

Problematising the Anthropocene: Geographic perspectives upon the riverscapes of Waimatā Catchment, Aotearoa New Zealand

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Funding information

George Mason Centre for the Natural Environment, University of Auckland, Grant/Award Number: 4112-78048

Abstract

Drawing on a Critical Physical Geography perspective, this paper problematises conceptualisations of the Anthropocene landscape of the Waimatā catchment on the East Cape, Gisborne district of Aotearoa New Zealand, through three lenses: forestry, restoration and indigeneity. Historical practices of arbitrary land division and resultant unsustainable forestry have caused multiple environmental, social and cultural problems within the catchment. Despite significant efforts of restoration groups and volunteers to remedy this, as yet programmes do not align with holistic Māori ideologies of seeing themselves as the land from which they trace their tribal identity. Fragmentation of the land has disrupted senses of identity and place. A kinship-based worldview between humans, the universe and everything in it suggests a more holistic lens through which humans are conceived as inseparable from nature. Such a more-than-human lens exposes a critical flaw in interpretations of the Anthropocene. Even when only considering its lexical construction, the word ‘Anthropocene’ innately centres the human. Continued use of such framings extends inequitable and unjust practices that imprint colonial forcings on the landscape and its people in ways inconsistent with intertwined Māori views of people, land and ancestors. No matter the lens through which it is interpreted, the Anthropocene term has little practical value in Aotearoa New Zealand, especially when considered in relation to emerging socio-natural river-centric perspectives.

KEY WORDS

Anthropocene, East Cape, forestry, more-than-humanism, restoration

1 | INTRODUCTION: THE ANTHROPOCENE THREE WAYS

... interactive river making, sharing and caring is age-old and basic to all water cultures. Such interaction has shaped ... amphibious geographies for ages ... The key consideration is the scale, means, and processes of

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making rivers ... Affected actors and commons are rendered voiceless when over-ruled by top-down hydrocracies and market-driven water policies ...

Boelens et al., 2023, pp. 1126–1127

Geographers continuously reappraise notions of landscapes (e.g., Mason & Riding, 2023). Geography, as a discipline, is primarily concerned with the nature–society relations that shape our planet, such as the human markers now visible in geological strata that indicate anthropogenic writings of the Earth. Resultantly, it lies at the heart of conceptualisations, deliberations and contestations surrounding the anthropocentric and Eurocentric nature of the Anthropocene narrative (henceforth referred to as the Anthropocene) (Castree, 2014; Davis et al., 2019; Hayman et al., 2018; Hoelle & Kawa, 2020; Maslin & Lewis, 2015), a term coined in response to the effects humans are having on the landscape and resultant fractured relations with nature. Local differences in the experience and context of the Anthropocene prompt suggestions that a pluriverse lens is required to embrace multiple ecologies of practices that work across entangled worlds (de la Cadena & Blaser, 2018; Wirth, 2022). In this paper, we apply a critical physical geography lens (e.g., Blue & Brierley, 2016; Lave et al., 2018; Tadaki et al., 2015) to interrogate contested meanings of an Anthropocene riverscape (*sensu* Dunham et al., 2018) in the Waimatā catchment of New Zealand's East Cape. We demonstrate how relations and understandings expressed through forestry, restoration and iwi (tribe) lenses know and seek to make place in three different ways, highlighting the role of geographers as weavers of knowledges-in-place in generative engagements with the pluriverse (e.g., Blue, 2018; Escobar, 2018; Hikuroa et al., 2021; Hoelle & Kawa, 2020; Todd, 2015). We argue that more-than-human thinking offers prospects for more caring, hopeful and sustainable practices (e.g., Brierley, 2020; Büscher, 2022; Thomas, 2015) – ways of living with riverscapes that listen to the voice of the river ('Let the rivers speak'), rather than managing (asserting human authority) over them (Salmond et al., 2019).

The Anthropocene has been the subject of much debate since its coinage more than two decades ago. Chemist Paul Crutzen suggested this new epoch as one in which the capitalist nature of certain Anthropos groups has led to such extensive planetary change that it may be mapped globally and hence considered a geological force (Crutzen, 2002). A precise start date has been agonised over since its conception, and the debate continues. The International Union of Geological Sciences assigned the official age of onset as 1945 (Kelly, 2017), but opposing suggestions date back to the extinction of Pleistocene megafauna during the last glaciation (Crutzen, 2002). Most recently the International Commission on Stratigraphy has rejected the proposal for it to be classified as a new geological epoch.

The Anthropocene abounds with contestations, at the centre of which is the inability to determine which indicators mark its initiation and whose voices are heard in making these determinations. Regardless of the date or indicator used, it is clear that Earth has undergone sufficiently prominent changes to warrant such considerations. Before the turn of the new millennium, human actions have altered, to some extent, ~75% of the world's ice-free land surface (Ellis et al., 2021).

