THE ROOT OF THE MATTER: FORESTS & COLONIAL HISTORIES IN AOTEAROA NEW ZEALAND

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DRAFT ONLY

Thinking through Forests

Forests, with their complex networks of relations among different life forms, have their own life histories, often intimately entangled with the lives of people.

In contemporary scholarship, many forests once thought wild and pristine are found to have co-evolved with human communities over millennia – land, water, plants, animals and people engaged in reciprocal exchanges, shaping each other's futures (Hecht et al., 2014).

In places like Amazonia, this entanglement between people and forests is so profound that shape-shifting forest animals (jaguars, for instance) and humans (shamans or warriors, for instance) are thought to share similar cultures, and may change into each other (Viveiros de Castro 1998, Vilaca, 2007).

This and other indigenous philosophies have helped to inspire a 'more-than-human' anthropology that investigates living communities including plants, animals and other life forms, as well as human beings, where forests may 'speak' and 'think' (eg Kohn 2013).

Even in the most remote parts of the world, however, forests have been destroyed or radically altered by by global exchanges. As Anna Tsing describes, richly diverse old growth forests around the world – in Japan, China, the Pacific North-west or Amazonia – have been felled for industrial uses and replaced by monocultures - pasture or tree plantations, for instance. In industrial forestry:

> Unwanted tree species, and indeed all other species, were sprayed with poison. Fires were absolutely excluded. Alienated work crews planted "superior" trees. Thinning was brutal, regular, and essential. Proper spacing allowed maximum rates of growth as well as mechanical harvesting. Timber trees were managed for uniform growth, without multispecies interference, and thinned and harvested by machines and anonymous workers (Tsing 2021, 41).

In this extractive process, Indigenous groups who live among forests are often displaced. As soils are exhausted or trees are stricken by disease or climate change, industrial plantations are abandoned as the foresters move on to other, more promising locations. Nevertheless, in these ravaged landscapes, forest remnants may still yield new forms of life, as processes of resurgence create new adaptive niches (Tsing, Bubant, Gan and Swanson 2027).

In Aotearoa New Zealand, one of the last places on earth to be found and settled by people, these processes have a much shorter history than in many other parts of the planet. When the first star navigators from island Polynesia came ashore, perhaps just 800 years ago, they found a land of forests, with trees, plants and animals very different from those in their tropical homelands.

The ancestors of those first settlers had crossed the Pacific, sailing from island to island and constantly adapting to new conditions. In the process, they evolved philosophies in which all life forms, including people and forests, are interconnected in a vast kin network, engaging with each other and endlessly creating new forms of life through reciprocal exchanges. In this article, we explore these ways of being, and the very different philosophies of the settlers who arrived from Europe and elsewhere from the late eighteenth century onwards, and how these have tangled and clashed in Aotearoa New Zealand.

As co-authors, Anne Salmond and Manu Caddie are both from Tairāwhiti, the eastern part of the North Island, which features largely in this account: Salmond, a scholar in anthropology, Māori studies and environmental studies raised in the region, and Caddie an Indigenous person who married into a local iwi (kin group) 26 years ago, and co-founded Mana Taiao Tairāwhiti, an environmental organisation led mostly by mana whenua (local Indigenous peoples).

As on the marae (speaking ground), or in forests for that matter, we each have our own voices, shaping the way this article has been written.

Forests in Aotearoa New Zealand: Anne Salmond

Te Wao-nui-a-Tāne (Tane's Great Forest)

In the cosmological accounts taught in ancestral whare wānanga (schools of learning) in Aotearoa New Zealand, the emergence of the living world is often framed in the language of plant growth:

Te Pu	Origin, source, main stock of tribe, root
Te More	Cause, taproot
Te Weu	Hair, rootlet
Te Aka	Long thin roots, stem of climbing plant
Te Rea	Growth
Te Wao-Nui	Primeval Forest
Te Kune	Conception, pregnancy, growth
Te Whe	Noise, sound
Te Kore	Creative void, Nothingness
Te Po	Night, the Unknown
Rangi	Sky
Papatuanuku	Earth mother

(Best 1976, 62, quoting Hamiora Pio of Ngāti Awa).

According to the nineteenth century *tohunga* (ritual expert), Te Matorohanga, everything in the living world is shaped by the same fundamental forces: "Nga mea katoa i tipu ai, i ora ai, i whai ahua ai, ahakoa rakau, kowhatu, manu, ngarara, ika, kararehe, tangata" ("All things are made to grow, live and take their form, whether trees, stones, birds, reptiles, fish, animals or people") (Smith 1913, 13).

The concept of tipu – to grow, increase; shoot, bud – is linked with the emergence of all living beings, including trees, stones, animals and people. It also gives rise to the word *tipuna* – ancestor, grandparent (literally, 'grown'). A founding ancestor might be spoken of as a take, or 'root ancestor,' as Edward Shortland remarked while describing a land dispute in the mid nineteenth century:

> "So and so is the root of the estate. Now then…" is the form of words in which they invariably commence. He then endeavours to prove that this root exercised some right of ownership undisputed by anyone and deduces, step by step, the descent of his clients from this ancestor or root (Shortland 1851, 96).

From these root ancestors, whakapapa (genealogy, descent) can be traced back to the beginnings of the cosmos. This is exemplified by Tāne-nui-a-Rangi, the ancestral house carved and decorated by Paki and Hinemoa Harrison at the University of Auckland.

