

# Risk-based insurance pricing and te ao Māori

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## Abstract

This paper works towards the goal of understanding the implications of increasingly risk-based insurance pricing on te ao Māori, and is a work-in-progress draft intended for a policy audience without prior content knowledge. Our approach involved fīma hui alongside the surveying of relevant literature, and we utilise thinking on diverse economies, whai rawa - māori economies, whakaoranga - marae resilience, and huringa āhuarangi, huringa oranga - a changing climate, a changing livelihood. Literature is surveyed under the following categories: te ao Māori - Māori values, Te Ōhanga Māori - Conceptions of Māori economies, Tūraru - Indigenous conceptions of risk, and Aotearoa Rīanga - Insurance in New Zealand. The latter section includes description of Māori resilience in an unwieldy market, including self-insurance and novel iwi-led business models for marae insurance. We then describe the expected changes to insurance, namely a shift to more obvious risk-based pricing for flood-prone properties and assets. Lastly, weaving these strands of mahi, we present initial whakaaro of the impact of these expected insurance changes for te ao Māori. We find principally that while increased risk-based insurance pricing directly impacts only those aspects of māoritanga which are insurable and insured, there is still clear potential for it to exacerbate inequalities, both directly and indirectly.

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## Whakatakinga - Introduction

Understanding the reach of human-made climate change impacts into indigenous lives and livelihoods constitutes an important challenge for indigenous academics and activists across Aotearoa New Zealand. Understanding the physical impacts to our environmental systems and assets is continuing apace, however the social and ecological impacts are less understood. As Māori economists and community researchers, the challenge before us is to understand climate change - related shifts to how our society is operating (both determined publicly, via rules and regulations, and privately, through business and finance decision-making and prioritising). Without concerted and focused effort into understanding these, the current and still-to-come economic impacts of climate change are likely to exacerbate inequalities and worsen wellbeing for our indigenous peoples.

This research paper, a collaboration between oRangaHau Ltd, Te Herenga Waka | Victoria University of Wellington and Manaaki Whenua Landcare Research funded by Te Komata o te Tonga the Deep South National Science Challenge is working towards understanding the implications of increasingly risk-based insurance pricing on te ao Māori and wider Aotearoa society. Over recent years the industry has increasingly adopted more risk based pricing. (Angela, 2021; Ksenia, 2021; MAS, 2020; RNZ, 2021; Tibshraeny, 2019a, 2019b, 2021) This paper walks the reader through te ao Māori values and economies, the reach of rīanga (insurance) into this world, and provides insight into how increasing risk-based pricing in rīanga may affect Māori.

Too often, significant changes to our economic systems go ahead without effort directed toward understanding the impacts on marginalised groups, particularly those which are not well represented in governing bodies (be they private or public). In this report, we hope to begin to take a critical view of the oft-discussed moves towards a more heavily risk-based private insurance system in Aotearoa.

*Ko ngā mahi ō ināianei, hei oranga mō āpōpō  
For the communities of tomorrow, who shall benefit from our efforts today*

This whakataukī reminds us this is an issue not only now but for our mokopuna, and one which will only become more important as climate change exacerbates flood risks. We must work to understand what is coming and what it means for our communities.

The report proceeds as follows. First a brief primer on traditional Māori values is given, followed by reflections on the concept of Māori economies. In the next section indigenous conceptions of risk are discussed. This is followed by an explanation of rīanga (insurance) and its reach into te ao Māori. Discussion is given here about the specific challenges of standard market-based economic thinking when considering the context for (often rural) ahi kā Māori communities. The expected changes to rīanga are then explained, and the implications of these changes for our diverse Māori economies are mapped across four domains of te ao Māori. Finally we offer questions as recommendations for future work. This is followed by a brief glossary of terms.

## Te Ao Māori - Māori values

Our cultural values guide our understanding of and interaction with the world around us. It is important to understand the cultural values underpinning this mahi, those of Māori, our indigenous peoples of Aotearoa.