Here, we evaluate epistemological meanings of the Anthropocene in Aotearoa New Zealand, where profound anthropogenic impacts on the landscape are framed alongside ontological relations of Māori, the Indigenous peoples of Aotearoa, who consider themselves of the land (Stewart-Harawira, 2020; Te Aho, 2019). We suggest the Anthropocene not as a discrete epoch but as an inequitable narrative interpreted by different actors in different ways – an AnthropoScene (Swyngedouw & Ernstson, 2018), facilitated by the term's lack of formal definition (Swindles et al., 2023). Using the Waimatā Catchment in Gisborne as a case study, we reflect upon the interactions of myriads of actors against this Anthropocene-stricken backdrop, exploring approaches to knowing and making Anthropocene landscapes of the Waimatā through forestry, restoration and indigenous (more-than-human) lenses. We contend that considering nature as purely social renders it powerless to human whim, the issues of which are indelibly printed into the Anthropocene script (Castree, 2001).

2 | SETTING THE SCENE

The Waimatā catchment is in the Gisborne district of the East Cape region of New Zealand's North Island (Figure 1). The highly dissected uplifting terrains of East Cape catchments, with weak underlying geology, earthquakes, frequent cyclones and heavy rainfall from March to May (autumn), result in river systems that have some of the highest sediment discharges per unit area in the world (Fuller et al., 2023; Hicks et al., 1996). Māori established houses and gardens along the fertile floodplains adjacent to the mouth of the Waimatā River, using the river for mahinga kai (food resources), including the construction of eel weirs along Waikanae Stream (Coombes, 2000). The surrounding landscape was mostly

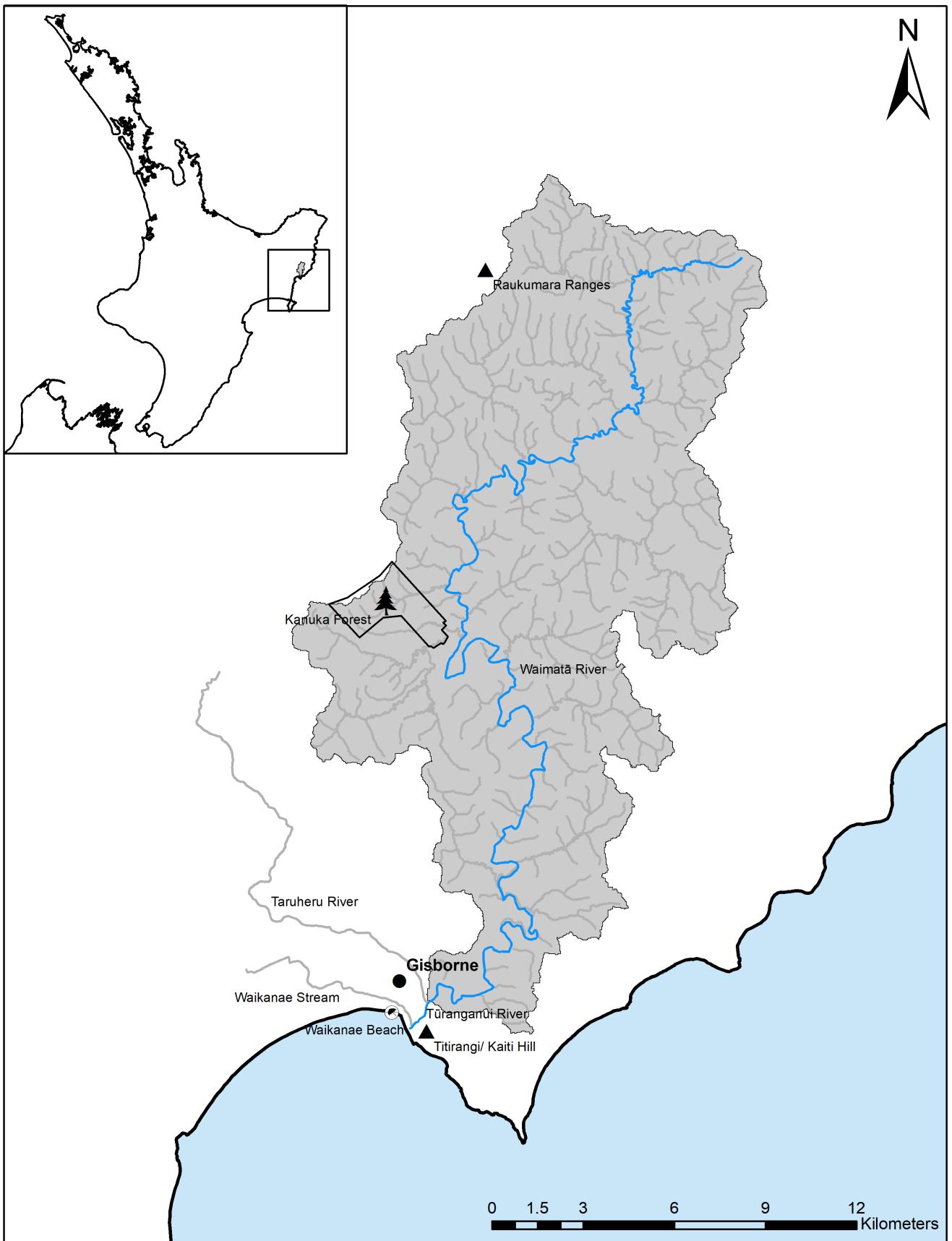


FIGURE 1 Location and areal extent of the Waimatā catchment.

left forested. By the time of European arrival, an intensively inhabited village and a pā (fortified settlement) had been formed near the river's lower course (Salmond et al., 2022). Subsequent deforestation, from the late 1800s to early 1900s, decimated native forests to 2.5% of their pre-settlement coverage, increasing sediment mobility and widening and eroding channel margins in this highly connected landscape (Cairns et al., 2024; Cullum et al., 2016; Fuller et al., 2023; Harvey, 2021).

