner of purposes. These included, among other things water used for drinking, food gathering and preparation, cleaning, health promotion, spiritual cleansing, ceremonial rituals, birth rituals, rituals for preparation of deceased; most of which (puna) were destroyed in the draining of land for farming purposes earth moving for diversion of the Waipā River and construction of flood stop banks, construction of the Main Trunk Railway Line and subdivision developments of the Ōtorohanga Township for Pākehā settlement.<sup>40</sup>

As the above quote demonstrates, the Waipā River catchment provided generations of Ngāti Maniapoto with ample sources of kai (food), which included freshwater fisheries. The Waipā River allowed them to “to meet their obligations of manaakitanga” (hospitality and kindness to others). An example of manaakitanga is when visitors travel to marae (formal meeting place of a hapū) they are always provided with food by the tangata whenua (local hapū); the hosts are obligated to provide local delicacies (such as tuna and shellfish) to their guests and if they fail to do so the hapū is perceived to lose some of their mana (prestige and social standing). The decline of freshwater resources and the problems it creates in terms of the abilities of hapū and iwi to meet the cultural requirements of kaitiakitanga and manaakitanga is a source of ongoing distress for Ngāti Maniapoto and other iwi.

This is a particularly important point when considering the ways in which disasters, changing environmental conditions, and disaster risk reduction strategies are understood and experienced by different groups of people. From a Pākehā worldview, traditional Māori foodstuffs (and broader Māori economic activities) could simply be replaced by practices

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<sup>40</sup> Tāne, *Cultural Impact Assessment*, 31-32.

more in line with ‘civilised’ (European) modes of living. Yet, for Māori such activities were bound-up with their identities, values, and ways of life, and it was not simply a case of replacing one with the other. Even following the 1863 Waikato invasion and the 1885 opening of Rohe Pōtae, harvested foods were dietary staples for many whanau, and allowed those with limited financial resources in the decades following colonization to maintain healthy diets. In the present day, as numerous scholars observe, practices of gathering, preparing and eating traditional foods with family, friends, hapū, and iwi remain a critical way that Māori maintain their cultural identities, reassert their links to their rohe, their hapū, and their ancestors, and allows them to learn and/or transfer mātauranga (knowledge) and practices across generations.<sup>41</sup> Through such activities Māori enact the practices associated with their role as kaitiaki of their rohe.

#### CHANGING VULNERABILITIES

Geographical and ecological scholarship highlights that hydrological engineering works often contributed to communities experiencing increased vulnerability to flood hazards. Scientists note how wetlands absorb excess water, which can slow the speed and reduce the height and forcefulness of floodwaters.<sup>42</sup> Thus, the loss of wetlands, coupled with vegetation change, sedimentation of riverbeds, and hydrological engineering works, all resulted in alterations in the flow and behaviour of water. Actions to transform the Waipā waterscapes into landscapes inevitably increased the biophysical vulnerability of human communities to flooding events. In the Waipā River, the effects of seasonal small-scale flood events worsened as wetlands were lost and vegetation removed. The construction of hard structures (houses, factories, sheds, roads, railways) on floodplains situated assets in vulnerable locations. This exacerbated the impacts of floods prompting public and political discussion about how to address flooding and ultimately resulted in the extension of

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<sup>41</sup> Kura Paul-Burke et al., “Using Māori Knowledge to Assist Understandings and Management of Shellfish Populations in Ōhiwa Harbour, Aotearoa New Zealand,” *New Zealand Journal of Marine and Freshwater Research* 52, no. 4 (2018): 542–56.

<sup>42</sup> Beverley R. Clarkson et al., “Wetland Ecosystem Services,” in *Ecosystem Services in New Zealand: Conditions and Trend* (Lincoln: Manaaki Whenua Press, 2013), 195.

existing approaches to flood risk management (most notably engineering works and clearance of riparian vegetation).<sup>43</sup>

Levees designed to decrease flood risk served to accelerate Māori land loss. Interventions to drain wetlands and re-engineer the Waipā River, like elsewhere in Aotearoa, occurred irrespective of what Māori landowners desired, and negatively affected Māori livelihoods and wellbeing.<sup>44</sup> Since Pākehā residents were overwhelming strong advocates for drainage works and flood controls and comprised the majority of elected and non-elected local and central government officials, Pākehā priorities and approaches to resource and flood management took precedent over those of Māori. Furthermore, Māori experienced ongoing socio-economic deprivation as a consequence of the cumulative impacts of colonial violence, dispossession, and political marginalisation. Māori land holdings were frequently subjected to unwanted drainage works, and Māori were then charged taxes (local government rates) for those same drainage works, which they could not afford to pay. Failure to pay local government rates could result in legal proceedings (initiated by the local government) and if Māori could not pay their rates, the court could order their land be leased out or sold.<sup>45</sup>

While floods occupied Pākehā hazard imaginaries and mobilised an enormous amount of resources and effort to 'control' the landscapes and waterscapes of the Waipā, the drainage works and structures implemented to control the muddy blue spaces of the Waipā had far more disastrous effects on Māori than any flood could ever have. Māori lost not only their whenua as a consequence of drainage and flood control interventions, but also their waterscapes that possessed metaphysical and material importance to their health and wellbeing.<sup>46</sup>

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<sup>43</sup> Letter from G T Wilkinson, ACGS 16211, J1 505/J, 1893/1155, 26 July, 1893.

<sup>44</sup> Meg Parsons et al., "Disrupting Path Dependency: Making Room for Indigenous Knowledge in River Management", *Global Environmental Change* 56 (2019): 95–113.

<sup>45</sup> "Native Rates," *New Zealand Herald*, 30 June, 1927.

<sup>46</sup> Tāne, *Cultural Impact Assessment*, 28.



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