**Traditional Māori values grow from reciprocal relationships with our environment, living and non-living.** Te Taiao, the natural world, sits at the centre of Māori value sets. The Māori world view (te ao Māori) acknowledges the interconnectedness and interrelationship of all things. A core concept for tangata whenua (indigenous peoples of the land) is *whakapapa*. Whakapapa broadly interprets as “to place in layers” (often translated in the specific sense of genealogy). In our oral histories, whakapapa relationships between humans and the rest of the world are clearly understood and explained through metaphor. While there are local differences, there is commonality among different iwi (tribes) in Aotearoa in origin stories of Pāpātuanuku (earth mother) and Ranginui (sky father), and their descendents, who in turn are the origin of all things. The Māori relationship with nature could perhaps best be described as a “socio-spiritual-ecology”. (Rout et al., 2021) The unified socio-spiritual-ecology is expressed through our origin narratives. (Hēnare, 2001; Marsden, 2003)

**The foundations for Māori wellbeing come through kaitiakitanga (stewardship of all our resources), manaakitanga (care for others), ōhanga (here meaning prosperity) and whānaungatanga (the connections between us).** Note that Māori wellbeing was eroded through colonisation, especially through land loss; see Thom, (2021). These values that shape Māori inter-generational practices for building and maintaining collective wellbeing also include kotahitanga (unity). These values work through a set of practices that are learnt and enacted through giving time and support for the collective good, through whānau (family) and marae (communal and sacred meeting grounds). At a more abstract level, Stewart summarises

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the three deeply held beliefs in Māori philosophies as so: everything in existence is related, all things are living, and worlds regarded as ‘unseen’ can be mediated by the human. (Stewart, 2020) Even more concisely, Hēnare once summed up Māori philosophy in just two words: humanism and reciprocity. (Hēnare, 2015) Hēnare sums up Māori Ethics as a holistic view of human, ecological and environmental sustainability, connecting humanity with the environment in a relationship demanding reciprocity and respect. (Hēnare, 1999) At the centre of Māori relations with nature is the ethic of kaitiakitanga. (Rout et al., 2021) Components of te ao Māori that guide and inform these values are mauri, tapu and mana. These can be known as life essence of all things, the sacredness of that essence, and the manifestation of these, respectively. (Hēnare, 2001)

**These values link Māori to particular lands.** A key implication of this different view of the world is the strong ties Māori have, emotionally and spiritually not only to Te Taiao (the natural world) but also to particular rohe (regions) and specific places in Aotearoa. Māori give whakapapa to particular lands, with links to culturally significant rivers, mountains and lands, as well as whakapapa to iwi, hapū, and marae. After having land confiscated and removed over many years, particular land parcels which have been retained or returned now house cultural infrastructures which maintain these ancestral links for our peoples. These ahi kā communities (“those who keep the home fires burning”) are doing important work in their kainga for their hapū to maintain our identity as indigenous peoples.

These values shape the ways Māori interact with the world, including with important ramifications for how we view the natural world and where our whānau will live and build in future. As we move forward to thinking about economics and climate change, these values remain top of mind:

### Te Ōhanga Māori - Conceptions of Māori economies

One way to approach the question of implications of a change in insurance on te ao Māori is to consider implications across Māori economies (as opposed to the Aotearoa economy). A challenge implicit in this is to characterise the complex “Māori economies”, ranging from contributions of traditional nature-based hau kāinga (home people) rural economies to Māori innovators working at the cutting edge of technology. A challenge then is how to adequately characterise both as valuable in our conception of the economy. This section explains and considers different conceptions and underpinnings of Māori economics.

### The Māori economy contains numerous tribal economies, comprising a range of enterprises across many industries.

Māori economic entities are building mergers, acquisitions, joint ventures and diversifying portfolios. Our economy is built of social organisations including iwi, hapū, households, entrepreneurs, businesses and collectives (whānau, iwi, hapū co-operatives) that self-identify as Māori, as well as Māori owned businesses operating primarily in the general economy.

**Māori cultural values shape how our economy functions.** Cultural values influence our interactions in market-based systems as they do in non-monetised social and cultural aspects of life. For Māori, like other Indigenous peoples, an economy is not only completely inseparable from their wider society, it is (to varying degrees) subservient to our society’s values, beliefs, and goals. (Hēnare, 2016) This is reflected in the concept of *ohaoha*, sometimes used as a kupu for economics, but also conveying concepts of generosity, charity, and gifting. This reflects the reciprocity of interactions and exchange in indigenous Aotearoa society. Other terms for economics are *ōhanga* and *whairawa* – *rawa* being goods or assets, *whai* being possession, or a pursuit or search. Hēnare (2016, p135) outlines how for Māori an economy needs to be embedded in and constrained by both the natural and social: “*economics exists in the ecology, and not the other way around... [and] the economy is embedded in society and the values of that society inform the economy.*” He refers to this as the ‘Economy of Mana’, outlining how it is driven by “*four wellbeings—spiritual, environmental, kinship, and economic*”. (Hēnare, 2016, p135)

