

KAITIAKI-CENTRED BUSINESS MODELS: Case Studies of Māori Marine-Based Enterprises in Aotearoa New Zealand

WHAI RAWA, WHAI MANA, WHAI ORANGA:
CREATING A WORLD-LEADING INDIGENOUS
BLUE MARINE ECONOMY

A research project of the Sustainable Seas
National Science Challenge,
Tangaroa Research programme

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Rukuhia rukuhia
Rukuhia kia a Ruatēpupuke, rukuhia ki a Ikatere
Rukuhia kia tau, rukuhia kia āio
Āio ngā ngaru, āio i a Tangaroa
Āio te hau tapu a Tāwhirimātea
Āio te manawa o tēnei pia, o tēnei tauia
E rapa ana ngā hua anō nei i a kui mā i a koro mā
E Rongo, whakairihia
Haumi e, hui e, tāieki e!

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CONTRACT AND RELATED OUTPUTS

This report has been completed under contract between the National Institute of Water and Atmospheric Research Limited (NIWA) as host of the Sustainable Seas National Science Challenge and Massey University as the subcontractor dated 16 February 2018, to be completed by 30 June 2019 [MBIE contract number: C01X1515]. This report is provided in fulfilment of the following outputs:

- Output 2 Report outlining mātauranga Māori-based models, or approaches used by Māori organisations to support the integrated management of marine ecosystems and economy complete (note: the literature review is provided as a separate report).
- Output 3. Report outlining business models, sustainability tracing and authentication systems, and innovations complete.

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INTRODUCTION

About the Sustainable Seas National Science Challenge

The objective of the Sustainable Seas National Science Challenge is to enhance utilisation of our marine resources within environmental and biological constraints. As the Challenge notes, there is a growing conflict between New Zealand's many uses of the marine environment, focused particularly on the needs of its important marine economy and protection of the marine environment itself.

Tangaroa research programme

As the Māori driven and focused component of the wider Challenge, the Tangaroa Programme is dedicated to exploring the development of ecosystem-based management (EBM) that is founded on, and informed by, mātauranga and tikanga Māori (Māori knowledge systems and practices). It is investigating mātauranga-inspired innovations that enable Māori to participate as partners and leaders in marine management and decision-making. It is within this wider context that the Tangaroa Project Whai Rawa, Whai Mana, Whai Oranga operates, seeking to explore ways in which mātauranga Māori can be harnessed to ensure that the Māori marine economy (MME) operates in a manner that is both profitable and sustainable over the long-term. Specifically, it is looking at the way kaitiaki-centred business models can deliver environmental, economic and social outcomes in a mutually-beneficial manner.

Māori marine-based enterprise case studies

This report uses seven case studies conducted by the Whai Rawa, Whai Mana, Whai Oranga Project Team with a range of different Māori fisheries participants to examine aspects of their operations that have a resonance with kaitiaki-centred business

models. The case studies are with the large Māori fishing companies Ngāi Tahu Seafood and Moana New Zealand; a Māori collective organisation, the Iwi Collective Partnership; a tribe with a range of fisheries assets, Ngāti Kahungunu; and two Māori-owned fishing companies, Whakatōhea with its focus on aquaculture, and Aotearoa Clams, a start-up enterprise. In addition, a case study of Sea Change Tai Timu Tai Pari—New Zealand's first marine spatial plan was also undertaken as part of the research programme and has been included in this report.

Some kaitiaki-centred models or approaches are formalised within Māori fishing businesses while others emerge out of informal governance arrangements that reduce take for long-term sustainability. The examples below suggest that where Māori have more control they manage well. This in turn suggests that the Māori marine economy would benefit if kaitiaki-centred business models were recognised and formalised to allow fishers to control the quota allocation process and set their own boundaries.

Report structure

The report first introduces an analytical framework for kaitiaki-centred business models, which consists of several interrelated domains: environment (kaitiakitanga), economic (whai rawa), social (whanaungatanga and manaakitanga) and political (rangatiratanga, mana whakahaere and kotahitanga). Next, the case studies are present in turn by the respective authors. Each case study has a different emphasis, but a common set of questions and methods guided the data collection and engagement upon which they are based. The framework is then used to examine the case studies in terms of the extent to which they demonstrate kaitiakitanga, whanaungatanga, manaakitanga, rangatiratanga, mana whakahaere, and kotahitanga, for instance.



After this, the report will provide a conclusion, drawing together the key findings from the case studies.

Mātauranga Māori Advisory Committee

The research team are fortunate to have had the guidance of a Mātauranga Māori Advisory Committee comprising distinguished Māori scholars, business leaders and practitioner-experts. Their advice and counsel on matters pertaining the conceptual and practical application of mātauranga Māori to our research has been extremely helpful and we are grateful for this. The Mātauranga Māori Advisory Committee members are:

- Tā Hirini Moko Mead
- Tā Mark Solomon
- Distinguished Professor Graham Smith
- Judge Layne Harvey
- Ms Dickie Farrar
- Mr Robert Edwards

Research team

The Whai rawa whai mana whai oranga research team comprises 11 members from several institutions that affiliate to Ngā Pae o Te Māramatanga, the Māori Centre of Research Excellence, specifically within the Whai Rawa—Māori economy research theme. The research team members are identified in the adjacent inset. In summary the research team comprises:

- Dr Jason Paul Mika
- Dr John Reid
- Dr Shaun Awatere
- Dr Annemarie Gillies
- Dr Hekia Bodwitch
- Dr Matthew Rout
- Dr Dan Hikuroa
- Ms Fiona Wiremu
- Dr Billie Lythberg
- Ms Mylene Rakena
- Ms Natalie Robertson



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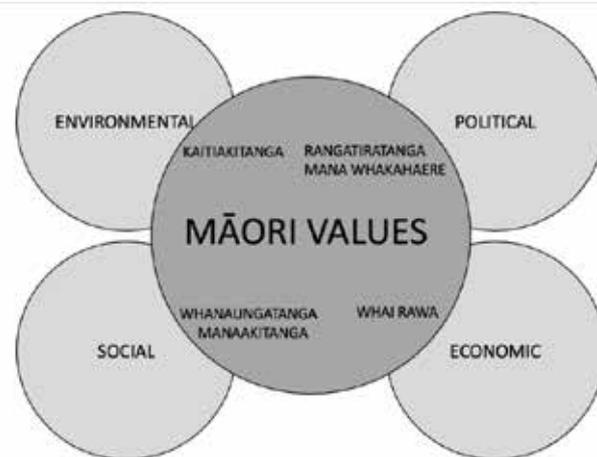
KAITIAKI-CENTRED BUSINESS MODELS

Driven by a long-term ethic of guardianship and care, kaitiaki-centred business models embed Māori commercial and social activity within sustainable ecosystem processes to support the integrated management of marine ecosystems and economies. While the value of kaitiakitanga is generally framed with an almost exclusively environmental focus by the Crown entities that have enshrined it in legislation, taken in the context of the Māori world view it can be understood in a far more expansive manner. As well as guarding and caring for the environment, kaitiakitanga also encapsulates the same guardianship and care for humanity, both because humans are viewed as a part of the environment and because the concept of mauri and the centrality of relationships means that interactions between humans and the environment must aim to be optimally mutually-beneficial.

As Spiller, Erakovic, Hēnare, and Pio (2011, p. 155) explain, “[c]are is at the heart of the Māori values system and calls upon humans to be kaitiaki, caretakers of the mauri, the life principle, in each other and in nature.” A kaitiaki-centred business model focuses on ensuring the long-term vitality and health of the ecosystem on which the business depends, requires the business’ benefits to be as widely distributed as possible; and aims for the business to be profitable, as a means of ensuring it beneficial to both people and planet. Therefore, a kaitiaki-centred business model is one that focuses on the environmental, economic and social not as individual, competing components but rather as three interconnected pillars of mauri sustainment, or well-being.

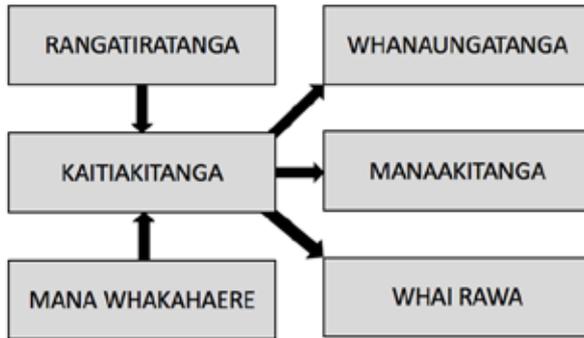
This report examines seven case studies across the key domains of environment (kaitiakitanga), economic (whai rawa), social (whanaungatanga and manaakitanga) and political (rangatiratanga, mana whakahaere and kotahitanga); the political domain is included as it is understood to facilitate the other three. The aim is to examine how the case study organisations express the relevant Māori values in these domains—though it should be noted that the expression and practice of Māori values are interrelated, defying simplistic categorisation (see Figure 1).

Figure 1 Māori values



While the values can work together in a range of different ways, as will be explored below, there is one relational network that seems most common and most effective when it comes to understanding the kaitiaki-centred business model: kaitiakitanga is facilitated by rangatiratanga and mana whakahaere and leads not only to whanaungatanga and manaakitanga but also to whai rawa. That is, there needs to be political authority and governance capacity for any kaitiakitanga objectives to be met, and in meeting those objectives a range of benefits run the gamut from community employment and long-term

Figure 2 Framework for kaitiaki-centred business models



food security to increased profitability. This is the kaitiaki-centred model, a model that has care and guardianship at its heart but that encapsulates the entire Māori world view and the interconnected values that underpin it and emerge from it. The diagram in Figure 2 below outlines this relational network.

Institutional framework for kaitiaki-centred business models

The kaitiaki-centred business model can be understood as the ‘ideal form’ for Māori but one that is difficult to fully realise in the contemporary context because Māori must operate in the settler institutional framework—that is within the political, legal, economic and social parameters of New Zealand, which are mostly reflective of British and Pākehā values. More specifically, Māori operating in the fishing sector face a particular set of legislative constraints that emerge from the various Acts that cover Māori fisheries. Arguably the two most important interrelated constraints are the fragmentation of settlement quota (or SET), and restrictions placed on selling settlement quota. The SET iwi received is often too small to be economically fished, and broken up over numerous species, particularly the deepwater quota. As MP Rāhui Kātene explains, “Most, if not all, iwi have small deepwater holdings that are objectively uneconomic

to fish independently, necessitating some form of ACE leasing arrangement. The small size of iwi holdings is a result of some Settlement quota being held in the centralised companies, and the remainder of the quota being devolved to 57 iwi, creating highly fragmented ownership.”¹ This problem is compounded by the fact that, unlike other quota, SET cannot be sold on the open market but rather is only able to be traded to other iwi.² It is restricted both in who can trade it and in the means of exchange—trade rather than cash purchase.³ Trading SET is “a really complicated legal process. To highlight the difficulties, no Settlement Quota has ever been sold in the 12 years since first allocated.”⁴ Taken together, these two constraints played an influential role in shaping the structure and function of Māori fishing organisations.

There are three key ways in which iwi can optimise their settlement quota. The most common business model is the ‘ACE trading company’, where an iwi sets up a holding company whose sole role is to manage the fisheries assets by leasing out the ACE to fishing companies for the best price every year. The second business model is for iwi to form a ‘joint venture’, either with other iwi or with private companies, which consolidates the quota into economically usable aggregates. These joint ventures will often operate as an ACE trading company. The third model, the ‘iwi fishing company’, occurs when an iwi either received enough quota or has purchased more quota on the open market to economically fish it on their own. Two further key, interrelated legislative constraints are the separation of commercial fishing from customary harvest and kaitiaki obligations, which are manifested through both commercial and customary fishing. Seafood harvested under customary regulations cannot be sold and is under a strict set of restrictions.

1 http://img.scoop.co.nz/media/pdfs/1111/20111007_FNL_FCV_Submission.pdf
 2 <https://www.iwicollective.co.nz/the-inconvenient-truth-of-maori-fisheries/>
 3 <http://www.iwiika.maori.nz/ahc/exchange-settlement-quota.htm>
 4 <https://www.iwicollective.co.nz/the-inconvenient-truth-of-maori-fisheries/>

WAIROA TAIWHENUA (NGĀTI KAHUNGUNU)

Ko Whakapunake te maunga

*Ko Te Wairoa-hōpūpū-hōnengenenge-matangi-rau te
awa*

Ko Ngāti Kahungunu te iwi

Ko Takitimu te waka

Ko Kahungunu te tangata⁵

Case study author

Dr Annemarie Gillies

Introduction

This case study has a specific focus on the Māhia area of the Wairoa District. Participants from each scale of fishing operation (individual, whānau, hapū, iwi), as well as commercial quota owners, were invited to participate in interviews. An overview of customary fishing in the rohe was also undertaken.

Te Taiwhenua o te Wairoa

The Wairoa Taiwhenua represents 26 marae, with a kāhui kaumātua and 12 board members acting on behalf of six groupings of marae. Apart from 26 individual marae characteristics and affiliation to specific ancestors, the local pepeha above is widely acknowledged as one that connects the people in the region.

The Wairoa Taiwhenua is also one of six Taiwhenua (Wairoa, Heretaunga, Whanganui-a-Orotū, Tamatea, Tamakinui-a-Rua and Wairarapa) groupings that make up Ngāti Kahungunu iwi (see Figure 3). Representatives from these Taiwhenua, plus a kaumātua and two Taurahere representatives, constitute Ngāti Kahungunu Iwi Incorporated (NKII) Board or rūnanga. Meetings take place each month for local Taiwhenua and similarly for Ngāti Kahungunu Iwi Incorporated.

Figure 3 Taiwhenua and tribal regions of Ngāti Kahungunu



Geographically, Ngāti Kahungunu has the second largest tribal rohe in the country and an equally impressive coastline, from the Wharerata Ranges in the Wairoa District extending to the Remutaka Range in South Wairarapa. The coastal boundaries are Paritū in the North to Tūrakirae in the South. Ngāti Kahungunu iwi is the third largest iwi grouping, with a population of over 61,626 thousand people, many of whom live outside the Kahungunu traditional boundaries. There are many who live elsewhere in the world who may be registered with Kahungunu but are not counted in the NZ Census.⁶

Governance

The Taiwhenua o Te Wairoa operates under a representative governance model whereby hapū and marae are grouped by distinctive whakapapa linkages to common ancestors and represented at the governance level by two elected members.

The representative governance model comprises three elements. The first part is political, where

⁵ Pepeha for Wairoa locals

⁶ <https://www.kahungunu.iwi.nz/about-us>

representatives are selected or elected with the expectation that they will represent the views of their constituency. The second part is corporate, where there are fiduciary expectations of the representative which include the duty of loyalty, the duty of obedience and the duty of care. These duties apply to any board member on any governance group whether it be for a profit or a not-for-profit organisation. The duty of loyalty is the expectation that representatives will think about, discuss and vote on issues on the basis of what is in the best interests of the organisation. In the case of the Taiwhenua board members, overall collective benefit is the goal. Board members take their roles seriously because they need to be, and be seen to be, credible and legitimate to their peer co-governors. This ensures the decision-making process is trustworthy. In this sense, credibility is ensuring the decision-making process is trustworthy and that the logic in information that is used to form judgements is transparent. The third part is legitimacy, which refers to the ways in which the conversations, views and perspectives have been accounted for in the decision making even where there has not been agreement—the main thing here is that all discussions have been accounted for.⁷

In terms of the fisheries quota for Ngāti Kahungunu and the Taiwhenua, there is general agreement that:

if we look after it [the fisheries] the way we are doing now and continue to do that and maybe improve on it, we'd have a sustainable product for the rest of our lives. And for upcoming generations (Tangaroa 1012019).

The collective goal in this sense is that allocations of fishing quota benefit the Māori communities in the Wairoa District. There is always an element of thinking about future generations and ensuring that fair and transparent discussions are undertaken when

leasing of quota decisions are made. Whether quota is leased to other iwi, fishing companies, or local fishers (Māori and non-Māori) there is an expectation that leasing decisions be cognisant of, and promote the maintenance of, a sustainable fishery for 'mokopuna.'

The Wairoa Taiwhenua is the overall governing body in the region that deals with the fishing quota or more specifically the leasing of their share of quota. They agreed to participate in this research by facilitating access to local fishermen. Under the guidance of kaumātua Bill Blake this case study has focused on crayfish/lobster quota being fished in the Te Māhia Mai Tawhiti (Māhia) Peninsula. Therefore, much of this case study is informed by Māhia locals involved in commercial, customary and recreational fishing, and managing Mātaitai and Taiāpure reserves.

The Māhia peninsula experience

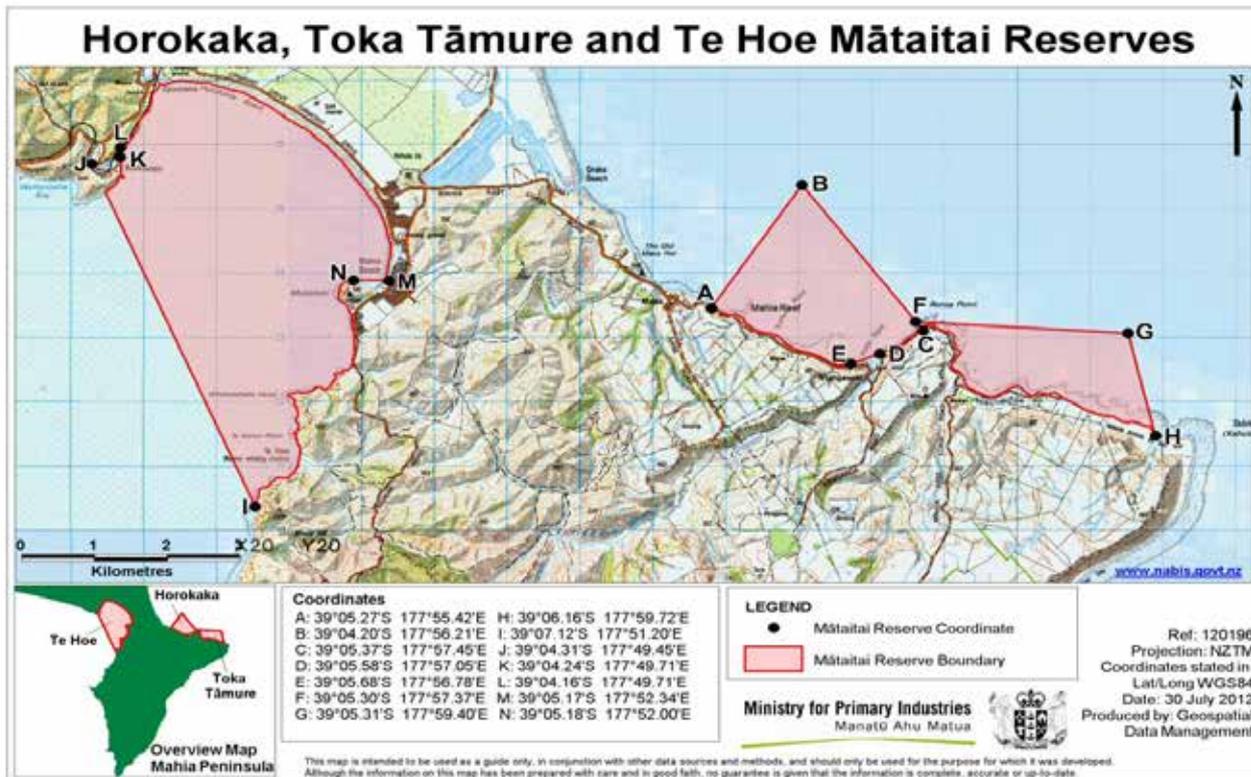
Beyond the Taiwhenua, a further level of governance for the Māhia area exists—the Māhia Māori Committee, which in the main deals with both the commercial and customary take. The Māhia Māori Committee represents local Māhia marae and is responsible for recommending to the Minister of Fisheries, but not appointing, kaitiaki—those individuals who are able to sign off on permits:

...we have no teeth, really, we can recommend but it is up to the minister to appoint (Tangaroa 1012019; Tangaroa 2012019).

While the Māori Committee has no authority to appoint kaitiaki, their recommendations are considered by the minister. In essence, their role is to monitor, document, and distribute the customary take for cultural purposes, including fish, shellfish and lobster. They are also the kaitiaki of customary fisheries management areas like mātaitai reserves, which are

⁷ <http://nclcgovernance.weebly.com/constituentrepresentative-board-model.html>

Figure 4 Map depicting Māhia Mātaitai reserves



closed to commercial fishing, taiāpure areas of special significance, and temporary closures under S186A and S186B of the Fisheries Act 1996 (see Figure 4).

I don't like national reserves... because they are controlled by other people and you are not allowed in them... our Mātaitai... should be farmed like sheep and cattle. They need drafting every now and then... we let out permits... when it needs thinning... making space for regrowth... we incorporate Te Kupenga o Te Huki with all of the Māori values it is the same as E Pari e Timu (Tangaroa 1012019).

The banning by Māori of commercial fishing in certain areas is not a new practice. Sustainable fishing practices based on tikanga have been in place since Māori arrival in Aotearoa and include rāhui, tapu and noa. Moreover, Māori participation in commercial fishing (e.g., whaling, sealing, processing and

distribution, and exporting), alongside other economic development initiatives has been well documented (Hawkins, 1999a; 1999b; 1999c). As the machinations of colonisation dominated the decades after the Treaty of Waitangi was signed, so too the waning of Māori participation in a range of socio-cultural and economic endeavours occurred. While Māori participation waned, their cultural awareness and mātauranga around fishing practices and protocols, and the forthrightness to know when to speak up and act even in a small way, were always present. For example, commercial fishing bans imposed by local kaumātua were gazetted as being in place in the 1940s, because Māori could see that commercial trawlers were coming in too close to the shore.⁸ But with current kaimoana regulations 1998:

The authorising body is the Minister and his servants... MPI. Māhia Māori Committee has actually

8 https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&objectid=11072241 retrieved 28/02/2019.

very little say in customary fishing under the kaimoana regulations, which is very concerning to some of us kaitiaki (Tangaroa 2012019).

Under S27A of previous legislation the Māhia Māori Committee was the authorising body: marae would refer kaitiaki to the Māori Committee who would then appoint based on the referral from the Marae. In Māhia there are still two or three kaitiaki that were appointed under S27A; all new ones, however, are appointed by the Minister.

Business context

The overall Ngāti Kahungunu business ventures and investments are managed by Kahungunu Asset Holding Company (KAHC), which is fully owned by Ngāti Kahungunu Iwi Incorporated (NKII). The bulk of the KAHC asset portfolio is with fisheries quota and shares in fisheries (Aotearoa Fisheries Limited, Pania Reef Fisheries Limited, Napier Mussels Limited and Fiordland Lobster Company Limited (FLC)). In 2013, KAHC also purchased a sheep and beef station (Tautāne) in Hawke's Bay in order to diversify the asset portfolio. KAHC business portfolio focuses on:

- Crayfish
- Deepwater fishing
- Inshore fishing
- Pāua
- Moana AFL
- Fiordland Lobster Company Limited FLC
- Tautane Sheep and Beef Station

Crayfish

A major part of Kahungunu Asset Holding Company's operations in the North Island is its investment in crayfish, which generates significant income for the iwi. Wairoa and Māhia locals played a significant role in building a stake in the asset. In the early 1980s, local fishermen established Māhia Fisheries:

We formed together as a group and formed a fishing company called Māhia Fisheries, and then went into partnership with a Japanese restaurant owner from Osaka, Japan. We were one of the first in New Zealand to do live lobster exports—we built a holding depot [see Figure 5] rather than a processing plant at Māhia because there was not the space... and there was huge opposition from District Council... the bulk of fishers who owned Māhia Fisheries were Māori (Tangaroa 3012019).

In the late 1980s the quota management system (QMS) was introduced, which changed the business of fishing and the New Zealand seafood industry. The impact of QMS was greatest on individuals and small companies because previously as long as one had a license and followed regulations there was no limit on harvesting the fishery:

when they bought in the quota system, we were quite anti ... we were unrestrained and suddenly we were told, "This is how much you've got." It was done [on] our historical level based over the past three years I think, but then they took—and I'm going from memory—I think 42% away, because they thought the fishery was stressed, so we got history minus the 42%. I think also 20% was taken for

Figure 5 Holding tanks at Māhia depot—January 2019



Māoridom to settle treaty grievances (Tangaroa 3012019).

The QMS was a focused effort to manage and control harvesting of the broad range of species. Individuals and companies were allocated quota to catch certain species. Quota could be traded, leased, bought, sold or transferred like a piece of property. In 1990 the QMS was also applied to the rock lobster/crayfish industry forcing individuals and companies in that sector to rethink the way they fished and processed their quota. Catching and freezing their catch was no longer viable, given the restrictions of the QMS. While freezing crayfish was not an issue for Māhia fishermen, many of them could not survive on their allocated quota and ended up selling to those who could afford to purchase off them.

In Māhia the practice of live exports was well underway by the late 1980s; however, the QMS did:

impact on some local fishers who were not able to access enough quota and they got out of the business... we [Māhia Fisheries] along with our Japanese partner purchased a processing plant in Mount Maunganui and became known as Mt Maunganui Seafoods. It was easier than driving to Auckland from Māhia. We were quite successful (Tangaroa 3012019).

The entrepreneurial behaviour and mentality of a few Māhia locals, both Māori and Pākehā, has provided an exemplar to other iwi. Originally, they had explored pooling resources and purchasing a fishing boat to be managed by the company; however, this initiative became unviable for a number of reasons. The company returned to purchasing or leasing quota through individual fishermen or other small companies and iwi. Individual fishers also lease quota from Ngāti Kahungunu iwi:

I have to say that the Japanese partner had half the company and Māhia fisherman had the other half, and then we formed Fiordland Lobster Company, and our Mt Maunganui Seafoods became half of Fiordland Lobster Company... It has become very successful... exporting... tonnes of live lobster each year... (Tangaroa 3012019)

In terms of the fishing industry, the Fiordland Lobster Company is the largest exporter of live rock lobster and is acknowledged as the largest and most profitable crayfish company in Australasia. Half of Fiordland Lobster Company (FLC) belonged to Mount Maunganui Seafoods which is owned equally by their Japanese partner and the Māhia fishermen; the other half was owned by Fiordland fishermen:

We battled very hard to get it started. Even got a big boat as a factory and had it in Milford Sound; it didn't work very well, had a lot of mortality. And then later built our new factory [at Te Anau] and it just kept on getting better and better over the years. (Tangaroa 3012019)

Ngāti Kahungunu became involved with Fiordland Lobster Company through tribal affiliations to Wairoa and Māhia—Kahungunu and Rongomaiwahine—plus, through the QMS, Ngāti Kahungunu Iwi Incorporated had quota for lease to individuals, whānau and hapū in the Cray 3 area. In return for their quota Ngāti Kahungunu were offered a deal on shares in FLC. The relationship was lucrative for both the company and the iwi. Eventually the iwi built a factory at the airport in Auckland, which FLC leases from the iwi. The Company has three holding depots: two in the North Island at Masterton and Māhia, and one at Te Anau in the South Island. Both FLC and KAHC continually work to ensure that Ngāti Kahungunu and Rongomaiwahine fishermen and whānau continue to experience best outcomes:

...we tied a knot with Kahungunu, they had already 40 tonnes of cray 3. So, we brought them in and gave them a big parcel of shares at a very good rate. They became quite dominant in the company. Then they decided, instead of carting from all the various places, they decided they wanted a factory in Auckland, right at the airport. So, Kahungunu built a factory and the company now leases it. (Tangaroa 3012019)

Maintaining and sustaining relationships, especially tribal relationships, has played a major part in Ngāti Kahungunu business and economic ventures, and partnerships have endured. Ngāti Kahungunu have also fostered relationships with Chinese and Japanese groups and other indigenous groups around the world.⁹

Deepwater

Ngāti Kahungunu has a deepwater fishing asset in joint venture with Sealord that is its second most valuable asset after crayfish and is therefore considered a significant holding. Sealord is owned by Aotearoa Fisheries Ltd and Japanese company Nissui based in Nelson. The joint venture 'Ihu to Mai' was due for renegotiation in 2018 and requires KAHC to again commit its deepwater quota, with Sealord matching that amount. In the seas around the East Coast, Sealord catches and processes deepwater fish species including Hoki, Squid, Ling, Silver Warehou, Alfonsino and Orange Roughy.¹⁰

In 2016 KAHC entered into a new venture with Hawke's Bay Seafood to purchase a 34-metre deepwater trawler.¹¹ More recently, KAHC indicated interest in purchasing up to a 100 percent stake of

Hawke's Bay Seafoods. Given many employees of the company are Māori and most belong to Kahungunu iwi, growing Ngāti Kahungunu fisheries asset is a key priority for the iwi. Following the purchase in April 2019 the company is re-organising under the name Takitimu Seafoods.¹²

Inshore

Investment in Hawke's Bay Seafoods has been a long and enduring one for the iwi. Much of the inshore quota of the iwi is leased to this company, which remains the largest fishing business located in the Kahungunu rohe. As part of the iwi pātaka system, Hawke's Bay Seafoods supplies seafood for tangihanga. The company has shop/retail and factory facilities in Ahuriri, 15 fishing vessels, and quota for wetfish (most commonly tarakihi, gurnard and snapper), crayfish and pāua. The company also has mobile retail vehicles and offers internet ordering and delivery.¹³

Moana—Aotearoa Fisheries Limited (AFL)

Moana Aotearoa Fisheries Limited is the largest Māori-owned fisheries company in New Zealand. AFL owns a 50 percent shareholding in Nelson-based Sealord, this country's largest deep-sea fishing company. In the 12 years that Sealord has been owned by the Treaty of Waitangi Fisheries Commission and AFL, the company has developed into a global seafood marketing company.

KAHC is the third largest iwi shareholder of Sealord and Sealord is a key supplier of frozen and chilled seafood to wholesalers, processors and retail chains in North America, Europe, Asia and Australasia, as well as being New Zealand's leading brand of frozen

9 <https://www.kahc.co.nz/copy-of-crayfish>

10 <https://www.kahc.co.nz/copy-of-crayfish-2>

11 <https://www.kahc.co.nz/copy-of-crayfish-2>

12 <https://www.stuff.co.nz/business/110872055/ngti-kahungunu-plans-to-purchase>

13 <https://www.kahc.co.nz/copy-of-inshore>

and canned fish products. Its marketing network consists of bases in the United States, UK, France, Spain, Hong Kong, Japan and Australia. Under the Māori Fisheries Act the KAHC is prevented from trading its AFL shares.¹⁴

Fiordland Lobster Company

Fiordland Lobster Company (FLC) is the largest and most profitable crayfish company in Australasia and is New Zealand's leading exporter of live rock lobster.