The house itself embodies Tāne, the shape-shifting ancestor who ascended the skies on a whirlwind to find the baskets of knowledge; and in his guise as Tāne Mahuta, is the ancestor of forests. In its carvings and paintings, this house tells the story of the beginnings of life on earth, as recounted in Te Rangikaheke's beautiful account Nga Tama a Rangi (Rangi's Children), written for Governor George Grey in 1849:

> E hoa, whakarongo mai! Kotahi ano te tupuna o te tangata Maori, ko Rangi-nui e tu nei, ko Papa-tuanuku e takoto nei. Ki nga tangata Maori, na Rangi raua ko Papa nga take o mua. (Friend, listen to me! There is only one ancestor of the Maori person, Rangi the great sky standing here, and Papa the earth lying here. According to Maori people, the take (root) of the past came from Rangi and Papa) (Te Rangikaheke GNZMMSS 43:893).

Here, Earth and Sky are one ancestor, locked together in a primeval embrace. Between them, their children lie cramped and crowded, in utter darkness. In their frustration, Rangi and Papa's children talk about killing their parents, but after heated debate, decide to separate them instead.

After one child after another tries and fails, Tāne-Mahuta, the forest ancestor, lies on his back and pushing up with his legs, thrusts his parents apart. As light floods into the world, Ranginui weeps for his wife, creating rivers and lakes, while Papatūānuku sends up mists of longing to greet him.

Seeing his parents naked, Tāne-Mahuta cloaks his mother with forests, and his father with stars, while the wind ancestor Tāwhiri-matea, moved by their grief, attacks his brothers, unleashing hurricanes and cyclones. As storms hit land and sea, the trees, Tāne Mahuta's children, snap and fall; fish, the children of Tangaroa, ocean ancestor, dive into deep waters; while Haumia (fern root) and Rongo (kumara, sweet potato) hide in their mother's body.

Only Tūmatauenga, the ancestor of people, stands tall, defying the tempests. In revenge for his brothers' cowardice, he begins to harvest their children, catching Tangaroa's offspring with hooks and nets; pulling fern-root and kūmara out of the earth by their hair; felling some of Tāne Mahuta's children, the trees, and snaring the birds in nooses.

When Tūmatauenga's descendants, the island star navigators, arrived in Aotearoa from their tropical homelands in about the thirteenth century, they set about clearing the forests for gardens, using stone tools and fire. It is estimated that by the time the first Europeans came ashore about five hundred years later, about a third of the North Island and much of the eastern half of the South Island had been cleared of forests, and were in grassland, fernland or shrubland (McGlone, Bellingham and Richardson 2022, 5).

As forest resources became depleted, rāhui (tapu restrictions) were placed to allow them to recover. Tohunga (ritual experts) called upon the ancestors of forests, gardens, rivers and the ocean in chants and seasonal rituals, making offerings to ask permission to harvest their offspring and enhance their life force (hau ora).

If exchanges are balanced, the hau enters a state of ora (hau ora: wellbeing, health, good fortune, prosperity), but if they are unbalanced, the hau moves into a state of mate (hau mate: ill-being, ill-health, misfortune, death). This can apply to individuals, families, communities and ecosystems, including lakes, rivers or forests.[1]

Colonial ideas about forests

In early colonial times in Aotearoa New Zealand, the European creation stories were very different. Here, cosmological accounts were also powerful, for instance the biblical account in Genesis. Instead of a source of growth, God created heaven and earth, dividing light from the darkness and land from the seas, and all living creatures, including people:

> And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.
>
> So God created man in his own image, in the image of God created he him; male and female created he them.
>
> And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth (*King James Bible*, Genesis 1-28).

This creation story helped to shape philosophical musings about the relations between people and the wider world, for instance John Locke's theory of property:

> God, when he gave the world in common to all mankind, commanded man also to labour, and the penury of his condition required it of him. God and his reason

[1] Much of the basic research for this section of the paper was carried out as part of a Marsden research programme, 'Te Ao Tawhito: the Ancient Māori World' (2010-2015), with a team from Māori Studies at the University of Auckland - Anne Salmond, Hone Sadler, Robert Pouwhare, Jeni Curnow, Joe Te Rito and Jane McRae - exploring ancestral tikanga (ways of living and thinking) by studying and translating a large number of early Māori manuscripts, including the cosmological chants.

> commanded him to subdue the earth, i.e. improve it for the benefit of life, and therein lay out something upon it that was his own, his labour. He that in obedience to this command of God, subdued, tilled and sowed any part of it, thereby annexed to it something that was his property, which another had no title to, nor could without injury take from him (Locke 1690, Chapter 5, Section 32).

The same story also shaped the law of property in the early colonial period, as outlined by William Blackstone in his *Commentaries on the Laws of England* (Book 2, Chapter 1), for instance:

> In the beginning of the world, we are informed by holy writ, the all-bountiful creator gave to man "dominion over all "the earth; and over the fish of the sea, and over the fowl of "the air, and over every living thing that moveth upon the earth." This is the only true and solid foundation of man's dominion over external things, whatever airy metaphysical notions may have been started by fanciful writers upon this subject.
>
> The earth therefore, and all things therein, are the general property of all mankind, exclusive of other beings, from the immediate gift of the creator. And, while the earth continued bare of inhabitants, it is reasonable to suppose, that all was in common among them, and that every one took from the public stock to his own use such things as his immediate necessities required.