**Individual economic attitudes among Māori often draw on our cultural values.** Indigenous concepts of value centre on collective interest as opposed to self-interest. (Dell et al. in Ellis, 2021, p24) Whānau relationships have been identified as a key driver of behaviour and attitudes towards money for Māori: sharing and lending money to whānau, travelling to spend time, and contributing to collective needs are commonplace. (C. Houkamau et al., 2020) It’s clear from qualitative work in the Māori business and financial literacy literature that there is a constant balancing of financial whānau obligations, whānauangata (a sense of belonging) and cultural obligations, with personal financial needs. ( See e.g. Houkamau et al., 2020) Further, there is evidence to suggest many Māori individuals’ strong Māori allegiances and traditional Māori values can outweigh the desire for individual wealth. (C. A. Houkamau & Sibley, 2019) A culture of manaakitanga and care within te ao Māori is well documented. For example, studies demonstrate that Māori women spend more time caring for others and do more voluntary and community work than non-Māori women and men. (Nana et al., 2013) Achieving sovereignty and economic independence are goals of Māori economic development, and economic development is considered a vehicle for achieving improved social outcomes and reducing disparities. (O’Sullivan & Dana, 2008)

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### **The Māori economy is made up of organisations which balance profit with our social, cultural and economic goals.**

Research in Māori economies indicates that a distinctive feature of Māori economic well-being is a focus on something other than material wealth. Relational wealth, or a well-being from close, reciprocal interconnections with loved ones and community (Diwan, 2000) is an important source of personal well-being for Māori. (C. Houkamau et al., 2020) With many Māori businesses operating outside the traditional profit-motivated sphere, there is demand within te ao Māori for strategies that reconcile multidimensional demands. (Wolfgramm et al., 2020) Some researchers argue the enactment of Māori values can be approximated by a “quadruple bottom line” of development and maximisation across social, environmental, cultural, and economic domains. (Scrimgeour & Iremonger, 2004) The trade-off between financial gain and environmental kaitiaki is also one that we see playing out in Māori economies today. For example, in the eco-system services realm (see for example Lyver et al (2017) who find cultural values influence the importance placed on “eco-system services”). Māori businesses which follow tikanga and uphold Māori values differ from prevailing business approaches in ways which include: obligations to extended family groups; responsibility and accountability to a broader range of stakeholders; and the application of tikanga, protocol and practice in the business environment. (Ellis, 2021)

**The Māori economy is also characterised by our understanding that our economy sits within Te Taiao.** Not only are our operations more land-based proportionally than the general economy, but at a deeper level our economy sits within our environment, and decisions reflect that. From an Indigenous perspective, financial, human and natural capitals are seen as nested, interacting spheres with natural capital encompassing all, human capital the next layer down as within natural capital, and financial in the centre, an abstraction of both natural and human capital. (O’Connell et al., 2018) Another important factor in understanding Māori economies is to remember that due to our whakapapa links, choosing where to reside and work has an additional dimension. Our tribal economies have rohe-based roots. Further, a Māori approach to resource management also draws on our cultural values and understandings (see e.g. Harmsworth & Awatere, (2013); Kahui & Richards, (2014)). Finally, Māori economies have developed in the face of sustained socio-political, cultural, and environmental trauma which indicates a high level of resilience, (Wolfgramm-Rolfe et al., 2018) indicating this understanding of economy-within-environment is a strong strategy.

**Māori had a complex economy before colonisation.** For over 500 years of human settlement in Aotearoa, more than half of our human history, our economy was complex, successful, and relatively isolated. (Easton, 2020) Since colonisation, Māori have continued to play a fundamental role in the Aotearoa economy, though we have now only re-gained around 5% of total land (mostly in freehold title). (Te Tari Taiwhenua - Internal Affairs & Te Puni Kōkiri - Ministry of Māori Development, 2021) The Māori economy pre-colonisation has been researched extensively, with the likes of Firth (1929) being some of the first published. A more recent article from Petrie (2002) discusses the Māori economy prior to colonisation, noting evidence of there always being entrepreneurial spirit among Māori, as well as the importance of Māori values in transactions.