As mentioned previously, FLC was owned by MT Maunganui Seafoods, a Japanese investor and Te Anau Fishermen. However, MT Maunganui Seafoods has been bought out by FLC and only a few of the Māhia fishers and the Japanese investor have shares in FLC. KAHC Cray 3 quota is with FLC and in exchange KAHC has been given shareholding in FLC. They have also bought and refurbished an East Tamaki crayfish holding depot in Auckland and entered into a long-term lease to FLC.

FLC's values and culture remain as strong today as when the company was established 25 years ago. Its reputation in the industry, as a company set up by fishing families for fishing families, is reflected in its ability to foster excellent relationships with fishermen, quota owners, staff and customers. and in its integrity in maintaining quota and best prices for fishermen.

The Taiwhenua owns fishing quota that is leased to individuals, whānau, hapū and iwi and has influence in sectors across the marine economy. The scale of operations ranges from small to large. For example, quotas leased to individuals, whānau, and some hapū are small to medium—the bulk of commercial quota has been leased to other iwi groups and fishing companies through KAHC. These include Fiordland Lobster Limited, which is partly owned by Ngāti Kahungunu, as well as local fishermen in the Wairoa

District. Fiordland is the largest exporter of live lobster in New Zealand and is currently expanding operations to Australia.

Local fishermen

Ngāti Kahungunu and Rongomaiwahine fishermen were not keen to share with the research team exactly what their quotas are, what they paid for it, what they sell for, and whether or not they are finding it easy to get their quota:

Oh, they getting their quota alright... this is a good time to come and see them because most of the fishers had already caught their quota by Christmas... can tell they are doing well 'cos you see them with new car or new house... I guess though that they don't want the other fishers to take their sites... they're protecting where they put their pots... so they don't want others to see their catch or know what a good catch they have had (Tangaroa 1012019).

One participant further observed that he was not sure why the fishers did not want to share what their quota is:

I think most people know what everybody else has got. We weigh in at XXXX and XXXX; so, when they get there, every bin has got to be clearly labelled, with the exact amounts on it. Everything is very precise for quota management. And then they can see what's in the tank, they know when somebody's had a good day; they watch them unload off the boat onto their truck. They've got a fair idea what's going on (Tangaroa 3012019).

Fishermen in this region have been at the forefront of different initiatives that involve building healthy sustainable fisheries. For example, they have taken

¹⁴ <https://www.kahc.co.nz/copy-of-crayfish-1>

self-imposed cuts in quota percentages and often work it out among themselves and the companies they fish to. Not all of them fish to FLC and last year the Taiwhenua leased some Cray 3 to Ngāti Porou (East Coast). While they often don't have to:

They [the fishers] seem to think if it protects the fishery and it increases even more, that's all good (Tangaroa 3012019).

They could [cut] but what I'm seeing in catches, there's no reason to. Its abundant. I've never seen catches so big as they've been getting in the last three or four years. I'm talking, one fisherman I know very well in particular; which makes 600 kilos in one day, that's an extra special day so you can't say its average. But they're catching... I mean, when I was talking about in the doldrums, we were lucky if we got 40 or 60 kilos some days; now they are rarely under 200 or 300 kilos a day now, which is great catching (Tangaroa 3012019).

In Māhia, there was a general consensus from locals, the Taiwhenua and the Māhia Māori Committee that even though the QMS was seen to be not good for fishermen because many did not survive and left the fishing industry, what had been happening was that the fisheries—all species—were being over fished and it would not have been long before the resource would have been depleted. In reality, the QMS has worked well for this region:

...the fishery has boomed, and it is still in a solid state. Really good. Unfortunately, we're coupled with Gisborne; and... I don't know how well its kept here, but they brought in a concession where you could catch smaller fish at certain times of the year. Māhia fisherman group together and said they won't catch

the smaller fish. Their fishery has boomed, Gisborne didn't do that, and they are a little bit in the doldrums; and because of that and because of Gisborne area who has got a strong voice, I understand they're possibly going to cut the quota this year by nine percent (Tangaroa 3012019; Tangaroa 1012019). [This cut was made in April 2019.]

Gisborne fisherman also have Cray 3 quota and are struggling to catch their quota because there are so many of them. This could result in their coming further down into areas of Cray 3 where the Māhia fishers are catching, or they may exert pressure on the government to cut the quota. This is what some fishers report they have heard is going to happen. The Taiwhenua, however, is urging Wairoa and Māhia fishers to cut their quota themselves. That way they can shelve a percentage of their quota for when the fishing improves:

If they wait for government to do it then they will lose that percentage outright. However, if they pre-empt and make the cut themselves and let the government know, then that percentage will remain... the government can't take any and they can have it stored (Tangaroa 1012019).

Average catch for Kahungunu and Rongomaiwahine fishers is probably around 15 tonne:

...one fisherman I'm very friendly with was catching at least 15 tonne this year, on his own; and doing it easily. That's why I say it's not under stress that I could see... because I went through it when it was under stress (Tangaroa 3012019).

As an example of the money involved in quota ownership, just after the QMS came in the going price for a tonne was \$30,000. In 2018, a tonne of Cray 3 was worth \$1.2million and in Fiordland it is worth \$1.6million. This is very significant for the fishers who are left in Māhia and for some who have significant shareholdings in Mt Maunganui Seafoods and Fiordland Lobster Company. Wairoa Taiwhenua lease their quota to local fishers and to other iwi. The money they receive from the leases supports the infrastructure of the Taiwhenua and key staff. Recently, they purchased new premises and will be utilising funds to renovate these premises over time. The Taiwhenua has also been heavily involved in the Treaty of Waitangi Claim for Wairoa and preparing for settlement. (*Tangaroa 3012019 and Tangaroa 101209*).

The fishers, their whānau and other locals in the Wairoa and Māhia regions acknowledge their own strong ethic and ability to look after their fishery. Their concerns are that others who have not looked after their fishery still have the right to fish the whole of Cray 3. One solution they are contemplating is to lobby government for change and protection.

Customary take and Kaitiaki

The customary take for the whole of Cray 3 is probably about 20 tonne but as one fisher admitted,

... I would say what I see around here, a lot more than that gets caught (*Tangaroa 3102019*).

Local concerns around the customary catch were similar, suggesting that providing seafood—especially crayfish—for whānau and hapū consumption is being abused. Moreover, reasons for permits sometimes do not reflect the cultural elements for which customary catch is designed. No one had a problem with the supply of seafood for Tangihanga and other cultural

events, birthdays, weddings or significant hui, but some examples were considered excessive:

If I've got a criticism, one that annoys me quite a lot... I don't say a lot about it, but it is to do with permits and customary quota. I think it's getting terribly abused. In fact, I know it is at times. People are now getting a permit because aunty's coming up for the weekend, and they catch 40 lobsters... someone has a friend coming for the weekend and that seems to enough of a reason to get a permit; next thing you hear of seafood especially crayfish being sold in Hastings or somewhere else (*Tangaroa 3012019*).

There was a view that if cuts became necessary to support replenishing the fishery overall, then perhaps the customary regulations could be tightened first rather than interfere with fishers' livelihoods. It was noted that recreational fishing also has an impact, because a permit is needed and there are some who abuse that right as well:

...I lease my quota to one of the local fishermen here and we [daughter and son-in-law] just go out and get enough for a meal... I don't eat crayfish anyway, but I do like fish and we just get enough for us... I can't risk my reputation as a fisher, shareholder in the companies and past governance and CEO to overfish... we stick to the rules... I don't want any of that on my boat... there is only so much you can eat, so we just catch when we need it (*Tangaroa 3012019*).

According to all the participants and conversations with locals, fishery around Wairoa and the Māhia Peninsula is in sound condition and has been for a number of years, but, as coastal hapū are aware, there needs to be a constant monitoring of the sea, currents and weather conditions locally, nationally and

internationally that might impact on the fishery and marine ecosystem:

I mean, you've got to watch the signs; catches can start to go down slowly. It's not always open fishing; its natural things like the little glassy ones [baby lobster] that arrive, some years they come in on the currents; it doesn't quite come in here [Māhia] in the masses that they can. To give you an idea; I think it was sort of a mini tsunami or something (I'm going back a lot of years); and on some of the beaches north of Tolaga Bay, the little glass crayfish, they were wading through so many on the beaches, they all got washed ashore...About five or seven years later there was very poor catches, because that's about the age they are when we catch them; they're up to about seven years old. We reckon we lost that catch that year when they all came and got washed ashore (Tangaroa 3012019).

Participants indicated that:

...the biggest danger is probably chemicals from off farms (Tangaroa 3012019) and Forestry plus also the water quality. I'm very interested in the water quality; not so much about the rivers, which as far as I am concerned the river's only part of it. It's the rivers that empty into the sea and that is where the rubbish ends up. My interest as a kaitiaki and a Māhia Māori committee member is what that is doing to our fishery (Tangaroa 2012019; Tangaroa 1012019).

As mentioned earlier, there are two types of kaitiaki in the rohe. Two or three are old 27A regulation kaitiaki, but also come in on the Kaimoana Regulation 1998 kaitiaki. The 27A system was regulated by the local Māori Committee who were the authorising body.

Under the kaimoana regulations, the authorising body is the Minister and his servants, which are MPI. The Māhia Māori Committee has actually very little say in customary fishing when it comes to the kaimoana regulations, which is very concerning to some:

Under the 27A the Māhia Māori Committee was the authorising body. The marae were the point of contact or they were to refer a kaitiaki for an appointment to the Māhia Māori Committee who would then appoint that person as a kaitiaki, and the then Minister of Agriculture and Fisheries would put a notice in the paper and that kaitiaki would be gazetted. Now we have a system that is in some respects is chaotic because the Māhia Māori Committee is only a notifying body now. It can notify MPI and the Minister who it would like; what it would like; but the Minister is under no obligation whatsoever to carry out those requests or wishes. They actually have a pretty much open hand (Tangaroa 2012019).

There have been recent court cases where MPI have not been successful in prosecuting kaitiaki because they have worked within the Sealord and Kaimoana Regulations 1998. The courts have had to point out to the Ministry that the Fisheries quota was given to Māori not to MPI:

...actually, under Sealord and the Kaimoana regs... fisheries were actually given to Māori not to the Minister of Primary Industries to dispose of as he sees fit (Tangaroa 2012019).

Those operating in the customary Māori fishing space have observed that the Minister for Primary Industries assumes that both customary Māori fishing and recreational fishing should also be paying taxes like any other primary industry or even other ministries where levies are paid for use of facilities or services

rendered. There are concerns from those in the customary fishing industry that if:

...recreational and Māori customary fisheries were absorbed by Ministry Primary Industries and quota-ed out, I'm quite sure there would be a charge involved which someone would have to pay. Now some would say that is quite okay but for some of us we regard it as an edge of the wedge. We foresee a day when to go down and catch a fish with a surf caster or maybe grovel round the rocks trying to find a pāua... will be require... a license to... do that. Some people may say it will never happen but some of us are feeling a little bit pessimistic because for some years now the general public have been told it's a user pays world; therefore, why shouldn't you pay (Tangaroa 2012019).

In discussing the quota for customary fishing in the region, the monitoring, recording, and documentation of permits allowing people to access quota were considered, as was the need to keep up to date with those roles. Currently, one person on the Māhia Māori Committee collects the signed permits from kaitiaki and records all the data. For example: how many permits were given out, who were they given to, what were they given for (which species, e.g., pāua, kina, crayfish or other) and was it consumed inside or outside of the region. They also record which Kaitiaki gave permits to whom and for what purpose. Given Māori demographics show that a large number of iwi members, especially for this region, live in other regions of Aotearoa or overseas in Australia, those on the committee feel that because they have whakapapa links to the rohe then they should be able to access kaimoana:

What I do is I am supposed to collect the pink slips which are the records of all permits issued every three months. I then tally those permits up as to what is permitted and what is

actually caught and whether what is actually caught is being consumed in the rohe of Rongomaiwahine, or whether it is going outside the district. So far one in three to one in four of the fish—the pāua and kina and crayfish we catch—are eaten in our own home rohe. The rest is all sent out to members of the iwi and connections of the iwi who live outside our immediate rohe such as Wairoa, Napier, Gisborne, Auckland, Wellington. We even have stuff which goes to Australia. This puts a strain on some people as is it credible? Should we be sending stuff outside the rohe? (Tangaroa 2012019).

Government policy and the push for Māori to leave the rural areas for towns and cities for employment led to massive exodus from this area, particularly after the Second World War. Māori communities in Wairoa, Māhia, and Gisborne districts also had to deal with the impacts of the war. Many young men never returned from Europe and whānau structures began to break down – a whole generation seemed to have disappeared. More people left the region in the 1960s to participate in the trade training schemes offered through Māori Affairs. While many of these people did not return to the district, they still have tribal and family affiliations to the area and are, therefore, entitled to kaimoana from the region:

This puts us in a bit of a spot because under whānau kawa, and manaakitanga, we consider that we have an obligation to our people that have left and the least we can do when they apply to us is to satisfy their requests. They are family; they are connections; they whakapapa back here in many cases and so many of us have no objection to them having some seafood from here (Tangaroa 2012019).

The new regulations are different from the old S27A regulations. Under S27A, permits were only given for

tangihanga or hui and perhaps some other special occasion. Under the new Kaimoana Regulations, the words “customary use” were used rather than specifying tangihanga or hui, which means that under the custom of manaaki tangata or manaaki manuhiri, any occasion more or less means one can access kaimoana:

If we have visitors coming, we try to give them something nice. We’re asked to give our visitors something nice; that means if we can put some kina on the table or some pāua or crayfish then that is what we do. Some people might say, “Oh we have visitors; we’ll give them some salmon. We’ll give them some ham.” We as Māori from here are more likely to consider a plate of kina on the table a much greater treat than the back leg of a pig (Tangaroa 2012019).

Depending on where they live and whether they are in full or part-time employment, not all Kaitiaki are easily accessible to fishers. In the Wairoa-Māhia region, just one of the Kaitiaki is retired and therefore easier to locate and contact than others. That person is responsible for 80 percent of the permits issued:

XXXX lives about 100 metres off the side of a tar sealed road and about two kilometers from one of the main boat-launching ramp sites on the Māhia... also has a cell phone and cell phone coverage so people can contact him (Tangaroa 2012019).

There is debate even amongst the committee around who has the right to a permit. Under the Treaty of Waitangi, Māori have the same rights as Pākehā and so there is argument that Pākehā should have rights to a customary permit. However, under the Sealord agreement it is Māori alone who have those rights:

...some people say the Crown under Sealord gave the fish to the Māori; only Māoris can get

it. This sounds great... But we’re not allowed legally to discriminate against a person based on colour or race; so therefore, we have a debate going as to whether Pākehā are entitled to a customary permit or not (Tangaroa 2012019).

Climate and environmental impacts

Our participants identified the Port of Gisborne as a significant protective shelter for the puerulus/postlarva (transparent state of the crayfish). They have provided protective shelters there called ‘motels’, which provide a safe haven and access to plenty of food. This in turn provides opportunity to monitor the crayfish population and assess the health status of the postlarva:

What happens is the crayfish egg is fertilised; it goes out to sea, then it drifts back in. There are places like Gisborne Harbour where a lot of them come in. It’s sheltered; it’s protected; but there is plenty of seafood. They built these little motels and the boards, it was made of plywood... you can pull them out of the water... look at them and see all the little crayfish living between [and] inside these little houses... an artificial shelter for them, and it was a very good way to monitor them (Tangaroa 2012019).

However, there has recently been a noticeable drop-off in the postlarva population, and many blame the anti-fungal spray used by the forestry industry on the pine plantations, which leaches into the rivers and eventually into the port of Gisborne. While the spray has been found not to kill the crayfish/postlarva outright, they certainly dislike it and to avoid contact they move on, back out to sea where survival of the fittest prevails:

...Gisborne you’ve got five rivers. One... empties into the Port... [has] a couple of big log dumps ... an anti-fungal spray and crayfish don’t really like it. Some of us believe that may

have affected the crayfish... they don't like it; they'll move on. When they move on, they don't reach their potential because they may get eaten or they may starve. They may be caught in open waters with no shelter, whereas in the port you have the tide coming in. You have the tide go out, so you've got fresh food coming in and out and you have the shelter. If you've got to leave the port and go out into the open sea, you are fair game for everyone. That may have triggered a drop [in population] (Tangaroa 2012019).

One participant referred to natural events like cyclone Bola in 1987 and the grounding/sinking of the *Rena* just off the coast of Tauranga. More recent storms in 2018 have also impacted on the fishery because the different tidal currents that run along the east coast bringing the debris from other regions like Tauranga. It was pointed out that beaches in Wairoa, Nūhaka and Blake's Beach are all shingle beaches influenced by the Wairarapa current, whereas the Māhia beaches and rivers are sand with very little or no shingle:

Our local rivers have no shingle whatsoever. Even the Wairoa river has only got a couple of deposits of shingle in that whole catchment. Our shingle comes from the Mōhaka and further south. It just marches along the coastline. It's massive when you look at the amount of shingle at Wairoa; at Whakamahia; at Nūhaka; it's incredible. That is why the Māhia which was an island is now joined onto the mainland. Māhia is a Tombola or you could call it Tide Island. It was never a peninsula... Māhia was pretty much an island until [up until the very early 1900s or late 1800s]. So, our biggest problem here... with our in-shore fisheries is the currents. You might say, "What the hell has the current got to do with it?" Well we've had a move in the last few years to establish large areas of

pine forest. That has come home and bitten us now. We've had massive flooding up the East Coast. Unfortunately, because the East Coast current comes down past Ruatōrea; down past Tokomaru Bay; down past Tolaga Bay; the Waipaoa spits large amounts of sediment out into the sea. It all tends to migrate down towards the Māhia peninsula. There is a potential for a lot of damage to be done to our in-shore fisheries from logging which is being done up the coast (Tangaroa 2012019; Tangaroa 1012019).

Many locals from around the region are becoming more and more concerned about the extreme weather events that have occurred in the region and elsewhere in Aotearoa which have had a profound effect on the overall fishing industry. In many respects Wairoa/ Māhia has just missed the most severe weather events in 2017 and 2018, but locals remember Cyclone Bola in 1987 which shook the region to its core and Wairoa/Māhia has taken a bit of time to get over it. This is most evident for local farming in the region. Forestry seems to be growing in popularity, especially in the hilly areas. However, recent storms in 2018 in Gisborne have shown the damage that forestry can have on the land and marine ecosystems. Climate change and its impacts are of grave concern to local Māori communities and have been for quite some time.

In the Wairoa/Māhia area for crayfish and most other species, the health or mauri of the ecosystem is currently in a sound and healthy state and believed to be sustainable, but participants agreed that other areas around the motu were not so sound:

Currently it is great, healthy and sustainable but only in our area of Cray 3—up north of Mahanga past Gisborne to Auckland Cray 2 is in dire straits (Tangaroa 2012019; Tangaroa 1012019; Tangaroa 3012019).

Summarising comments

Aspirations

Fishers, Kaitiaki, Governance, and locals want a sustainable healthy fishery and look after the area for which they are responsible. This was most noticeable in the Wairoa/Māhia Cray 3 in that fishers, kaitiaki and governance through the Taiwhenua o Te Wairoa and the Māhia Māori Committee all communicate with each other at different levels and promote care and protection of the resource. There is acknowledged agreement that protecting the fishery by not overfishing has benefits for the community generally. Fishers, whānau, hapū, and iwi bid for both commercial and customary quota. Twenty-six marae in the region receive a box or two boxes of fish (snapper, tarakihi, gurnard, etc.) for tangihanga, depending on the size of the tangihanga. A further distribution of \$1000 from Taiwhenua leased quota monies is made to each of the 26 marae in the Wairoa-Māhia region. Each marae also receives other seafood such as pāua, crayfish, mussels, kina, and pipi for different events including tangihanga. Under the new Kaimoana Regulations 1998, access to seafood under the customary umbrella has widened to include any hui of any size and this is where a range of issues arise that may be cause for more and stricter regulation in the future in relation to customary fisheries.

Cultural elements

While not emphasised in the case study, local tribal pūrākau, waiata, and well-known histories of ancestors are embedded in the landscapes, rivers and coastlines of the area, in particular, iwi relationships with the seafood basket and appropriate care of the children of Tangaroa. For example, stories of Rongomaiwahine standing on her rock and sending karakia out for successful fishing to her fishermen as they passed through the mouth of the river to sea. She would wait for their return and then walk back to Nukutaurua with

her portion of fish (Tangaroa 1012019). The Waka Takitimu is said to have landed at Nukutaurua and the tohunga Ruawharo planted the mauri of the whale and fish at that spot and later left his three children as guardians (turning them to stone) at different sites along what is now known as the Ngāti Kahungunu coastline (whales and fish have always been plentiful at these sites).¹⁵ Nukutaurua has designated Mātaitai area but these can also be fished when whānau need kai to feed themselves (Tangaroa 1012019).

Kahungunu himself was reknowned for his food gathering abilities, especially pāua gathering, and it was through the consumption of pāua that he eventually was able to separate Rongomaiwahine from her husband and later come together with her in marriage and produce the iwi known as Ngāti Kahungunu.¹⁶ These stories are confirmed in waiata (Kōtiro Māori, Ruawharo).

Participants talked about whānau, hapū and iwi mātauranga Māori and traditional knowledge pertaining to different species of fish and shellfish. They also talked about their commitment to upholding Māori values—sharing, caring and supporting whānau, and hapū wherever they might live in New Zealand and overseas. There was acknowledgement that if you whakapapa to the region, to Kahungunu and Rongomaiwahine, then there was a responsibility to ensure you have access to kaimoana.

Pressures

Natural weather events as well as overall climate change are putting pressure on inshore fishing along New Zealand coastlines, and the Wairoa/Māhia coastline is no exception. However, because of the protective harbours and beaches along the Wairoa/Māhia coastline much of the sediment and debris that comes in on the different currents is a little diluted.

¹⁵ <http://nzetc.victoria.ac.nz/tm/scholarly/tei-MitTaki-t1-body-d1-d8-d2.html>

¹⁶ <http://nzetc.victoria.ac.nz/tm/scholarly/tei-MitTaki-t1-body-d1-d8-d2.html>

Climate change issues and impact on environment is discussed regularly at community, Māori Committee and Taiwhenua/Kahungunu rūnanga levels.

Impacts

There are a range of positive and negative impacts on both communities and fisheries. Most fishers in the Wairoa/Māhia region agree to a process of management practice that supports the health of the fishery. They do this among themselves – for example, by sticking to their quota, identifying their ‘patch’, acknowledging other fishers ‘patch’, and through agreed reductions, i.e., banking quota for the future, working with kaumātua and community to raise awareness with younger generations by engaging with local schools in the region (Tangaroa 1012019).

Health of fish stock

As mentioned earlier, local fishers and community know that in this region the fish species stocks are healthy and abundant – fishers are catching their quota easily and, over the last four or five years have finished their season early. Because of the condition of other regions, like Cray 2, the top of Cray 3, and Cray 4, the official view of fish stocks is different from

the local view. Participants referred to MPI intentions to cut quota across the board by 9%, which may be needed in other regions but not in this region. Making a decision to self-impose a cut on quota in this region is considered to be a smart move. Anticipating government moves has proved to be proactive and profitable in the past (Tangaroa 1012019; Tangaroa 3012019):

...we [in this region] stand out as being successful... I am not skiting or anything (Tangaroa 1012019)

Ecosystem-based Management

Each participant was asked their perceptions and knowledge of Ecosystem-based Management (EBM) but none knew or were confident enough to speak at length on this topic. They agreed that probably commercial fishers might not practise EBM but overall having the technology on the boats would be good (Tangaroa 1012019; Tangaroa 3012019). However, when asking the same about kaitiakitanga, they were much more knowledgeable (Tangaroa 1012019; Tangaroa 2012019; Tangaroa 3012019).



MOANA NEW ZEALAND

Case study author

Dr Shaun Awatere

The business

Moana New Zealand is the largest Māori-owned fisheries company in New Zealand (Aotearoa). Moana New Zealand is a pan-Māori enterprise that is 100% owned by Māori and has 400 employees across New Zealand and 58% iwi shareholders. Moana New Zealand is based in Auckland and the company fishes and harvests solely from inshore fisheries around Aotearoa, exporting fin fish, lobster, Pacific oysters, wild pāua (abalone) and farmed blue pāua (Moana New Zealand, 2019). Moana New Zealand has 10 modernised processing facilities, which has increased their processing capacity and enabled efficient processing of high-quality seafood.

Moana New Zealand's primary exports are:

- \$47.4m New Zealand
- \$33.0m Australia
- \$12.5m China
- Rest of Asia* \$5.5m
- North America 3.8m

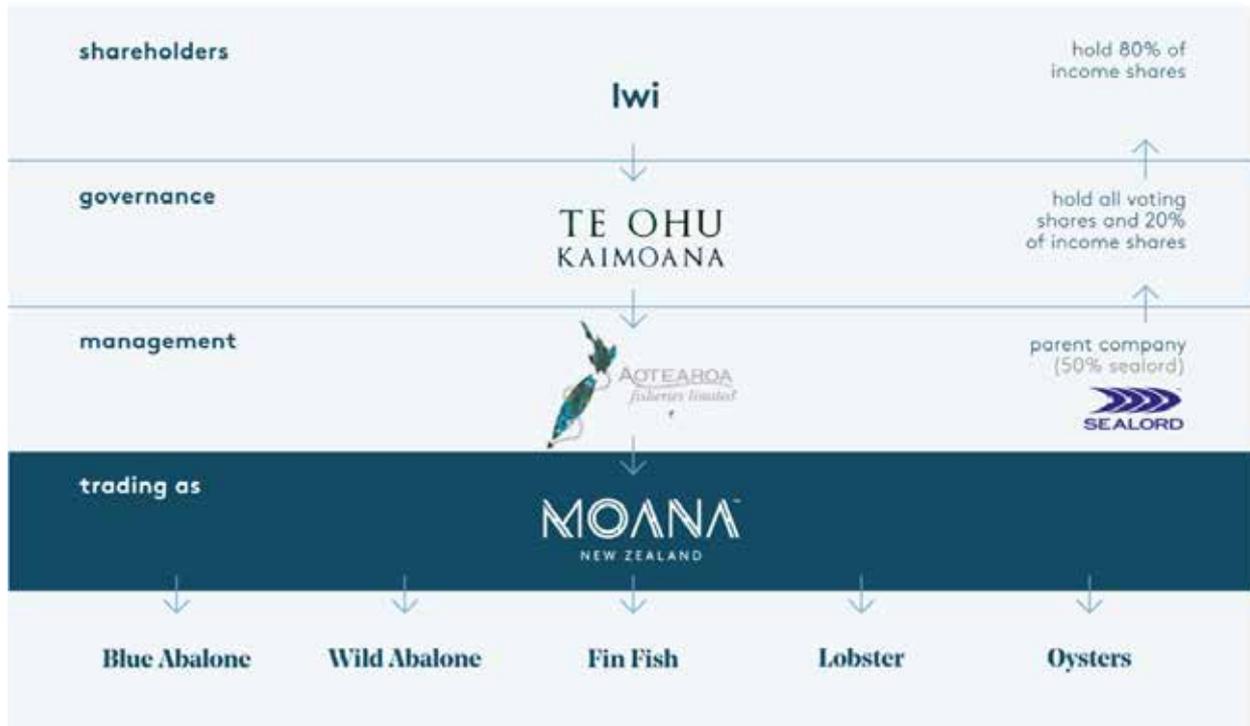
- Other \$25.7m (Singapore, Hong Kong, Taiwan Europe and the Pacific Islands)

The enterprise also has 3 retail outlets and an Aquaculture Stewardship Council (ASC) Certification for Blue Abalone. Moana New Zealand has a number of farms and processing facilities as well:

There's blue abalone farm up in Ruakākā. We've got a wild abalone and RTE processing facility in Palmerston North, which is only about 3 years old. It was a brand-new factory. We've got 16 oyster farms across the North Island and the top of the South; and we've got a nursery hatchery operation in Nelson. Our fin fish part of the business and the RTE part is military, humanitarian "Ready to Eat" meals that operate out of Palmerston North (Interview 1).

Moana New Zealand was originally Aotearoa Fisheries Limited, which took ownership of several Māori-owned fishing companies in 2004 through the allocation of the Māori Fisheries Settlement assets and the passing of the Māori Fisheries Act. Moana New Zealand owns in trust on behalf of Iwi the 50 percent shareholding in Sealord Group Limited.

Figure 6 Moana New Zealand organisational structure



Source: Moana New Zealand (2015, p. 1)

The goals of Moana New Zealand are:

- Ensuring the safety of our fishers and people
- Using our existing assets in the most productive way
- Sustainability of fish stocks for the benefit of all
- Better development of our people internally
- Doing as we say we are going to

- 1 Māori manager joined the company
- 48% of new recruits (permanent, fixed-term and casual) were Māori
- 34% of our leaders, managers and supervisors are Māori
- 35% total workforce are Māori.

Figure 6 above outlines the relationship between Aotearoa Fisheries. Operations include four divisions: inshore, aquaculture, prepared foods, pāua and a 50% shareholding in Sealord Group Limited. The business is involved in all aspects of the value chain, including fishing, processing and marketing.

Te Ohu Mahi—Workforce

Moana New Zealand has a commitment to developing Māori capability (Moana New Zealand, 2018). In 2018:

- 2 Māori executives joined the company
- 3 Māori internal promotions into managerial and supervisory roles

With 400 employees across New Zealand, Moana New Zealand aims to be a best-in-class employer with highly engaged teams where individuals can build meaningful careers, and seeks to develop the next generation of leaders. According to the 2018 Annual Report, Moana New Zealand has recently completed a comprehensive review of their human resource governance structure, systems and processes. Results showed that while some HR initiatives and projects were carried out, many employees believed more work was required on engagement, training and communication (Moana New Zealand, 2018).

As well as the geographic spread, Moana comprises a diverse workforce. The following is a snapshot of the workforce profile at 2018 (Moana New Zealand, 2018):

- 400 total staff
- 50% aged 46 and above
- 17% leaders, supervisors, managers or senior specialist employees
- 22% unionised waged workforce
- 2 Māori executives joined the company
- 3 Māori internal promotions into managerial and supervisory roles
- 1 Māori manager joined the company
- 48% of new recruits (permanent, fixed term and casual) were Māori
- 34% of leaders, managers and supervisors were Māori
- 35% total workforce were Māori

Te tini ki te mano—Engagement strategy

Moana New Zealand's current financial position is a \$20m profit with approximately ½ billion in equity. Profits it makes are returned to Iwi shareholders in the form of dividends, with the balance retained to fund the long-term growth of Moana New Zealand. \$65.2m dividends have been paid to Iwi to date with a \$8.6m dividend paid out for 2018.

Moana New Zealand has a 'many to many' engagement approach, which is about getting closer to shareholders and finding out what they want from their company and how they can deliver on that. According to the Integrated Annual Report in 2018, a survey was carried out to identify stakeholder priorities in order to inform Moana's business and sustainability strategies. Internal and external stakeholders, including Iwi, Government, Non-Governmental Organisations, fishers, industry bodies, lobbyists and customers took part (Moana New Zealand, 2018).