The 20 km long channel, beginning in the Raukamara mountain range, flows through variable relief and then joins the Taruheru River in the lower reach to form the Southern Hemisphere's shortest river, the 1.2 km long Tūranganui River. These three landscape compartments may be broadly categorised as the headwater, transfer and accumulation zones (Figure 2). Erosion occurring within the headwater and transfer zones, combined with the minimal sediment storage exhibited by the terrace-confined channel (acting as a flume) of the Waimatā River, means large quantities of sediment and woody debris are transported to the highly urbanised lower course, and onto Waikanae Beach (Harvey, 2021). The trunk is largely comprised of a single, stable channel with low sinuosity and discontinuous floodplain pockets (Figure 2b). Associated tributaries are also single-channelled but found in areas of valley confinement. Sediment that is largely stored on inner bends as point bars, point benches and sand sheets is repeatedly reworked (Figure 2c,d). Additionally, human disturbance has caused the loss of natural wetland buffers (Harvey et al., 2021). Recent socio-cultural relations to the river adopt a restorative ethos, seeking to conserve and enhance the function of the river and its catchment in a healthy state, thereby maintaining its ora (holistic wellbeing) and providing an environment in which humans can live, undertake rituals, catch food, recreate and partake in sports.



FIGURE 2 Photographs of the Waimatā River and its catchment: (a) Terrain of the headwater zone; (b) Single channelled, low sinuosity trunk stream-transfer zone (with channel slumping); (c) Point bar surface; (d) Post Cyclone Gabrielle – smaller point bar surface with large sediment storage on the outer bend–accumulation zone.

3 | LAND ALIENATION AND FORESTRY IN THE WAIMATĀ

The approximately 220 km² of land comprising the Waimatā catchment was made available for legal sale by the passing of the Native Lands Act 1865 (Coombes, 2000; Gundry, 2017). The land was divided into discrete parcels on paper, then bounded and delineated physically by fences and hedges (Salmond et al., 2022), a process described by Salmond et al. (2019) as cutting into blocks (Figure 3). At that time, only small tracts of the lower catchment had been purchased by Europeans. However, much larger areas, such as the 4350-acre Kaiti Block, had been leased for sheep runs.

The Kaiti block and the Whataupoko and Pouawa blocks were subsequently purchased by European owners in the 1880s (Gundry, 2017). Under the Native Lands Act 1865, Māori owners were included in the certificates of title, and where a block exceeded 10 owners, it was to be registered under iwi. In practice, however, the court further subdivided the land until there were no more than 10 owners. Dividing land into small parcels and formally placing iwi-owned land into individual ownership effected hectares of Māori land passing, via sales, into European tenure (Daly, 1997). The resultant increase in European settlement led to large-scale deforestation in the upper catchment, followed by land burn-offs to make way for sheep pasture (Poverty Bay Herald, 1895). Continuations of such practices into the twentieth century, along with additional areas cleared by logging, meant only remnant indigenous forests remained (Salmond, 2016). The Waimatā was not alone in housing these destructive practices. Subsequently, it nationally became clear that to keep up with the demand for timber, planting would need to occur.

The establishment of the New Zealand Forest Service (NZFS) in 1921 (Te Ara, 2017) led to a trio of planting booms, the last of which occurred in the East Cape region following the devastation of Cyclone Bola (February–March 1988) (Marden & Rowan, 1993). During the 1980s–1990s, the Crown actively encouraged planting exotic pine species, citing economic success and erosion prevention. However, while reforestation was partially concerned with erosion control, once the trees matured, timber production became the dominant motivator (Marden & Seymour, 2022). The NZFS was disbanded in 1987 following government reforms (Roche, 1990), with the forest crops sold to overseas-owned companies. For example, the ‘China Forestry Group New Zealand Company Ltd’ owns Kanuka Forest, located ~19 km north of