**Māori also participate in the general economy.** Since colonisation, our people have also been participating in the general economy. Our population today is close to 16% of the national population, and our people are represented in local economies up and down the motu. While some of our people live on customary lands and collectively own assets, many more reside on property in general title. The Māori economy has leant generous support to the general New Zealand economy, particularly through marketing of the Aotearoa New Zealand brand to overseas customers and tourists. As of 2018, BERL estimated wealth in the Māori economy at \$68.7 billion, mostly held in businesses of Māori employers, and most heavily represented in agricultural, forestry and fisheries, and real estate and property, industries. (Nana et al., 2021) Sustainable, healthy and self-determining Māori and tribal economies are critical to Aotearoa’s resilience and wellbeing. (Ellis, 2021)

**The diverse economies methodology offers a useful framework for mapping units in Māori economies.** One way to characterise socio-economic interactions more broadly than only those in the market system is via a diverse economies approach. (Gibson-Graham, 2008) The core aspect of the diverse economies approach is to acknowledge the non-monetary drivers behind the decisions being made within an economy. That is, a diverse economies approach considers the economy as the complex web of diverse processes, negotiations and relationships which constitute livelihoods. This concept, now prevalent in economic geography and social anthropology/human geography literatures, argues that attempting to characterise the economy in the neo-classical sense whittles away the core drivers of those economies – the true lives and livelihoods within them. As opposed to a simplistic framing of an economy as only those monetary transactions to do with earning and employment, a diverse economies approach, similarly to a complex systems or network theory approach, considers an economy as a complex ecology of community assets: networks of interactions between people that contribute to the community resiliency, identity and wellbeing. (Amoamo et al., 2018) As Amoamo et al. write:

*“the modern Māori economy is a dynamic, deep-rooted, complex and ever-evolving space, incorporating intergenerational wealth, maintenance of cultural identity and the well-being of iwi, hapū and whānau”* (Amoamo et al., 2018)

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Table 1: A “diverse economy” representation of Te Ao Māori economic complexities, developing the framework of Gibson-Graham (2008)

Transactions	Labour	Enterprise
<b>Non-market</b> <i>Whānau flows</i> <i>Koha</i> <i>Mahinga kai gathering</i>	<b>Unpaid</b> <i>Whānau care</i> <i>Housework</i> <i>Marae voluntary mahi</i> <i>Mentoring</i>	<b>Non-capitalist</b> <i>Communal and tribal</i> <i>Subsistence</i> <i>Ahu whenua trust</i> <i>Whānau trust</i> <i>Iwi/hapū trusts/holdings</i>
<b>Market</b> <i>Sales of goods</i> <i>Sales of services</i>	<b>Waged</b> <i>Hourly paid</i> <i>Salary worker</i>	<b>Capitalist</b> <i>Māori in profit-driven private business</i> <i>Māori savings in private banking and financial markets, incl. private property investments</i> <i>Iwi/hapū holdings</i>
<b>Alternative market</b> <i>Ethically driven markets</i> <i>Local trading systems</i> <i>Co-op exchange</i> <i>Informal markets</i>	<b>Alternative paid</b> <i>Self-employed Māori</i> <i>Māori cooperatives</i> <i>Reciprocal labour</i> <i>In-kind support</i>	<b>Alternative capitalist</b> <i>Māori-values led business</i> <i>Non-profit Māori enterprise</i> <i>Māori “green capitalist”</i> <i>Māori investment efforts incl. papakainga</i> <i>Iwi/hapū holdings</i>

Moving forward, we understand that Māori economies are diverse and complex.

### Tūraru - Indigenous conceptions of risk

**Indigenous understandings include the natural environment in their thinking.** Within Te Ao Māori, risks are holistic and span multiple domains: metaphysical/spiritual, environmental, material, and relational. (Kaiser & Phibbs, 2019) Similarly, resilience is characterised as holistic and community based. Community resilience is, essentially, the social, physical, familial, spiritual, and environmental wellbeing of whānau. Drawing on a whakapapa conceptualisation, one can imagine that a risk is something with the potential to shift the dynamically created balance of a whānau or Māori enterprise. A given risk presents a significant threat to present balance, or to future balance – that is to the livelihood of a given group, and the balance this has achieved with their surroundings.