An intergenerational focus underpins Moana New Zealand's focus to developing future capability: the company manages the Global Fisheries Scholarship—a scholarship for Māori that provides an opportunity for a student to work for a year at Nissui in Japan, their 50% partner in Sealord Group Limited. Additionally, 700 Northland kids were also supported by Moana New Zealand through the Kiwi Can programme (Moana New Zealand, 2018):

In terms of other sponsorships, we make an effort to sponsor or support kaupapa in the areas that we operate, so for Coromandel, Thames, Auckland area we've got a lot of inshore fishers so we support the Westpac rescuing helicopter in case any of our fishers get in trouble it's the rescue helicopter that they'll need. On the Chatham Islands they do a festival, so we support that. We also supply or help with supplying schoolbooks for kids out there, just exercise books. We give to Kiwi Can, so there's about 700 kids in Northland that we support through the Graeme Dingle Foundation, and then there's other conferences like the Māori Fisheries conference and our industry conferences that we support. This year we did Te Matatini as well; we've been doing the Māori Sports Awards for ten years or so. There's a bunch of things that we sponsor around the country but essentially the criteria for monetary sponsorship is that they're Māori, that the kaupapa is Māori, or benefits Māori (Interview 1).

Other ways that Moana New Zealand tries to connect with wider stakeholders and beneficiaries are through support of bespoke business models with iwi/hapū and the Pātaka redistribution programme.

We've already spoken about the, essentially, they're bespoke business models, which allows for a range of participation. And I guess it's part of our responsibility as well to grow the knowledge and capability of iwi in the fishing industry so that they can better manage their own assets.

...from Moana's perspective it's (Pātaka) just a good way for people to get access to fish from their own company as well when the need is the greatest. And then we've also got contract growers as well for oysters and processors, so that was a million dollars last year; eleven thousand kilos of Pātaka last year, \$11 million to Māori fishers last year (Interview 1).

These programmes demonstrate Moana New Zealand's commitment to the 'tini ki te mano—many to many' approach of engagement with iwi/hapū beneficiaries

Kaitiakitanga—Sustainability

Moana New Zealand is committed to ensuring people understand how Moana New Zealand came to be, why they exist, and why they are relevant. Kaitiakitanga-based values are ingrained into the culture of the organisation. According to Moana New Zealand's Sustainability Strategy (Moana New Zealand, 2017), the enterprise has a deep sense of responsibility and respect for the kaimoana they harvest. An intergenerational approach informs most of Moana New Zealand's approaches, and they aspire to work in harmony with nature to ensure the sustainability of fisheries for future generations.

Moana New Zealand markets pre-packed seafood in a world-first barrier tray that uses sustainable raw materials that can be recycled. PLANTIC™ is a responsible packaging alternative to plastic designed to meet growing demand for sustainable plastics technology. Most of the tray uses materials

from renewable and recycled resources with very low oxygen transmission rate, which can result in an extension of shelf life for fresh proteins. This means Moana New Zealand can continue to provide the world with New Zealand's premium seafood while living true to our value of kaitiakitanga (Moana New Zealand, 2018).

He rautaki—Strategy

The following strategic approach is presented in Moana New Zealand's Sustainability Strategy (Moana New Zealand, 2018):

- **Our Purpose:** As guardians of Māori fishing assets, we are dedicated to a deep sense of responsibility to our people and respect for kaimoana and kai ora contributing to the well-being of future generations
- **Our Vision:**
 - We connect the world to the true taste and rare magic of New Zealand's best kaimoana.
 - We recognise that improved future benefits will be delivered to iwi through increasing value rather than volume, given finite marine ecosystems. We also recognise that we must be profitable to be able to reinvest in sustainable management.
 - Social sustainability is a key element to our success. The focus is on integrating corporate social and environmental responsibility into our business objectives.

The key drivers for Moana New Zealand are identified in the Integrated Annual Report 2018 (Moana New Zealand, 2018):

- **Tō mātau iwi:** At Moana New Zealand we want to ensure we continue to care for and build the capability of our people, for the benefit of everyone. We strive for happy and healthy employees who live our values and have meaningful connections in our community.

- **Tā tātau haonga:** Our role as a Māori owned business and as kaitiaki is to care for the realm of Tangaroa so we can provide pristine kaimoana now and for future generations to enjoy.
- **Ā mātau kawenga:** We're working to improve what we do and how we do it, in order to create efficiencies and create value for our shareholders and the communities we operate in.
- **Ā tātau māketē:** Our business strategy is driven by being innovative with what we catch to ensure we extract the most use and value out of this precious resource and building on customer demand in existing and new markets to create additional value for our premium product.
- **Tā mātau whanonga:** We're working to improve what we do and how we do it, to ensure the long-term sustainability of our fisheries and our business and to deliver value to our shareholders.

Organisational culture

Sustainability is a key ethic that makes up the culture of Moana New Zealand. The enterprise recognises that improved future benefits will be delivered to iwi through increasing value rather than volume, particularly given finite marine ecosystems (Moana New Zealand, 2017). Paradoxically, Moana New Zealand is also committed to profitability, believing that profit is required in order to be sustainable.

Being a good corporate citizen is important for Moana New Zealand. They recognise that social sustainability is a key element for success, and aim to integrate corporate social and environmental responsibility into their business objectives. Moana New Zealand has a philosophy of continuous improvement demonstrated through new branding, new state-of-the-art processing facilities, and a sustainability strategy (Moana New Zealand, 2017).

Moana New Zealand has adopted best practice and integrated corporate reporting and are beginning to implement elements of the Natural Capital Protocol, a

framework for sustainable business internationally, by measuring their environmental footprint (waste, water and energy efficiency) and considering all aspects of their business holistically. Moana New Zealand are educating staff about the importance of underpinning the entire business with the ethic of kaitiakitanga—sustainability. Moana New Zealand is building the capability of staff, including fishers, through a tailored sustainability awareness programme (Moana New Zealand, 2017). Moana New Zealand inshore are trained as responsible fishers through the Responsible Fisheries Awareness Programme. This ensures fishers understand the behaviours required at sea, on the wharf and in communities.

Tikanga Māori plays an important part in influencing how Moana New Zealand operates. The Integrated Annual Report acknowledges that iwi are at the centre of everything Moana New Zealand does, and Tikanga Māori offers navigation points—whakapapa, manaakitanga, kaitiakitanga and whakatipuranga—that underpin everything they do (Moana New Zealand, 2018). For example, Moana New Zealand is part of the Pātaka programme, that provides fish at no cost to whānau/hapū and iwi for cultural purposes such as for tangihanga:

It is quite dynamic. But we've got Māori contract divers that work for us so last year I think we paid out a million dollars to divers for their catch efforts. We've got Māori fishers who own their own vessels so they're their own business but fish Moana ACE. We connect through Pātaka Kai, so where we have a commercial arrangement with iwi we provide Pātaka for tangi. That's not coming off customary catch at the moment, that's coming straight off the bottom line, and it's fish fillets so they're ready to go; and essentially, it's to help that first kai when you first get to the marae... (Interview 1).

At the same time, the wellness programme, Hīkoi ki te Ora, won the Safe and Healthy Work Environment Award at the Primary Industries Good Employers Awards. Messaging the whakapapa of Moana New Zealand to staff of the enterprise is also a key focus of Moana New Zealand. Educational hui have been carried out to remember the history of Moana New Zealand and those who fought tirelessly for Māori rights under the Treaty of Waitangi (Moana New Zealand, 2018).

Well-being of staff is an important priority for Moana New Zealand. A diverse number of programmes are carried out to improve the well-being of staff:

Because we're a business that was built by acquisition, we used to be quite siloed. Hīkoi ki te Ora was the first programme to go across all our sites. And so, each month we focus on a different kaupapa. Sometimes it's just educational, sometimes we're just drawing off the resources that the government or other agencies put out, so Breast Cancer Awareness or Diabetes. The aim of it was to be a holistic programme, so looking at physical wellness in terms of trying to get people moving, looking at what diets are, looking at nutrition and so we've had sugar-free demonstrations. We had people come in and do easy, simple recipes to try and get rid of this permanent noodle culture that we had. Also, about just practical tools as well, so we've got a high Pacific demographic who are sending money back to the islands. So, we ran some training around the best way to do that so that they're losing the least amount of money in that transaction (Interview 1).

The approach for implementing the well-being programmes is to encourage integration across teams so that accountability for well-being is not siloed:

So, for Hīkoi ki te Ora we try and make it a bottom-up approach; it's not about what management thinks that we need. We've got a group of champions, so we have either one or two people at each site depending on the size of the site. So, for Bell Ave we'll have one person upstairs to engage the office staff, but we also have someone on the factory floor because that engagement looks different... The engagement is only as good as our champion, to be honest. And it's the same with sustainability so we have a sustainability working group, and we've got a representative from each site. We meet three or four times a year (Interview 1).

Holistic approaches like well-being and sustainability are part of the culture within Moana New Zealand. These approaches are not promoted only by HR or the Sustainability office:

The internal newsletters where staff speak are very strong and consistent, and senior management are strong champions for this, and demonstrate it in their own lives as well. So, it's very deep. And, of course, then there are other advisors and consultants on these different kaupapa supporting these teams. We've just had our 21st sustainability team meeting, so that's a fair amount of time and investment over the years in building that momentum and capability (Interview 1).

Innovation

Moana New Zealand has several innovation initiatives. For example, their oyster business is exploring new harvesting innovations to gain husbandry efficiencies. The Ready to Eat division is developing new recipes and in-market sales representatives in Dubai are dedicated to securing new channels to market. Moana New Zealand have continued to invest in facilities for future growth. This includes the completion of the

Mt Wellington Fin Fish processing facilities upgrade, a new grow out shed for Blue Abalone in Ruakākā, and continued investment in innovation across the organisation (Moana New Zealand, 2018).

Moana New Zealand also invests in the diversification of products such as 'Ready to Eat' type meals. This type of investment is one way of managing risk as well as providing a product to satisfy social and humanitarian goals:

So, in the off season they started producing 'Ready to Eat' meals; so, they're long-life meals that are in a sachet, so it could be 250 grams or 450 grams and it's all Halal, that part of the factory is Halal. And it could be a beef stew or a chicken curry. The humanitarian side is used in relief or aid where it's needed, so the Nepal earthquake was an example, and in fact we just gave some to Christchurch as well last month. So, it's long-life, Ready to Eat meals. One arm is for humanitarian aid and the other arm is around contract packing; so, it might not be our ingredients but we'll pack because we've got the facility to do that. And the third one is Defence Force (Interview 1).

Moana New Zealand are investing in innovative fishing equipment that is aligned to their core value of kaitiakitanga. Precision Seafood Harvesting (2019) has been implemented on most of Moana New Zealand's vessels. PSH nets minimise the impact of damaging fish when fish are transferred to the deck improving the quality of the fish and importantly minimising the impact on bycatch.

Ngā wero—Challenges

Moana New Zealand continues to face the ongoing challenge to demonstrate to the general public and their customers that they are operating responsibly by harvesting in a sustainable manner. This messaging approach is through social media. They have joined

the sustainability discussion on social media, having recently launched the Moana New Zealand Facebook and Instagram platforms (Moana New Zealand, 2018).

The health of fish stocks is another challenge faced by Moana New Zealand. The enterprise is facing Total Allowable Commercial Catch (TACC) cuts in the next financial year and had cuts in 2018 financial year to their lobster quota. However, in accordance with their tikanga, Moana New Zealand has voluntarily shelved quota for hoki, and will experience a TACC cut in tarakihi, kuparu (john dory) and pātiki (flounder). Moana New Zealand is working with Government and industry to come up with a fisheries management proposal that doesn't simply involve cutting TACC but takes a more holistic view towards looking after fish stocks (Moana New Zealand, 2018).

Social Licence to operate is an important approach for Moana New Zealand particularly with respect to their commitment to engage with the many:

.So, social license to operate is always the challenge, making sure that people understand our fishers are responsible, and that we farm responsibly... we met with local iwi, hapū stakeholders, we had about 30 odd in the room. One of their concerns was the number of sticks in the water. And we're trialing at the moment actually a new farming method, which is called flip farming; that means that we don't need as many sticks in the water, which would help because there's less infrastructure in the harbour. Those sorts of things and innovations will help with our social license to operate and making sure that people understand our efforts in being as responsible as we possibly can (Interview 1).

At the same time, efforts to ensure sustainability is part of fishing efforts are reflected in the expectations

around how contracted fishers carry out their operations:

What we're training them (fishers) in is social responsibility around where they fish and how they fish; and around health and safety, looking after themselves, looking after their families while they're away (Interview 1).

Additionally, promotion of Precision Seafood Harvesting (2019) techniques, an innovative solution for drift net trawling that promotes the health of fish caught and minimises damage to bycatch, is a technique actively carried out by Moana New Zealand Fishers.

So, all of our full-time trawlers—I think except one, we've still got one to change over—are now using PSH technology.

(The PSH technique is) basically bulk harvest, longline quality, which is the significant breakthrough. And another aspect with respect to the Benthic (ecology) is this technique can be deployed a hell of a lot more accurately and with precision than normal trawl gear (Interview 1).

Another significant challenge faced by Moana New Zealand is climate change and the potential impacts from marine heatwaves and ocean acidification, such as the health of shellfish, the potential introduction of new pest species and the movement of fish to cooler/warmer climates:

And then the marine heatwaves, especially this last summer, there's been anecdotal reports of fish not being where they should be, or they used to be.

Moana's experience with the XX abalone farm (is) significant summer heatwave problems in the last two years, with heat stress on the pāua and warm water coming in through the pipe. So that's operationally challenging and a good example (Interview 1).

Furthermore, climate change is an important consideration for future challenges because of the potential risks from climate change and the impacts on inshore assets (pāua and oysters) as well as deep sea fish stocks. Climate change will have implications for where farms and processing facilities are based.

Summary

Moana New Zealand is the largest 100% Māori-owned seafood company with 400 employees across the country and 58% iwi shareholders. The enterprise has a culture dedicated to sustainability and intergenerational approaches for managing their assets on behalf of Māori. Moana New Zealand has clear goals and objectives underpinned by tikanga Māori. There is a strong kaitiakitanga-based approach to strategy and this flows through into some of the demonstrations of kaitiakitanga being applied in fishing activities. The reporting by Moana New Zealand through annual reports and sustainability reports highlights qualitative examples of programmes and approaches aligned to tikanga Māori. This case study has provided evidence of a number of examples where Moana New Zealand demonstrates commitment to achieving the ethic of sustainability and kaitiakitanga.

IWI COLLECTIVE PARTNERSHIP

Case study author

Ms Mylene Rakena

The Iwi Collective Partnership (ICP)

The Iwi Collective Partnership (ICP) is a limited liability partnership collaboration model within the fishing and seafood industry, established by and for the benefit of Iwi Tribal Members. The ICP is a multimillion-dollar global seafood joint venture that was officially launched in 2010 at Te Pākira Marae in Rotorua. Twelve iwi have collaborated as an unincorporated collective of iwi fishing interests since 2007. By 2015, two further iwi had subsequently joined ICP with another one joining in 2016. All tribal members connect through whakapapa (shared genealogy).

The ICP collaboration model is the largest collective of iwi involved in the fisheries sector and is made up of interests from, *inter alia*, Ngaa Rauru, Ngāi Te Rangi, Ngāti Awa, Ngāti Manawa, Ngāti Porou, Ngāti Ruanui, Taranaki Iwi, Ngāi Tai, Te Rarawa, Ngāti Tūwharetoa, Whakatōhea, Ngāti Whare, Rongowhakaata, Te Aitanga a Māhaki and Te Arawa. The ICP collaboration model demonstrates that “working together collectively provides better financial returns and provides greater social and cultural benefits” (Iwi Collective Partnership, 2019, p. 1)

ICP specialises in treaty fishing rights and kaitiakitanga (responsible fishing), delivering seafood products to markets in New Zealand, Australia, the Pacific Islands, South Korea, China, Japan, Singapore, Russia, the United Kingdom and the United States. ICP carries out its business on a global scale in partnership with New Zealand’s

leading seafood companies including Sealord, Port Nicholson Fisheries, Pelco New Zealand, and Moana New Zealand. A significant amount (90%) of all ICP commercial partnerships are with fishing companies where ICP iwi members have part ownership.

ICP manages 16,000 tonnes of fish caught annually, or the annual catch entitlement (ACE), which roughly involves 123 different species of fish nationally on behalf of the iwi members. ICP are 50/50 partners in a joint venture with Aotearoa Fisheries Ltd catching, processing and marketing 2,000 tonne of premium inshore species. ICP are also one-third owners in Port Nicholson Fisheries, a company that catches and exports 200 tonne of live lobster annually to China. The business is 100% iwi owned with Parinihihi ki Waitōtara (PKW) and Ngāti Mutunga (Chatham Islands).

The reputation and the good name of ICP have increased such that opportunities for investment now land on the General Manager’s table. The following assessment process is conducted: Offers are investigated with due diligence. If the general manager is satisfied all ICP requirements are met, the offer goes to the board, and then to the ICP iwi membership for expressions of interest. If there is sufficient interest, a feasibility study from a cost perspective will be undertaken.

Today, ICP membership comprises of 15 iwi from various locations throughout the North Island (see Table 1).¹⁷ At the time of publication of this report, two additional iwi with ACE were in negotiations to partner with ICP. Most are formal shareholders in the ICP while the remaining iwi supply ACE to the ICP through ACE supply agreements (iwi members). The legal entities for iwi members to become partners to ICP are via asset holding companies established under the

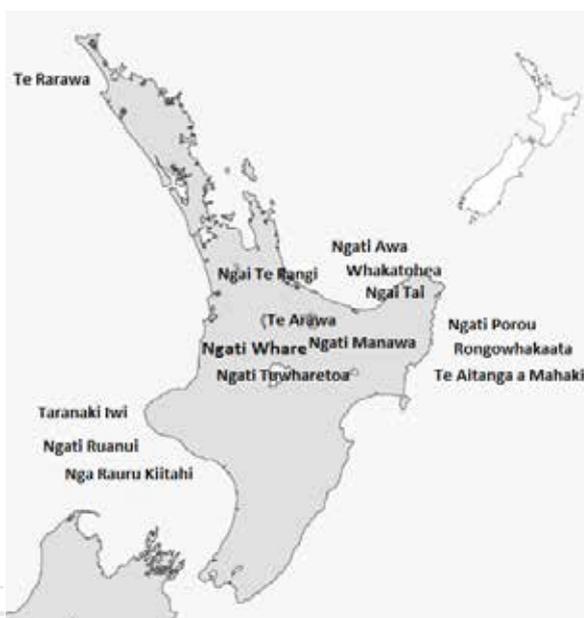
¹⁷ At the time of publication of this report, two additional iwi with ACE and QMS were in negotiations to enter into partnership with ICP.

Table 1 ICP iwi membership 2019

Iwi	Region	Asset Holding Company	Status
Ngaa Rauru Kiihahi	Taranaki	Te Pataka o Tangaroa Limited	Shareholder
Ngāi Tai	Ōpōtiki	Te Kumukumu Limited	Shareholder
Ngāi Te Rangi	Bay of Plenty	Ngāi Te Rangi Fisheries ACH Limited	Shareholder
Ngāti Awa	Bay of Plenty	Ngāti Awa Asset Holdings Limited	Shareholder
Ngāti Manawa	Bay of Plenty	Ngāti Manawa Tokowaru Asset Holdings Company Ltd	Shareholder
Ngāti Porou	Gisborne	Ngāti Porou Seafoods Limited	Shareholder
Ngāti Ruanui	Taranaki	Ngāti Ruanui Fishing Limited	Shareholder
Ngāti Tūwharetoa	Bay of Plenty	Ngāti Tūwharetoa Fisheries Holdings Limited	Shareholder
Ngāti Whare	Whakatane	Ngāti Whare Holdings Limited	Shareholder
Rongowhakaata	Gisborne	Rongowhakaata Iwi Asset Holding Company Ltd	ACE Supplier
Taranaki Iwi	Taranaki	Taranaki Iwi Fisheries Limited	Shareholder
Te Aitanga a Māhaki	Gisborne	Te Aitanga a Māhaki Trust Asset Holding Company Ltd	ACE Supplier
Te Arawa	Bay of Plenty	Te Arawa Fisheries Holding Company	Shareholder
Te Rarawa	Northland	Te Waka Pupuri Pūtea Ltd	Shareholder
Whakatōhea	Bay of Plenty	Whakatōhea Fisheries Asset Holding Company Limited	Shareholder

Source: Iwi Collective Partnership (www.iwicollective.co.nz)

Figure 7 ICP iwi boundaries 2019



Source: Iwi Collective Partnership (www.iwicollective.co.nz).

Māori Fisheries Act 2004, to hold and manage their tribal fisheries settlement assets. The majority of these assets holding companies are registered New Zealand charities, reinforcing their community purpose. The map in Figure 7 shows where ICP members are located in Aotearoa, New Zealand.

The meaning of the ICP logo

The ICP tohu (logo) is a kaitiaki—a traditional Māori guardian of people, places and treasure. According to the ICP informant, the following meaning of the ICP tohu is given:

The kaitiaki brings together two distinct body forms: one represents our tikanga (traditional teachings, as they relate to the oceans and fisheries, passed down from generation to generation), while the other represents

entrepreneurship and our commercial aspirations to provide for our families and community. While some view conservation and commercialisation as two opposing forces, we prefer to view them as two sides of the same coin.

The 'eyes' are prominent, actively scanning the horizon searching for opportunity and risk. **The 'backbone'** symbolises the mahi (work) of our tūpuna (elders), our leaders, and every person who has contributed to the restoration of rangatiratanga (customary authority) in New Zealand seafood. In addition, the bridge merges our commercial imperatives and environmental responsibilities.

The 'scales' represent our iwi members who retain their individual identities yet are strengthened by acting collectively. The scales are a protective layer that guard and uphold the kaupapa (heart and purpose) of our organisation. The emerald green and deep blue hues represent pounamu (New Zealand jade) and the changing faces of the moana (sea). (Tohu designer: Aisha Ross, 23ika limited)

Governance and management of Iwi Collective Partnership

The legal entity for the governance collaborative model for ICP is limited partnerships. The advantage of limited partnerships is that limited partners have limited liability to business debts. Profits and losses pass through the business to the partners, who are then taxed via iwi asset holding companies. The ICP operational model is very lean with just one full-time staff member who is the General Manager. ICP has an annual turnover of \$5–10 million dollars. There is no retention of funds for investment, rather a six-month operating budget for cash flow, with the view that the returns on investments flow directly back to the iwi members.

ICP encourage and practice good governance and active management. The ICP governance board is composed of six directors elected by the ICP's iwi members. The three largest iwi shareholders appoint three directors, while the remaining 12 shareholders elect the other three directors. The Board is comprised of directors with extensive commercial and traditional experience. Developing and investing in capacity building for good governance and proactive management in the commercial fisheries sector is another critical success factor for ICP. The ICP values promote collaboration, visionary leadership, tikanga Māori, good governance and active management (see Figure 8) (Joseph et al., 2016).

Therefore, ICP adopt good governance and active management principles as well as traditional Māori governance and tikanga Māori values, which provides an effective framework for collaborating, governing and managing effectively. Following on with tikanga, geographic and cultural proximity are additional success factors for ICP in terms of bringing the groups together in a natural cultural match.

Best ICP practices in management for a Māori marine economy

The following analysis looks at operating values and principles that ICP consider make their collective partnership a competent and working model for the 15 iwi who are partners in ICP.

Whanaungatanga (relationships) are important to ICP ICP recognises the need to develop and maintain strong relationships and networks, in service of a prosperous Māori marine economy. There is clear evidence that relationships are especially important to ICP, as there are 15 iwi members within ICP with distinct and competing interests and needs. The ICP website states, "Their Whakapapa (shared genealogy) and shared DNA means we are effectively a very large

Figure 8 ICP values

- (i) Whanaungatanga (We are like a family)
 - a. Showing mutual respect and integrity in all we do.
 - b. Building lasting relationships (Kotahitanga) through trust.
- (ii) Manaakitanga (We look after each other)
 - a. Being hospitable is important.
 - b. We support one another.
 - c. Honest and open communication binds us and builds trust.
- (iii) Mākohakoha (Using our expertise)
 - a. Consistently high levels of achievement through effective and efficient management.
 - b. We recognise the expertise and efforts of our people and partners.
- (iv) Kaitiakitanga (We are guardians)
 - a. Being an influential steward of the resources is a bottom line.
 - b. It is our responsibility to ensure sustenance for the present and future generations.
- (v) Whakaaro nui (Visionary—we are part of the sea and other fisheries and they are part of us)
 - a. We are visionary, creative and innovative.
 - b. We will be proactive rather than reactive towards achieving our goals, which requires using our initiative to promote our vision.

family business.”¹⁸ Whanaungatanga contributes to the holistic well-being of ICP.

The ICP informant talked about the importance of whanaungatanga:

Cultural connections play a strong role for our iwi members in their shared experiences and working together, as well as contributing to developing ICP policies and initiatives. We sort of assume within Māoridom and within our tikanga that our relationships are key. Relationships are important, not just outcomes and results. How you get there is important too.

The ICP encourages further collaboration opportunities with other iwi who can add value and who themselves appreciate transparency, integrity, respect and trust.

Collectivising ICP assets

Through fostering healthy whanaungatanga and collectivising ICP assets, ICP have increased quota advantage, and *inter alia*, cooperation at the strategic level of ICP to maximise opportunities and investment with external potential partners.

Another benefit for collectivising assets is that ICP has an aggregate voice for their shared interests. Collectivising also involves collective decision-making. To uphold the mana (prestige, honour) and authority of each iwi member of ICP, all iwi members retain their individual status in their respective asset holding companies, while ownership of any assets is at the iwi level and therefore collectivised.

As ICP is moving into its ninth year of operation, and more iwi are interested in becoming partners with ICP, ICP’s collaborative model appears to be working.

The ICP informant talked about the importance of collectivising ICP assets:

And one the key principles in terms of building this was iwi said we want to retain as much as we will be a collective and there will be some collective decisions and we will be handing over a little bit of our decision-making authority, there's certain things we want to retain.

And that was to retain their individual companies. Any assets, ownership would be at the iwi level, but it would be the use of those assets that would be collectivised. So still retain quite a bit of mana and authority but still getting some benefit out the use of those assets.

The ICP informant continues talking about collectivising on a national scale when he says:

And we're saying is that the right way? Would we achieve more if we actually worked together nationally, collectively in terms of all those different interests? Maybe we would, maybe we wouldn't - I'm not sure. But we should at least have a look at what that looks like.

Effective leadership in ICP and vision

A collective pragmatic and strong vision was and is required for success, and many hours of voluntary work by some of the ICP leaders were invested initially to bring the groups together. Other significant leadership findings were the importance of maintaining a long-term, intergenerational view of the ICP; promoting good relationships through being transparent and accountable; maintaining exceptional and constant communication among the ICP iwi leaders; and building and maintaining trust among the partners (Joseph et al., 2016).

The ICP informant talked about effective leadership and ICP vision:

So, a big part of that is the added influence and voice that comes from actually owning assets. You know, you can sit at the table and be consulted as iwi or you can sit at the table and be consulted as a company that owns, say, 75% of the industry.

So that's kind of an unspoken aspiration and vision is to get to a certain point where you're no longer consulted as iwi and your views discarded or ignored, instead you're like, yeah this is the way it's going to go, this is what's going to happen.

Disputes, conflicts of interest in ICP

Disputes are inevitable when differences of opinion arise between iwi members, as ICP actively acquires new assets through investment for its membership. The importance of having an effective dispute resolution forum and process within the ICP framework has been necessary, as iwi members have had divergent views on which investments suit the needs of their iwi.

The ICP informant points out issues that surface with conflict of interests:

A real issue that we are dealing with is conflicts of interest¹⁹ where one iwi is buying an asset over there and another iwi is buying an asset over there, they are in business with products and they are competing with each other. Conflict of interest is a situation where a person has a personal interest or divided loyalties in a matter that is the subject of a decision or duty of that person and your iwi stand to gain financially from a decision or discussion in the boardroom.

¹⁹ ICP Informant, 2018.

While competition is fine, and just part of the world we live in; the telling question was to what degree should partners within a collective compete with one another? Should a dispute arise partners *kōrero kanohi ki te kanohi* (face to face) at the office or marae, and to sort out their differences amicably essentially through *tikanga*. The adherence to *tikanga* and the underlying values of ICP means there is no formal dispute resolution process.

Joint ventures with ICP

The ICP enter into joint ventures (JVs) with a 50/50 split with their commercial fishery partners to share the risks and the benefits. Benefits of using this model allow ICP to increase and improve its experience and knowledge within the industry without having to shoulder the risks in their entirety. “Owning your own fishing company comes with its own risks, challenges unless you know what you’re doing.”²⁰ There is also lower financial risk and risks are mitigated.

The ICP informant (2018) explains what happens with Joint Ventures with ICP:

So, to us a joint venture gives you that foothold and sufficient exposure to learn and understand without having to take full responsibility.

Entering into a JV with a company who has experts and a good reputation, history and a good record of accomplishment is a good way to transition and learn from them.

Furthermore, ICP members are willing to share and exchange their expertise among themselves to assist each other to collaborate, govern and manage their assets more effectively from their shared experiences in JVs.

On the other hand, ICP always informs their JVs of its intention to become self-reliant and independent of fishing companies “to do our own thing.” This aspiration has always met with genuine support from JVs to assist ICP to achieve their aspirations. The ICP informant continues the conversation about joint ventures in ICP:

So, we have always thrown it on the table that hey eventually we want to get to a point where we no longer need you, we can do our own thing. There has not been a single fishing company that has said, “Oh, nah that’s stink, we don’t want work with you.” They have said, “Yeah, that’s cool and in fact we’ll make that part of our operations to help you achieve that.”

Kaitiakitanga—An essential ingredient of a Māori enterprise

For many Māori *iwi*, *kaitiakitanga* confers responsibilities and obligations, and reinforces a spiritual attachment with the natural environment. Practicing and implementing *kaitiakitanga* demonstrates an active exercise of power in a manner beneficial to the resource. In the process of distributing assets back to *iwi*, ICP acknowledges that while Māori have good frameworks in place in terms of governance and management, they did not necessarily have the experience to look after those assets properly. Having brought so many like-minded *iwi* together, one of ICP’s key principles was to ensure that the use of those assets would:

1. Remain within the collective
2. Retain its *mana* and authority
3. Derive a benefit
4. Be retained for future use.

The ICP informant articulates the value of *Kaitiakitanga*:

²⁰ ICP Informant, 2018.

Iwi still need to work more collaboratively towards consolidating their collective voice in terms of kaitiakitanga in how they manage their marine resources and estate.

ICP uses the Kaitiakitanga narrative to distinguish their products, achieve goals, aspirations and resolve issues from an indigenous perspective.