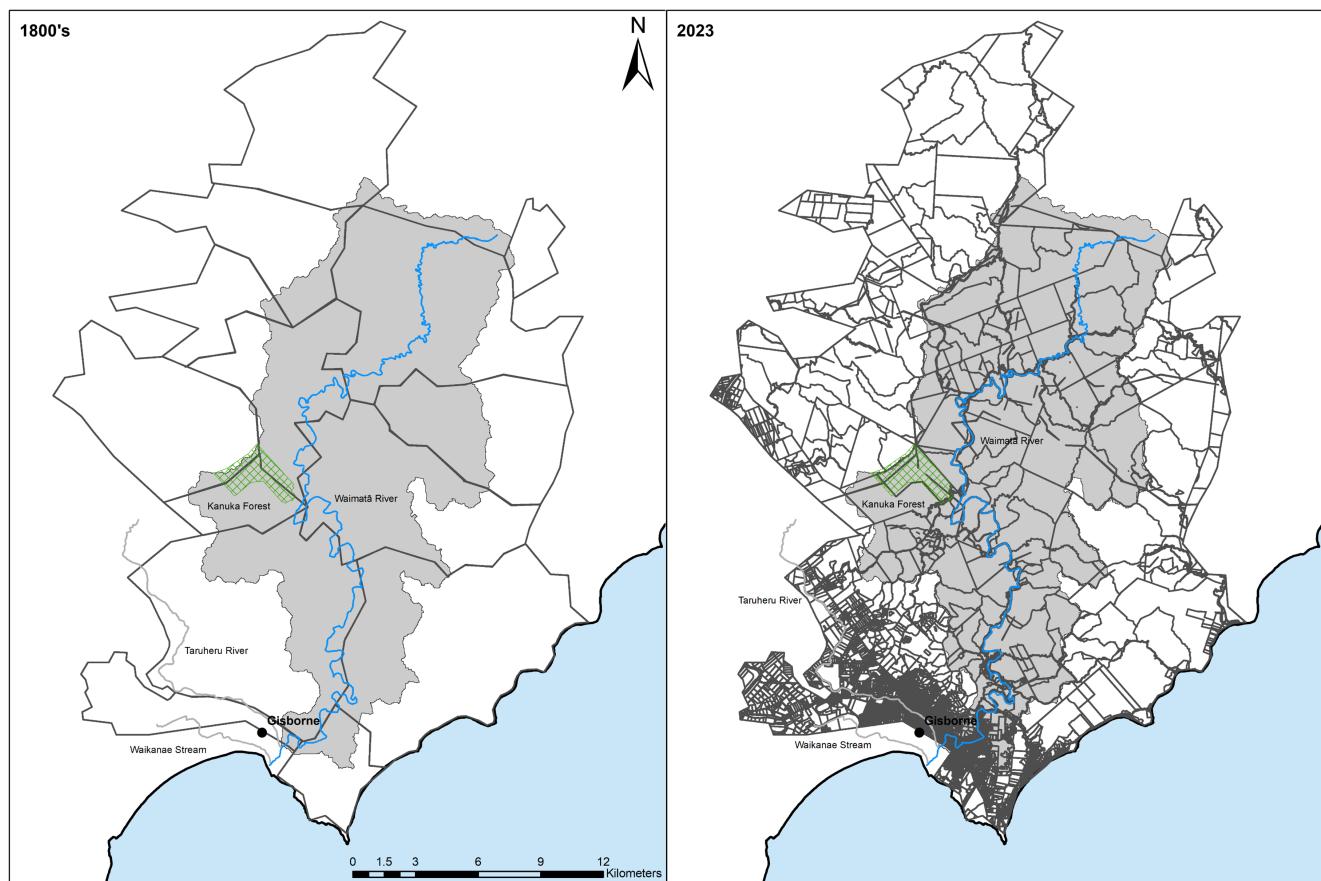


FIGURE 3 Poverty Bay blocks, as determined by the Native Land Court.

Gisborne along Waimatā Valley Road. Most of the land has only 10%–20% indigenous forest cover remaining. In 2016 the total catchment area used for exotic forestry (largely *Pinus radiata*) comprised 141,581 ha, a reduction from the peak of 156,400 ha in 2011 (Gisborne District Council, 2020).

While much of the deforestation and land alienation occurred prior to the generally agreed upon beginning of the Anthropocene, these historical practices have ultimately led to the Anthropocene landscape observed today – one underwritten with these legacy effects.

3.1 | Forestry – An enactment of the Anthropocene

Marden and Seymour (2022) showed that the shallow-rooting and highly flammable *Pinus radiata* is ill-suited for plantation on highly erodible soil, such as the Waimatā catchment. However, it is not simply a poor choice of pine that has led to the slash- and sediment-clogged Waimatā River seen today. The settler-colonial division of land into discrete entities for the sole purpose of purchase acted to separate formerly inseparable components of the catchment from each other. The people are separated from the river, the river from the land, the land from the sea, and so on (Salmond et al., 2022). Treating land as property has been enacted since times of early exploration in New Zealand when land was gridded and mapped, removing from it all life and rights (Salmond et al., 2019). This Eurocentric ideology disrupted connections to the river itself. Even today, the forestry industry appears to uphold the human-centric ontology of the Anthropocene. As noted in the Forest Management Plan of the ‘China Forestry Group New Zealand Company Ltd’ (PF Olsen, China Forestry Group New Zealand Company Ltd, 2019), iwi are considered stakeholders with vested interests in all ‘sizeable land parcels’. Te Aitanga a Mahaki are observed as stakeholders of the Kanuka Forest block, as historically they once occupied all the lands between the Motu, Hangaroa and Waimatā rivers and hence over which they extended their mana (ancestral power) (Daly, 1997). Mana is not something that can be mapped or bounded, therefore dictating which land parcel over which it may preside would seem pointless. Similarly, the forest management plan noted immediate neighbours as stakeholders – those with something to gain or lose – given the potential for adverse effects from the industry occurring within the forestry blocks. Limiting stakeholders to immediate neighbours neglects the extremely high connectivity of the Waimatā system created by the loss of natural wetland buffers and hillslope-channel coupling (Harvey et al., 2021). It is not only adjacent neighbours that encounter impacts, but the catchment as a whole.