**As always, reciprocity is important: risk also comes with resilience in indigenous thinking.** Within the emergency management sphere, this is well understood and has been characterised from a resilience perspective by *whakaoranga*: the process of a community quickly coming together to support the collective in response to a disaster. (Carter et al., 2019) When a disaster occurs, the responsibility of caring for others and Te Ao Tūroa (the natural world), falls to whānau, hapū and iwi with historical ties to the areas impacted by the disaster. The *whakaoranga* process is underpinned by kaupapa Māori, informed by mātauranga Māori and enacted as tikanga Māori to co-create community and environmental resilience. (MCDEM, 2019)

**We can understand climate change risk from a te ao Māori perspective.** A traditional Māori understanding of what ‘damage’ to the climate means comes from the te ao Māori worldview and mātauranga māori (see Rout & Reid, forthcoming). As discussed earlier, the Māori worldview is that all elements of the natural world are related from a common ancestor, meaning we all (land, seas, skies, maunga, people) share whakapapa via atua. Indigenous environmental insights are generally offered in a narrative heuristic, as cosmological stories of atua. These atua narratives help with weather, seasonal and climatic predictions, and the different species’ lifecycles often give some of the critical information to inform these predictions. (King et al., 2008) The spiritual, ecological and social relationships can more fundamentally be understood through the concepts of *mauri*, *tapu* and *mana* (Royal 2007) As such, the *mauri* of the atua was strongest when the world was *utu* or in balance, before our natural processes were disrupted by human-made influences such as fossil fuels. This atmospheric pollution unbalances the climate system, and depletes *mauri*. (Rout & Reid, forthcoming)

**Work has been done cataloguing climate-change related risks to te ao Māori.** There has recently been a significant effort from Māori researchers to identify some key climate change risks, as well as strategies and approaches to mitigate and adapt

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to climate change impacts (see Awatere et al., 2021). Following the framework created in Awatere et al. (2020), natural-hazard risks to Te Ao Māori can be organised as below:

- *He Kura Taiao – Living treasures e.g. natural capital*
- *Te Whare Ahuru He Oranga Tāngata – Safe homes, healthy people;*
- *Whakatipu rawa – Māori enterprise, and*
- *Ahurea Māori, tikanga Māori – Māori culture, Māori values and principles.*

Risk assessment for Te Ao Māori ideally follows this Māori-values led, community created, indigenous risk framework. Another framework for iwi vitality outcomes, and thus of use for considering what is particularly risky for indigenous development, has been created by (Porter & Ratima, 2014). They argue that iwi vitality requires the following outcomes: secure identities, intergenerational sustainability, collective cohesion, environmental stewardship, self-determination, economic prosperity, and whānau health and wellbeing. A significant risk would damage one or many of these factors.

### **Rianga – Insurance**

Insurance is known by at least two terms in te reo Māori – *inihua*, a transliteration, or *rīanga*, which is drawn from the kupu for screen.

**The general insurance model here in Aotearoa operates as elsewhere.** Insurance involves a provider and a customer coming to some fixed term agreement about the costs associated with damage from a set of hazards and the level of payments (premiums) which the customer will pay to the provider to ensure that if the hazard occurs, the customer receives a given pay-out. For earthquakes, providers operate a *Sum Insured* model where a fixed payout is agreed, but a *Replacement Cost* is used for in Aotearoa, where the payout is to the amount required to replace the asset, however much that may be. For the market to function, there are ideally many customers, the hazards are well understood, and as are the costs associated with the hazards occurring. A sound insurance sector then contributes to financial security of individuals and firms, and supports economic stability by allowing efficient risk-taking. Insurers can spread the costs of risk events across time and the population, helping a society to ‘weather the storms’ so to speak.

**Due to the highly financialised system we live in, insurance is often a requirement.** For example, in Aotearoa insurance is required by a bank to secure a residential mortgage and to remain in accordance with the mortgage contract – elsewhere this is also common for car ownership.

**Insurance is also opaquely priced.** Due to the bundled hazard system (insuring in a single contract against many hazards), balanced with the individualised pricing nature of insurance contracts, it is difficult for customers to know how much risk-based pricing is contributing to their premiums. There are only two major companies in the market, each operating multiple brands, further making it difficult for consumers.