Key insights for the Māori marine enterprises

The ICP kaupapa (purpose) is underpinned by the aspirations of its iwi membership to become more active in the business of fishing in a kaitiaki way. The benefits of the ICP to individual iwi membership include (Joseph et al., 2016):

- i Building economies of scale through the collectivisation of iwi ACE;
- ii Pursuing optimal returns on ACE;
- iii Creating opportunities that build iwi member capacity, capability and participation within the fisheries sector;
- iv Improving understanding and capacity to manage risk;
- v Promoting kaitiakitanga and sustainable practices within fisheries;
- vi Improving business performance through developing a strategic direction that is realistic, logical, and achievable;
- vii Sharing of knowledge and experience among iwi members through tuakana–teina principles;
- viii Attracting fisheries investment opportunities; and
- ix Attracting opportunities for iwi members to advance participation within the fisheries value chain.

Māori world view of informants

A world view is the most essential lens through which the world is viewed and understood. Mikaere defines the Māori world view as:²¹

...the lens through which we view our world. It determines the way in which we relate to one another and to all other facets of creation. It enables us to explain how we came to be here and where we are going. It forms the very core of our identity.

All iwi informants express their viewpoints through a Māori world view lens. The Māori world view bridges interconnectivity between tangata²² and the environment. In practice, a set of operating values and principles inter alia kaitiakitanga,²³ rangatiratanga,²⁴ whanaungatanga²⁵ and manaakitanga²⁶ can provide a template for profitable yet sustainable resource use as envisaged the Ecosystem Based Management.

The following ICP partners accepted the invitation to participate in the interviews: Ngāti Ruanui Taranaki; Ngāti Tūwharetoa Fisheries; and Te Kaahui o Rauru (see Table 2 for a profile of their iwi entities).

Māori marine resources

In 1977, the New Zealand Crown legislated the exclusive economic zone (EEZ) of New Zealand.²⁷ EEZ is defined as “A maritime zone over which the coastal state has sovereign rights over the exploration and use of marine resources” (Ministry for Primary Industries, 2019a) New Zealand invested heavily and overcapitalised its domestic fishing fleet exacerbating the problem of ‘too many boats and not enough fish’

21 Mikaere, A. (2011). Colonising myths, Māori realities: He Rukuruku Whakaaro. (Wellington: Huia Publishing, 2011) at 357-358.

22 Humankind.

23 An ethic of intergenerational ecosystem care.

24 An ethic of authority/independence.

25 An ethic of communal growth.

26 An ethic of generosity.

27 Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977.

Table 2 Profiles of ICP partner informants

Name of Iwi 	Ngāti Ruanui Taranaki
Name of Māori Mandated Iwi Organisation	Te Rūnanga o Ngāti Ruanui Trust Group
Name of Asset Holding Company (Māori Fisheries Act 2004)	Ngāti Ruanui Fishing Limited
Director	Patrick Rangihaeata
Number of staff	1 fulltime manager and 1 shared administrator
Annual Turnover as of April 2019	\$100K-500K
Marine Resources owned/managed	<ul style="list-style-type: none"> • All Annual Catch Entitlement (ACE) derived from Settlement Quota and transferred to the Iwi Collective Partnership (ICP).
Name of Iwi 	Ngāti Tūwharetoa
Name of Māori Mandated Iwi Organisation	Ngāti Tūwharetoa Fisheries Charitable Trust
Name of Asset Holding Company (Māori Fisheries Act 2004)	Ngāti Tūwharetoa Fisheries Holdings Limited
Director	Danny Loughlin
Annual Turnover as of April 2019	\$1-2 million
Operating Revenue from Fisheries	\$690,946 ²⁸
Marine Resources owned/managed	<ul style="list-style-type: none"> • All Annual Catch Entitlement (ACE) derived from Settlement Quota to the Iwi Collective Partnership (ICP) • Deepwater ACE parcel is included in a new long-term Deepwater collective arrangement between ICP, 18 other Iwi and Sealord called, Ngā Tapuwae o Māui • Lease of Antons ACE parcel under a profit share arrangement called Ihu to Mai to Moana New Zealand (Aotearoa Fisheries Limited) • Lease of Crayfish (Lobster) ACE to ICP which then on supplies to Port Nicholson Fisheries (PNF).²⁹
Name of Iwi 	Te Kaahui o Rauru ³⁰
Name of Māori Mandated Iwi Organisation	Te Paataka o Rauru
Name of Asset Holding Company (Māori Fisheries Act 2004).	Te Paataka O Tangaroa Limited
Director	Hayden Pōtaka
Annual Turnover as of April 2019	\$1-2 million
Asset Base	\$3,744,247
Marine Resources owned/managed	All Annual Catch Entitlement (ACE) derived from Settlement Quota to the Iwi Collective Partnership (ICP)

28 <www.ntf.maori.nz/wp-content/uploads/2019/05/Fisheries--Report-2019>.29 <www.ntf.maori.nz/wp-content/uploads/2019/05/Fisheries--Report-2019>.30 <<http://www.rauru.iwi.nz>>.

(Sissenwine & Mace, 1992). With depletion of fish stocks, the New Zealand Government established the Quota Management System (QMS) in 1986. Drawing on Bodwitch (2017a), Rout et al. (2018, p. 27) explain the QMS as:

...modelled after a theoretical conception designed by an international group of fishery biologists and economists who were focused on how to address the problem of overfishing without reducing economic activity surrounding fishing. The ITQ “redistributed commercial quotas with the goal of professionalising the industry, and rationalised the regime in terms of conservation policy.

The Quota Management System³¹ (QMS) granted private property rights as provided through the Fisheries Amendment Act 1986³² but it also breached Article 2, Treaty of Waitangi of ‘full, exclusive and undisturbed possession of [Māori] fisheries.’

Bess and Rallapudi added:³³

The 1986 [Fisheries] Act made no reference to Māori having customary or Treaty-based fishing rights. Many Māori objected to the QMS, as it was seen to force their severance from the ocean, raid their sea resources and sell their right to participate in fisheries while others were allowed access to their fishing grounds.

The Ngāti Tūwharetoa informant expressed the tension that the legislation brought to bear:

When they did the Fisheries settlement, our previous chief did not want to be included in the Fisheries settlement. We did not want our

freshwater rights affected in our treaty rights. Because that is the thing: the settlement is just that. It took away your own rights and replaced it with some other bits of paper. That is one of the tensions.

Māori commercial rights

On 23 September 1992, a deed of Settlement was entered into between the Crown and Māori, to settle Māori commercial fishing claims. Māori agreed with, and Parliament passed, the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (sometimes referred to as the ‘Sealords Deal’) on 14 December 1992, to give effect to the settlement of claims relating to Māori fishing rights provided for in the Deed of Settlement which included:

- a) the reconstitution of the Māori Fisheries Commission as the Treaty of Waitangi Fisheries Commission (Te Ohu Kaimoana or TOKM);
- b) payment of cash to the TOKM (which was to be used to purchase a 50% shareholding of Sealord Products Ltd hence the ‘Sealord’s Deal’);
- c) provision for the allocation of 20% of quota for any new species brought into the quota management system;
- d) provision for the making of regulations to recognise and provide for customary food gathering by Māori; and
- e) the empowerment of TOKM to hold the assets and develop a model to allocate the assets to Māori.

In return, Māori agreed:

- a) that the Settlement would extinguish all commercial fishing rights and interests;
- b) that the Settlement settled all Māori commercial fishing rights and interests;³⁴
- c) they would ‘endorse’ the Quota Management System;

³¹ Refer s. 2 and Part IV, Fisheries Act 1996 for full definition.

³² Furthermore, s. 88(2), Fisheries Act 1983, states: ‘Nothing in this Act shall affect any Māori fishing rights.’

³³ Above, n. 209 (Bess and Rallapudi) at 721–722.

³⁴ Section 9, Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

- d) to accept regulations for customary fishing;³⁵
- e) to stop litigation relating to Māori commercial fisheries;
- f) to support the implementing legislation to give effect to the Settlement; and
- g) the Waitangi Tribunal should be stripped of its powers to consider commercial fisheries matters.

This was all given formal effect by the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, which separates commercial from customary fishing rights.

The Ngāa Rauru Kiitahi informant (2019) defined their quota:

We have a varied quota, the highest quota. Our higher standing quota would be Snapper, Terakihi, and then we have a Kōura quota and we purchase more quota in that in our area on the west coast for inshore. We also have Scampi, which is parceled up within inside of ICP as well. We hold the fish asset and we sell it to ICP, and ICP fish it on our behalf. We are also a shareholder in ICP.

The Ngāti Tūwharetoa Informant explained the ACE entitlement for Ngāti Tūwharetoa :

The coastline rather determines your in-shore effectively, and deep water is based on your population. Our coastline is quite small actually with other iwi, like Te Arawa, Ngāti Awa and others; so, our quota for example in that area was like half a million bucks, whereas our deep water is a little bit more substantial than that. They did it on the 2001 Census. We were like seven big iwi at that time. In terms of ICP arrangements, Ngāti Porou is probably the biggest member than Te Arawa, then ourselves.

The Ngāti Ruanui informant illustrated how Ngāti Ruanui ACE was managed:

All our work is handed out to ICP, Iwi Collective Partnership, so our quota—not the quota itself—what they call the ACE, the Annual Catch Entitlement, that we're allowed, that all goes to the ICP, Iwi Collective Partnership. Then all the work is done there. We just kind of sit back and wait until the fishing season is over and the pūtea (money) comes back.

The ICP informant articulated how ICP quota is determined:

What we manage collectively is the ACE the annual catch entitlement that is generated each year from that quota and so that is a separately tradable asset and that is what is collectivised, transferred into the ICP every year by its partners. So, for the ICP we're just a little bit over 16,000 tonne collectively. And so that roughly involves 123 different species of fish nationally.

Each of those species of fish is divided geographically around New Zealand into 10, there is 10 sort of geographical regions. Therefore, in terms of inshore you are generally an iwi with inshore within a region on their backdoor step. However, when it comes to deep water the nature of the settlement was that you would end up with a share all around New Zealand in terms of deep-water stocks. ACE is population based. Therefore, these assets traded and are the assets that generate that 5-10 mil income. Purely the ACE.

The current Māori marine economy (MME) is adapting to an extremely complex legislative framework with a

³⁵ As above, s. 10

vast array of actors. While some iwi consented to this extinction of rights, others did not. Nonetheless, all Māori commercial claims were bound and constrained by the legislation. However, the Preamble of the Fisheries Act 1996 reaffirmed that nothing in the Act shall affect Māori fishing rights. Furthermore, both Māori commercial and customary fishing rights are included in the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

On the other hand, the fish quota as a right for Māori to harvest fish has created opportunities for vested iwi with quota to obtain capital to fund additional quota purchases and build their asset base in the marine estate. In addition, ICP has created Joint Ventures for partnerships to move into integrated Māori-orientated value chain and continue to uphold and develop Māori customary rights.

Māori marine economy within ICP members

The Ngāti Tūwharetoa informant discussed the aims and values as follows:

Certainly, one of our main goals was growth, in terms of the assets ... for our people to be more actively involved ... And we tried to be a bit more active in our shares.

The Ngāa Rauru Kītahi informant defined the values of Te Paataka o Tangaroa as:

The values of Te Paataka o Tangaroa are set around mana tangata, whenua, and Tangaroa, or in Maru. So, it's around those value sets; also, it's to revitalise Ngāa Raurutanga as well.

The Ngāti Ruanui informant stated their aims and values were to:

Build a stronger future for their iwi by increasing the asset base of our quota.

The ICP informant expressed the aims and values of ICP:

The aims and values. So, in terms of dollars, it has to optimise returns on those assets. So, what does that mean? Practically, it means that we are not about chasing the highest return. Second, it is about a good return but also factoring in a couple of other areas: one is employment opportunities, then the other is, I guess, the more important one, and it goes hand in hand with that financial return, is kaitiaki responsibilities.

Another key principle in terms of building ICP was as iwi said, "We want to retain as much as we will be a collective and there will be some collective decisions and we will be handing over a little bit of our decision-making authority, there's certain things we want to retain."

Finally, the aims and values of ICP are reflected in their management practices and while a key focus is to optimise returns on their assets, their kaitiaki responsibilities are of higher importance. The New Zealand brand has a strong iwi component in New Zealand seafood, and does add value to the New Zealand seafood brand. Why? Because it has a bunch of indigenous people that are focused around reputation and kaitiakitanga.

The current Māori Marine Economy's aims and objectives are encapsulated by values and principles of kaupapa and tikanga. Kaupapa is "juxtaposed and interconnected with Māori thinking" (Marsden, 2003, p. 66). All informants admit that economic and commercial success is vital to the well-being of their iwi, but it not the only driver. The economic driver is also surrounded by the themes of sustainability, kaitiakitanga, intergenerational wealth and prosperity permeating throughout the aims and objectives of their

individual iwi (as espoused on their websites) while becoming integrated within the kaupapa and tikanga of ICP.

Measuring success

The Ngāti Tūwharetoa informant talks about success, growth and the challenges:

That is a good question. We have just been doing some work in that area; so just renewing our strategic plan. Certainly, one of our main goals was growth, in terms of the assets. It is an interesting one, where your biggest asset is like your shares in Moana and your quota. We lease our inshore quota to a JV with Moana, and the deep water we have just changed over to Sealord. We have just done an updated arrangement in terms of profit share with other iwi included as well, who are outside of the ICP. Once you are part of that, though, effectively our fish is being fished by these big companies, which you have an ownership interest in.

There is a whole lot of aspiration when they did the settlement, for our people to be more actively involved. But, the reality on the ground is, unless you have a reasonable sized bit of scale that may or may not be achievable. We have tried to be a bit more active in shares in a business called Bay Packers in the Mount with three other iwi and Moana that does a whole lot of smoked fish and wet fish. We are in business and there are margins of time; the minimum wage has gone up, so that puts pressure on all wages. Being in business is hard and being in the fisheries business is even harder. Just trying to get double-digit returns and things in this market is very hard.

We're doing a little project right now around fresh water kōura farming. It's never going to

be a big money earner, but it's looking more positive than it did when I started this project.

The Ngaa Rauru Kītahi informant stated that success would be recognised in the following ways:

I believe success will come in the revitalisation of Ngaa Raurutanga. It is the core purpose of our iwi and there are five strategic kaupapa: Whakapapa, Whanaungatanga, Whenua, Mātauranga and Rawa. Growing the asset base is our fundamental strategy toward restoring the success of social, cultural and economic wealth of our iwi.

The ICP informant measured success for ICP as follows:

Measure success ... Well the cleanest way is the look at our partnerships, which is an obvious one. What is the number of iwi involved in ICP? What is our ability to influence the direction of iwi/Māori sectors? How is our ability to influence the industry? Those would be the main questions we ask.

Second, so all of our joint ventures we have had running since we first started so those are long-term. So, once you buy into that, you kick off your JV on that foundation, it's something you just chip away at each. Therefore, ticking off those programmes or projects or outcomes is again a measurement of success

The measures of success as articulated by the informants are cemented in firstly, increasing the quota and asset base of the iwi. Second, retaining their mana and authority over their assets and investing in the social objectives of the iwi and hapū.

Identifying as a Māori enterprise

For Māori, like other indigenous peoples, an economy is intrinsic and interconnected to their wider society; and subservient to their society's values, beliefs and goals (Hēnare, 2016; Sahlins, 1972; Spiller et al., 2011).³⁶ Hēnare (2016, p. 135) outlines how for Māori an economy needs to be embedded in the 'Economy of Mana', which is underpinned in four well-beings of spiritual, environmental, kinship and economic: "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."³⁷

The Ngāti Tūwharetoa informant discusses the importance of culture and tikanga in business:

For me, a Māori business should be for example a Tūwharetoa business; basically, the people who are there on your board and management and everything else, hopefully have a world view on tikanga and everything else, that underpins who they are; and then the Māori business becomes just an outcome of that.

The Ngāti Tūwharetoa informant continues:

I learnt that, when I was at university you learnt all about the corporate culture from the Japanese. What is a Japanese business? We know what a Japanese business is. Why? Because it has Japanese culture that informs how they do everything they do. Māori is the same.

The Ngaa Rauru Kītahi informant talked about revitalisation and environmental responsibility around his iwi and the planet:

Yeah, it is a Māori business because, one, our value is set around revitalisation. Revitalisation is not only about the people but the planet as well. So, what are the impacts on our over-fishing, on our environmental responsibility as fishers. Those are important values at play with it.

The Ngaa Rauru Kītahi informant continues:

Whenever we do business, we are doing business mainly with Māori and te reo (Māori language) is a big component of that, i.e., under the tikanga and kawa of iwi to iwi; we do that. It is different to any other Pākehā organisation where you do not 'tū ki te mihi' (Māori protocols), and find that linkage, that connection.

From a cultural aspect with anything, being true to those values that we have in the company, but also have, as the iwi is important. If we were not there to protect the ongoing sustainability inter-generationally then we have done an injustice for our people, which is crucial. The commercial obligations at the end of the day may only be short-term, and being and having our cultural affinity to it has gotta be paramount as well.

On tensions and conflicts between Māori and commercial opportunities, the Ngāti Ruanui informant stated "No, I don't believe there is, no. Because you have your culture and why you are doing this."

36 Hēnare, M. (2016). In search of harmony: Indigenous traditions of the Pacific and ecology. In W. J. Jenkins, M. E. Tucker, & J. Grim (Eds.), *Routledge Handbook of Religion and Ecology* (pp. 129-137). London, England: Routledge; Sahlins, M. (1972). *Stone age economics*. New York: Aldine De Gruyter; Spiller, C., Erakovic, L., Henare, M., & Pio, E. (2011). Relational well-being and wealth: Māori businesses and an ethic of care. *Journal of Business Ethics*, 98(1), 153-169. doi:10.1007/s10551-010-0540-z.

37 Above n 46 at 135.

None of the informants expressed views of tensions and conflicts when engaging in commercial fishing and its practices and how they may collide with kaitiakitanga and sustainability of their quota. The default position was to kōrero, kōrero, kōrero (talk). However, conflicts of interests remain a constant as iwi fisheries look to increase their quota and may compete in the same space.

The role of mātauranga Māori

Mātauranga Māori is the pursuit, accumulation and application of knowledge and understanding of Te Taiao, or the natural world, following a systematic methodology based on evidence, incorporating culture, values and world view (Hikuroa, 2017).³⁸ King, Goff, and Skipper (2007, p. 60) continue that mātauranga Māori is:³⁹

Based on long-term association with the land and its resources, Māori have developed a detailed knowledge of local environmental features and processes. This environmental knowledge has been transmitted orally by successive generations as an integral part of a wider holistic understanding of the natural and spiritual world.

Spiller et al. (2011, pp. 158-159) clarified this further:

Being bound together through mauri unifies all aspects of creation, and is not without differentiation, but unity appreciative of the intrinsic spiritual worth, and difference, of each... Māori continue to see themselves as agents in an evolving cosmological community, and use whakapapa [genealogies] to actively interpret relationships in order to bring the sacred to the centre of being.

The Ngāti Tūwharetoa informant affirms Spiller et al. (2011), with his thoughts on whakapapa and Tangaroa:

What's happening more and more is, we're moving into the space where the values aren't about having listed kaitiakitanga and all this sort of stuff; it's actually really understanding whakapapa and connection to Tangaroa.

The Ngāti Tūwharetoa informant continues:

Things like property rights, the kōrero was around we're descendants of Tangaroa, that's our ancestor, and these connections with his lands that for us is our true property rights; not the quota, or a bit of paper with the Crown, or the Treaty. So, the Treaty is something that just talks about acknowledging those rights that you have from your ancestors, that are passed down to you. But, you're getting to this place where more and more as the iwi move towards everything about those values and whakapapa, tikanga and everything else, it's all the same; which you would expect you might have some nuances in terms of whether you don't pronounce the 'h' or use k's and things. But, in theory, we are the same; and that's the same ancestor.

The Ngāti Ruanui informant reflects on how mātauranga Māori was used by his father:

I look at the moon because my father used to talk about the moon and fishing. And I think, "Oh yeah. Now I see it. I should have listened to him." It is very important in knowing how the world works, when to go out and when not to go out fishing, instead of just going out any old

³⁸ Hikuroa, D. (2017). Mātauranga Māori—the ūkaipō of knowledge in New Zealand. *Journal of the Royal Society of New Zealand*, 47(1), 5-10. doi:10.1080/03036758.2016.1252407

³⁹ King, D. T., Goff, J., & Skipper, A. (2007). Māori environmental knowledge and natural hazards in Aotearoa New Zealand. *Journal of the Royal Society of New Zealand*, 37(2), 59-73. doi:https://doi.org/10.1080/03014220709510536

day. If I had of listened to my father maybe I would have understood when to go out fishing. To use our knowledge.

The Nga Rauru Kiitahi informant talks about mātauranga Māori being a base of learning in their marine estate:

Mātauranga Māori is more or less with us predominantly in inshore, but then also in the marine habitat. So, for an example, we'd have for this seabed mining activity, we produced mātauranga Māori about our missing legions to protect the natural habitats. About how whales and kōura would march and why they would march that way. And I'm using that as a base; and then also Māori traditional fishing areas.

Mātauranga Māori is a powerful resource for understanding and balancing the Māori world view that prevails through all the informants' interview statements. The informants express both tacit and codified knowledge and include a suite of techniques empirical in nature for investigating phenomena, acquiring new knowledge, and updating and integrating previous knowledge.⁴⁰

Sustainability

Regarding mātauranga Māori, tikanga Māori and sustainability, the Ngāti Tūwharetoa informant explains the significance of the relationship with Tangaroa and his children:

The issue is are we as Fisheries, an owner in Fisheries shares and quota, in any better place than most in terms of being able to do something about that? Our tikanga is quite simple; you do not make things bad. Certainly, we have these discussions with water quality

and stuff. In some ways we are limited but then that's your tool kit; your tool kit is don't do dumb things.

So, if Tangaroa is your ancestor, and all these species are their children, then that's the relationship you have and it's how do you do that.

The Nga Rauru Kiitahi informant discusses the importance of long-term view on sustainability around their tuna (eels) and the environment:

Whenever we're selling ACE, especially with tuna, because our rivers have been decimated over the years, it is not a very good environment for our tuna to rejuvenate. Putting things in place to protect it in the long-term, it is quite important the obligation should be to protect it. So, having other things that impact on those sorts of things is our connection with that river, or those rivers, to bring the environment back up to scratch. It is quite important for its long-term survival. Having a look at sustainable practice as well.

The Ngāti Tūwharetoa informant provided an example of sustainability with the fishing industry: Last year was a big one with hoki. The government was not saying we had to do something about hoki, but our people on our boats that are out there, these big companies, are saying, "We think there's some issues over here." And, actually it might not be this region here, it's this region over here, and we actually need quite a targeted approach to that.

The way they get around that is to effectively do it voluntarily. So, we've got a scenario

40 Above n 48

where we were catching less fish in that area because we thought that's the right thing to do. That's driven again at this highest level with these companies, and hopefully those companies have some of our values as part of that approach.

Māori cosmology consider that all beings whakapapa⁴¹ back to Papatūānuku (Earth mother) and Ranginui (Sky Father), Māori are related to Tangaroa, the God of the Sea, their son. Māori therefore must act in a manner commensurate with the kaupapa in all their interactions with the ocean. Iwi informants cite their whakapapa to Tangaroa, declaring their obligation to care and protect the ocean and its resources. This philosophical approach can combine practical and spiritual or religious ideas that can be interpreted as respect for and care of resources (McCormack, 2011, p. 45).

ICP and sustainability

The Ngāa Rauru Kītahi informant also comments on the importance of collective influence of Iwi on sustainability:

Our biggest look at sustainable practice would be our collective influence that we have as ICP as well; it's quite a big impact and quite a big influence. Having as many iwi as we do in ICP more or less saying the same thing, is quite good and crucial for any commercial activity, any environmental activity that's going on.

With our engagement with ICP, so Maru (CEO of ICP) does a fantastic job of keeping us informed about a lot of things and also keeping us up-to-date with any political movements, any issues of significance in terms of sustainability of fish stocks. That's how we keep up-to-date with a lot of the issues facing our fishery.

In the same view, the Ngāti Tūwharetoa informant continues:

As we grow bigger and stronger, we have more influence and can get those values reflected. Again, in ICP, you work with Te Ohu Kaimoana, because they drive a lot of that stuff out at an industry level. So, again, it is working with them; and it's about their tikanga and stuff that our representatives there bring to the table.

We're quite fortunate with the Iwi Collective Partnership that the iwi have got Maru (CEO of ICP) there and we're able to be more engaged compared to others. ICP is collaboration to help get around the limitations of trying to do all this stuff with Fisheries settlement assets.

Finally, a Ngāti Ruanui informant concludes what sustainability means to him:

For me it means, so if we do something, we need to maintain it forever. Yeah, forever, it needs to be there forever—we don't wanna lose it. But we need to manage it properly too. We talk about that the catching of fish for example. If stocks are running low, then we stop fishing. But we always did that.

I remember going back to my father's day, and he would say "No, no, we can't go fishing." I said, "We go fishing?" "No, no we can't go fishing." He never knew the word 'sustainability' but I kinda understood where he was coming from. So, yeah, that's pretty important.

All three iwi informants articulated *inter alia* that mātauranga Māori, tikanga and culture were at the core of their business operations in the fishing industry. Kaitiakitanga was at the core of sustainable

⁴¹ An ethic of genealogy.

resource management and that their iwi had a responsibility and obligation to care and protect the ocean, the marine estate and resources as they whakapapa back to Tangaroa. More significantly, within the ranks of ICP, this understanding of sustainability prevailed and ICP used this rationale when considering the well-being of their quota within a long-term view. Iwi informants used mātauranga Māori as a base to set their science on, also recognising the importance of documenting the knowledge for intergenerational use.

The role of innovation

The Ngāti Tūwharetoa informant (2019) put forward the following opinion:

Fisheries is hard at the best of times. One of things for us as inshore fisheries is deep-water fisheries you have got a lot more knowledge about the species, because you can do more research. For inshore they are migrating up and down. There are issues about climate change. There are issues around for example the snapper in terms of the environment, like in terms of their spawning grounds. More research. Then you have the fishing and recreational fishers, and then you have the commercial; so, you have all these dynamics, which make it a very, very unsettled environment with a lot of politics.

Innovation is a very Pākehā thing, which is around turning ideas into something. I think you could argue that Māori innovation might be using Māori ideas to create innovative things; it might be Māori processes and stuff that help you turn those ideas into innovative things.

The Ngāti Ruanui Taranaki informant talks about innovation:

We are always out there looking for ideas. When we have our AGM at ICP, half-yearly and the end of the year, they will bring ideas to the table. Then we talk and say “Right, this has come up what do you all think about it? Do we investigate it more or leave it?” Invariably we will always say “Check it out, because if it looks as though there’s a package then we’ll want to know a bit more about it.”

See, at the moment, through ICP, we look at the ideas to see if it is viable, so we have three on the plate that are active at the moment. We looked at one but that does not seem to be all that hot. The other two look viable. We discuss it, then consider due diligence. We just do this in stepping-stones.

Innovation is connected to research. It would appear that ICP is engaging with innovation, however; it is an ongoing process. This is question for further research.

ICP partnership model with iwi

The Ngāa Rauru Kītahi informant talks about ICP and business opportunities:

As an entity of the iwi we were not going to get economies of scale by ourselves in the industry, we were never going to build that sort of capacity; and it made sense to partner with other minded people to deliver that. I think ICP in general as a partnership is a good model, and the role of protecting it and making it sustainable fishing. But to do that, we need good capture of information as well.

Regarding other business opportunities, the Ngāa Rauru Kītahi informant stated:

We meet quarterly; we look at opportunities outside of ICP to partner with as well. We bought Bay Packers with five other iwi, and Moana—Tūwharetoa, Te Arawa, Ngāti Ranginui and Moana and us bought into a packhouse in Tauranga called Bay Packers; they mainly do smoked fish.

The ICP informant outlined how the purposes of ICP originated:

One of the key principles in the ICP, we got all the like-minded iwi together or they came together and we worked through our kaupapa. So, we left all the legal stuff aside, left all the formal stuff aside and just said hey what are we, if we were to come together as a collective what are we actually doing that for? What are we trying to achieve? So that was the key priority was getting that purpose sorted.

Further, the ICP informant reiterated the importance of collective decision-making:

And one the key principles in terms of building this was iwi said we want to retain as much as we will be a collective and there will be some collective decisions and we will be handing over a little bit of our decision-making authority, there's certain things we want to retain.

Informants spoke highly of the partnership model ICP that provided for engagement with likeminded iwi, economies of scale for quota in the fishing industry, collaboration of projects, and discussion of potential projects for iwi, protecting and sustaining fishing resources and having good capture of information.

Conclusion

The current Māori marine economy aims and objectives are encapsulated by values and principles of kaupapa and tikanga. Kaupapa is juxtaposed and interconnected with Māori thinking. All informants stress that economic and commercial success is vital to the well-being of their iwi, but it not the only driver. The economic driver is also surrounded by the themes of sustainability, kaitiakitanga, intergenerational wealth and prosperity, permeating the aims and objectives of their individual iwi (as espoused on their websites) while becoming integrated within the kaupapa and tikanga of ICP.

In addition, the measures of success as articulated by the informants are cemented first, in increasing the quota and asset base of the iwi, and second, in retaining their mana and authority over their assets and investing in the social objectives of the iwi and hapū.

Mātauranga Māori is a powerful resource for understanding and balancing the Māori world view that prevails through all the informants' interview statements. The informants express both tacit and codified knowledge, and include a suite of techniques empirical in nature for investigating phenomena, acquiring new knowledge, and updating and integrating previous knowledge. None of the informants mentioned tensions and conflicts when engaging in commercial fishing and its practices and how they might collide with kaitiakitanga and the sustainability of their quota. The default position was to kōrero, kōrero, kōrero (talk). However, conflicts of interests remain a constant point of discussion as ICP members may engage in ventures and opportunities where different iwi interests may coincide or conflict.

In regard to the MME model of success, informants spoke highly of the partnership model ICP that provided for engagement with likeminded iwi, economies of scale for quota in the fishing industry, collaboration of projects, and discussion of potential projects for iwi, protecting and sustaining fishing resources and having good capture of information.