Rather than a nurturing mother, the earth was understood as inanimate, and created for human purposes. Ideas of 'improvement' also shaped scientific thinking, with models of social 'progress' from hunting and gathering ('savage') to agricultural ('barbaric') to industrial ('civilised') societies emerging at this time - for instance in this quote from Georg Forster, the young German naturalist who accompanied James Cook to New Zealand, in Dusky Sound in 1773:

> The superiority of a state of civilization over that of barbarism could not be more clearly stated, than by the alterations and improvements we had made in this place. In the course of a few days, a small part of us had cleared away the wood from the surface of more than an acre, which fifty New Zealanders, with their tools of stone, could not have performed in three months…
>
> Nor had science disdained to visit us in this solitary spot: an observatory arose in the centre of our works,… where the attentive eye of the astronomer contemplated the motions of the celestial bodies. The plants which clothed the ground.. in the forests likewise attracted the attention of philosophers, whose time was devoted to mark their differences and uses. In a word, all around us we perceived the rise of arts, and the dawn of science, in a country which had hitherto lain plunged in one long night of ignorance and barbarism! (Forster 2000, I,105-6).

Those who subdued the earth by clearing and planting it could claim it as property; and in the 'civilising' processes that followed, the land was cut up into blocks and sold as a commodity, thus uprooting and severing the sprawling, overlapping whakapapa networks, with the migratory, overlapping seasonal patterns of land use they fostered. Once sold, the land was generally cleared of forest, put in pasture and fenced, and protected by the laws of trespass.

In 1840, when Te Tiriti o Waitangi (The Treaty of Waitangi) was signed, about half of Aotearoa New Zealand's landscape was covered with indigenous forest. Over the next seventy years Te

Wao-nui-ā-Tāne shrank to about a quarter of the landmass (Beattie and Star, 2010, 195).

In ancestral *tikanga* (ways of being), the ruling idea of kinship between people and other life forms was interwoven with a strand of human control. Likewise in early colonial thinking, the ruling idea of human dominance was interwoven with a strand of kinship with Nature, and responsibility for its well-being.

In his masterwork *Kosmos* (1845-62), for instance, the German naturalist Alexander von Humboldt wrote about a 'wonderful web of organic life' 'animated by one breath – from pole to pole, one life is poured on rocks, plants, animals, even into the swelling breast of man'– a description of the planet closely resonant with Maori ways of thinking (Von Humboldt quoted in Wulf 2015, 120).

These different philosophical strands led to a history in which the widespread clearance of indigenous forests alternated with attempts at sustainable harvesting, or their conservation (McGlone, Bellingham and Richardson 2022: Beattie and Star 2010).

Thus while some settlers urged the need to clear the forests to establish a pastoral Eden, for instance the early Wesleyan missionary Schackenberg in 1841: "If you find your mind, your heart to be a wilderness, cultivate it in the same manner as you do your fields, cut down the bush, great and small – spare no sin" (Knight 2009, 326), others lamented their destruction, for example William Pember Reeves in his poem "Ao Te Roa":

> Mighty are axe and fire, destroyers twain,
> Swift servants of the arch-destroyer, Man:
> And he is mighty as he hews amain,
> Bronzed pioneer of nations. Ay, but scan
> The ruined wonder never wrought again,
> The ravaged beauty God alone could plan!
> Bitter the thought: 'Is this the price we pay –
> The price for progress – beauty swept away? (in Kuzma 2003, 454)

This regret, plus a realisation that deforestation was having devastating impacts on flooding and erosion, led to efforts to conserve indigenous forests. In 1874, Julius Vogel's government passed a Forests Act, and a Chief Forest Conservator, Campbell-Walker, who had worked in India and was familiar with German forestry, was appointed. Quoting von Humboldt, he argued that indigenous forests should be managed for sustainable supplies of timber, flood protection, and their beneficial impacts on erosion and the climate (Beattie and Star 2010, 203).

Campbell-Walker was opposed by those who regarded indigenous timber trees as inferior to Northern Hemisphere conifers, and heading for extinction – an idea that in the late nineteenth century, often mirrored ideas about the imminent demise of te iwi Māori, the Indigenous Peoples. According to John Sheehan MP, for instance:

> The same mysterious law which appears to operate when the white and brown races come into contact… by which the brown race, sooner or later, passes from the face of the earth – applies to native timber (Beattie and Star, 2010, 215).

Eventually, Campbell-Walker's critics won the day. In 1887 the position of Chief Conservator of Forests was disestablished, and the logging of indigenous forests resumed

unabated.

Once again, deforestation led to widespread flooding and erosion, and botanists including Leonard Cockayne, who helped to establish the Royal Forest and Bird Protection Society, fought to save them. By 1919 their efforts led to the founding of the State Forest Service, headed by a Canadian forester MacIntosh Ellis, who argued for a sustainable future for indigenous forests.

By 1925, however, immense areas of exotic conifers were being planted, and conservationists began to advocate for indigenous forest reserves for wildlife and scenery, rather than sustainable timber production. This was controversial, for instance when the NZ Forest Service opposed the establishment of the Waipoua Forest reserve in 1948:

> To lock up 40,000 acres as a plant museum or 'tree cemetery' would be regarded by the Service and a large body of its supporters as fantastically wasteful of land and natural resources (McGlone, Bellingham and Richardson 2022, 6).

After World War II, a shortfall in housing led to a surging demand for timber, and more indigenous forests were felled, including those on Māori land, and more exotic plantations were planted. At the same time the Forest Service, citing the risks of disease or climatic events to exotic trees, fought to preserve indigenous forests for future logging (Ibid, 9-11).