**The Aotearoa insurance market is unusual compared to other countries.** Our insurance market is differentiated from others by a number of factors: first, the government plays a major role in the residential insurance market through the provision of Earthquake Commission insurance (public coverage against the first tranche of damage from earthquakes and other natural hazards, if the homeowner is privately insured against fire damage). Further, our insurance market contains mostly Australian players, and our prudential regulation is relatively recent and does not constrain the product categories which an insurer can offer. There is significant cross-subsidisation across geographies and hazards. In other markets, there is a higher level of risk-based pricing. Currently, as for other countries, actual risk is but one of many factors in pricing insurance contracts.

**However, the Aotearoa market does have high coverage.** Over 95% of residential property is insured against fire damage (Nguyen & Noy, 2020), meaning it qualifies for the public natural hazard insurance provided by the Earthquake Commission.

**There are a range of insurance products being utilised by Māori, within both residential and commercial spheres.** At home, many Māori have Home insurance which covers against fire, earthquake, and other disasters, as well as Contents insurance, Car insurance, Health and/or Life insurance. At work, many Māori businesses engage in insurance against: business interruption, for their stock and assets, against Public Liability (for accidental injury and the like), and for damage to work vehicles.

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**Although many Pākehā and Māori experiences of insurance will be similar, there are some aspects of Māori cultural infrastructures which face unique challenges in the market.** For communally-owned assets, assets with a significant intangible value, and for cases of uncertain replacement costs, insurance is complicated. These aspects are often true for the assets held within Māori economies. Insurance also requires a level of financial stability and financial literacy, trust in financial institutions, and enough income to afford it. Trust in financial institutions and in the judicial system to enforce legal behaviour as a colonised population is understandably likely to be lower than for the majority of citizens. Further, our financial statistics, including income, tend to be lower than our Pākehā counterparts. It is the case that, as with many other economic safety nets, Māori in Aotearoa utilise insurance less than their Pākehā and migrant counterparts. (CCFC, 2019; “Why Do so Few Māori Have Any Insurance?,” 2019) However, it should be noted that while our people may be under-represented in financial and insurance uptake statistics, we have strong literacy in other essential skills such as manaakitanga and resilience.

**Insurance for cultural infrastructures such as whareniui insurance can be extremely difficult to access and afford for hapū** (see for example “Marae Pay Price of Poor Insurance Check,,” 2015; McLeod & Lam, 2021; Rangitauira, 2015; Stepanova, 2019; Turia, 2013; Wilson, 2016). As a result, many iwi have moved into the provision or subsidising of hapū insurance services within their rohe, with some self-insuring, some actively subsidising hapū insurance, and others entering into partnerships with insurance providers to offer tailored products. Collective insurance schemes exist for some marae assets, including contents and taonga, in multiple rohe (regions), and health insurance is also offered in some cases. Collective insurance programmes are offered by iwi for hapū assets by Te Runanganui o Ngati Porou (Ngati Porou, 2014), Raukawa (Raukawa Charitable Trust, 2016) and Waikato Tainui (*Waikato-Tainui Offer Marae Insurance Package: Press Release*, 2014). These schemes tend to involve an insurer working with an iwi (sometimes through a broker) to build a collective marae policy for their hapū to opt in to. For more detailed discussion of these, see the Reserve Bank of New Zealand working paper below. (McLeod & Lam, 2021, pg 7)

Some iwi choose to subsidise their hapū insurance, rather than organising a new collective product offering. For example Te Rarawa, in Te Upoko o te Ika, have subsidised their marae insurance.

In summary, insurance is one form of risk sharing, but other forms are being employed around the motu. These include “self-insurance” – where communities save toward their own disaster funds and can call on their communities for extra support in times of aid, rather than dealing with premiums and excesses. Other Māori communities have partnered with insurers to try to improve insurance accessibility by pooling resources to reduce premiums, and to reducing information asymmetries.

### Expected changes to rīanga

**What we expect is that in future, weather related risks will be more “priced-in”.** This means riskier homes will pay more than safer locations for coverage, or will lose private insurance access (in some cases properties in particularly exposed areas already cannot access insurance, such as along Te-Whanganui-a-Tara Wellington’s southern coastline.) With increasing information available to insurers about hazards and exposures, we expect that the market will become more risk-based, placing more emphasis on the actual risk in their pricing frameworks. This means that prices (through excesses and premiums) of insurance will rise in more “risky” flood-prone areas, as climate change exacerbates the already understood risk of flooding. Pricing in may be done through increasing premiums and excesses or by certain hazards being excluded from insurance offerings (known as partial withdrawal), or it may be that the market “freezes”, as has been seen for earthquake risk. In the latter case, this would mean that insurance contracts would not be renewed nor new contracts be available to new homeowners (a complete insurance “retreat” - see Storey et al., (2020) for more discussion of this).