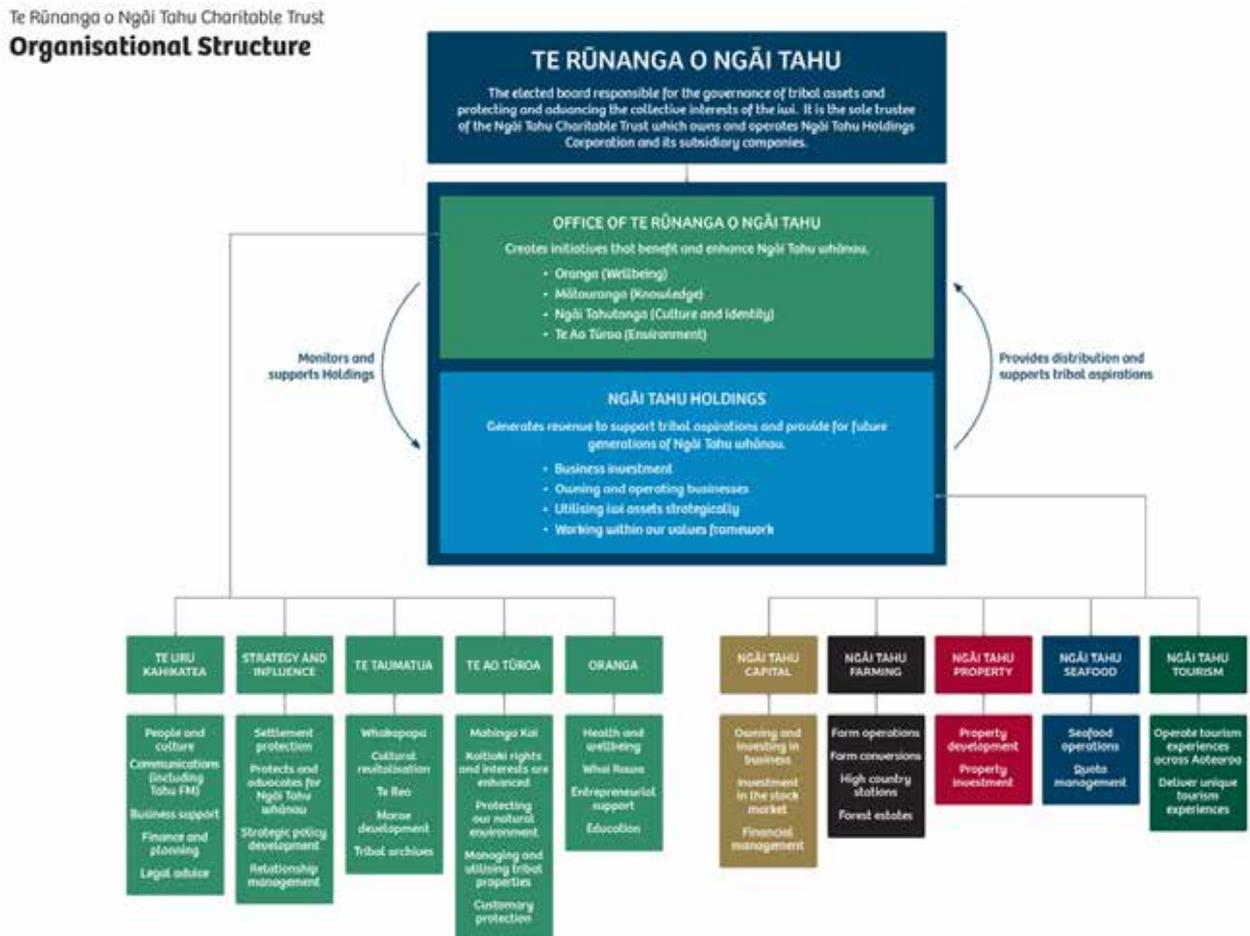
All three iwi informants articulated *inter alia* that mātauranga Māori, tikanga, and culture were at the core of their business operations in the fishing industry. Kaitiakitanga was at the core of sustainable resource management and their iwi had a responsibility and obligation to care and protect the ocean, the marine estate, and resources as they whakapapa back to Tangaroa. More significantly, within the ranks of ICP, this understanding of sustainability prevailed and ICP used this rationale when considering the well-being of their quota within a long-term view. Iwi informants used mātauranga Māori as a base to set their science on, also recognising the importance of documenting the knowledge for intergenerational use.

In exploring sustainability in the Māori Marine Economy, Māori cosmology consider that all beings whakapapa back to Papatūānuku (Earth mother) and Ranginui (Sky Father). As Māori are related to their son, Tangaroa, the God of the Sea, they must therefore act in a manner commensurate with the kaupapa in all their interactions with the ocean. Iwi informants cite their whakapapa to Tangaroa, declaring their obligation to care and protect the ocean and its resources. This philosophical approach can combine practical and spiritual or religious ideas, which can be interpreted as respect for and care of resources.

Innovation is connected to research. It would appear that ICP is engaging with innovation, however, it is an ongoing process. This is a question for further research.

Finally, the current Māori marine economy is adapting to an extremely complex legislative framework with a vast array of actors. While some iwi consented to this extinction of fishing rights, others did not. Nevertheless, all Māori commercial claims were bound and constrained by the legislation. On the other hand, the fish quota as a right for Māori to harvest fish has created opportunities for vested iwi with quota to obtain capital to fund additional quota purchases and build their asset base in the marine estate. In addition, ICP has created Joint Ventures for partnerships to move into integrated Māori-orientated value chain and continue to uphold and develop Māori customary rights.

Figure 10 Ngāi Tahu organisational structure



Source: Te Rūnanga o Ngāi Tahu (2017b, p. 27)

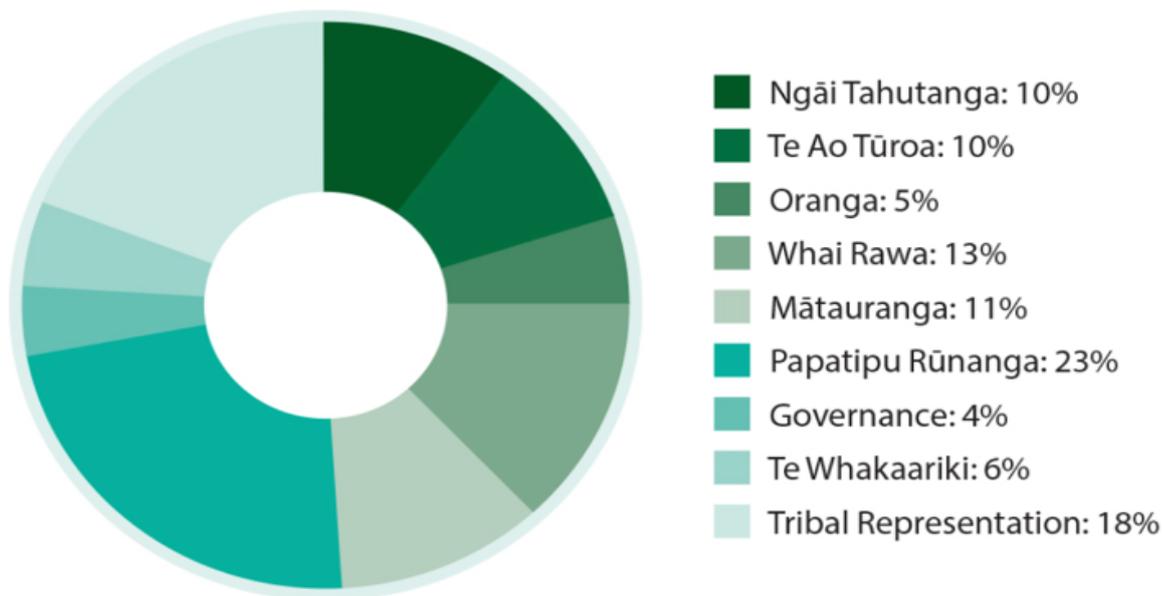
Distributions

Each year, Ngāi Tahu Holdings directs a portion of its proceeds to TRoNT to support non-commercial development initiatives, including customary fishery development, along with language learning, retirement, and housing initiatives (Te Rūnanga o Ngāi Tahu, 2018). For the fiscal year ending in June 2018, the Holdings Corporation exhibited a net profit of NZD\$150 million, with NZD\$61 million directed to Te Rūnanga (Te Rūnanga o Ngāi Tahu, 2018). That year, Te Ao Tūroa, the organisation that oversees customary fisheries and other mahinga kai, taonga, and natural environment governing initiatives, received 10% of this amount (see Figure 11).

Drawing on interviews with fishers and managers, the following sections explore challenges faced and strategies to support Ngāi Tahu customary and commercial fishery governing initiatives. The analyses presented draw on interviews with Ngāi Tahu fishers and managers conducted by the author in 2018 as part of the Sustainable Seas National Science Challenge and from 2013-2015 during the author's dissertation research. The next section accounts for Ngāi Tahu Customary Protected Area establishment and fishery development programs as made possible in part by the multi-stakeholder, flaxroots-directed coordination efforts led by the iwi customary fisheries team. The following section highlights how the iwi lease model for quota management restricts Ngāi

Figure 11 Ngāi Tahu distributions 2018

Ngāi Tahu distributions for year ending 30 June 2018



Source: Te Rūnanga o Ngāi Tahu (2018)

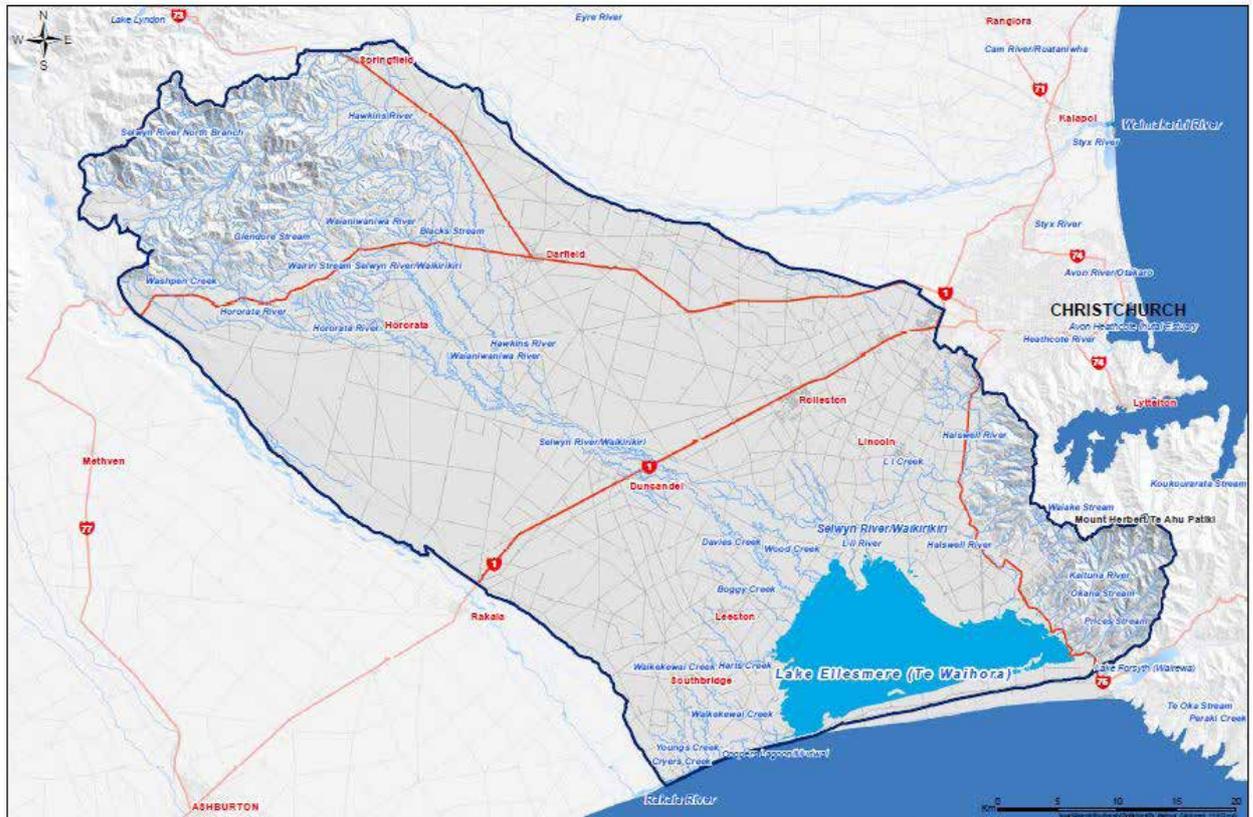
Tahu fishers' access to markets. Documenting the emergence of a small-scale fisher-processor operation Te Waihora, a historically important tuna (eel, *Anguilla australis*) fishery, it emphasises that while iwi leaders can use the quota asset to rebuild Ngāi Tahu fishing communities, coastal fishery development is at the mercy of upstream land use practices, governed outside of fishery regulations (see Figure 12). The concluding section discusses governing mechanisms through which Ngāi Tahu fishers' and managers' constraints may be overcome. The accounts presented are only a partial representation of the diverse ways Ngāi Tahu individuals enact their fishing rights, state sanctioned or otherwise. Nonetheless, the structural barriers faced, and strategies deployed to overcome these constraints, likely resonate with and may inform the efforts of others operating within similar regulatory frameworks.

Ngāi Tahu customary governing initiatives

Ngāi Tahu customary fisheries team, comprised of marine and freshwater ecologists, works to implement, monitor, enforce, and restore customary protected areas. Nigel Scott,⁴² who has a natural resource background and whose father was also Ngāi Tahu, coordinates the team's efforts. Scott assumed the customary fishery governor position twenty years ago, shortly after the 1998 Ngāi Tahu Claims Settlement Act. Following settlement, the customary fishery team embarked on an initiative to construct a network of CPAs throughout the South Island, with the goal of establishing at least one CPA for each marae. The project, as Scott (2018) described, involved "looking at what it is we're trying to protect and match[ing] the tool

⁴² All names are changed.

Figure 12 Te Waihora/Lake Ellesmere Catchment



Te Waihora/Lake Ellesmere Catchment

Source: Environment Canterbury (2016)

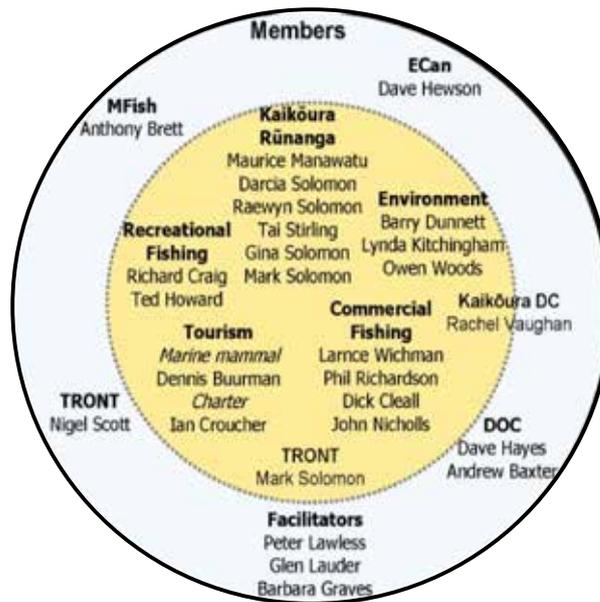
to suit.” Also, matching the tool to “suit how it would impact others.”

‘Tools’ that protect customary fishing areas include settlement-granted mātaihai, where commercial fishing is prohibited, and taiāpure, which allow for fisheries regulations, that enable the realisation of customary goals. Priority locations included those areas least likely to displace commercial fishing pressure elsewhere, as determined through collaborations with commercial and recreational fishers and analyses of commercial catch data from the Ministry of Fisheries. With an additional twenty CPA requests slated for submission, Scott (2018) describes the most effective proposals as those in which Ngāi Tahu obtains support from other rights holders, namely commercial fishers, before submitting an application. Customary Protected Area applications require government approval to gain

effect (Jackson, 2013). Ngāi Tahu customary fisheries team’s support for applicants facilitates the ability of the iwi to gain support from commercial industry stakeholders before engaging with government.

The customary fisheries team’s projects also include support for Te Korowai o Te Tai ō Marokura (2019), a community-led marine spatial planning initiative at Kaikōura. Upheld as an exemplary case of multi-stakeholder marine spatial planning (Hughey, 2016), Te Korowai involved the establishment of a network of CPAs, MPAs, and commercial industry governing agreements, aimed to support tourism, commercial fishing, recreational fishing, conservation, and customary fishing initiatives. Modelled after a land-sea governing initiative deployed by Laurel Tierney and the Fiordland Marine Guardians (Tierney, 2003), Scott characterises the approach as the egg-model,

Figure 13 The egg-yolk model of community collaboration at Kaikōura



Source: Te Korowai o Te Tai ō Marokura Kaikoura Coastal Marine Guardians (2019)

Note: This figure depicts the marine spatial planning initiative at Kaikōura, in which a “yolk” of local leaders directed a “white” of industry experts.

whereby a “white” of advisors from iwi, and central and local government agencies support the directives of a “yolk” of local leaders (Figure 13).

At Te Korowai and elsewhere, Ngāi Tahu customary fisheries team is now working to support local managers’ capacities to implement new management rules, restoration activities and also to monitor and enforce customary regulations. Restoration activities include attempts to control undaria, an invasive seaweed, as well as active initiatives that involve the reseedling of juvenile and translocated adult pāua. The team’s active restoration works to offset slow population recovery rates, evidenced even in those places with rāhui, or bans on fishing (Scott, 2018). As Scott (2018) observes:

It’s interesting that humans can destroy quicker than nature can rebuild...you think fisheries would be quite robust, but as I’ve seen with a lot of pāua fisheries, if you fish them down to a point where they struggle to breed properly, it can take a long time to recover.

“Inundated” with work, and “really only just started,” monitoring initiatives include efforts to determine the abundance of core iconic species as a food source (Scott, 2018). In an effort to get Tangata Tiaki the information they need to make governing decisions, the team aims to understand, “Not just is the food abundant, but can we actually eat it and can we give it to our visitors and use it to feed people” (Scott, 2018). The team explores the presence of pathogens, viruses, contaminants, and heavy metals. Looking to fill gaps, the team focuses on marine species, including pāua and bivalves, not included in standard water quality analyses. The team’s tissue sampling analyses also add to regional council data on upstream water monitoring (Scott, 2018).

The customary fisheries team is additionally working to build evidence of customary and recreational fishing activity by encouraging recreational fishers to report their catches and customary fishers to obtain authorisations for fish take. Scott (2018) notes that evidence of fishing activities builds Ngāi Tahu

capacities to inform resource consent applications and water conservation orders. Aiming to further support succession planning, the team also developed a survey through which resource users can submit reports to the iwi on resource health at the completion of a fishing event. Analogous to a hotel satisfaction survey, the group is now working to facilitate adoption (Scott, 2018). Alongside this, Scott is working to obtain government endorsement and support for customary ranger positions, imbued with the authority to inspect users' catches, aiming to increase compliance by increasing oversight frequency (Scott, 2018).

Describing science as new territory, Scott notes that a strength of Ngāi Tahu in-house customary fisheries team is found in their ability to answer a variety of community research questions (Scott, 2018). By way of example, Scott notes that engagement on food safety initiatives often leads to more research questions for the team to explore (Scott, 2018). The group collaborates with universities, and other research providers when needed, and runs its dive program through the University of Otago. With the longer-term goal of empowering Tāngata Tiaki to eventually take over the work, Scott observes that the team's adoption of scientific thinking is occurring alongside scientists' adoption of mātauranga ways of knowing. Examples of mātauranga thinking can be found in the team's analyses of fish for consumptive purposes. In response to community-level concerns, the team prioritises inquiries into food safety and abundance for the mana upheld in serving mahinga kai to visitors (Scott, 2018). As Scott (2018) explains, Tāngata Tiaki, "don't worry so much about taking kai home and eating it themselves... they do worry when they're giving it away or using it on the marae to manaaki manuhiri." Looking forward, Scott (2018) describes the goal of being able to say, "We're effective guardians." "And what that comes to is, 'is food abundant and safe to eat?'"

As the customary fisheries team works to collect data

from resource users, in certain areas, kaitiaki, or customary fishery governors, attribute a lack of data to the restrictions on fish access imparted by ITQ system establishment. At Te Waihora, a historically important eel fishery, kaitiaki Phillip Tāmāti was instrumental in establishing a customary reserve area over a known kōhunga, or fish nursery ground. Tāmāti argues, however, that he is unable to monitor reserve effectiveness and fishery health, in part due to the boat, fuel, and labor costs associated with routine fishery access. Prior to quota system establishment, Tāmāti funded routine trips through the sale of small fish catches. He did not fish if he perceived the stock as needing recovery. As a result of this sustainability ethic, he did not have the 80% income from fishing necessary to obtain quota from the government (Bodwitch, 2017a). Describing his customary fishing practices, Tāmāti notes:

Fishing was about feeding the whole man. In other words, you had the full right of the fishery. That was the ability to gift it, sell it, or barter. You had the full ownership of the fishery. It blew my, like most people in our situations, it blew our socks off when I realised, "Hey, no, you just can't do that" (Tāmāti, 2018).

And so, when we had the Waitangi Tribunal here, I apologised to the Tribunal that I couldn't provide the fish where I should. But that right had been taken away. One of the people said, 'you could have done it under Reg 27, etc. etc.' And I said, 'what is that? Because I don't know what it is.' And she said, 'You can provide fish for hui and tangi under reg 27 blah-blah (Tāmāti, 2018).

"And I said, 'I didn't know that'. When I lost my commercial rights, I lost everything. That's what I said to the Tribunal. When I lost my commercial right, I lost everything. I'm not longer master of my own fate" (Tāmāti, 2018).

Tāmāti's narrative of dispossession informed the 1992 Fisheries' Settlement and the reallocation of quota to iwi. However, the primary quota management strategy of the iwi continues to exclude him and other small-scale fishers.

Ngāi Tahu commercial rights management

Ngāi Tahu quota package includes a percentage of the stocks for both in-shore and deep-sea species located off New Zealand's South Island, as per the terms of the 1992 Fisheries Settlement Act. The 1992 Fisheries' Settlement was designed in part to mitigate the effects of colonial-era as well as contemporary forms of exclusion presented by Tāmāti and other and outlined in the Waitangi Tribunal's 1992 Ngāi Tahu Sea Fisheries report (Waitangi Tribunal, 1992). Ngāi Tahu fishers were excluded from accessing off-shore commercial fisheries historically, thanks in part to unfulfilled land-sale agreements that relocated Ngāi Tahu from lucrative agricultural land and restricted access to capital (Waitangi Tribunal, 1992). Pushed downstream, Ngāi Tahu relied on in-shore fisheries for subsistence and trade (Waitangi Tribunal, 1992). Yet, when, starting in the mid-1980s, the government allocated rights to commercial fisheries based on catch histories and trade, few Ngāi Tahu fishers had the reported catch histories necessary to obtain quota rights (Bodwitch, 2017a). Their failure to report catches was in part a reflection of the notion that fisheries were Māori-owned, a perspective that the courts later upheld (Bodwitch, 2017a). The reallocation of quota to iwi leaders, under the Māori Fisheries Act 2004, instead of individual fishers, places responsibility on leaders to manage the asset in ways that address current fishers' exclusion, while also benefitting the iwi collectively, whose whānau include those restricted from fishery access prior to ITQ system implementation (Bodwitch, 2017a). Thanks to quota obtained from the Fisheries Settlement and investment decisions since, as of

2017, Ngāi Tahu commercial quota ownership rights amounted to over NZD\$71 million (Te Rūnanga o Ngāi Tahu, 2018). In fiscal year ending June 2018, Ngāi Tahu Seafood, who manages the majority of the iwi quota, reported its "Best year ever," exhibiting a net profit of over NZD\$28 million (Te Rūnanga o Ngāi Tahu, 2018). Ngāi Tahu Seafood' primary quota management strategy involves leasing annual catch entitlement (ACE), the specific tonnage a quota right corresponds to, to highest bidders, usually non-Māori, vertically integrated fisher-processor operations, who then lease it on to fishers. The company uses the profits, in part, to purchase additional quota. Ngāi Tahu Seafood also runs a processing facility to process and sell higher-valued species, including kōura (lobster, *Jansus edwardsii*), tio (Bluff oysters, *Tiostrea chilensis*), and rāwaru (blue cod, *Parapercis colias*). For the fiscal year ending 30 June 2017, Ngāi Tahu fish quota valued at NZD\$71,850 million, up 6.75% from 2015 (Deloitte, 2017). Kōura exhibited 66% of the seafood company's cash generating units (Deloitte, 2017). Attributing the company's 2018 success to the value of kōura in Chinese markets, the annual report of the iwi notes a need to diversity and develop an "innovative approach to getting value added from other quota species" (Te Rūnanga o Ngāi Tahu, 2018).

In leasing ACE, Ngāi Tahu Seafood privileges processors who commit to making ACE available to Ngāi Tahu fishers, when they request it. However, individuals who fish ACE from a processor are required to land the fish caught back to the processor and are unable to negotiate between processors for prices. Mandates to land to particular processing plants place fishers in sharecropper-type relationships with processors and rarely impart the profits necessary to purchase or lease their own ACE (Bodwitch, 2017a). In leasing ACE to fishers, processors are incentivised to lease ACE at low rates so that processors can also pay lease fishers and other fishers low amounts for fish caught.

To make ACE available to Ngāi Tahu fishers, Ngāi Tahu Seafood overseas a small-scale fisher development initiative, called the Murihiku Development Pool, which in practice, operates as a subsidy for Māori fishers. In processing their own fish, Ngāi Tahu Seafood competes against longer-running companies in New Zealand, including Fiordland's Lobster, part owned by Ngāi Kahungunu. Ngāi Tahu Seafood and other processors obtain additional fish by leveraging their own ACE in return for fish caught with ACE obtained elsewhere (Bodwitch, 2017a). Leverage agreements enable processors to overcome consolidation limits, but they exclude fishers who do not have capital to obtain their own ACE (Bodwitch, 2017a). They also exclude fishers who sold their quota, "Thinking they'd always be able to lease it back" (Stewart & Stewart, 2018). As a small-scale Ngāi Tahu fisher describes, "There were never any contracts or anything... so a lot of people sold their quota, thought they'd have their cake and eat it too, but it didn't work out that way" (Stewart & Stewart, 2018).

The goal of the Murihiku Development Pool is to provide ACE to tribal fishers at rates low enough and purchase fish at rates high to enable them to purchase their own ACE. As theoretical ACE owners, Ngāi Tahu fishers could reciprocate earlier support by providing additional fish to the iwi-owned processing company. However, quota and ACE ownership goals place Ngāi Tahu fishers in competition with Ngāi Tahu Seafood and other processors. Fishers rarely outbid processors for quota or ACE, and thus must continue to rely on subsidised support to Ngāi Tahu-owned ACE that the iwi provides for non-leveraged fishers (Bodwitch, 2017a). In the absence of fish, the values non-leveraged, development pool fishers provide NTS primarily include branding benefits associated with Ngāi Tahu Seafood marketing itself as a company that supports indigenous fishers.

A select portion of Ngāi Tahu quota is governed by the iwi non-commercial arm, without a mandate for capital gain. This includes that for so-called "boutique development stocks" (Scott, 2018) or stocks perceived as having not-yet-realised commercial values, such as that potentially obtained through indigenous-branding initiatives (Reid & Rout, 2016). This quota is in part slated to enable flaxroots directed restoration of coastal fishing communities, through the direct allocation of iwi-owned ACE to iwi fishers. Te Waihora tuna quota is in this category. When Ngāi Tahu leases ACE to fishers directly, instead of to processing plants and onto fishers, fishers can negotiate prices between processing plants and leverage their ACE for additional fish. Multi-year ACE leases can also provide fishers' security to invest in physical infrastructure and permitting processes required to sell their own fish to domestic and export markets.

Small-scale fishery development at Te Waihora

In 2000, Ngāi Tahu began leasing Te Waihora tuna quota to father and son team Riki and Thomas Stewart, an amount that then corresponded to 25 tonnes (Stewart & Stewart, 2018). A lifelong fisher, Thomas Stewart did not receive quota in the government's initial allocation due to his adoption of diversified income strategies to subsist. Supporting his family in part through his small-scale farming operation, Stewart did not have the 80% income, or capital, necessary to obtain quota through regulatory or market-based measures. Competing against other fishers, the Stewarts secured the lease in part by agreeing to pay Ngāi Tahu a tax for use of the lakebed bottom. Ngāi Tahu authority to implement the tax was a result of their lakebed ownership rights granted in the 1998 Ngāi Tahu Claims Settlement Act.

The iwi also holds co-governance rights to the lake, which include the authority to influence lake

restoration initiatives, as well as the timings of lake 'openings.' To prevent flooding, the regional council 'opens' the lake to the sea by digging a channel through the rocky shoals between the lake and the ocean, with the potential to alter fish migrations (Bodwitch, 2017b). In an effort to actualise their lakebed ownership rights, the iwi enacted a tax on tuna fishers for their use of the Te Waihora silt bottom to stake their nets. Established commercial fishers resisted by refusing to fish Ngāi Tahu eel quota. The Stewarts broke the boycott.

Roger Stewart estimates investing at least NZD \$100,000 upfront to establish the operation (Stewart & Stewart, 2018). Formerly tying steel and working on the family's small-scale farm, for two years after obtaining the quota lease, the Stewarts lived in tents on the lake's shores to cover costs. The Stewarts supported their operation in part by leasing pātiki (flounder, *Rhombosolea sppatiki*), and aua (yellow-eyed mullet, *Aldrichetta forsteri*) quota from United Seafoods, with the stipulation they land their catches back to United. Eventually, the Stewarts earned enough from fishing to purchase and resuscitate one, and as of 2018, three huts on the lake's shores.

Living next door to kaitiaki Phillip Tāmami, the Stewarts provided the customary guardian with updates on the lake's condition at the end of each day-long trip (Bodwitch, 2017b). The Stewarts also organised trips for customary fishery team scientists. A 2014 trip to evaluate the lake's aua population served to mitigate Ngāi Tahu contractual responsibility to evaluate the effectiveness of one of the lake's customary reserve areas, as initially outlined in reserve implementation proceedings (Bodwitch, 2017b). When the customary fishery scientist participated in the aua take, removing the fish from gill nets left out overnight, the scientist observed that aua movements extended beyond the bounds of the reserve site, requiring a larger budget than that available to determine stock status. Moreover, as Phillip Tāmami noted when serving

coffee to the fishing team at the end of the day, the government doesn't have to prove the effectiveness of their marine protected areas, why should we?

The Stewarts' access to commercial fisheries, owning two small boats, also enabled them to provide fish caught on customary-take permits for community events. Unlike Tāmami, the Stewarts have the gear required to access large amounts of fish for Ngāi Tahu whānau and visitors. The Stewarts supply tuna as well as pāua and fin-fish caught outside of the lake, for tangi and also, the international Te Matatini festival, which Ngāi Tahu hosted in Christchurch in 2015 (Bodwitch, 2017b). Acknowledging the time, and fuel, required to fill a customary permit request for, not unheard of, 300 pāua, Thomas Stewart describes his support for customary fish gathering practices as part of his exercise of mana. In reference to his lease of Ngāi Tahu tuna ACE, "I give so I can take" (Bodwitch, 2017b), Roger Stewart notes a feeling of obligation to supply fish to others, noting, "Being a sole customary fisher is a very expensive hobby. To have the capability solely for customary fishing is not really heard of" (Stewart & Stewart, 2018).