Loggers and sawmillers often circumvented these controls, however, and in response to their clearance, an assertive conservation movement emerged in the 1970s to fight for the preservation of natural old-growth forests. Still, tawa forests were being logged for chipping and wood pulp and indigenous forests were being clear-felled for exotic plantations.

While the Forest Service tried to study the sustainable management of indigenous forests, their efforts were small scale and sporadic, as their journal noted in 1960:

> The fact remains that planned experimentation as the basis of scientific study has been notoriously absent. In the whole of the country's indigenous forest estate there are probably not five sets of even small plots which have been studied and tended continuously over a period of the 40 consecutive years of departmental existence, let alone any longer (Ibid, 11).

In 1987 the Forest Service was disestablished. Old growth indigenous forests were handed over to the newly formed Department of Conservation, and their logging was prohibited.

At the same time, many exotic state plantations were sold to private investors, including those established as 'conservation forests' in response to widespread erosion. Since that time, the clear felling of pine plantations has dominated timber production in Aotearoa New Zealand, and the export of raw logs to markets like China and India.

While there has always been an interest in the sustainable management of indigenous forests in Aotearoa New Zealand, then, this has never happened at scale. Research and investment has overwhelmingly been channeled into industrial forestry with exotic monocultures, especially *pinus radiata*. This remains the case after concerns about climate change led to the creation of the Emissions Trading Scheme, and the use of production forests and then carbon farming with pine trees for carbon sequestration.

While these processes proved disruptive in many parts of Aotearoa New Zealand, the environmental impacts have been particularly severe in Tairāwhiti, the east coast of the North Island, which has some of the most erodible land in the world. Here, concerns about the devastation caused by commercial forestry and carbon farming have come to a head in very recent times.

Forests in Tairāwhiti: Manu Caddie
Matemate-a-one

Wānangahia te atua o te rangi
O te rā, o te marama, o te whetū, o te kapua, o te hau
Tātaihia ko te kawa o te rangi,
Ko te nui o te rangi, ko te hua o te rangi

Ko te paki o te rangi, ko te pū o te rangi
Ko te mana o te rangi ka tau hā,
Whakatau ko te rangi e tū iho nei

Ka tau hā, whakatau
Ko te whenua e takoto ake nei
Takitakina ko te kawa o Papa
Ko te horanga ā-nuku, he atua!

He tipu te atua, he rākau te atua,
He ngārara te atua, he manu te atua
He oneone te atua e tangi ai te mapu

I te korowai ka takapau he kawa ora!

Let us invoke the atua of the sky
Of the sun, of the moon, the stars, the clouds and of the wind
Trace the kawa (ritual) of the sky
The expanse of the sky, the abundance of the sky
The glow of the sky, the origin of the sky
Welcome the mana of the sky
Invoke the sky that stands here

Let us invoke
the land that lies here
Trace the kawa of Papa
The spreading out of the earth, an atua!
The atua is growth, the atua is a tree
The atua is a reptile, the atua is a bird
The atua is the earth, weeping with indrawn breath
The cloak lain down as a kawa of life!

(Wayne Ngata, in Mana Taiao Tairāwhiti, 2023)

In this chant, Wayne Ngata summons up the ancestral powers of earth and sky. A former Māori Language Commissioner from Ūawa (Tolaga Bay), Tairāwhiti (the East Coast, on the North Island of Aotearoa New Zealand) Ngata recited this *karakia* (incantation) to formally open a meeting between representatives of Mana Taiao Tairāwhiti (literally, the mana of Tairāwhiti's living world), concerned Tairāwhiti residents, and the Ministerial Inquiry into

Land Use.

This Inquiry was established by the New Zealand government in the wake of two devastating cyclones in early 2023, to investigate the impacts of land use in the region and the causes and solutions for forestry slash (logs and other harvest waste from commercial pine plantations).

In his *karakia*, Ngata calls upon the power of *Papatūanuku*, the Earth Mother, who is weeping with indrawn breath. During Cyclones Hale and Gabrielle, the land was ravaged by storms that that stripped millions of tonnes of soil off the hills, ripping away the cloak of trees and leaving the earth naked and bare. Gouged by cut logs and toppled trees, local landscapes were scarred by more than one million landslides.

As they moved downstream, rafts of logs formed dams in gullies, around bridges and on river bends that burst, creating mini-tsunamis. During the floods, forestry waste smashed through fences, roads and bridges, destroying paddocks, orchards, crops and vineyards, farm buildings and houses, choking streams and rivers, and smothering beaches and harbours with sediment and slash. More than 60 bridges in the region were destroyed or damaged.

The impact on local landscapes and communities was devastating. Property, livelihoods and lives were lost, the link with land and sky was ruptured. Local people became fearful when it rained, and mourned the loss of familiar landmarks. For Māori, this kind of grief is known as *matemateāone*, literally 'the many deaths of the earth.' *Matemateāone* has a wide range of meanings, although these converge upon pain arising from relationships between people and the land. According to linguist Wharehuia Milroy:

> Matemateāone grows from within the group, knowing and getting to know each other. The physical cues such as trees, mountains, rivers and kainga [settlements] etc. are all factors that activate matemāteaone. (Milroy in Te Awekotuku and Nikora, 2003, 23)

In Tairāwhiti, this kind of grief has flowed in and out like the tide. Over the past ten years, it has surged as the region has experienced an accelerating series of catastrophic floods, caused in large part by the way land in the region has been used and abused during human occupation.