**This process is being hastened along by climate change,** which has further changed the calculations for insurers. Weather-related risks are now increasing in severity and frequency. “There is likely already a human influence behind Aotearoa’s extreme flooding events. For example, the risk of an extreme rainfall event over Northland, such as was observed in early July 2014, has likely increased due to the human influence on climate”. (Rosier et al., 2015)

**From the insurers point of view, this “pricing in” is a protection of their profits.** From a societal point of view, a positive aspect of risk-based pricing is in theory that it encourages a mitigation or avoidance of those risks. Thus, for example, a price signal might encourage people not to purchase homes in flood prone areas unless they can afford to only hold that asset temporarily.

### Hīraunga - Likely implications of increasingly risk-based insurance

What aspects of te ao Māori might be affected by increasingly risk based insurance pricing?

Insurance pricing directly impacts only those aspects of te ao Māori which are insurable and insured.

## Risk-based insurance pricing and te ao Māori

Whether more risk-based insurance leads to higher premiums and excesses for whānau depends upon:

- The insurers' understanding of risks where whānau live and work
- How those risks are changing under climate change
- Insurers pricing choices (how much weight is given to that changing risk)

Following the framework of Awatere (2020) we can think about the impacts of shifting insurance pricing across four domains of te ao Māori:

### *He Kura Taiao – Living treasures*

The only products we are aware of in this realm are for those areas of te Taiao which have been financialised into “environmental markets” – such as there being insurance products for carbon farming investments in forestry (potentially also in wetland carbon storage). See for discussion of environmental markets Greenhalgh et al., (2010).

To our knowledge there are not currently other insurance products available specifically for our living treasures, except within the land cover of residential EQC insurance, covering land under and around an insured whare (house). This landcover is an aspect of EQC insurance priced using a flat pricing structure – a set percentage of the possible EQC-only repayment is used. A change to EQC pricing to be more risk-based is outside the scope of this paper, so we do not explore these implications.

### *Te Whare Āhuru He Oranga Tāngata – Safe homes, healthy people*

Māori are under-represented in home ownership and housing suitability statistics. Tatauranga Aotearoa, Statistics New Zealand, reports that in 2018, the proportion of people living in an owner-occupied dwelling was 47.2%, as compared to 70.6% for our Pākehā population. In Aotearoa New Zealand, there is a clear difference in housing habitability and security of tenure between owner-occupied and rental housing. (Stats NZ, 2020) The 2018 Census showed that Māori were more likely to live in damp homes affected by mould than Pākehā, as well as other problems such as feeling too cold, or in homes requiring major repairs. Two in five Māori people lived in damp housing (40 percent) in 2018. Read more about Māoritanga and housing in the Te Pā Harakeke: Māori housing and wellbeing 2021 report. (Stats NZ, 2021) All of this means that when considering the impact of changes to residential insurance on Māori, one must remember that Māori are already disadvantaged when it comes to housing.

Where whare (homes) are located in increasingly flood-prone areas, whānau homeowners with insurance are likely to face increasing premium costs and higher excesses, and in some cases are unlikely to be able to access insurance at all. It's also possible that renters in these areas see increasing premiums for contents/renters insurance, if applicable.

In Aotearoa, if whānau tend to reside in riskier areas (for example if marae or Māori customary land titles tend to be more coastal, lower lying, etc) then it's likely premiums will rise disproportionately for Māori.

To the best of our knowledge it is unlikely that health insurance will shift to account for flood-prone dwellings. However, costs incurred due to accidental injury during flood events or blackouts are likely to be covered by ACC. These claims we expect to increase as extreme weather makes blackouts more common (a known time of high risk, particularly for the elderly).

### *Whakatipu rawa – Māori enterprise*

Businesses in increasingly flood-prone areas (low-lying, coastal, etc) are likely to face higher premiums and/or increased excesses in future, for flood-related business interruption, contents (stock etc) and liability cover, among others. As Māori business is more resource-based than the rest of the economy, there are considerations here. Droughts, extreme weather, and flooding all play a role here. Land-based business may be more affected by climate change than service-based enterprise.