Roger Stewart reports that he pays "top dollar" for Ngāi Tahu quota ACE. However, as compared to ACE from processing facilities, access to Ngāi Tahu ACE provides him the flexibility to sell to whomever he wants, including himself, provided he meets the standards required to be a licensed processor. To obtain further value from fish sales, in 2017, the Stewarts' opened their own processing facility. As per New Zealand's 1996 Fisheries Act, only Licensed Fish Receivers (LFR) can publicly sell fish caught in New Zealand. To obtain a licensed fish receiver ticket, individuals must construct a facility that adheres to government food safety requirements, as well as international export standards. Requiring indoor facilities, showers, toilets, specialised clothing, and daily activity monitoring, along with other criteria, investment in a processing plant also mandated

alterations to generations-old fish drying and processing techniques, and required new forms of government oversight of production activities on Māori-owned land. Describing the process, Roger Stewart explains he needed the LFR, an export license, and recall, “so you can recall your product if you knew it was contaminated or something” (Stewart & Stewart, 2018). He also, “needed the [processing] factory. The factory has to be up to certain standards through MPI [Ministry for Primary Industries]” (Stewart & Stewart, 2018). By way of example, Roger Stewart describes, “Between your storage room and your factory has to be covered from the air” (Stewart & Stewart, 2018).

It’s the layout of your buildings, your audit records... To get export market [certification] you might have to pass all your audits. To get local market [certification] you might have to pass 90% of them... Your boat has different tickets also, depending on who you’re selling to... For a start, you’re audited monthly, and then it goes to three and then six months, and then yearly. It depends if you pass an audit or not. If you don’t pass it could go back to monthly. It’s a decision made by MPI, it’s not exactly set out. It’s the decision they come back with (Stewart & Stewart, 2018).

Accounting for enforcement, *“You can’t just get the tickets and do whatever you want. MPI have to know your process right down to when that fish leave the bench and goes into a bin or goes into a box. You have to let them know your intentions... They will come and view it. Physically stand there and watch you do it... You can’t change your system unless you change it with them. Whether it has to be done that way or not”* (Stewart & Stewart, 2018).

In describing the process of developing his system,

If you go to an export standard you’re pretty much well covered for everything. Australia’s

one of the easier countries to start exporting into. But, if we were exporting flounder into Australia and then wanted to send them to China, we’d have to apply to MPI for that. MPI sends away to China and hears back before you can... (Stewart & Stewart, 2018).

The Stewarts report their first season of processing plant operation as highly lucrative. The Stewarts’ obtained flounder quota from Ngāi Tahu and sold to grocery stores in New Zealand as well as the Sydney fish market. Stewart hired an additional skipper to man a second boat and employed four others for the season. Domestic grocery stores offered the more lucrative option, given the costs saved on shipping. As Roger Stewart describes, “You need to be getting good money for it to be worth sending” (Stewart & Stewart, 2018). He exports fish to the Sydney market through Mainfreight.

“They stick it in a steel box, and it’s iced and chilled. It’s at the market probably six hours after you drop it off... So it’s still well and truly within its temperature and time limit” (Stewart & Stewart, 2018).

Regional grocery stores, unlike Sydney, were willing to take the lake’s black flounder, a species Stewart believes is less recognisable in Australia (Stewart & Stewart, 2018). Some domestic fish store operators, however, resisted taking the Stewarts’ catches, on the grounds that doing so required these chains to tell their larger suppliers, namely Tallies, that they only wanted a select portion of the usual catch. Roger Stewart notes that access to supermarkets,

“Depends on the nature of the person. You start dealing with individuals... I’ll go to the supermarket at Hornby, I’ll go to Pak n Save, that was one of my first stops. And then (I’d) go to the one of Moorhouse. They were really open just to buy fish off me and just tell Talley’s

no we don't want your fish, we don't want your flounders. But then you get other ones, like there's a Pak n Save in Northlands, and the [individual] there that I approached a couple of times was just not prepared to tell Talley's that she didn't want their flounders, she only wanted the other species. She just wasn't—sort of felt embarrassed, I think, to tell them, 'I'm going to get my flounders from somewhere else' (Stewart & Stewart, 2018).

To maintain consistency, the Stewarts broke the catch up between their two primary supermarket buyers, even if one requested a larger amount (Stewart & Stewart, 2018).

When asked if he ever thought about selling fish at the farmers' market, Roger Stewart noted his time constraints. "It's just time. By the time you go fishing and then box up fish, that's 24 hours. No hours left in the day" (Stewart & Stewart, 2018). Describing the day, Roger Stewart explains,

"You go fishing. Your [set gill] nets are already in [the lake] from the day before. You clean your nets, empty your nets, gut your fish, put them on ice. [You drive the boat] back to the chiller trailer, shovel the fish out of the chilly bins into fish bins. [You] add a bit of ice if it's needed, keep it a good temperature, put the fish in the chiller trailer. You drive them out to the factory, box them up, and do a heap of paperwork" (Stewart & Stewart, 2018).

Paperwork includes,

"Cleaning records...pre-operation check... you've got a device in your chiller that records the temperatures, so you need all of that, all those details written down. You have to take temperatures of your fish when you first arrive to the factory. When it leaves... you have to

estimate ice weights, estimate weights of fish. Then you weigh it and write it down" (Stewart & Stewart, 2018).

Asked if the records help to avoid leakage and facilitate compliance with the quota system, Roger Stewart responded,

"It could be, but I don't see how it makes much difference. It's a waste of time if you're processing that much fish. It's a waste of time trying to make fifty bucks at the end of the day, it's just pointless" (Stewart & Stewart, 2018).

To prepare the fish to send out, the Stewarts use chiller boxes comparable to a tin-foil lined cardboard box, with a liner,

"Like a big plastic bag sheet...that goes inside the box. Put that on the scales, balance the scales out so it's reading 00:00. If someone's ordered 30kg, you put 30kg in the box and then add ice packs, close the box up, write on the box a few details, tap into the laptop what you've just done, and out of the printer comes a packing slip and invoice. You put the packing and invoice in a wee plastic holder that goes on the box, you strap the box closed, and it goes into the chiller" (Stewart & Stewart, 2018).

To obtain their orders, the Stewarts texted or phoned grocery stores an account of each days' catch, finding it was more efficient to contact stores first than to wait for a request (Stewart & Stewart, 2018). Continuing with the day,

"When you've finished doing all the orders, you clean the chiller trailer the fish arrived in... You take the fish out of the factory's chiller, back into the chiller trailer... and then start delivering...By that stage, it's daylight the next morning" (Stewart & Stewart, 2018).

The effect of the Stewart's twenty-four-hour fish processing turn-around,

Was just awesome. You walk into the supermarket to have a look and your fish is just shining, gleaming like diamonds, and everyone else's fish looks like death. But at the end of the day, you're probably better chilling the fish for a day and processing 24 hours out. An extra 24 hours would take a lot of pressure off. And then you don't have people doing night shift. But we are definitely kicking ass on freshness.

Explaining his strategy, Roger Stewart notes that freshness was an,

Area where we knew we could improve on. Being small scale as well. Larger scales it's impossible... We're coming in every day... and realistically it's a small amount of fish to process and its only one species... Bigger factories are backed up, they can't process everything at once (Stewart & Stewart, 2018).

Roger Stewart would like to hire someone full-time to oversee the processing side of the operation. To do so, however, requires consistent fish coming thru. Tuna, exported live, is perceived as the most lucrative species the lake can offer (Stewart & Stewart, 2018). However, visiting in 2018, the factory was no longer running, on account of there being no eel. Instead, the Stewarts relied on their small-scale farming operation, run on Māori-owned land, to support themselves. As Roger Stewart described, the lake's eel population was at a level where "going fishing is the wrong thing to do" (Stewart & Stewart, 2018).

The year prior, the government increased the total allowable commercial catch for the lake's eel population, an increase the Stewarts' resisted. The Stewarts' hope a reduction in fishing pressure will prompt a rebound, however, government reports on

the lake's condition suggest fishing pressure is not the primary source of fishery decline. As downstream Ngāi Tahu fishers' working on using their quota assets to support local economies, upstream, the government engaged its own development initiative, supporting development of a dairy economy (Bodwitch, in review). As Bodwitch (in review) describes,

From 2000-2015, the number of hectares managed as dairy in the Te Waihora's nutrient allocation zone, or drainage basin, increased by over fifty percent, as did the number of cows in the Sewlyn-Waihora district (Lomax, Johnston, Hughey, & Taylor, 2015). In 2017, a government-funded analysis stated that every dairy in the region needed to be shut down for the Lake to meet the national government's water quality standards, as outlined in the National Policy Statement for Freshwater Management (NPS-FM). To be in compliance, Te Waihora required a 76% reduction in nitrogen and a fifty percent reduction in phosphorus (Harris & Davie, 2017). The Council requested a compliance exemption, on the grounds that the "social and economic consequences," would be "too severe" (Harris & Davie, 2017).

Ngāi Tahu co-governance rights to Te Waihora, primarily focused on riparian plantings, are unable to mitigate the lake-altering effects of dairy expansion (Bodwitch, 2017b). In 2018, the co-governance partnership ended (Bodwitch, in review).

The Stewarts are unsure as to whether all other commercial eel fishers on the lake stopped fishing (Stewart & Stewart, 2018). The Stewarts attribute their decision to stop fishing as in part a reflection of shared risk model with Ngāi Tahu. In leasing ACE, the Stewarts do not pay unless the fish is caught. The Stewart's lease agreement gives rise to different incentives, as compared to quota-holding fishers, to

openly discuss the state of the eel fishery (Stewart & Stewart, 2018). For the Stewarts, a lack of fish is nonetheless consequential, not only for current income, but also for ability to access export markets. Certain regions require a multi-year track record of clean audits for entry. As Roger Stewart describes:

“Your UK standards are the highest. To get fish into a higher standard country you might need three years of clean audits or three years of exploring... to prove yourselves to be able to go to the higher standard” (Stewart & Stewart, 2018). Noting that now is not a good time to buy or sell eel quota, unless you're prepared to wait multiple years for a rebound, Roger Stewart nonetheless notes that eel are a determined species (Stewart & Stewart, 2018).

To facilitate stock improvement, Roger Stewart desires better communication with MPI, “Just to keep each other in the loop of what's going on. I'm not even sure who to contact or how to try and get things changed” (Stewart & Stewart, 2018). Observing that MPI appears to be in better contact with industry associations for higher valued species, including pāua and kōura, Roger Stewart also notes that quota owners seem to have better access to governing officials, as compared to ACE leasing fishers (Stewart & Stewart, 2018). Stewart desires an eel industry association that represents fishers as well as quota owners (Stewart & Stewart, 2018). “With the higher value species [MPI] seem to be in communication a lot more with fishermen, having meetings and know what's going on. With the eels, it just doesn't exist” (Stewart & Stewart, 2018). Referencing the council's ongoing support for dairy farm expansion at the expense of the Te Waihora fishery, Thomas Stewart notes that Te Waihora is a farm also, a fish farm, and should be managed as such. As Thomas explains, “You have to realise what it will produce. I don't know the tonnes, but the lake needs to have a fish farm manager” (Stewart & Stewart, 2018).

Strategies moving forward

The insecurity experienced by Te Waihora fishers due to upstream land use change suggests that attempts to promote fishery development also require care for resources not returned in settlement, in this case, upstream land held as private property. Government support for development initiatives that devalue settlement assets, such as fishing quota, may present grounds for renegotiation of settlements—suggesting that inaction in Te Waihora may also have “severe” consequences. Advocating for land retirement, Te Waihora fishers note that an alternative use of upstream land could be the establishment of a mahinga kai park, where locals and visitors to hunt and fish wild-caught foods (Bodwitch, in review). Fishers also identify the possibility for Ngāi Tahu lakebed ownership rights to provide grounds for the iwi to implement a tax on upstream users for the filtration services the lake provides (Bodwitch, 2017b).

As customary and commercial stakeholders in New Zealand's marine economy, government support for Ngāi Tahu and other iwi fishers and fishery development initiatives will likely aid New Zealand's capacity to enhance economically and ecologically sustainable seas. This support may include the development of mechanisms to enhance local community members' capacities to enforce customary fishery regulations and to promote the reporting of non-commercial take. Iwi quota ownership rights also impart the capacity to potentially encourage additional monitoring by mandating fishers fishing Ngāi Tahu ACE report to kaitiaki on status of the fishery, beyond that required by MPI. Iwi may facilitate ease of reporting through the development of user-friendly reporting technologies, such as that supported by the pāua industry's “turtle back” technologies (Imcs, 2017). Government support for Māori fisheries may also include funding for iwi-led research projects, thanks in part to the access iwi governors, such as Scott, have to intergenerational knowledge holders

and community leaders. Funding for permanent customary fishery governor positions is also worthy of investigation as a mechanism to promote long-term fish governance and rebuild efforts. The way in which non-fishing related pressure may be a driver of fishery decline, indicates that fish governors' authorities may need to extend upstream. The need for enhanced CPA enforcement suggests that iwi authorities may need to be enhanced to ensure CPAs achieve desired benefits.

As environmental activists uphold indigenous rights as a mechanism to mitigate against species' extinction, Ngāi Tahu fishers and managers' development efforts hold significance for coastal communities, and the resources they rely on, within and beyond the takiwā. Yet, the structural forms of exclusion fishers experience when leasing ACE from processing plants, a strategy that brings profits at the iwi-level, indicates challenges surrounding the use of quota as a mechanism to address historical and contemporary forms of exclusion. The pressure placed on iwi to use settlement quota to support small-scale fishers, places Ngāi Tahu and other iwi at a disadvantage with non-iwi fisher-processor companies, who obtain additional fish through leverage agreements. Going forward, further acquisition of quota will aid iwi abilities to support fish and fishers. As this occurs, the government must continue to be held to task to support regulations that enable Ngāi Tahu and other iwi to realise the benefits these rights are supposed to imbue.

WHAKATŌHEA, ŌPŌTIKI

Case study author

Ms Fiona Wiremu

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I would like to thank the participants who gifted their *mātauranga Māori* (Māori knowledge) and sector expertise relating to the aquaculture and marine activities within the *rohe* (region) of Whakatōhea/Ōpōtiki.

Introduction

The impetus of this study sought to analyse *te hōhonutanga me te whānuitanga*⁴³ (the breadth and the depth) of the Māori marine economy grounded within the *rohe* of Whakatōhea/Ōpōtiki in the Eastern Bay of Plenty.

Kaupapa Māori methodology was used in this study including descriptive inquiry through *kanohi ki te kanohi* (semi-structured) interviews and fact-finding enquiries to explore *mātauranga Māori*, *kaitiakitanga* (guardianship, protection and preservation) and *kāwanatanga* (governance) alongside contemporary practices in respect of marine ecosystem-based management.

The 2002 Waitangi Tribunal report covering Wai 953, together with a selection of legislation, offers insights into the evolution of the aquaculture and marine space pertaining to Māori.

Other research carried out on the aquaculture and marine industry within the Bay of Plenty describes risks and opportunities, of which a selection is noted within this study. These examples along with research conducted by Whakatōhea Māori Trust Board (WMTB), support the transformative notion of *tino rangatiratanga* (self-development) (Smith, Gillies,

Wiremu, Mika, & Puketapu-Watson, 2017; Smith, Tinirau, Gillies, & Warriner, 2015).

From 1998 (Whakatōhea Māori Trust Board, 2018, p. 22) and noted within the Wai 953 report, WMTB sought consent to develop 4,750 ha (Figure 14) of open ocean water-space (3,800 ha being Farm A—black rectangle and 957 ha being Farm B—red rectangle). This study is predominantly centred on the aquaculture activity connected to Farm A, a 3800 ha open ocean water-space located 8.5 kilometres off the coast of Ōpōtiki (50 metres to the ocean floor) and a selection of multi-stakeholder entities that are connected to it, supporting a flourishing marine economy.

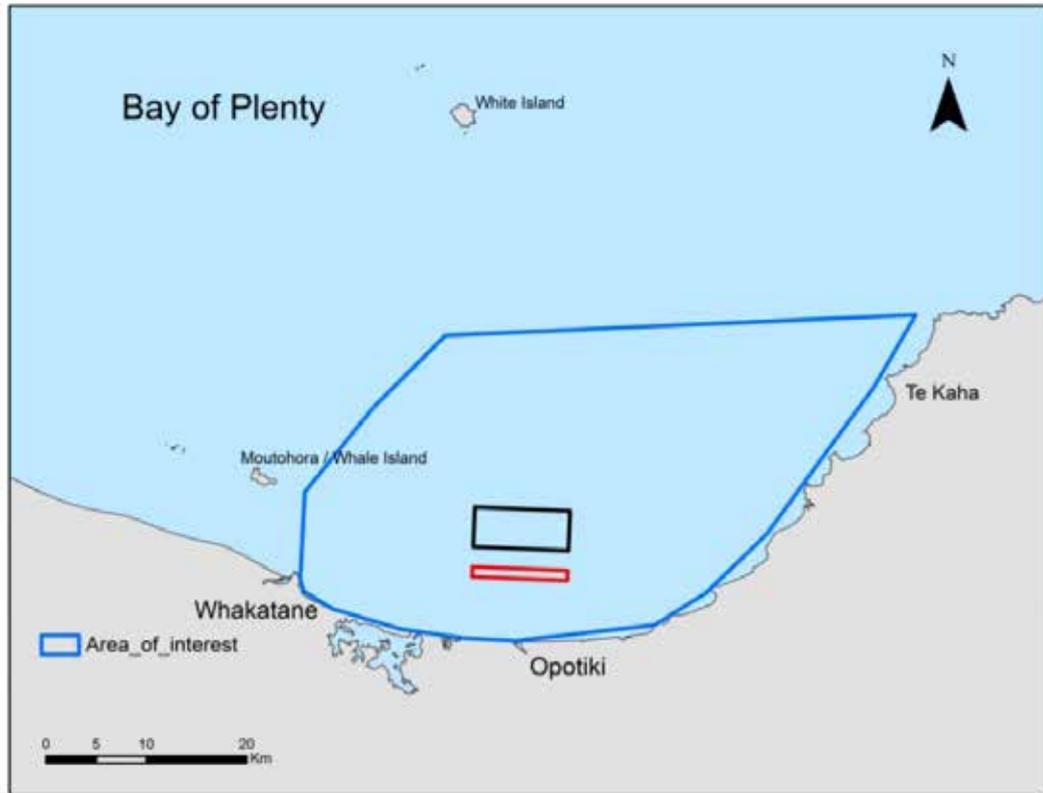
The entities included within this study are Eastern Sea Farms Limited (ESF), the Lessor of Farm A; WMTB and Whakatōhea Aquaculture (Ōpōtiki) Limited (WAOL) are the shareholders/owners of ESF; Whakatōhea Mussels (Ōpōtiki) Limited (WMOL) is one Lessee (80%) of Farm A; while the remaining 20% is leased by Sanford, Gulf Mussels and Hauraki (Whakatōhea Māori Trust Board, 2018, p. 22). Sanford, Gulf Mussels and Hauraki are not included in this study. A desktop analysis was broadened to incorporate Whakatōhea Fisheries Trust (WFT), Whakatōhea Fisheries Asset Holding Company Limited (WAH), and Pakihi Trading Company Limited (PT), given their nexus to WMTB and their interests within the Māori marine economy. Figure 15 demonstrates the relationship between these entities. The findings from this case study will describe challenges and opportunities within the Māori marine economy of ecosystem-based management.

Whakatōhea/Ōpōtiki

The origins of Whakatōhea tribal members can be traced back through their *whakapapa* (genealogy) to their *tīpuna* (ancestors) of Tūtāmure (Nukutere waka) and Muriwai (Mātaatua waka) (Tū Ake Whakatōhea

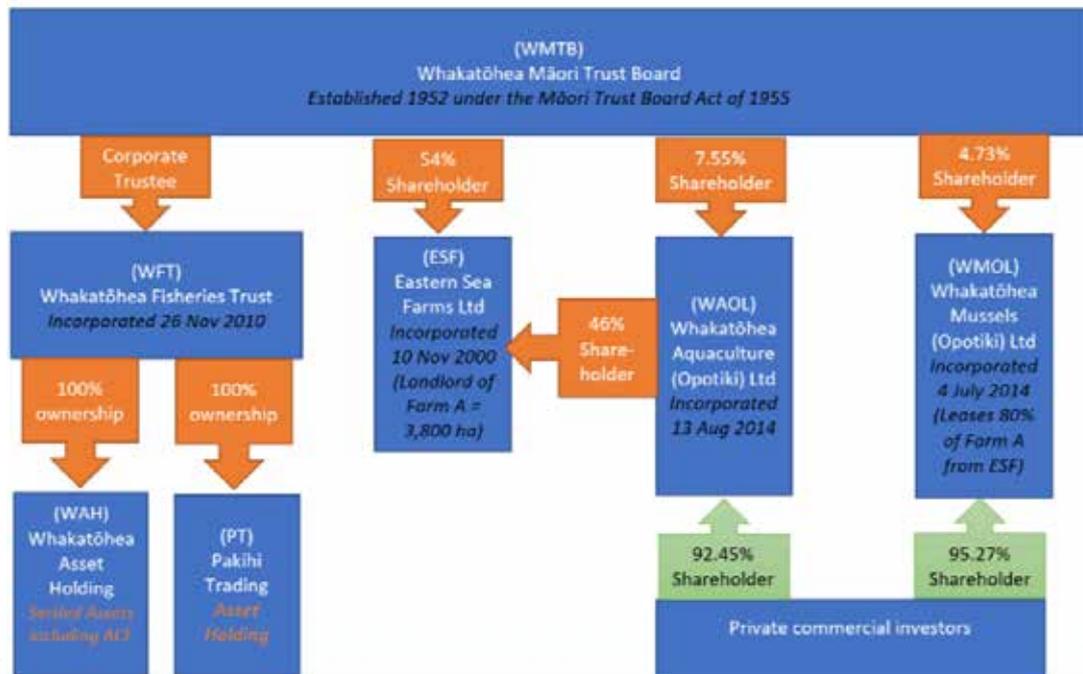
43 Tā Hirini Moko Mead

Figure 14 Whakatōhea Farm A and Farm B



Source: Knight, Forrest, Taylor, Mackenzie, and Vennell (2017, p. 1)

Figure 15 Multi-stakeholder marine entities connected to Whakatōhea Māori Trust Board



Sources: New Zealand Companies Office (n.d.); Whakatōhea Māori Trust Board (2018); Whakatōhea Mussels (Opotiki) Limited (2018)

Collective, 2016). This rohe is steeped in Whakatōhea history, traditional and customary *kawa* (protocols), *tikanga* (customs), *kaitiakitanga* and *kāwanatanga*.

Te Tiriti o Waitangi (Treaty of Waitangi) was signed by seven Whakatōhea chiefs on 27 May 1840 in Ōpōtiki (Tū Ake Whakatōhea Collective, 2016). This did not deter the Crown from confiscating 143,879 acres of *whenua* (land) from Whakatōhea in 1866. The *whenua* was fertile and provided sustenance for its people. As a coastal iwi, Whakatōhea had access to an abundance of marine-life in the *moana* (ocean) and *awa* (rivers).

Whakatōhea has been engaged in pre-settlement discussions in an attempt to negotiate its historical claims since 1996 (Tū Ake Whakatōhea Collective, 2016). It continues to progress its pre-settlement discussions with its hapū members to redress its historical grievances including the *raupatu* (confiscations).

Today, Whakatōhea maintains mana *whenua* rights within the boundaries of its rohe and as such *kawa* and *tikanga* pertaining to its traditional and customary practices are regarded as essential to support a sustainable marine ecosystem for its *uri* (descendants).

The 2013 census provides demographics of the Ōpōtiki region to highlight some of the challenges it faces in a rural location. The 2018 census data has not been used due to data integrity issues. Statistics New Zealand (2013a) recorded the total Whakatōhea population residing in Aotearoa New Zealand as 12,174. Tū Ake Whakatōhea Collective (2016) found that 40.2% reside in the Bay of Plenty and 59.8% reside elsewhere in Aotearoa New Zealand. Despite the large number residing outside of the Ōpōtiki region, WMTB must “act for the benefit of all the members of the iwi, irrespective of where those members reside”, according to clause 32(1)(a) of the 2004 Māori Commercial Aquaculture Claims Settlement Act.

Ōpōtiki statistics for 2013 (Statistics New Zealand, 2013b) recorded a total population of 8,436 (4,518 were Māori); 1,104 business locations in Ōpōtiki with 2,940 paid employees; te reo Māori was spoken by 23.8% of the total population (37.8% of the Māori population); 8.7% of people aged above 15 years held a qualification above a bachelor’s degree (6.9% of Māori above 15 years held a qualification above a bachelor’s degree); total unemployment of those aged above 15 years was 11.0% (Māori unemployment aged above 15 years was 16.6%). The largest industries in Ōpōtiki and the surrounding regions are predominantly horticulture and agriculture. The median income of people aged above 15 years was \$20,700 (for Māori this was \$17,900). These statistics emphasise that while Māori make up 54% of the total population in Ōpōtiki, they remain under-served by Government policy and legislation.

Policy and legislation

Whakatōhea Māori Trust Board (WMTB) was one of the tribal claimants in the Wai 953 report in which the tribunal found that “Māori have a broad relationship with the coastal marine area and that, as an incident of that relationship, Māori have an interest in aquaculture, or, more particularly, marine farming” (Waitangi Tribunal, 2002, p. 76).

In 2004, the Māori Commercial Aquaculture Claims Settlement Act was enacted, as a result of law reforms giving rights to iwi by allocating authorisations for 20% of aquaculture space within aquaculture management areas (AMAs). This has implications for WMTB as ESF has consent to the water-space of which this study is centred upon; however other iwi gain monetary advantage off the back of WMTB efforts and investments in regard to this space.

On the 28 November 2006, WMTB, as a mandated iwi organisation under the Māori Fisheries Act 2004, became a recognised (Takutai Trust, n.d.) iwi aquaculture organisation under the Māori Commercial

Aquaculture Claims Settlement Act 2004. The Foreshore and Seabed Act of 2004 was repealed and the Marine and Coastal Area (Takutai Moana) Act 2011, alongside the Resource Management Act 1991, include components of Māori customary interests and rights. Whakatōhea maintains its rights to mana whenua status and customary practices within its rohe.

While some legislation may intend to provide for Article II of Te Tiriti o Waitangi, for Whakatōhea, which is in its pre-treaty settlement phase, the enactment of legislation assumes a 'one-size fits all' approach. However, legislation did provide for the allocation of Settlement Quota and Moana Ltd Shares (Whakatōhea Fisheries Trust, 2018) to Whakatōhea. Research conducted by WMTB assists in challenging some of these approaches.

Aquaculture research within the Bay of Plenty

The Bay of Connections (2018) aquaculture strategy and reports prepared for both Regional and Local Councils include the development of the Ōpōtiki Aquaculture and Harbour project (Buchan & Wyatt, 2011), highlighting potential environmental issues (Knight et al., 2017), new water-space development, economic opportunities (Batstone, 2017), health of greenshell mussel (Heasman & Knight, 2014; Romanazzi, 2014), nutraceutical value of Mussel (Aquaculture Direct, October 2014), and the subsequent social and community benefits of development within the rohe. These studies emphasise economic growth tempered with sustainable measures. An expectation of revitalising the town of Ōpōtiki is that by creating employment it will bring about new businesses, thereby creating a cycle of *Whai Rawa* (economic prosperity).

WMTB developed a *Kura ki Uta, Kura ki Tai* (Land to Surf to Sea) aquaculture research programme with its partners. Its aims are to build capacity (aquaculture

and environmental training); develop opportunities (investing and growing in aquatic species such as green mussel spat, flat oysters, pacific oysters, seaweed, sponges, surf clams and fish); enhance the value of species; understand the environment and biology (where does water come from, what does it bring and where does it go to); and create new ecosystem environments (suitable for the location, optimal for the species that are sustainable). WMTB has engaged in several research projects including investigating the impact of climate change and how this may impact future Aquaculture production and marine space use.

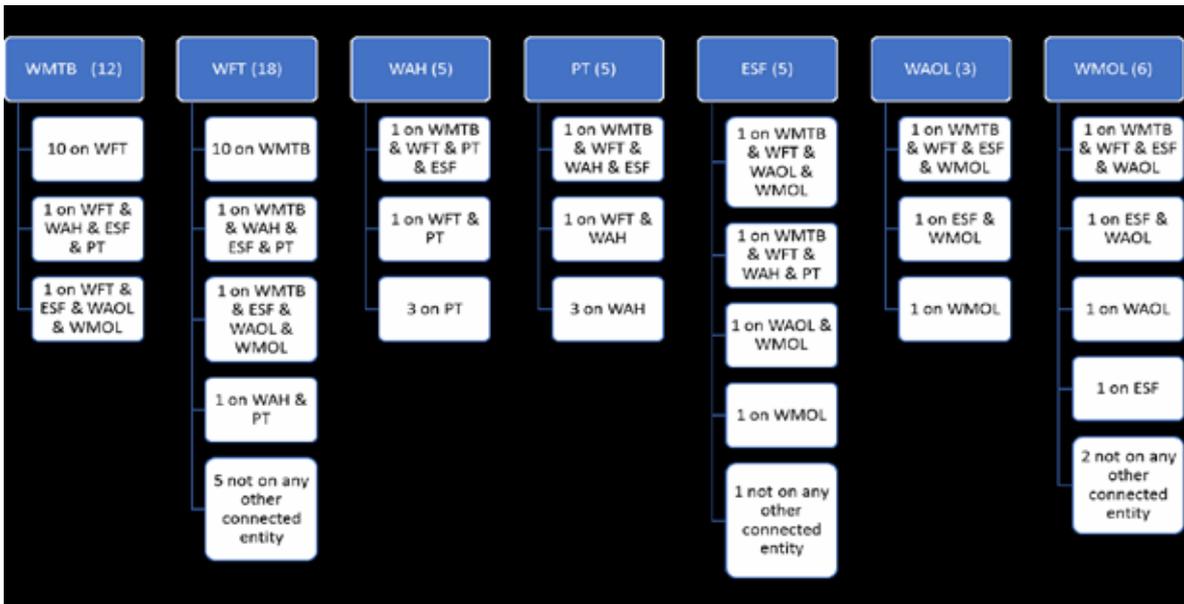
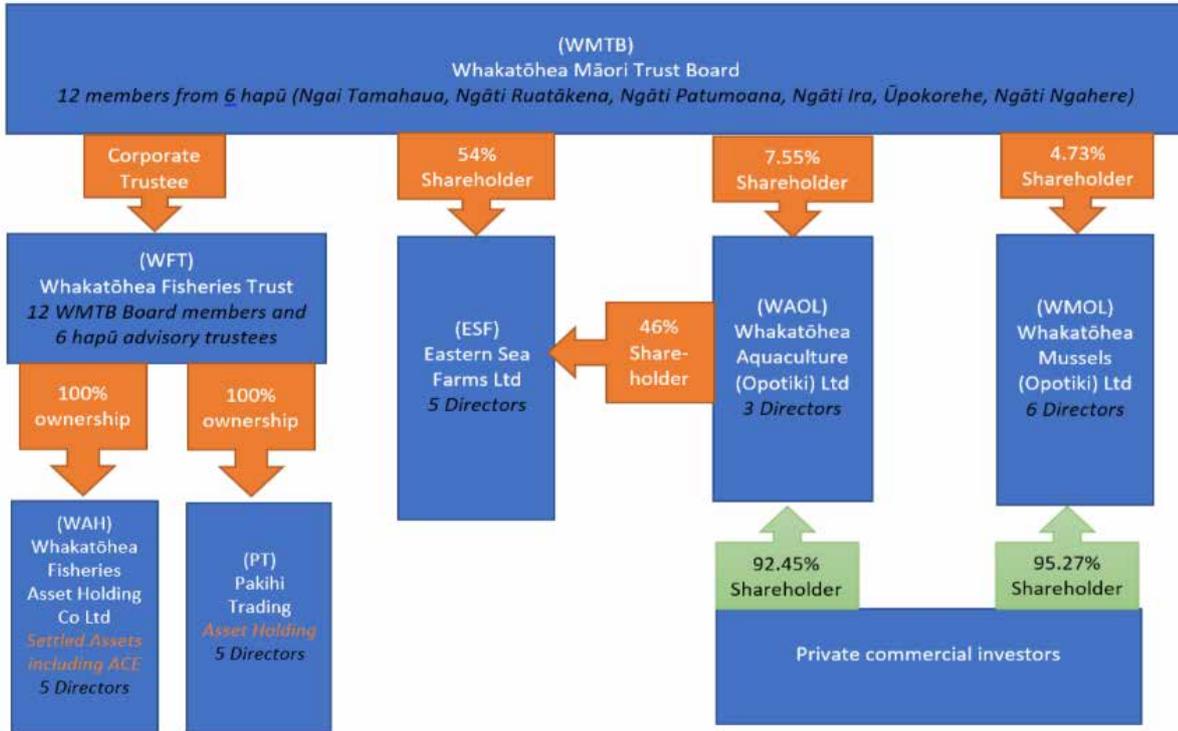
Governance

Each entity within this study is mandated by their respective deeds to serve its shareholders/stakeholders. Figure 16 provides an overview of trustees and directors and their connection to WMTB, ESF, WAOL, WMOL, WFT, WAH and PT. In some circumstances, a trustee/director may hold a governing position on one entity, but may be an independent director on another. For example, one trustee of WMTB is an independent director on WMOL. The importance of networks and accessing knowledge across entities for those who have a stake within the marine space is priceless.