When the first humans arrived in Tairāwhiti about 800 years ago, local landscapes were cloaked in temperate rain forests. In coastal areas, where native forests were cleared for gardens and settlements on the foothills and river flats, forest stands were left for building timber, birds, bush foods, and fibres. (Coombes et al. 2000) In the hinterland, forest resources were seasonally harvested.

Although about one third of Aotearoa was cleared of native forest prior to European arrival, mostly by burning, indigenous forests in Tairāwhiti remained relatively intact (except around coastal bays) until the late nineteenth century. At about that time, according to a European bushfeller in the region:

> The steep hills and river flats were bush covered right down to the beds of the rivers, which were hard and full of huge boulders. The water was clear and sweet, and it ran fast. Children swam in the clear pools, and there were eels, native trout and fresh water mussels. The native bush was beautiful. It was full of tawa, with plenty of totara, white pine and matai. There was beech forest at the higher levels. There were pongas and ferns of all sorts, and the undergrowth was thick and green. (Howard 1976, 4)

After European settlement in Tairāwhiti, from the 1880s the land was surveyed into blocks, titles were awarded by the Native Land Court and land sales and clearance accelerated dramatically. In the early 1900s, the Royal Commission on Forestry stated that "No forest land, except if it be required for the special purposes of a climatic or scenic reserve and which is suitable for farm land, shall be permitted to remain under forest if it can be occupied and resided upon." (Royal Commission on Forestry, 1913, C12 XX)

Across the region, large areas of bush were felled and burned for pasture for sheep farming, including on Māori lands. Native trees were felled for houses, bridges, fences, jetties, farm and office buildings, and mills were set up to process the timber. This phase of forestry relied on native forests, but no attempt was made to manage them sustainably. (Coombs et al.)

The erosion from this large-scale land clearance across the region was catastrophic. According to two geologists employed in 1920 to assess the impacts on the Waipaoa catchment, the results included

> greatly increased sheet-washing of the soils; great increase in the number of slips, slumps and rain-gullies; aggradation of the stream-beds; wandering of the streams over valley-bottoms; lateral erosion of the river-banks; burying of culverts and bridges; filling-in of the Gisborne Harbour; and more severe and frequent floods. (Henderson and Ongley 1920, 29)

Although Macintosh Ellis, the first Director of Forests in New Zealand (1920-1928), suggested the restoration and sustainable harvesting of native forests, government initiatives including Land Clearance grants, Stock Retention schemes, Land Development and Marginal Lands Loans schemes encouraged further clearance of land in the region that had reverted to shrublands since the 1930s. These provided subsidies for land, fertiliser grants, reduced loans, and guaranteed minimum livestock prices. (Fuller, Brierley, Tunnicliffe, Marden et al., 2023, 429)

It was not until the late 1950s that afforestation schemes were proposed as a way forward in Tairāwhiti. The afforestation schemes involved mass plantings of Pinus radiata, an exotic conifer, initially as conservation plantations, and targeted planting of willow and poplar on erosion-prone hillsides and gullies. (Gundry 2012, 222) A timely opportunity to explore sustainable approaches to native forestry was squandered.

Even so, remaining stands of forest near Māori settlements were still extensively used for food and other resources. As *kaumātua* (elder) Rūtene Irwin reported:

> When I was a kid the Pipiwhakao forest provided for many of my family's needs: It was our supermarket, you see. I'd go there and trap birds - kereru especially. We'd set up traps by bending branches and tying them down with string ... Wait, wait, wait some more, then ... dinner. At other times of the year, we'd collect kiekie leaves - the inner ones which are whiter, just like you'd go for the heart of a good lettuce. We call that tawhara.
>
> I'd collect tutu and drain the juices out so my mother could make a dessert out of it with karengo to set it. There were all sorts of berries and fruits which could be collected there. Even in the 1960s, those foods were important as [a] supplement to shop food. How much more important those forests must have been before there were shops. (Irwin in Coombes et.al., 2-20-21)

On farms owned by Māori, erosion was often blamed on poor land management, although farms owned by Pākeha (European New Zealanders) suffered similar damage. According to a

Department of Lands and Survey report in 1964, for instance:

> The reasons usually given for the quite evident deterioration in Maori land in this part of the region include the difficult nature of the land itself, the unfavourable climate, the extensive erosion, the granting of leases to Europeans without right of compensation for improvements and without rights of renewal and the difficult title position of most of the land. All these reasons are valid but the most important of all is the personal factor.
>
> With some notable exceptions the Maori has yet to become a good farmer under present day conditions ... Many Maoris seem to lack some essential attribute for a business of this type. They do not generally show the needed ability to plan ahead and budget for essential requirements such as maintenance, topdressing, and stock replacement. They are usually good workers but not good managers. (Lands and Survey 1964, 83)

In 1979, the Raukūmara Forest Park was established, 110,000 hectares of mature indigenous forest extensively grazed by deer, goats, pigs, possums and other pests; and in 1987 the Park was handed over to the newly created Department of Conservation. In that same year, the New Zealand Forest Service was disestablished, the pine plantations that had been established for soil conservation were sold by the state to private interests, and wholesale harvesting began once again. As John Ruru, who had just become the district manager of the New Zealand Forestry Corporation in Tairāwhiti, lamented:

> We had gone through the stage of acquiring the land, planting the trees and establishing the forest, and it had got to the stage of setting up the forests for harvesting. When the decision was finally made, it really cut up a lot of people, myself included, because I felt let down and cheated by the government.
>
> We were told a whole lot of lies. They had an ulterior motive and that was to sell the forests. My argument was that the forests couldn't be sold because of the reasons for which they were established – that is, erosion control… Fronting up to the people was the worst part, as virtually all of them lost their jobs when the forests were sold. (Ruru in Gundry, 223)

Pastoral farming on steep hillsides was still causing severe erosion, with the formation of gullies and sedimentation in rivers, most spectacularly during Cyclone Bola in 1988. In response to this and the declining profitability of sheep and beef farming, many local farms were sold to forestry companies. As Colin Williams, a local farmer, remarked:

> One of the big tragedies is that there's so much beautiful strong land on the Coast that's gone into trees. It would have been much better to keep it in farming, which is more profitable for people and communities like Tokomaru Bay, Ruatoria and Tolaga Bay. Now any profits from forestry – apart from local trucking firms and the like – goes overseas and is not spent locally. The profit from farming was always spent locally, providing employment for so many people. It's a green desert now. (Williams in Gundry, 191)

After Cyclone Bola in 1990, Basil Graeme, North Island Conservation Officer for Forest & Bird., wrote about forestry in Tairāwhiti:

> There is a role for commercial forestry, enhancing the regional economic base, and for catchment management on the better hills close to the plains. However the most cost-effective catchment protection for a huge area between these different plantation types

> is to allow the bush to return.
>
> All this land needs is retirement and pest control; nature will do the rest. It is here in the naturally revegetating lands that conservationists can enhance the process with judicious planting of seed source trees that are regionally scarce. The manuka and scrub species are already there, in pockets and gullies, waiting to do their job.
>
> If it is appropriate for this region to return to subsidised pseudo-commercial forestry, then it is essential to first zone land suitable for commercial forestry and zone out with a green line those lands requiring permanent tree cover. We have enough to pay for without replacing one cycle of inappropriate land use with another.
>
> The nation does owe a debt to the East Cape. We have had 100 years of wrenching export earnings from these hills. We will all have to pay if the category 3 lands are to be purchased, replanted and retired. We will all have to pay if most of the category 2 lands are to be purchased and retired. Anything less than this commitment to a "green line" is a decision to let the region die. (Graeme 1990, 39)

In 1992, local iwi Ngāti Porou set up its own commercial forestry operation in partnership with Hansol, a Korean company, expanding its holdings over the next twenty years and retaining jobs and profits in the region. (Gundry, nd., 224) Once again, however, a combination of pasture on erodible steeplands and the clear-fell harvesting of pine plantations led to severe flooding, now aggravated by forestry waste in the floodwaters, culminating in floods in Ūawa (Tolaga Bay) in 2018 that battered roads, fences, bridges and houses with tangled masses of forestry logs, and provoked a national outcry.

In the latest phase, carbon farming with pine trees, funded by the Emissions Trading Scheme, is expanding in the region, with highly erodible landscapes being sprayed with defoliant (Smale 2023) and then mass planted with relatively short-lived, shallow rooting, highly flammable monocultures of pine trees (BDO Spicer, 2021).

Given the risks of fire, disease and increasing storm damage, this is not a credible form of long-term carbon sequestration in a time of climate change. For local communities, pest- and weed-ridden plantations of ageing and dying pine trees across vast parts of most catchments are the most likely legacy of this latest central government policy, conceived at a distance from the region but impacting local landscapes throughout Tairāwhiti and beyond.

In September 2021 a group of local Māori organised an event to inform landowners about alternatives to carbon farming with pine trees, including indigenous afforestation. At this event, ‘Recloaking the Whenua,’ more than 300 people joined online sessions featuring land use researchers, central and local government officials, ecologists, farmers, entrepreneurs and conservationists.

Following this event, a regional initiative called Te Weu Tairāwhiti was formed to focus on the impacts of carbon farming, climate change and land use in the region. This group began to interview local leaders and families working in farming and forestry sectors about the likely impacts of the rapid transition to ‘permanent pine’ that would no longer be harvested, and organised educational resources, events and roadshows to share information and facilitate feedback from residents.

Soon afterwards, a study examining the impacts of deforestation on five major catchments in Tairāwhiti noted that, in one of them, the Waiapū river is the highest sediment yielding river in New Zealand, and one of the worst in the world, with severe hillslope erosion and river

bed aggradation that have accelerated sharply since human arrival. (Fuller, Brierley, Tunnicliffe, Marden et.al.).

After the cyclones, Manaaki Whenua Landcare Research, a Crown Research Institute, used satellite imagery to analyse how East Coast landscapes under different kinds of vegetation cover had fared. They found that the land under indigenous forests held the land together five times better than pine plantations, and ten times better than harvested plantations. (McMillan et al., 2023).

Indigenous reforestation in Tairāwhiti

Alongside the expansion of commercial *pinus radiata* plantations in Tairāwhiti, and the experience of widespread pre-planting and post-harvest erosion, various projects to restore these fragile landscapes into indigenous forest emerged from about 2000 onwards, although compared with industrial plantations, most of the early projects were relatively small in scale.