### *Ahurea Māori, tikanga Māori – Māori culture, Māori values and principles*

For Māori, as discussed in section 1, the core whakapapa and whānaungatanga values of our people include to specific rohe – as Rev, Chris Huriwai (Huriwai, 2020) writes:

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*“Ko au te whenua, ko te whenua ko au”  
I am the land and the land is me.*

This is important understanding for our ahi kā and hau kāinga communities. This is also core for Māori who don't live on their ancestral whenua, as these home communities are a core aspect of Māori identity.

While it is possible to move community living situations somewhat within traditional rohe, the complications of our colonial legal system bring to bear. Only a small amount of land has been re-matriated to Māori, and these land parcels now form the basis for our community links.

Marae located in flood prone areas, particularly those on coasts or rivers, are likely to face increasingly expensive insurance against natural disasters such as flooding and storm damage. This may lead to increased numbers of marae finding that insurance, while desirable, is not affordable, and thus to the case of weather-related damage being un-repaired. With the erosion of marae future safety, as cultural hubs for our people, our cultural health will become harder to maintain. This is a serious threat to our people.

The use of government economic discount rates might argue such costs are small. However within te ao Māori the concept of discounting is incongruous with Mātauranga Māori, which places emphasis on safeguarding treasures passed down over generations. (Awatere, 2008) heavily discounting the future losses of climate change is also generally inappropriate, especially when those harmed will be uncompensated. (Cowen & Parfit, 1992)

### **Tohutohu – Recommendations for whānau, future research, and policy**

This summary document has traversed from values, through economics and into the realities of insurance for our whānau. To conclude, we offer questions for future research into this important aspect of climate change impacts on te ao Māori – insurance pricing changes.

#### **Questions for future research:**

- How is Māori land represented in flood-prone areas? (Over- or under- general title proportions?)
- What information on Māori participation in insurance is known by the insurers themselves? (Do insurers gather indigenous or ethnic data?)
- Are Māori assets more likely to be geo-located coastally, in riverine areas, or in high wind zones than other assets?
- How do government policies impact the experience of the private insurance market for cultural assets?

#### **For policy makers:**

- Do not expect Māori and Pākehā groups to behave similarly in response to price signals (particularly be aware that due to colonisation, land titling practice and economic disparity, hau kāinga are unlikely to want to, or be able to, quickly respond to high insurance price signals by relocating assets). Given this, how might future regulatory changes impact Māori?
- Consider that Māori cultural infrastructure faces challenges in insurance when designing disaster resilience and relief policies. Consider that unlike private property, Marae complexes are not included in EQC and thus face the profit-driven insurance market when searching for insurance products. How will future policy in this space fare given the lack of EQC support for cultural assets?

If Māori businesses, land and assets are over-represented in risk-prone areas, moves to more risk-based insurance pricing will impact Māori home and business -owners disproportionately. Similarly, if Māori whānau renting are over represented in risk-prone areas, and these insurance costs are passed on via rent increases, this will also impact Māori whānau disproportionately.

*I ore a te tuatara ka patu ki waho  
A problem is solved by continuing to find solutions*

We finish with this whakatauki, which also was held front of mind throughout the writing of this paper: a call to action to be committed to this kaupapa and in particular to be thinking about possible solutions. Let us go forward together with this in mind.

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### Author credit statement<sup>1</sup>

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### Glossary of concepts in Te Reo

hapū	sub-tribe(s) that share(s) a common ancestor
iwi	tribal kin group; nation
marae	Māori meeting house; centre of community,
mātauranga	knowledge, tradition, epistemology
ohaoha/ōhanga	economics
pākehā	non-Māori New Zealander
pakihi	business, enterprise, venture
pukapuka	whakapapa books (taonga of the whānau)
pūtea	money, funds
rīanga	insurance
tangata whenua	indigenous peoples, people of the land
tauīwi	foreigner, immigrant, person not from Aotearoa
tikanga	customs and practices
tohunga	teacher,
tūraru	risk (business sense)
wānanga	learning
whakaaro	thoughts, ideas
whakapapa	family ties, genealogy, to place in layers
whakamōrea	to endanger/to put at risk
whakawhara	to be risky, to be harmful or dangerous
whānau	family; nuclear/extended family

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<sup>1</sup> CRediT - contributor roles <https://casrai.org/credit/>

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whare	home, house,
whare-nui	meeting house, community home,

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