The WMTB governance board at 30 June 2018 is made up of 11 Trustees representing the six hapū of Ngāi Tamahaua, Ngāti Ruatakena, Ngāti Ngāhere, Ngāti Patumoana, Ngāti Ira, and Upokorehe of Whakatōhea. Elections have been held since this report was written whereby five new WMTB members have been elected onto the Trust Board at 30 June 2019. For this report, any references to WMTB governance board members, relates to those who held positions at 30 June 2018.

ESF has five directors, including two on WMTB. The WAOL has three directors one of which is on WMTB. WMOL has six directors, one of which is on WMTB,

Figure 16 Governance members of WMTB, WFT, ESF, WAH, PT, WMOL and WAOL



Sources: New Zealand Companies Office (n.d.); Whakatōhea Māori Trust Board (2018); Whakatōhea Mussels (Opotiki) Limited (2018)

but is independent on WMOL. WFT has 18 trustees on its governance board (12 WMTB Board members and six hapū advisory trustees). WAH has five directors, one of which is on WMTB. PT has five directors, one of which is on WMTB. While the report from Heron (2018) highlighted aspects of governance practices,

the diagram in Figure 16 demonstrates a line of sight between WMTB and selected entities that have a vested interest in Farm A. The abundance of collective knowledge, inclusive of the aquaculture industry, mātauranga Māori and subject-matter expertise held by these governors, is supplemented by their world

views (in Te Ao Māori and Te Ao Pākehā).

Every Board member on the various entities has their own established networks and relationships (formal and informal) which intertwine to support the viability and sustainability of ecosystem-based management. Maintaining oversight of sustainable marine governance practices within the rohe includes an understanding of responsibilities and sharing the marine space and its resources between commercial, recreational, and customary fishers.

Whakatōhea Māori Trust Board

The iwi has held a general principle, “return of the whenua” (D. Farrar, pers. comm., 1 October 2018), through which, in 1952, Whakatōhea received some *pūtea* (funds) from the government to purchase its first significant whenua asset that would build on its aspirations of tino rangatiratanga. WMTB is a large pre-settlement Māori entity formed under the Māori Trust Board Act 1955, and located at 122 St John Street, Ōpōtiki.

The Trust has grown its equity, resources and *mātauranga* to serve the needs of its people and communities while pursuing its vision and purpose *Ko te kai hoki i Waiaua* (To be the food bowl that feeds the world) and *Kia rangatira ai ngā uri o Te Whakatōhea* (To grow and invest in the well-being of our people). It is a multi-faceted entity with a hierarchical structure led by its CEO. WMTB operational structure is supported by management and staff who are mostly Māori and predominantly employed in Ōpōtiki.

WMTB and its subsidiaries have well-established relationships with other iwi and agencies (Te Ohu Kaimoana, Aotearoa Fisheries Limited, Iwi Collective Partnership (ICP), Te Pūtea Whakatupu Trust, Te Waimāori Trust) that add to their *whai rawa*, including aquaculture, dairy farming, joint ventures, and investments grounded within their *tikanga*, *kawa* and Māori values. These activities

support and uplift their iwi identity, *Whakatōheatanga* (culture), *te reo* (language), *manaakitanga* (social), *mātauranga* (education), *hauora* (health), and *toi ora* (environmental) well-being.

WMTB was originally funded through social service contracts. Now, it has investments in Farm A and Farm B, ventures within ESF (54% shareholder), WAOL (7.55% shareholder), WMOL (4.73% shareholder), is the corporate trustee of WFT that are the owners of WAH and PT; all contributing to total group accumulated funds of \$18.834m at 30 June 2018 (see Table 3). Its current ratio is 0.85 (current assets \$5,005,863 and current liabilities \$5,910,799) accentuating a potential challenge to meet its short-term obligations that are due within one year. The debt/asset ratio is 0.35 (total liabilities \$10,243,508 and total assets \$29,077,967), noting that WMTB is financed primarily through equity.

Whakatōhea Fisheries Trust

WFT was established in 2006 and its main source of income is derived from Annual Catch Entitlements (ACE), dividends, quota lease and ICP profit share. From its beginnings in 2010, when it recorded a negative total accumulated funds, it now returns a positive \$9.465m total accumulated funds at 30 June 2018 (see Table 4). Its current ratio is liquid (current assets \$731,206 and current liabilities \$21,378), reinforcing the view that WFT can meet its short-term obligations that are due within one year. The debt/asset ratio of zero (total liabilities \$21,378 and total assets \$9,487,144) illustrates that WFT is financed through equity.

Whakatōhea Fisheries Asset Holding Company Limited

The asset holding company was incorporated on 8 November 2006 under the Companies Act 1993. It is 100% owned by WFT. WAH holds the settlement quota and income shares allocated by Te Ohu Kai Moana. Its total equity at 30 June 2018 is \$8.955m

Table 3 Whakatōhea Māori Trust Board Group annual accounts summary

Financial summary	30-Jun-2018	30-Jun-2017
Current Assets		
Cash & Cash receivables	\$ 1,979,718	\$ 1,727,364
Receivables from Exchange Transactions	\$ 1,273,352	\$ 526,013
Biological Assets - Livestock	\$ 1,743,020	\$ 1,799,567
Other receivables	\$ 9,773	\$ 9,773
Non-Current Assets		
Investment – Whakatōhea Aquaculture (Ōpōtiki) Limited	\$ 102,944	\$ 106,416
Investment – Whakatōhea Mussels (Ōpōtiki) Limited	\$ 349,057	\$ 124,528
Investment – Eastern Sea Farms Limited	\$ 382,218	\$ 248,904
Investments – Other	\$ 3,892,097	\$ 4,213,334
Intangibles – Mussel Farm Application	\$ 410,549	\$ 446,114
Intangibles – Other	\$ 20,733	\$ 21,478
Biological Assets – Orchard	\$ 810,000	\$ 810,000
Property, Plant & Equipment	\$ 18,104,506	\$ 18,471,536
Total Assets	\$ 29,077,967	\$ 28,505,027
Current Liabilities	\$ 5,910,799	\$ 5,341,119
Non-current Liabilities	\$ 4,332,709	\$ 4,332,418
Total Liabilities	\$ 10,243,508	\$ 9,673,537
Total Accumulated Funds	\$ 18,834,459	\$ 18,831,490

Source: Whakatōhea Māori Trust Board (2018)

(see Table 5). WAH is in a secure position to pay its short-term obligations (current assets \$1,672,795 and current liabilities \$18,370) that are due within one year and it is financed through equity (total assets \$8,973,633 and total liabilities \$18,370).

WAH recorded 710,043 kg of ACE (see Table 6). The top nine species of ACE were Hoki (177,861 kg), Southern Blue Whiting (147,519 kg), Arrow Squid (103,778 kg), Jack Mackerel (73,900 kg), Ling (24,735 kg), Blue Mackerel (22,522 kg), Oreos (18,582 kg), Hake (11,788 kg) and Silver Warehou (11,362 kg).

Table 4 Whakatōhea Fisheries Trust Group annual accounts summary

Financial summary	30-Jun-2018	30-Jun-2017
Revenue		
ACE – Holdings	\$ 153,301	\$ 138,958
ACE – Inshore	\$ 42,043	\$ 49,784
ACE – Kōura	\$ 32,201	\$ 32,956
Dividends Received	\$ 139,368	\$ 118,853
ICP – Other Income	\$ 2,055	\$ 5,095
MQAHL – Quota Lease	\$ 39,535	\$ 9,036
Imputation Credits	\$ -	\$ 441,894
<i>Interest</i>	\$ 386	\$ 1,729
<i>Profit Share – ICP Kōura Ops. LP</i>	\$ 20,073	\$ 13,900
<i>Profit Share – ICP Kōura Facilities LP</i>	\$ 14,198	\$ 15,797
Total Revenue	\$ 443,160	\$ 828,002
Total Expenses	\$ 170,712	\$ 212,113
Surplus for the Year	\$ 272,448	\$ 615,889
Revaluation of AFL Shares	\$ -	\$ 1,439,317
Total Comprehensive Income	\$ 272,448	\$ 2,055,206
Assets		
Bank Accounts & Cash	\$ 405,778	\$ 589,163
Debtors & Prepayments	\$ 278,229	\$ 198,771
Biological Assets – Mussel	\$ 47,199	\$ -
Total Current Assets	\$ 731,206	\$ 787,934
Investments		
EFL Shares	\$ 5,016,338	\$ 5,016,338
ICP Kōura Operations Ltd Partnership – CRA 3 & 4 Quota	\$ 336,976	\$ 336,976
ICP Kōura Facilities Ltd Partnership	\$ 93,648	\$ 93,648
JV Loan Account – Mātaatua Quota Ace Holdings Ltd	\$ 71,510	\$ 71,510
MFA Settlement – ACE Quota	\$ 1,782,366	\$ 1,782,366

Financial summary	30-Jun-2018	30-Jun-2017
Whakatōhea Māori Trust Board		
Opening Balance	\$ 1,013,847	\$ 957,564
Whakatōhea Mussels Ōpōtiki Ltd & Whakatōhea Aquaculture Ōpōtiki Ltd	\$ 254,991	\$ 56,283
Other Movements		
Total Investments	\$ 8,569,676	\$ 8,314,685
Property, Plant & Equipment	\$ 157,270	\$ 108,333
Intangibles – Water Space Consent	\$ 28,992	
Total Assets	\$ 9,487,144	\$ 9,210,952
Total Liabilities	\$ 21,378	\$ 17,628
Total Accumulated Funds	\$ 9,465,766	\$ 9,193,324

Sources: Whakatōhea Fisheries Trust (2017a, 2017b, 2018)

Table 5 Whakatōhea Fisheries Asset Holding Company Ltd annual accounts summary

Financial summary	30-Jun-2018	30-Jun-2017
Current Assets	\$ 1,672,795	\$ 1,490,332
Non-Current Assets	\$ 7,300,838	\$ 6,798,704
Total Assets	\$ 8,973,633	\$ 8,289,036
Current Liabilities	\$ 18,370	\$ 15,760
Non-Current Liabilities	\$ -	
Total Liabilities	\$ 18,370	\$ 15,760
Revenue	\$ 443,008	\$ 755,806
Expenses	\$ 83,305	\$ 96,752
Profit/(Loss)	\$ 359,703	\$ 659,054
Total Equity	\$ 8,955,263	\$ 8,273,276

Source: Whakatōhea Fisheries Trust (2018, p. 43)

Table 6 Whakatōhea ACE

Marine Species	ACE kg	Marine Species	ACE kg
Alfonsino & Long-finned Beryx	1,279	Mako Shark	598
Anchovy	597	Moki	216
Arrow Squid	103,778	Moonfish	1,569
Barracouta	7,516	Orange Roughy	8,695
Bigeye Tuna	2,125	Oreos	18,582
Black Paua & Yellowfoot Paua	2	Oysters Dredge	3
Blue Cod	56	Pacific Bluefin Tuna	345
Blue Mackerel	22,522	Packhorse Rock Lobster	14
Blue Shark	5,536	Paddle Crab	562
Bluenose	315	Pale Ghost Shark	4,339
Butterfish	5	Parore	127
Cardinal Fish	5,236	Patagonian Toothfish	119
Cockle	22	Pilchard	5,914
Common Warehouse	43	Pipi	13
Deepwater (King) Clam	4	Porae	146
Deepwater Tuatua	4	Porbeagle Shark	328
Elephant Fish	11	Prawn Killer	98
Flats	679	Rays Bream	2,917
Friiled Venus Shell	3	Red Cod	33
Frostfish	9,099	Red Crab	116
Garfish	30	Red Snapper	366
Gemfish	219	Redbait	35
Ghost Shark	4,028	Ribaldo	4,114
Giant Spider Crab	1,146	Rig	626
Giant Stargazer	2,031	Ringed Dosinia	21
Green-lipped Mussel	30	Rock Lobster	771
Grey Mullet	403	Rough Skate	205
Gurnard	2,377	Rubyfish	900
Hake	11,788	Scallop	58
Hapuku & Bass	511	Scampi	3,193
Hoki	177,861	School Shark	714
Horse Mussel	15	Sea Cucumber	10
Jack Mackerel	73,900	Sea Perch	2,707
John Dory	369	Silky Dosinia	3
Kahawai	3,069	Silver Warehouse	11,362
Kina	620	Smooth Skate	1,604
King Crab	210	Snapper	6,558
Kingfish	252	Southern Blue Whiting	147,519
Knobbed Whelk	9	Southern Bluefin Tuna	3,113

Marine Species	ACE kg	Marine Species	ACE kg
Large Trough Shell	6	Spiny Dogfish	1,738
Leatherjacket	396	Sprats	95
Ling	24,735	Swordfish	2,634
Lookdown Dory	1,484	Tarakihi	1,149
		Marine Species	ACE kg
		Trevally	1,978
		Triangle Shell	27
		Trough Shell	3
		Trumpeter	46
		Tuatua	-
		White Warehou	8,620
		Yellow-eyed Mullet	36
		Yellowfin Tuna	783
			464,321

Pakihi Trading Company Limited

Pakihi Trading (PT) Company Limited is in development (Farm B is in the process of being consented by PT) and the benefits of the trustee's efforts were yet to be realised at 30 June 2018 (see Table 7). It is 100% owned by WFT. PT is in a secure position to pay its short-term obligations (current assets \$162,969 and current liabilities \$1,438) that are due within one year. It is primarily financed through debt (total assets \$349,231 and total liabilities \$401,488).

Table 7 Pakihi Trading Company Limited annual accounts summary

Financial summary	30-Jun-2018	30-Jun-2017
Current Assets	\$ 162,969	\$ 251,702
Non-Current Assets	\$ 186,262	\$ 108,336
Total Assets	\$ 349,231	\$ 360,038
Current Liabilities	\$ 1,438	\$ -
Non-Current Liabilities	\$ 400,050	\$ 360,050
Total Liabilities	\$ 401,488	\$ 360,050
Revenue	\$ -	\$ -
Expenses	\$ 52,245	\$ 12
Profit/(Loss)	-\$ 52,245	-\$ 12
Total Equity	-\$ 52,257	-\$ 12

Source: Whakatōhea Fisheries Trust (2018, p. 43)

Eastern Sea Farms Limited

ESF became an incorporated company on 2 April 2001, having previously been incorporated as Foveaux Mussels Limited on 10 November 2000 under the Companies Act 1993. ESF was originally owned by Sealord, WMTB and two entrepreneurs. The first investment call for the initial development of Farm A was made under ESF. As a result of the over subscription by community shareholders, ESF was able to buy-out Sealord and the two entrepreneurs. Its

current owners are WMTB (54%) and WAOL (46%), according to the New Zealand Companies Office (n.d.). It is the Lessor (has consent over the water-space) of Farm A (3,800ha block) and Farm B is in the process of being consented by PT. It took nine years to gain the resource consent for Farm A.

Previously, the fish stocks in the rohe were depleted but with the development of Farm A, an abundance of sea-life has become attracted to the mussel farm, creating a whole new ecosystem. Customary and recreational fishers are permitted to tie their fishing boats up to the buoys and fish. ESF and WMOL share the sea space with customary and recreational fishers.

The dollar value of ESF to WMTB at 30 June 2018 was \$382,218 (Whakatōhea Māori Trust Board, 2018, p. 73). The dream for ESF as the Lessor is to also be the Lessee.

Whakatōhea Aquaculture (Ōpōtiki) Limited

WAOL was incorporated on 13 August 2014 under the Companies Act 1993 and has 1,410,000 shares. It does not identify itself as Māori owned but it is community owned. It was set up as a private commercial operation, a "mirror investment" company of WMOL. It is for investment purposes only. Where the first call for investment was under ESF, the second call was under WAOL to purchase the boat (Northern Quest). Further investment calls were undertaken as the need arose. WMTB owns 106,416 shares of WAOL, equating to 7.55% of the total shareholding. The WAOL dollar value to WMTB is \$102,944 at 30 June 2018 (Whakatōhea Māori Trust Board, 2018, p. 73). WAOL is a 46% shareholder/owner of ESF.

Whakatōhea Mussels (Ōpōtiki) Limited

In 2010 an idea formed to develop a mussel farm with Whakatōhea and its communities. Between 2010 and 2014 it was a challenging time to raise capital. WAOL was created to raise capital. WMOL was incorporated

on 4 July 2014 under the Companies Act 1993 and has 7,910,163 shares. The intent is to be a viable commercial operation with social and environmental consciousness.

The office is located at 96 Waioeka Road, RD1, Ōpōtiki with its boats moored in Whakatāne and its land-base (leased) in Pāroa, Whakatāne. It is a small, private commercial farming operation that leases 80% of Farm A from ESF. WMOL is nimble enough to deal with and react to allow for growth. Its philosophy is “We want all our people to come home safe” (P. Vitasovich, pers. comm., October 03, 2018). While it does not identify as a Māori organisation, the Board of WMOL recognises and acknowledges *kawa* and *tikanga*.

WMOL operates two fishing boats, the first was the Northern Quest. It is 30 metres long, can hold 96 tonne and has Wi-Fi on board so that the organisation can remain connected on the open ocean. It was originally leased for six months, then a capital call was raised to purchase it. It was built in Nelson in 2009, then went to work in the Coromandel, before arriving in Ōpōtiki in 2016.

In 2016, 40 tonnes of mussel were harvested, under 300 tonnes in 2017 and 1,500 tonnes in 2018. WMOL harvest from July to December (90mm-100mm sizing of mussels). The harvesting of mussel spat is dependent on the weather and moana conditions. WMOL has a sustainable strategy that is cautious and methodical in its approach, i.e., accepting of seasons (some years there is a good harvest; in other years it is not good) and accepting of environmental seasonality (El Nino and La Nina).

The second boat is named the *Kukutai*. It is 24m long and can hold 50 tonnes. It is newly built having been launched in late 2018, with a formal Māori blessing held in *Tāmaki Makaurau* (Auckland) and then again in Whakatāne.

WMOL employs 13 people—including a CEO, skippers, deckhands, a land-based employee at its leased site in Whakatāne—and outsources some of its administrative functions. Its aim is to eventually employ locals. As part of an arrangement with a ship-building company in Tāmaki Makaurau, three apprentices from Ōpōtiki were employed to build the *Kukutai*.

WMOL has domestic agreements for fresh quality mussel sales with Oceans Seafood (Ōpōtiki), Gibbo's (Whakatāne), Foodstuffs, and a processing plant in Tauranga for distribution. The first export to the USA occurred in October 2018, with three containers to Chicago. This sale arose due to a personal relationship one of the directors had with the owners in Chicago. Its marketing brand is “Open Ocean”, whereas its products are known as “Whakatōhea Mussels and Ōpōtiki Mussels.”

Its total accumulated funds are worth \$7.963m (see Table 8) at 30 June 2018. WMTB owns 374,214 shares of WMOL, equating to 4.73% of the total shareholding. The WMOL dollar value to WMTB is \$349,057 at 30 June 2018 (Whakatōhea Māori Trust Board, 2018, p. 73). WMOL is in a secure position to pay its short-term obligations (current assets \$1,807,000 and current liabilities \$220,740) that are due within one year. It is primarily financed through equity (total assets \$8,683,972 and total liabilities \$720,740). Its main sources of revenue are mussel & spat sales and contract vessel hire. The valuation of pre-harvest mussel stock increased in value by \$569,621 at 30 June 2018, with an adjustment for risk in yield and harvest due to damages.

WMOL seeks to develop its farming operation to support a factory in Ōpōtiki, i.e., vertical integration is the future.

Table 8 Whakatōhea Mussels (Ōpōtiki) Ltd financial summary

	30-Jun-2018	30-Jun-2017
Revenue		
Contract Stock Loading	\$ 1,272	\$ 1,590
Contract Vessel Hire	\$ 311,931	\$ 482,160
Freight/Unloading Income	\$ 12,142	\$ 6,209
Line Installation Income	\$ -	\$ 436,917
Line Maintenance Income	\$ 119,869	\$ 67,921
Sanitation & Biotxin Costs Recovered	\$ 17,043	\$ -
Mussel and Spat Sales	\$ 547,178	\$ 105,638
Investment Income	\$ 743	\$ 5,653
Other Revenue		
Change in Fair Value of Biological Assets	\$ 569,621	\$ 953,600
Other Income – Insurance Proceeds	\$ 105,013	\$ -
Total Revenue	\$ 1,684,812	\$ 2,059,688
Total Expenses	\$ 2,807,246	\$ 2,128,208
Profit/(Loss)	(\$1,122,434)	(\$68,520)
Assets		
Bank Accounts & Cash	\$ 143,970	\$ 27
Debtors & Prepayments	\$ 250,254	\$ 282,478
Biological Assets – Mussel	\$ 1,412,776	\$ 422,000
Total Current Assets	\$ 1,807,000	\$ 704,505
Property, Plant & Equipment	\$ 6,711,027	\$ 4,109,189
Biological Assets	\$ 165,945	\$ 586,600
Total Assets	\$ 8,683,972	\$ 5,400,294
Total Liabilities	\$ 720,740	\$ 2,039,720
Total Accumulated Funds	\$ 7,963,232	\$ 3,360,574

Source: Whakatōhea Mussels (Opotiki) Limited (2018)

Challenges and opportunities

Three challenges are identified in this study:

1. Legislation and policies that purport a one-size-fits-all approach for pre- and post-treaty settlement entities at the same time responding to the needs of commercial and recreational users while balancing competing priorities and the economy;
2. Securing enough investment (government and private) in a timely manner to enact sustainable and researched development opportunities; and,
3. Understanding how others are doing things and how that feeds into what is happening in Whakatōhea/Ōpōtiki e.g., who owns the genetics of species/marine stocks as Māori were guaranteed te tino rangatiratanga or undisturbed right to their lands, villages and all property that Māori treasured according to Te Tiriti o Waitangi.

Three opportunities that have arisen as a result of this study include:

1. Development of an iwi coastal strategy inclusive of kawa, tikanga and traditional/customary practices to sustain a marine ecosystem above and below the sea;
2. The enhancement of an ecosystem resulting from the introduction of additional marine life (oysters, seaweed, sponges, surf clams, fish stocks and new species). This cultivates vertical integration of complementary businesses and opportunities; and,
3. Further development of 11,250 hectares identified within the Bay of Connections (2018) Aquaculture Strategy and deep ocean activities.

Summary

This study offered insights into the open ocean marine-space within the rohe of Whakatōhea/Ōpōtiki, and considered knowledge of the rohe and a selection of entities that contribute to the Māori marine economy. In developing an integrated ecosystem-based management model that is imbued with mātauranga Māori, tikanga, kawa, kaitiakitanga and kāwanatanga, a true partnership must exist between the Crown and Iwi as intended within Te Tiriti o Waitangi.

AOTEAROA CLAMS

Case study author

Dr Jason Paul Mika

Introduction

This case study provides an overview of the organisation and people behind the establishment of Aotearoa Clams Limited (ACL), a start-up enterprise established in 2018 to trial surf clam harvesting along the West Coast between Foxton and Whanganui. The study is based on interviews and relevant literature on Māori opportunities for the commercialisation of surf clams in Aotearoa (New Zealand). It describes different scales of Māori enterprise and their current challenges. It also seeks to understand how this Māori company incorporates kaitiakitanga (guardianship) and mātauranga (traditional knowledge) through its tikanga (cultural principles) and kawa (cultural practices) within the Māori marine economy (Rout et al., 2018).

Background—surf clams in Aotearoa New Zealand

Surf clams are bivalves that grow on the surf zones of sandy beaches, from shallow water out to a depth of 10 metres (Cranfield, Michael, Stotter, & Doonan, 1994). Due to turbulent waters, surf zones are very productive areas with regenerating nutrients that are favourable to the clams. A positive factor for surf clam commercialisation is the relationship between the harvesting process used and the surf clam environment: harvesting is based on dredge systems but there should not be any significant environmental impact due to surf clams' location in a very dynamic area. Also due to their habitat, the scientific study of these animals in the country was only possible after the development of hydraulic dredges. As Spence (1980) explains, the studies that ensued gave a notion of the abundance and extension of surf

clams around the country. There are seven species present in New Zealand: deepwater tuatua—PDO (*Paphies donacina*), fine (silky) dosinia—DSU (*Dosinia subrosea*), frilled venus shell—BYA (*Bassina yatei*), large trough shell—MMI (*Mactra murchisoni*), ringed dosinia—DAN (*Dosinia anus*), triangle shell—SAE (*Spisula aequilatera*), and trough shell—MDI (*Mactra discors*).⁴⁴ Although all species can be found around the country, specific species are more plentiful in determinate zones (Cranfield et al., 1994).

History of commercial surf-clam business

Before the formation of Aotearoa Clams Ltd in 2018, there was only one company in the country involved in surf clam harvesting and processing, Cloudy Bay Clams Ltd (Farrington, 2014). Cloudy Bay Clams supplies surf clams to both the domestic and international markets, especially to Asia and the United States. Cloudy Bay Clams harvests surf clams in two regions of the South Island: Blenheim and Christchurch. The quota management system (QMS) was only expanded to include surf clams in 2004, reflecting the relative recency of the commercial surf clam fishing industry. Twenty percent of this quota is allocated to Māori under the Treaty of Waitangi fisheries settlements and 80 percent to open tender (Lock & Leslie, 2007). By legislation, only New Zealand citizens and domestic companies can own, lease, or sell fishing quota (Walrond, 2006). Currently, new surf clam businesses are at an advantage because there are few competitors in the country and this area is still to be explored.

Business structure and function

In 2016, Lee Lim, Tūroa Karatea and Peter Madden came together to establish a surf clam business. Tūroa lives in Halcombe and his whakapapa is Tūwharetoa and Ngāti Raukawa. Peter lives in Whanganui and his whakapapa is Ngāi Tūhoe and

⁴⁴ https://fs.fish.govt.nz/Doc/23632/92_SURFCLAMintro_2014%20FINAL.pdf.ashx

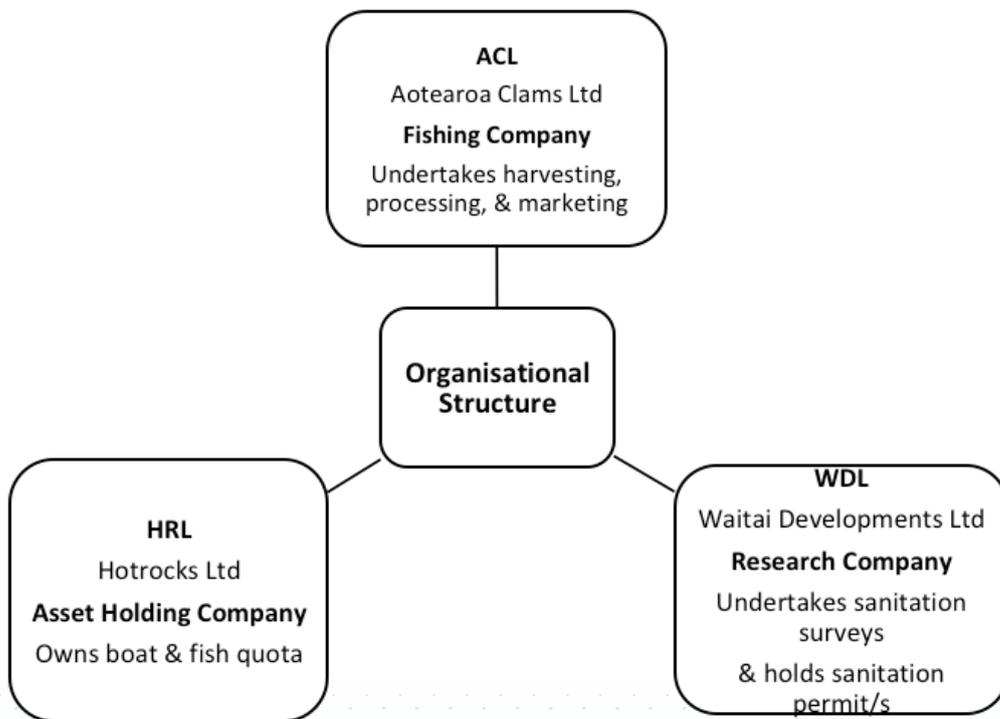
Whakatōhea. Lee Lim is originally from China and has made New Zealand his home. He lives in Lower Hutt and studied at Massey University, Palmerston North.