These include the Whinray Ecological Trust, formed to restore Whinray Reserve in 1999 (DoC 2024); Waikereru on the Waimatā River, led by Dame Anne and Jeremy Salmond from 2000 (Waikereru, 2024); Te Kurī a Paoa / Young Nick's Head and around Te Wherowhero Lagoon south of Gisborne city, initiated by Ngai Tamanuhiri with Geoff Park in 2001, and by landowner John Griffin (Park, 2001; Wikipedia, 2024); the Uawanui Sustainability project led by Te Aitanga-a-Hauiti in collaboration with the Allan Wilson Centre for Research Excellence from 2011 (Massey University 2024); the restoration of indigenous forests for carbon farming on Nuhiti Q station in Anaura, led by the Ferris whānau from 2011 (Mercer 2018); and the restoration of Waikanae Stream led by Ngai Tāwhiri and Gisborne District Council in Gisborne city from 2011 (Gisborne District Council, nd.).

More recently, other indigenous reforestation projects have been initiated in the region, including Whaia Titirangi, the restoration of Titirangi, the ancestral hill that stands alongside the port in Gisborne city, led by Ngāti Oneone since 2018 (Trees that Count, 2024); Raukūmara Pae Maunga, initiated by Ngāti Porou and Te Whānau-a-Apanui with the Department of Conservation, a massive project to restore 150,000 hectares of indigenous forest in the Raukūmara Forest Park which attracted a government grant of $34 million in 2020 (Raukūmara Pae Maunga, 2024); a range of iwi-led projects funded by the Jobs for Nature programme from 2021-4 (Gizzy Local, 2021); and the Toha project, launched in 2023, which offers Tairāwhiti biodiversity projects for investment (Toha 2024).

It is striking that the majority of these projects have been initiated by local hapū and iwi (kin groups), with much of the work of planting, pest and weed control being carried out by young Māori. Ancestral philosophies of care for the whenua remain strong, and these helped to inspire local responses to the cyclones.

Cyclone Gabrielle, the Mana Taiao Tairāwhiti petition and the Ministerial Land Use Inquiry

Shortly after Cyclone Hale hit Tairāwhiti on 6 January 2023, a largely iwi-led group called Mana Taiao Tairāwhiti was formed and drafted a petition asking Gisborne District Council to support an independent inquiry into forestry and land use in the region, to tighten regional land use regulations and monitoring, and to back a community-led Just Transition planning process with central government support. Within two weeks, nearly 10,000 people signed the petition.

The evening before the petition was presented to Council, a young boy was killed by a freshly cut log washed down from a harvest site on the Waimata River onto Waikanae Beach, where the river meets Te Moananui-a-Kiwa, the Pacific Ocean. After a highly charged meeting, the

Gisborne District Council supported the petitioners, and formally asked the Government to establish an inquiry into forestry and land use in the region.

Three weeks later, on 12 February 2023, a second, more devastating cyclone hit the East Coast. During Cyclone Gabrielle, ten people were killed in Hawkes Bay and one in Tairāwhiti, and hundreds of roads, bridges, homes and crops were destroyed, resulting in damage estimated by Treasury at $9 to 14.5 billion (Pullar-Strecker 2023).

Within a fortnight, the Minister for the Environment and Minister for Forestry had announced a Ministerial Inquiry into Land Use in Tairāwhiti and Te Wairoa (the district to the south of Tairāwhiti). A former Cabinet Minister, Hekia Parata from Tairāwhiti, was appointed to chair the Panel, and two experts in resource management and forestry joined her to investigate historic and contemporary land use in the region, consult with the public, and report back to Ministers within a two-month timeframe (Parata et al. 2023).

Like other locals, Mana Taiao Tairāwhiti had very little time to organise their submission to the Inquiry. They sent out an online call for volunteers, and within 48 hours, over 110 researchers and writers from Aotearoa New Zealand and overseas responded. A dedicated team was set up to manage the process, and distinguished researchers from institutions including the London School of Economics and Cambridge University joined local experts and lay people, deciphering decades-old science, summarizing community, and land-based insights, and distilling several hundred research papers into key points and summaries.

In this remarkable crowd-sourced initiative, the volunteer researchers were sorted into seven groups, each addressing a particular inquiry theme, holding on-line meetings and rapidly accumulating a vast document repository. Another team organised the primary material with a spreadsheet, while a separate group developed technology to allocate readings and manage summaries and reviews. This infrastructure was improvised on the fly, with Mana Taiao Tairāwhiti overseeing the coordination.

One week before the deadline, a group of readers and reviewers formed a dedicated writing team that distilled the work of the researchers into a 29-page, four-part submission. This made three key recommendations, asking the government to:

1. Order the immediate cessation of clear-felling on erosion-prone land;
2. Support the immediate native reforestation of harvested and erosion-prone grasslands;
3. Order the cessation of planting pine trees for harvest or carbon farming on erosion-prone land.

The Mana Taiao Tairāwhiti submission also included a presentation deck, a comprehensive 58 page thematic summary, a searchable annotated database of reviewed documents, and five papers written by subject experts, in addition to the main document, all prepared in less than a month. (Mana Taiao Tairāwhiti)

Alongside this detailed work, in April 2023 Renee Raroa, a young Maori leader from Tairāwhiti, presented an eloquent plea to the UN Permanent Forum on Indigenous Issues in New York on behalf of Mana Taiao Tairāwhiti, outlining the devastation in the region and stating, ‘The only acceptable solution is an immediate moratorium in clear-felling, and the restoration of biodiverse native cover.’ (Raroa 2023)

The Inquiry received more than 600 submissions, and the Panel’s report contained 49

recommendations. (Parata et al., 10-41) All of Mana Taiao Tairāwhiti's recommendations were included in the Inquiry Panel's final report to government.