3.2 | The Capitalocene: Anthropocene's co-star

Not only does forestry in the Waimatā reflect the ideologies associated with the Anthropocene, but it also connects with principles from the correlated Capitalocene – an age shaped by the continual accumulation of capital at the expense of everything else (Swyngedouw & Ernstson, 2018). European settlement brought about not just a penchant for forestry and pastoral farming but also a change in how humans relate to their rivers. Consistent with how rivers were viewed, used and valued in Europe, their value was associated with their utility as a resource and their capacity to act as a conduit for waste, goods and travellers (Brierley et al., 2022) rather than mana. The Capitalocene relies on the subordination of ‘nature’ to humans and the capitalist society within which we live (Swyngedouw & Ernstson, 2018). Further, increased control over ‘nature’ is often seen to generate greater economic yield (Kennedy, 2006). The dissecting of land into parcels was, therefore, as much an exercise of cataloguing possible wealth (Phillips et al., 2018) as it was a Linnaeus-like project of classification. In this way, a kind of ‘cheap nature’ (Phillips et al., 2018) is formed by assigning lesser values to land with lesser economic potential and further abstracting it into component parts. While the artificial boundaries of land parcels still exist, forestry practices in the Waimatā will continue to operate as if discrete from the river and its lifeforms. Historically – and more notably, currently – absent, distant and/or exploitative relationships between humans and rivers do not result in mutually beneficial outcomes.

4 | RESTORATION IN THE WAIMATĀ

Since 2020, the Waimatā River Restoration Group has taken steps to foster and restore socio-cultural relationships with the river. Frequent large-scale flooding events in recent decades have washed tonnes of sediment downstream, damaging property and infrastructure extensively and eroding the channel banks. In an endeavour to reduce the effects of storms and resultant

flooding events, parts of the mid-upper catchment were reforested with pine in the 1990s (Salmond et al., 2019). However, the subsequent harvest of these pines and the mismanagement of the associated waste has added forestry slash to the already severe issues. More recently, in the lower portion of the catchment, Ngāti Oneone has been reforesting the slopes of Titirangi hill and the banks of Kopoawhakapata stream that flows at its base with native species that once flourished there (Salmond et al., 2019). Native species have both extensive lateral root systems that are effective for slope reinforcement and sinker roots descending from these (Marden et al., 2018). In 2020, the Waimatā Catchment Group was established. This group is focused on the upper reaches of the catchment (e.g., Figure 2a), assisting those that live along the river with appropriate fencing and planting along with pest and weed control measures. A second catchment group, the Lower Catchment Group, targets its efforts (as implied by its name) in the accumulation zone of the Waimatā river (e.g., Figure 2c,d) and surrounding lower catchment. As with its upriver compatriot, the group organises plantings, pest and weed control, and opportunities for education and engagement with the local community (Salmond et al., 2019). Alongside such ‘bottom-up’ approaches, an overarching catchment plan has been developed under the National Policy Statement for Freshwater Management (2020) and the Tairāwhiti Resource Management Plan. The plan includes eight catchments, including the Waimatā. It contains the steps required for each catchment to meet the National Objectives Framework of the National Policy Statement for Freshwater Management. The steps include statements such as ‘Identify[ing] freshwater management units’ in order to separate the catchment into manageable units and ‘Set[ting] target states for environmental flows and water levels’ (Gisborne District Council, 2022).

4.1 | Volunteers from the audience

At face value, it would seem that a catchment with such significant input from institutional and diverse citizen groups – ‘volunteers from the audience’ – should be on a trajectory for recovery. Yet, as so brutally demonstrated by the deaths and destruction caused by ex-tropical Cyclone Gabrielle (February 2023), this is not the case. As summarised above, despite excellent community engagement, most restoration efforts in the Waimatā thus far have been piecemeal and disconnected, focusing on farm planning activities rather than specifically adopting a catchment focus. Kondolf et al. (2006) recognise that connectivity is essential in restoration efforts. Restoration projects confined to the reach scale tend to be unsuccessful as they have not considered the catchment as a whole, from the mountains to the sea (Salmond et al., 2022). Cyclone Gabrielle destroyed much of the riverside vegetation contributing to bank slumping and extreme feelings of helplessness. However, the community has altered planting strategies to further consider bank-channel connectivity. Planting is now occurring along tributaries and in wetlands due to the suffocation and erosion of previous efforts from storm events. Additionally, the Waikereru Restoration Project is aiming to re-establish ecological corridors along the Waimatā River, which include the wetlands and streams (Waimatā River Restoration Group, n.d.).

The Waimatā River acts as a flume, rapidly and effectively transporting water, sediment and debris from the upper to lower reaches (Fuller et al., 2023). In this context, work undertaken by the Lower Catchment Group is greatly impacted by what is occurring upstream and associated with the Waimatā Catchment Group. The proposed catchment plan, which separates the landscape into manageable units, each with a target state, pivots geomorphologic restoration back to its reductionist origins. This frames landscape change as a product of process–form interactions, with the landscape abstracted into component parts in attempts to gain understanding (Blue, 2019). It fits with the idea that we must corral misbehaving landscapes into a preconceived notion of what is acceptable (Kondolf et al., 2006). Despite significant, well-intentioned efforts, restoration in the Waimatā has yet to leave the limiting binary of human versus nature that the dominant ideologies of the Anthropocene inherently promote. Instead, these groups, who have strong local relations to the river, have attempted to contend with the Anthropocene in ways that preserve hope. Organised plantings try to move forward through experimentation and provide a sense of community and togetherness. This practice begins to foster a more-than-human approach. The more-than-human concept (Abram, 1996) incorporates a spectrum of relationships between the human and non-human, while giving space to genealogies of deep relationality (Stewart-Harawira, 2020). In this way, the centring of the human as an external factor influencing nature and the ideas of discrete management units are questioned.