Recloaking Papatūānuku

The seed for a new national initiative, 'Recloaking Papatūanuku,' was sown at the 'Recloaking the Whenua' conference organised by the group that would become Mana Taiao Tairāwhiti in September 2021, and at a later conference 'O Tātou Ngāhere' sponsored by Pure Advantage (a group of business leaders dedicated to a sustainable future for Aotearoa New Zealand) and Tane's Tree Trust (researchers into indigenous forests), held in Wellington on 27-28 October 2022.

Informed and guided by *mātaraunga* Māori (Māori traditional knowledge), "Recloaking Papatūānuku" is designed and supported by a consortium including Pure Advantage and Tane's Tree Trust; a range of Maori entities and landowners with deep connections with ancestral lands, including Mana Taiao Tairāwhiti; and leading environmental NGOs, among others.

'Recloaking Papatūānuku' is a nature-based plan based on *mātauranga* and leading edge science and practice. It aims to reforest and rehabilitate 2.1 million hectares of indigenous forests around waterways and on highly erodible land across Aotearoa New Zealand over the next decade. The protective cloak of forests will serve as permanent carbon sinks and habitat for many rare and endangered species, enrich and stabilise soils, enhance the quality of waterways, create jobs and weave climate and ecological resilience into landscapes across New Zealand.

The Recloaking Papatūānuku' business plan has been rigorously tested by leading analysts, working on a voluntary basis. Landowners would be paid by the New Zealand government in perpetuity to protect existing indigenous forest and/or retire low productivity farmland, and funds from the Nationally Determined Commitments for net emission reductions under New Zealand's Paris Agreement would pay for initial pest control, fencing and planting and ongoing management of the forests.

While the New Zealand government proposes to meet much of its Paris Agreement commitment by purchasing offshore credits, this strategy does not enjoy wide public support. Schemes for planting trees to offset emissions, particularly exotic monocultures, have been harshly criticised for allowing polluters to continue to pollute, while causing additional environmental damage. The costs of international credits are high (potentially $24 billion for New Zealand's commitment), their ongoing availability is uncertain, and some of these schemes have been revealed as fraudulent.

'Recloaking Papatūānuku' offers an alternative with multiple environmental and social benefits. It provides a pioneering example of a nature-based, Indigenous-inspired solution to address the crises of climate, biodiversity and culture loss, with the urgency and ambition that Papatūānuku (Earth Mother) deserves.

The success of this initiative could render Aotearoa New Zealand the first nation in the world to achieve a nature-positive status.

With the support of multiple stakeholders across Aotearoa New Zealand, this transformative initiative is well placed to literally change the face of the country, and so far the signs are

positive. ‘Recloaking Papatūanuku’ has been profiled by its stakeholders at COP28 in Dubai in December 2023, and presented to the incoming New Zealand government.

Working with Papatūānuku, Ranginui (Sky Father) and their children to recloak the *whenua* with the cloak of Te Wao Nui ā Tāne is a daunting challenge, for the Tairāwhiti region and for the nation. For the sake of future generations, our responses must be active, courageous and strategically astute, not ill-considered, evasive and lazy.

Mauri tū, mauri ora. Mauri noho, mauri mate.

Stand up, and live. Sit down, and die.

Conclusion

From the Land Wars of the 1860s to the Land March and occupations in the 1970s, and since the establishment of the Waitangi Tribunal in 1975, Māori kin groups have fought fiercely for their *whenua* (lands). Despite past and ongoing ravages of landscapes across the country, the ancestral idea of land, forests, rivers, the ocean and people as living beings interconnected in a vast kin network remains potent, generating world-leading environmental initiatives.

In 2017, for instance, the Whanganui River became the first river in the world to be recognised as a legal person, with its own life and rights. A fight to recognise the rights of Hine-moana, the ocean, is also under way. ‘Recloaking Papatūānuku’ is another example of this philosophy; with the proliferation of indigenous reforestation initiatives across Tairāwhiti testifying to the flax-roots strength of these commitments.

Many of the rising generation, taught in *kohanga reo* (preschool language ‘nests’), *kura kaupapa* (Māori immersion schools) and *whare wānanga* (Māori tertiary institutions) and schooled in *Te Reo* (Māori language) and *tikanga* (ancestral ways of being), are deeply committed to caring for Papatūānuku, with her forests, mountains, rivers and oceans.

These young people are prepared to fight for te *tino rangatiratanga* (the independence) of their *whenua*, *kāinga* (dwelling places) and *taonga* (treasures), promised to their ancestors by Queen Victoria in Te Tiriti o Waitangi in 1840. During 2024, attempts led by a small libertarian political party in the coalition government to erase that Treaty promise triggered protests even larger and more spectacular than the 1975 Land March.

The perennial struggle for the wellbeing of the *whenua,* rivers, forests and rights of Māori continues into a new generation. In a time of collapsing ecosystems and climate change, these young leaders are taking their fight to the United Nations, and their message to the world is powerful.

As Renee Raroa urged the UN Permanent Forum on Indigenous Issues in New York: “We call on the Forum to encourage all member states to center the rights and wellbeing of indigenous peoples, indigenous ecosystems, land and waters as the only true pathway to climate stability. In this there is hope for all.” (Raroa 2023)

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