5 | IWI HISTORY ALONG THE WAIMATĀ

More-than-humanism may align with Māori ontologies. Historically, Māori identity was hapū-based. The integration, division and migration of these hapū units have resulted in the iwi groups that presently live along and around the

river. Several iwi have mana within the Waimatā catchment: Ngati Porou, Ngāti Oneone, Rongowhakaata, Te Aitangaā-Māhaki and Te Aitangaā-Hauiti (Waimatā River Restoration Group, n.d.). Horouta and Takitimu are the two canoes arriving from Hawaiki to which these iwi trace their descent. Turanganui a Kiwa, the embayment in which Gisborne is located, is named for the great standing place (Turanganui) of Kiwa, who was the first to set foot off the Horouta canoe after it landed. Kiwa's son, Kahutuanui, married Hine-akua and had many children. Ngāti Porou trace their descent to Horouta through these children (Daly, 1997). Despite the early settlement of Māori in the Gisborne region, they associate their connections with the rivers not only from this long settlement history but also from rivers that are inseparable from shared ancestors and, therefore, themselves – as it is said, *Noo taatou te awa, Noo te awa taatou* (We are the river, the river is us). The area was famed for its wealth of kaimoana and kaiwhenua (food from the land and sea, respectively). A contrast to the name given to it by Captain Cook, Poverty Bay, reflecting his failed attempts to gather resources from it and exemplifying the onset of European misidentification of the whenua (land) according to their own benefits from it, or lack thereof.

In this way, Māori ideologies have not often aligned with Western, Eurocentric, scientific ideals. A clear geographic example is the differing ways of depicting New Zealand in maps and figures.

Figure 4 connects the islands of New Zealand with the exploits of Maui, who fished from the ocean Te Ika a Maui – the Fish of Maui (North Island), from Te Waka a Maui – the Canoe of Maui (South Island) (Hikuroa, 2020). Mount Hikurangi, located north of Gisborne, is a revered maunga (mountain) for Ngāti Porou, and considered the first point of Te Ika a Maui to rise above the sea when Maui fished it from the depths (Salmond et al., 2023). Te Upoko o te Ika – the head of the fish is located near Wellington hence the vertical alignment of the fishes head. The result is, for those of a Western standpoint, a flipped geography, and the implication that cardinal points, like many other things in modernity, are abstract constructions (Trinick et al., 2015).

This example also demonstrates that through a Māori ontologic lens, people, the land and their ancestors are intertwined and inseparable. While the Waimatā River and its surrounding landscape are part of tribal identities, like other awa (rivers), it also has its own lifeforce (e.g., Te Aho, 2010). The lifeforce of the Waimatā is constantly evolving within a net of all other things and in which power unevenly accumulates (Thomas, 2015). Previous fragmentation of the land into blocks has dislocated ancestral relations and disrupted the mana of the river (Brierley et al., 2022). This fragmentation did not consider the worldview in which humans exist in kinship-based relationship with the Universe and everything in it (Lythberg & Hikuroa, 2020). We may find some academic equivalence in relational ethics where the damaging of the non-human world forces the human to consider their relationship with it due to the role it played in shaping who humans are (Thomas, 2015); or in Watts (2013) 'indigenous place-thought', where place and thought are not separated because they were always inseparable. One way Māori express these kinship-based relations is through pepeha, an introduction where connections to place and people are conveyed. In a pepeha, connections to ancestors that include specific mountains and rivers are articulated first, with the name of the individual offering their pepeha appearing last. The environment is more important than the individual, and the environment will outlast the individual (Lythberg & Hikuroa, 2020), a framing expressed in the whakataukī (proverb): *Toitū te whenua, whatungarungaro he tangata* (People pass on, but the land is permanent). This sentiment harshly echoes and expresses the imprint of legacy effects from past practices.

6 | DISCUSSION

Rivers are actively co-produced hydrosocial territories that embody worldviews, knowledge frames, cultural patterns and power relationships (Boelens et al., 2016). ... Rivers therefore constitute political geographies of contested sionatural imagination, configuration and materialization: dynamically produced among divergent actors in different locations who collaborate and compete over the world-that-is and that-should-be.

(Boelens et al., 2023, p. 1135)

This case study analysis of the Waimatā Catchment has outlined how assertions of the Anthropocene made by some humans, and the realities they instil, are envisaged and enacted in different ways by different groups. Here we contend that a pluriverse, more-than-human lens engages generatively with radically local, holistic and hopeful prospects in efforts to move beyond such contested and uneven realities. Coherent, catchment-framed, inherently relational and recurrently updated knowledges-in-place reflect an ongoing geographic commitment to alternative ways of knowing and doing. Problematising the Anthropocene in this way shifts the frame of reference away from piecemeal human



FIGURE 4 Perspective of Aotearoa New Zealand, aligned according to Māori worldview, with the head of Te Ika a Maui upwards. Note. Map of Aotearoa with a flipped geography, thus representing Te Ika a Maui. From Te Ara, 2017 (<https://teara.govt.nz/en/map/6767-maui-in-newzealand>).

concerns for fragmented riverscapes that impose utilitarian perspectives upon land and water merely as resources, allowing the river to speak through relationships and practices that work with the river as a living entity. Rather than being locked within notions of resilient riverscapes or seeking to restore particular perceptions of past realities (Dufour & Piégay, 2009), ever-changing relations recognise and seek to live with emergent traits and the inevitable uncertainties that accompany them. In such deliberations, it pays to *re-member* (Linton & Pahl-Wostl, 2023) and promote the *re-emergence* of Indigenous knowledges (Moko-Painting et al., 2023), respectfully bringing together understandings and threads of enquiry that have become separated over space and time, nurturing moral and reciprocal relationships between people and water. As expressed elsewhere, such framings suggest that the concept of the Anthropocene has already passed its use-by date (e.g., Davis et al., 2019; Lorimer, 2017; Swyngedouw & Ernstson, 2018), and it is best conceived as a cultural zeitgeist and ideological provocation (Malhi, 2017) that should merely be viewed as a particular 'event' in geological time (Gibbard et al., 2022).

Given that an Anthropocene landscape is a product of environmental, social and cultural crises, a move towards a more holistic 'Māori worldview' where we are part of nature, not apart from nature, is necessitated. This call for holism is not new. As early as 1890, Chamberlin suggested the observation of the world around us should take place not just from our perspectives but from those of the water, rocks, and trees, calling it the 'multiple working hypothesis' (Chamberlin, 1890), while almost a century earlier, Humboldt's 'Naturegemälde' (meaning both 'painting of nature' and 'unification') first depicted his theory that all of nature was connected (de Humboldt, 1805). More recently, Haraway calls for the interpretations of landscapes as sympoietic organisms of interwoven processes and histories of the natural, human and spiritual worlds (Haraway, 2016), while Szerszynski (2017, p.2) claims an expansion of the Anthropocene is required to include 'the multiple narratives of Indigenous and colonised people'. Despite traditional Western scientific knowledge often separating itself from affective ideas of landscape (Santos, 2018), examples of affective fieldwork do exist (e.g., Couper, 2023). However, these examples have been detached from science, for affective notions are seen as detrimental to unbiased scientific practice. As the health of a river is directly dependent on the engagement of the people along it (Wooltorton et al., 2022) and natural processes often no longer operate removed from social or cultural ones (Swyngedouw, 1999), the weaving of Māori knowledges and values into current scientific and management practices would have positive outcomes for the Waimatā and those that live along it (cf., Koppes, 2022). Similarly, if included in the previously discussed approaches to forestry, the catchment would not be divided into isolated blocks, and resultant restoration initiatives similarly demarcated. Instead, the Waimatā catchment would be viewed as the connected system it is, including all human and non-human entities. It is not new to postulate that incorporating the extensive lived histories of iwi groups into management plans for the Waimatā would make for a more cohesive framework from which to learn to live with rivers. The challenge is understanding how these multiple knowledge forms co-exist in the Anthropocene from a place of mutual respect (Thomas, 2015), given that the Anthropocene has changed the balance of power and where it accumulates.

It is in considering this perspective that a flaw in the interpretation of Anthropocene lenses is exposed. As hinted at by the prefix 'Anthropo' ([hu]man), the 'Anthropocene' innately centres the human. Such a view is inconsistent with Māori ideologies of seeing themselves 'as the land' (Te Aho, 2010, p. 285), and its use continues to imprint colonial, anthropocentric forcings on the landscape and its people. The Anthropocene term, no matter the lens through which it is interpreted, may be of little practicality in an Aotearoa New Zealand context, especially given the socio-natural river-centric perspective currently emerging (as identified in Section 4.1) (Hikuroa et al., 2021). It should be noted that this perspective is largely at odds with the environmental policies emerging from the current coalition government formed in October 2023. While in some instances the Anthropocene has been considered an example of socio-natural reality, we would contend that it does not render society and nature inseparable but abstracts them as mutually influential but separate entities. The post-structuralist epistemology of socio-nature is more clearly aligned with Māori worldviews than the Anthropocene.

Similarly, anthropogenic impacts, as represented by the Anthropocene, are viewed as a consistent whole. In reality, they are occurring and experienced unevenly across the globe. Should the term we use to describe the impacts reflect their intensity and spatial inconsistencies? The closest attempt to represent this is the multiple Anthropocene suggestion of Kelly in 2017. It appreciates that the Anthropocene will be seen and used in varying contexts by those in differing disciplines. The stretch is not so far for it to be impossible to imagine multiple Anthropocenes representing the aforementioned variance of human impacts. Such an idea appears to mesh nicely with that of fluvial pluralism, or the different ways of knowing and managing rivers (Lyver et al., 2016). Diverse human–nature relations are appreciated in the same way as each river's uniqueness and anthropogenic influences.

While the concept of multiple Anthropocenes is useful in some contexts, it returns to the humancentric framing we should attempt to move away from. The idea of humans being akin to some divine force enacting change upon the landscape through the will of god and creating the end of wild nature is archaic. In terms of river management, it promotes a restorative approach. This implies it is both feasible and desirable to reconstruct rivers of the Holocene and earlier as the Anthropos sees fit. Instead, to maximise socio-ecological function for the future, catchment-specific understandings of ‘the things that matter’ should be considered during forestry practices and restoration/management applications.

The difficulty in letting go of the past ways of doing things can somewhat be attested to the grief at the loss of the foundations of modern Western prosperity – grief for the rivers of the Holocene (Head, 2016). Much of this grief is for previous ‘baseline’ conditions, or the ‘lamenting of Eden’ (Hulme, 2009); the idea that the fragile environment enacted upon by society is something that needs to be saved, thus, further evidence to leave the Anthropocene behind. Instead, we require a kind of hopeful geography that allows for this grief but also the potential for new ways of thinking without unfounded optimism. This ‘hope’ needs to be realistic. Perhaps the Anthropocene presents an opportunity. While it may be at its natural conclusion, it has brought us to this state of rupture (Head & Gibson, 2012). It has forced society to take note, consider and rethink its actions.

Inevitably, contemporary endeavours to make place are constrained by what has gone before, as legacy effects and path dependencies shape what is realistically achievable today and into the future. Here we envisage how alternative more-than-human worlds can reconceptualise riverscapes through a generative, more just lens (Büscher, 2022). Among many considerations, they move beyond fragmented realities that ‘split the land’ (Figures 2 and 3), reconfiguring relations and existing ways of being through more holistic approaches (Figure 4). Herein lie foundational premises for a more just sustainability (Agyeman et al., 2003). Boelens et al. (2023, p. 1146) reflect upon more-than-human concerns for the rights of nature and the river as relational entanglements wherein disruptive, creative and complex epistemic interfaces may interrupt the coloniality of practices that purport to make the world one, hinting at unknown forms of togetherness (cf., Brierley et al., 2022; Yates et al., 2017). Intriguing prospects lie ahead in efforts to make the best use of available understandings in a pluriverse world (de la Cadena & Blaser, 2018), carefully relating lessons of *re-membered* (Linton & Pahl-Wostl, 2023) and *re-emergent* (Moko-Painting et al., 2023) Indigenous worlds alongside Big Data representations of our increasingly Digital Living Earth. Such considerations of multiple knowledges invoke an ecocentric more-than-human approach, more closely aligned with Māori ontologies, to knowing and making riverscapes in Aotearoa.

More-than-human relations extend beyond human constructs, such as the Anthropocene. Māori framings from Aotearoa outlined in this paper directly echo indigenous relations and sentiments elsewhere in the world (e.g., Brondízio et al., 2021; Johnson et al., 2016). More-than-human connections to rivers are explicitly asserted from North America such as ‘The river is in our veins’ (Fox et al., 2017) or authorship of academic outputs from the perspective of the river in Australia (e.g., Martuwarra RiverOfLife et al., 2022; Martuwarra, RiverOfLife et al., 2023). The weaving of more-than-human perspectives with indigenous knowledges creates a shared discourse that can facilitate spatially-local research to inform globally-relevant practice. This ‘translocal’ approach (Loorbach et al., 2020) leverages the best available (multiple) knowledges to support efforts to re-imagine and re-connect socio-cultural relations to landscapes (Mason & Riding, 2023). More-than-human relations that acknowledge, know and protect ‘things that matter’ for any given river system can support ways of co-existing generatively with living rivers across the globe.

7 | CONCLUSION

The recent uptake of the Anthropocene term in relation to the natural sciences has been in response to both the observed effects humans are having on the landscape but also in the altered/fractured relations humans have with rivers. To move forward with a more-than-human approach, a dissection of the Anthropocene term and the practices it represents are required. For aside from being just a nominal term it is a way of knowing and making landscapes.

Interactions of nature, environment and society operating in the Anthropocene landscape of the Waimatā catchment in the Gisborne region are complex and messy. The Anthropocene is contended with in different ways by those participating in forestry, restoration or identifying as iwi. Historical and current approaches to forestry and restoration are inherently piecemeal and operating out of bound blocks due to the path dependency created by the Native Land Court rulings. The extensive lived histories of iwi groups along the Waimatā and their holistic view of the catchment can aid in the ability to live generatively with the river.

Through this promotion, the Anthropocene appears to lose footing with more-than-human knowledges. Even at face value, the terms themselves are incompatible. Upon a deeper and more theoretical inspection, the intrinsically human-centric Anthropocene is limited, even when considered in multiplicity, in moving towards a socio-natural perspective for living with the Waimatā River. This supposition is not solely applicable to the case study discussed here, given its entire sense revolves around the individuality of place. When considered epistemologically rather than geologically, the Anthropocene may have reached its logical conclusion. It has brought us to the era of more-than-humanism, a chance to reduce the environmental impact of the Anthropos, not in an attempt to right past wrongs but because we are inseparable from nature itself.

ACKNOWLEDGEMENT

Open access publishing facilitated by The University of Auckland, as part of the Wiley - The University of Auckland agreement via the Council of Australian University Librarians.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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How to cite this article: Thomas, M., Lythberg, B., Hikuroa, D. & Brierley, G. (2024) Problematising the Anthropocene: Geographic perspectives upon the riverscapes of Waimatā Catchment, Aotearoa New Zealand. *The Geographical Journal*, 00, e12598. Available from: <https://doi.org/10.1111/geoj.12598>