The small-scale business structure encompasses a partnership of Aotearoa Clams NZ Limited with two other enterprises, Hotrocks Ltd and Waitai Development Company Ltd (WDCL), each with specific functions. Aotearoa Clams Ltd is owned 70% by the Lee Lim whānau (family) and 30% Waitai Development Company Ltd (WDCL) (see Figure 17). It will be the public face of the operation, undertaking the harvesting and initially subcontracting the processing to various third-party food processors. The company's marketing will be done by Lee, who already has a distribution network in New Zealand, Australia, China, and other Asian markets, through which he sells

predominantly oysters and mussels for other New Zealand fishing companies Hotrocks Ltd, owned by the Lim whānau, brought to the business the trawler purchased for the venture and the assortment of fish quotas to be used in conjunction with the clam business. The clam quota required for the venture will be leased from third parties.

Waitai Development Company Ltd is a joint venture formed in 2018 between Māori and non-Māori to harvest surf clams in Whanganui. It is undertaking sanitation surveys to assess the condition of the water as well as the shellfish and will hold the necessary permits. It is collecting samples from the water space 15 km north and south of the Whanganui River mouth, and extending up to 13 km out from the shore.

Figure 17 Aotearoa Clams organisational structure



Challenges and opportunities

The three main challenges for this enterprise to succeed are:

1. Completing required marine survey work;
2. Establishing supportive iwi relationships; and
3. Dealing with government requests and bureaucracy.

A mandatory shellfish quality-assurance programme applies to all bivalve shellfish consumed by people. It is managed by the New Zealand Food Safety Authority along with district health boards (DHBs) and the fishing industry. The programme involves monitoring water quality over a period of 12 months or more, tracking harvesting areas through diverse weather conditions, and detecting possible biotoxins.

The marine survey encompasses establishing sites for the periodic collection of water and meat samples over at least one year, including through different weather conditions, after which a sanitation plan must be submitted to the Department of Health to be implemented during specific weather conditions or in case of biotoxin outbreaks. The company also needs a continuing harvesting monitoring plan.

WDCL is currently undertaking a sanitary survey in the Central West Region (FMA 8) operating out of Port Whanganui, led by Cam Ormsby, a marine fisheries consultant from Kahungunu and supervised by Phil Jeffs from the Ministry for Primary Industries (MPI). The area covered by FMA 8 does not yet hold sanitation clearance for the commercialisation of surf clams (Ministry for Primary Industries, 2012).

The water testing has highlighted the effects of land-based pollution from the rivers to the sea, as Tūroa comments:

What we've done, doing now out here with the coast here. We've done all along, close in

shore, all the way out from Waitōtara down to the Rangitikei River doing the water testing. So, what we've done is moved out a bit and we're probably out to about ten metres deep, but what we're still finding down that line there—there's still pollution.

That's one of the things I've been saying right along is that with MPI [Ministry for Primary Industries]; the problem is not out at sea it's all these rivers here. Until we clean up these rivers and get the flow out in the sea cleaned up; these rivers have got to be cleaned up first. Find out where it's been polluted. We know it's coming from sewage; so, obviously the towns and the villages that are discharging into the river. So, it's not just a problem for the iwi that have interests out there; the problem starts ashore and that's where you should be starting. Why should we carry the burden; the farmer doesn't carry the burden when he pollutes.

The second water space under consideration for exploration is in the Central East Region (FMA 2). Lee distributes for Moana New Zealand, and that company has urged him to start survey work in that fishery, where it holds a large clam quota bundle. The main opportunities for WDCL are the development of research, science, and intellectual property rights, while Hotrocks Ltd will be focused on commercial sales of surf clams.

As part of the development process, the directors visited China to observe how they manage and harvest their shell fish stocks. Here Tūroa reflects on the vast scale of the operation and how they approached its sustainability:

In this harbour that we were at... there's 3,000 vessels in this bay at this port and they all do clams, and these particular fellas, they go out they've got two crews. One crew goes from one

o'clock in the morning until one o'clock in the afternoon; then the other crew comes on; they unload the fish.

The first boat had 40 tonne of clams on it in that time. Then the next boat came back in and he had 60 tonne on, and they were unloading and straight off the boat onto a truck and into the market, they sold straight away. They do that every day, but their fisheries is all, you know, they 'reseed,' it's like a farming practice but at sea.

So, what they do is reseed; they don't touch it for 18 months and in that 18 months they grow to the size that they want them. They put a hundred tonne in, in spats; and then they expect to get a million tonne of product back. That's the scale that they operate on over there.

In terms of the relationship with iwi, this is still being developed, with opportunities for Māori individuals to engage as shareholders and also include their individual quota. Regarding bureaucracy, while dealing with different government departments, divisions of MPI, and Maritime New Zealand, this takes time, but it does make these stakeholders aware of opportunities for Māori commercial development.

Kaitiaki practices

Kaitiakitanga and mātauranga Māori are relevant and applied by Aotearoa Clams as these are concepts that are based on what founders Tūroa Karatea, a commercial fisherman, and Peter Madden, an agribusiness consultant, were raised with and live by.

Being a start-up enterprise, one of the challenges is to ensure the venture is profitable from an early stage, and that decision-making reflects this:

it's an interesting thing, the old fishery, but if you don't get it right at the beginning, it'll never survive, even us; that's why we've taken a bit of time and thought about a lot of this stuff... not everybody can go into it and make it profitable straight away. The aim is that when you start catching it's got to be profitable straight off.

Sustainability and innovation

The company's main mission is to help Māori be leaders in the development of a relatively new fishery, readily found in different parts of the country. Aotearoa Clams Ltd also wants to stimulate the growth of local economy and employment opportunities. A biomass survey directed in 2012 that covered 23 km of the Manawatū river established that there were substantial quantities of surf clams available off the Manawatū coast (Ministry for Primary Industries, 2012). These findings led to an increase in the catch limits for surf clams in the region, making this market a promising enterprise.

SEA CHANGE—TAI TIMU TAI PARI, HAURAKI GULF

Case study author

Dr Dan Hikuroa

The blue economy

The concept of blue economy is designed to promote and develop an economy that works within the dynamics of marine environments to sustain, enhance, and create economic and social values (Pauli, 2010; Silver, Gray, Campbell, Fairbanks, & Gruby, 2015). A blue economy approach draws on key principles of social-ecological research (Armitage et al., 2008) and ecosystem based management (EBM) in which relationships are dynamic, integrated, and place-based (Arkema, Abramson, & Dewsbury, 2006; Ban et al., 2013; Luks & Siebenhüner, 2007; Tremlett, 2015). Aotearoa's blue economy is shown in Figure 18.

Marine economies create value from marine resources and comprise a diverse mix of market and non-market economic activities and actors. They provide food, employment, minerals, recreation opportunities, export revenues, social amenity, identity and cultural values. From iwi-owned fishing corporations to tourism operations, recipients of mining royalties, recreational fishers, cultural subjects, and seafood gatherers, Māori are central to New Zealand's marine economies. These economies are expanding, complex and subject to uncertain and changing environmental and social processes.

Based on an EBM approach to marine economic development, a blue economy commits to creating ecologically sustainable economic, social and cultural value. In the Aotearoa-New Zealand context, they must engage seriously with Māori economy, both as a requirement of the statutory Te Tiriti partnership and because of the vast Māori economy presence and aspiration in the blue economy space and the

opportunity represented therein (e.g., Ban et al., 2013; Bargh, 2014; Stephenson & Moller, 2009).

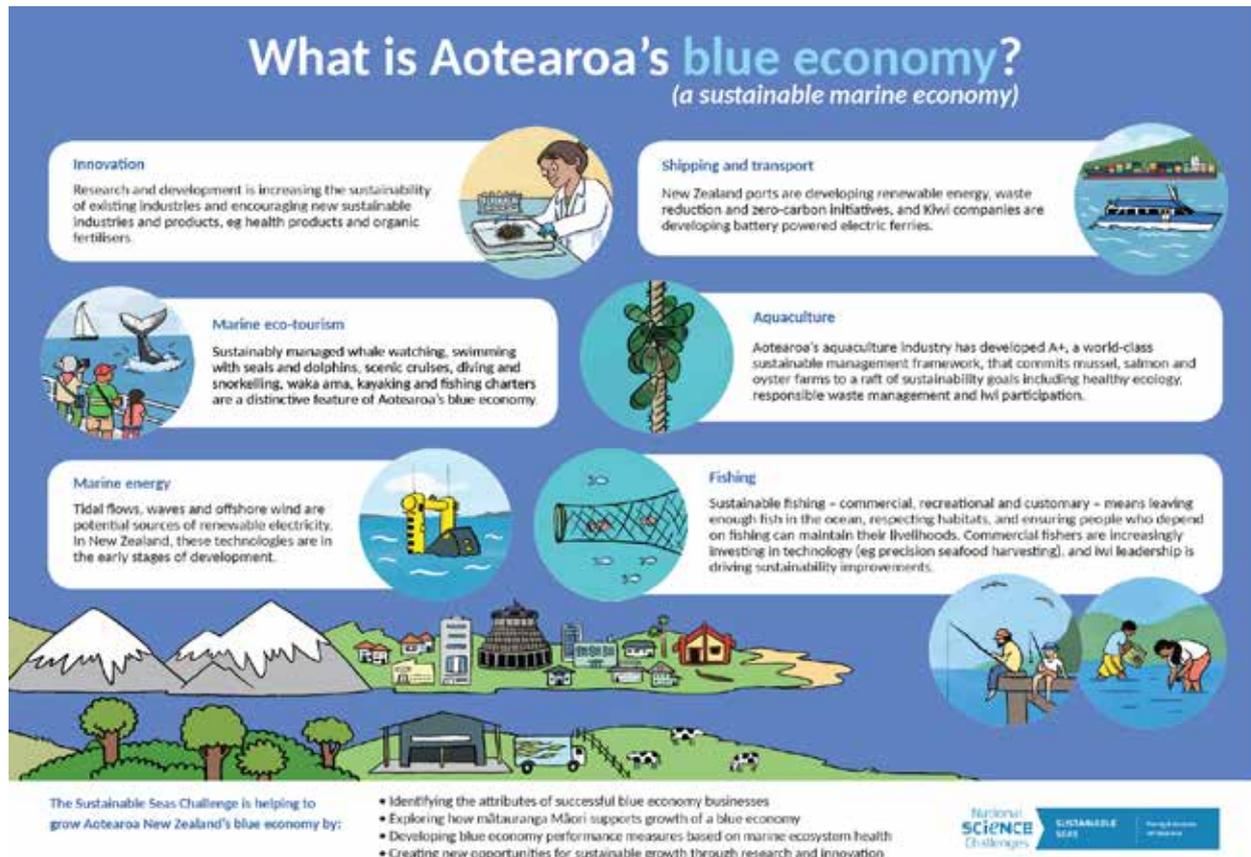
Hauraki Gulf

The Hauraki Gulf covers 1.2 million hectares of ocean and encompasses numerous islands and harbours (Figure 19). The Gulf is a highly productive marine system, sustained largely by some of New Zealand's richest phytoplankton generation (Zeldis, Walters, Greig, & Image, 2004). It is one of New Zealand's most valued and intensively used resources—including for food gathering, recreation and conservation (Sea Change, 2017).

It is also a significant asset, generating more than \$2.7 billion in economic activity every year, including aquaculture, fishing, tourism, shipping and ferry transport (Sea Change, 2017), and immeasurable amounts of pleasure and joy to those who live within its catchments, and beyond both nationally and internationally. However, it is also suffering environmental decline in many forms—the most damaging being overfishing combined with destructive fishing techniques, and decades of land-use change leading to the erosion of sediment in catchments choking rivers, harbours and estuaries (Hauraki Gulf Forum, 2011, 2014; Peart, 2019).

In recognition of the value of the Hauraki Gulf, and in an attempt to cease and reverse the environmental decline, the Hauraki Gulf Marine Park was established by the Hauraki Gulf Marine Park Act (2000), which included a governance structure—the Hauraki Gulf Forum. Successive State of the Hauraki Gulf Environment Reports (Hauraki Gulf Forum, 2011, 2014) commissioned by the Hauraki Gulf Forum documented significant degradation of Hauraki Gulf biodiversity and seabed, and high rates of sedimentation. Business as usual was not working so energy was devoted to trying something radically different.

Figure 18 Schematic showing Aotearoa New Zealand’s blue economy



Source: Sustainable Seas National Science Challenge Hauraki Gulf

In 2011, amongst many suggestions, marine spatial planning was proposed as an option to explore and over the following two years attention focused on marine spatial planning as a credible way forward, with support building in particular from the Hauraki Gulf Forum and the Environmental Defence Society. A proposal was put forward and initially Auckland and Waikato Regional Councils agreed to resource and support the creation of a marine spatial plan.

Sea Change—Tai Timu Tai Pari

Sea Change—Tai Timu Tai Pari was a collaborative and co-governance process tasked with preparing a marine spatial plan for the Hauraki Gulf Marine Park, using the UNESCO Marine Spatial Planning document as a non-prescriptive guide. The outcome delivered through the Sea Change—Tai Timu Tai Pari

process is the Hauraki Gulf Marine Spatial Plan (MSP), New Zealand's first marine spatial plan. In addition to the Hauraki Gulf Marine Park, the MSP covers the contributing catchments.

The development of the MSP was guided by the following vision: “He taonga tuku iho—treasures handed down from the ancestors Tīkapa Moana/ Te Moananui-ā-Toi—the Hauraki Gulf Marine Park is vibrant with life, its mauri strong, productive, and supporting healthy and prosperous communities” (Sea Change, 2017, p. 1).

The MSP lays the foundation for an integrated approach to managing the Hauraki Gulf Marine Park. It aims to secure a healthy, productive and sustainable future for the Gulf through

Figure 19 Hauraki Gulf Marine Park and catchments (16)



- improving the understanding of the pressures on the coastal and marine environs;
- identifying and proposing long-term solutions to improve overall health, mauri, quality and well-being;
- providing increased certainty for the economic, cultural and social goals of our communities in and around the Gulf;
- ensuring that the ecosystem functions that make those goals possible are sustained (Beverley, Ehler, Battershill, Hikuroa, & Boven, 2014).

The MSP aims to improve the entire Hauraki Gulf Marine Park and its catchments by taking a fresh look at its management, and to develop a roadmap for its future. Importantly, the MSP recognises the long and inseparable association, traditions and knowledge that mana whenua have with the Hauraki Gulf Marine Park—spiritually and as a community resource. This mana whenua view is interwoven

throughout all parts of the MSP including its science, management approaches and recommended actions. Principles established under the Treaty of Waitangi include a Crown duty to actively protect Māori rights and interests, and recognition that the relationship between the two parties is one of partnership.

The MSP was written when regional Treaty claims negotiations were taking place with multiple iwi and hapū. These negotiations will lead to greater iwi involvement in the management of natural resources and the environments of the Hauraki Gulf and Coromandel Peninsula. A key principle agreed to by all parties involved in the development of the MSP is that its implementation does not in any way affect or dilute Treaty settlements.

Significance of the plan

The MSP is a non-statutory document. It does not contain any rules and it is not legally binding. It provides integrated management approaches and recommended actions to inform stakeholders and the partner agencies who manage the Gulf and its resources—Waikato Regional Council, Auckland Council, Department of Conservation, Ministry for Primary Industries and the Hauraki Gulf Forum.

Structure of Sea Change Tai Timu Tai Pari

The governance structure of Sea Change Tai Timu Tai Pari reflected Crown obligations to iwi as Te Tiriti o Waitangi partners, and potential Treaty settlement arrangements for the Hauraki Gulf Marine Park. Sea Change—Tai Timu Tai Pari project had oversight from a Project Steering Group co-governed equally between mana whenua and relevant government agencies, and received advice from an Independent Review Panel, that comprised expertise spanning iwi and Crown negotiations, economics, marine ecology, marine spatial planning and integration of mātauranga and science. The plan was developed collaboratively using consensus by a Stakeholder Working Group

(SWG). The SWG had an Independent Chair and comprised representatives from mana whenua and a range of sectoral groups. One fundamental and relatively unique feature of the Sea Change process was the degree of empowerment for the SWG. Significant responsibility was devolved to the SWG to identify its own goals, objectives, issues and options, and to prepare and recommend the MSP. Specifically, government agencies were excluded from being members of the SWG. That 'super-collaborative' approach was beyond the extent of collaboration envisaged in the UNESCO Guide (17). The Panel considered that approach to be commendable and appropriate in the New Zealand and Hauraki Gulf contexts (17). However, the innovation was not without its risks. Selection criteria for potential SWG membership was across the spectrum of sectoral interests and mana whenua. However, once selected onto the SWG, members were asked to then become the Voice of the Gulf and make decisions 'on behalf of the Gulf'. The timing of this is noteworthy, as it occurred pene-contemporaneously with the creation of Te Urewera Act 2014 (18)—our first legislation that gave nature legal identity. By creating a SWG that was representative of the broad range of sectoral and mana whenua interests, the view of the PSG was that the MSP would reflect the voice of the people and could therefore be readily implementable by relevant agencies. It appears this approach was taken based on experience elsewhere in Aotearoa New Zealand where management of marine spaces had been considered, e.g., Fiordland Marine Reserve and Te Korowai o Te Tai o Marokura, and the length of time it had taken, partially due to the requirement for new legislation to be created. Furthermore, it was hoped that the structure of the SWG could enable holistic planning that saw the Gulf as an indivisible whole, and create an MSP not prejudiced by structural government boundaries, e.g., MPI and DoC, Auckland and Waikato Councils. The Sea Change Tai Timu Tai Pari process was an alternative that might circumvent the requirement for new legislation to be created.

Development of the Marine Spatial Plan

A 14-member Stakeholder Working Group (SWG) developed the Plan through extensive engagement with mana whenua, local communities, stakeholders and technical experts, and considerable contributions from local and central government agencies. The SWG was selected to represent those sectors that have an impact on or an interest in the Hauraki Gulf Marine Park including mana whenua, recreational and commercial fishing, farming, aquaculture, infrastructure, community, and environmentalists. All SWG members have long-term personal and cultural connections with the community, alongside a deep knowledge of, and a set of priority concerns for, the Hauraki Gulf Marine Park.

Five key partner agencies assisted and supported the Stakeholder Working Group by providing funding, information, technical advice and guidance. These were Waikato Regional Council, Auckland Council, Department of Conservation, the Hauraki Gulf Forum and the Ministry for Primary Industries, working with Mana Whenua iwi.

The three-year collaborative process through which the Stakeholder Working Group developed the Plan, saw it informed by science, mātauranga Māori (Māori knowledge) and hundreds of community voices with knowledge and experience of the Gulf. This process was supported by the partner agencies along with Mana Whenua representatives. In order to better facilitate the integration of mātauranga into the workings of the SWG and the marine spatial plan a Mātauranga Māori Reference Group was established.

Marine Spatial Plan

The Hauraki Gulf Marine Spatial Plan, completed in December 2016, is broadly divided into four parts which group the related chapters and issues. Each chapter contains a description of the current situation, identifies objectives for the subject matter and a

series of recommended actions for implementing these objectives. The four overarching concepts that underpin the Plan are:

1. Kaitiakitanga
2. Mahinga Kai, Pātaka Kai
3. Ki Uta Ki Tai and
4. Kotahitanga.

Kaitiakitanga

Applying kaitiakitanga and guardianship would involve all communities in sustaining and enhancing the Hauraki Gulf Marine Park for future generations. It would promote a sense of place, provide for shared ownership of the responsibilities of kaitiakitanga and guardianship—now and for future generations—with measurable steps along the way to achieve the vision.

In the MSP it is very clear that the aspiration is for all to exercise kaitiakitanga (guardianship), but that being a kaitiaki is reserved for mana whenua only. Practically, it appears the distinction lies in who can speak as a kaitiaki (only mana whenua) whereas the aim is to empower all to act as kaitiaki, through enabling the action of practising kaitiakitanga.

Mahinga kai, pātaka kai

The Hauraki Gulf Marine Park is recognised as a pātaka (food basket) and management approaches must balance protecting and enhancing the food producing capacity of the coastal area with the needs of the Park’s habitats and inhabitants.

Ki uta ki tai is a holistic approach to managing, restoring and protecting terrestrial freshwater ecosystems and marine areas. It acknowledges the linkages between terrestrial and marine ecosystems within the Hauraki Gulf Marine Park.

Kotahitanga means unity or collectivity, and involves each one of us exercising our rights and responsibilities in a way that strives towards collective goals while recognising the autonomy and needs of each participant.

Recommendations

The Hauraki Gulf Marine Spatial Plan proposes over 180 recommended actions, grouped into 16 themes (see Table 9).

Ahu Moana

Ahu Moana are an innovative recommendation proposed in the plan under the ‘Protected, enhanced and restored habitats’ theme as one of four types of marine protected area. Ahu Moana are coastal areas identified for co-management by mana whenua and local communities and are intended to enable them to collaboratively respond to coastal and fisheries management issues with a more prompt and flexible approach than currently provided by existing legislation.

Table 9 List of themes into which specific recommendations were grouped

1. Rebuilding fish stocks	2. Restoring habitats
3. Aquaculture	4. Restoring healthy functioning ecosystems
5. Protected, enhanced and restored habitats	6. Restored species diversity and abundance
7. Marine debris	8. Biosecurity
9. Sediment	10. Nutrients
11. Heavy metals	12. Microbial pathogens
13. Risks and threats to water quality	14. Inspiring the Hauraki Gulf Marine Park community
15. Providing access to the Hauraki Gulf Marine Park	16. Designing coastal infrastructure

Some key points that apply to Ahu Moana:

- A 50:50 co-management approach between mana whenua and local communities
- Ahu Moana are initiated at the local level
- Ahu Moana areas do not restrict access to the marine environment
- Commercial and recreational fishing are allowed in Ahu Moana
- Fishing and other activities may be restricted by mana whenua and local communities in Ahu Moana to protect fisheries or the environment
- Ahu Moana are able to be integrated with existing (and future) fisheries and conservation instruments, such as marine reserves and marine protected areas, and mahinga mātaītai, taiāpure, and rāhui within fisheries legislation
- Ahu Moana do not affect the application of other statutory management tools to protect fisheries or the environment.

After its completion in 2016, the MSP was received with mixed views; some saw it as visionary (e.g., environmental advocacy groups), whereas others railed against it (e.g., Sanford). As the MSP is aspirational, non-binding and non-statutory, it was designed to act as a guidance framework for agencies with statutory functions in the Gulf's environmental and economic management. Responsibility for progressing these proposals fall to a variety of organisations, primarily central government, Auckland Council and Waikato Regional Council.

In 2019 the Ministers of Conservation and Fisheries initiated a process to create a Ministerial Advisory Committee because although agencies support the overall aspirations of the MSP, they do not believe it can be fully implemented in its current form for the following reasons:

- The proposals have not been prioritised and there is a lack of detail about how they could be practically implemented.

- There has been insufficient stakeholder input and the level of wider support is unknown.
- There would be significant impacts on Iwi and stakeholders within and outside of the Hauraki Gulf.
- Some of the proposals could have significant impacts on Treaty Settlements.
- There are potentially high resource implications for central and local government.
- Some of the proposals are novel and have precedent implications.

Membership of the Ministerial Advisory Committee is expected to be announced in late June 2019.

Gulf Innovation Fund together— Foundation North

Despite the mixed responses of sectoral groups, and the challenges of government agencies (local, regional and national) detailed above, the vision and mission in the MSP was inspirational for many. One example is Foundation North that holds in trust for the Auckland and Northland communities an endowment of over a billion dollars, derived from the sale of the community's shares in what was previously the Auckland Savings Bank. That endowment allows Foundation North to make millions of dollars in grants each year to not-for-profit groups in Auckland and Northland.

Inspired by and in response to the Sea Change Tai Timu Tai Pari MSP, Foundation North established 'GIFT—Gulf Innovation Fund Together' in August 2016, with the vision of improving the mauri of the Hauraki Gulf. GIFT committed \$5m over five-years and grew out of a desire to try something different to tackle environmental decline. The re-framing of the challenge in terms of mauri has enabled GIFT to think differently about what success looks like, and in particular, bringing attention back to the Gulf itself—giving the Gulf agency, voice, and presence.

Discussion

This section considers the Sea Change Tai Timu Tai Pari process and output (i.e., the MSP) through the focal point and question of the Whai Rawa, Whai Mana, Whai Oranga project, specifically:

Exploring the ‘gaps, tensions and complementarities’ between kaitiaki-centred management that privileges mātauranga Māori and EBM approaches developing out of techno-scientific knowledge and rationales.

Seeking out:

- Innovations used by Māori marine economy-based enterprises for managing competing imperatives (e.g., commercial, customary, and ahikā)
- Indigenous models that optimise Māori commercial activity within kaitiaki-centred marine management approaches,
- Opportunities for kaitiaki-centred marketing based upon marine product sustainability and cultural authenticity assurance.

The Sea Change Tai Timu Tai Pari process and MSP are examples of how to map and make a blue economy, and were created using the approaches and characteristics of EBM as defined by the Sustainable Seas NSC.

The vision of the Sea Change Tai Timu Tai Pari MSP—“He taonga tuku iho—treasures handed down from the ancestors Tīkapa Moana/Te Moananui-ā-Toi—the Hauraki Gulf Marine Park is vibrant with life, its mauri strong, productive, and supporting healthy and prosperous communities” shows that the plan is more than just complementary with mātauranga Māori and kaitiaki-centred management—it is strongly influenced by it.

The Sea Change plan is focused on restoring mauri; place-based; informed by and drawing from social-ecological research and kaitiaki-centred management; and was consistent with ecosystem-based management (EBM). A key tension was the coeval timing of the Sea Change process and regional Treaty claims negotiations with multiple iwi and hapū. It is envisaged that those negotiations will lead to greater iwi involvement in the management of natural resources and the environments of the Hauraki Gulf and Coromandel Peninsula. A key principle agreed to by all parties involved in the development of the Hauraki Gulf Marine Spatial Plan is that its implementation does not in any way affect or dilute Treaty settlements.

The structure of the plan, comprising the four sections Kaitiakitanga; Mahinga Kai, Pātaka Kai; Ki Uta Ki Tai; and Kotahitanga, further demonstrates the strong complementarity with mātauranga Māori and kaitiaki-centred management. The Plan laid out the issues and processes for managing competing imperatives in the Hauraki Gulf, in which Māori marine economy-based enterprises have a strong presence. The Ahu Moana recommendation is a specific example of an innovation inspired by and drawing from a kaitiaki approach to manage competing imperatives that Māori marine economy-based enterprises could engage with.

Principles that underpin a kaitiaki approach to fishing include restricting catch to what is required, only taking what the ecosystem can sustain, and to creating or maintaining environmental conditions that allow kai moana to flourish. Many of the recommendations in the ‘Rebuilding fish stocks’, ‘Restoring habitats’, ‘Aquaculture’ and ‘Protected, enhanced and restored habitats’ themes, although never specifically referring to a kaitiaki approach, are consistent with such an

approach. Accordingly, the recommendations in those themes when considered through the MSP structure are examples of indigenous models that could optimise Māori commercial activity within kaitiaki-centred marine management approaches.

There was no specific discussion during the Sea Change process exploring opportunities for kaitiaki-centred marketing based upon marine product sustainability and cultural authenticity assurance. However, the relationships forged during the process, and the shift in thinking from a techno-scientific to a Te Ao Māori framing has created fertile conditions to realise aspirations in that space.

Distinctions between kaitiakitanga (the act, the doing) and kaitiaki (the actor, the doer) are another tension apparent in the MSP. The tensions largely derive both from philosophical differences between mātauranga Māori and EBM, and from the political positioning of mana whenua during the Treaty claims process.

Summary

The Sea Change Tai Timu Tai Pari process and MSP created are examples of a model of applied mātauranga Māori and principles of EBM in the integrated management of marine ecosystems and economy. The combined process used and MSP created are an exemplar of the significant effort afforded to determining gaps, tensions and complementarities between approaches. Whether the Sea Change Tai Timu Tai Pari MSP will be successful with respect to restoring the mauri of the Hauraki Gulf, Tikapa Moana, Te Moana-ā-Toi remains to be seen. However, the process used, the empowering of mātauranga Māori, the mapping of opportunities and a way to manage competing interests provide realistic mechanisms for Māori marine and terrestrial economy-based enterprises to engage meaningfully.

Accordingly, we posit that Sea Change Tai Timu Tai Pari will not be New Zealand's only MSP.

DISCUSSION

Environment: Kaitiakitanga

Moana New Zealand

Kaitiakitanga-based values are ingrained into the culture of Moana New Zealand. The company states that “As guardians of Māori fishing assets, we are dedicated to a deep sense of responsibility to our people and respect for kaimoana and kai ora contributing to the well-being of future generations.” According to Moana New Zealand’s Sustainability Strategy (Moana New Zealand, 2017), the enterprise has a deep sense of responsibility and respect for the kaimoana they harvest. An intergenerational approach informs most of Moana New Zealand’s approaches, and they aspire to work in harmony with nature to ensure the sustainability of fisheries for future generations. There are several key ways in which this kaitiaki focus has manifested in Moana New Zealand’s operations.

First, in collaboration with MPI and other fishing companies, they have been pioneering Precision Seafood Harvesting technology that allows them to target the specific species while reducing, or even eliminating, bycatch. Precision Seafood Harvesting (PSH) technology replaces traditional nets, instead containing fish inside a flexible PVC tubular receptacle with holes that allow undersized fish to swim out. As the company’s CEO, Steve Tarrant explained, “As an iwi-owned company, sustainability and care for the future of our fish stocks in Aotearoa is at the forefront of what we do ... It’s important that our contract fishers are using best practice fishing methods that pay homage to our values of kaitiakitanga and whakatipuranga [multi-generational approach] in order to foster healthy fish stocks for both now, and future generations.”⁴⁵

So, all of our full-time trawlers—I think except one, we’ve still got one to change over—are now using PSH technology. (The PSH technique is) basically bulk harvest, longline quality, which is the significant breakthrough. And another aspect with respect to the Benthic (ecology) is this technique can be deployed a hell of a lot more accurately and with precision than normal trawl gear.⁴⁶

As well as bringing the fish on-board largely undamaged, the method also allows for better targeting of specific species and better tracking of when and where the fish was caught. Under their Tiaki brand, Moana “use the tracking technology to give consumers information about when and where their fish was caught via a QR code.” Moana have launched an app that will allow customers to “access information relating to where it was caught, how it was caught and information about the species. Hoki, alfonso, snapper, gurnard, john dory, trevally and kingfish are all included.” Here the pursuit of kaitiakitanga also provides an opportunity for whai rawa as these tracing and verification methods are an excellent way of adding value to a product.

The second sustainability initiative is that Moana New Zealand markets pre-packed seafood in a world-first barrier tray that uses sustainable raw materials that can be recycled. PLANTIC™ is a responsible packaging alternative to plastic designed to meet growing demand for sustainable plastics technology. Most of the tray uses materials from renewable and recycled resources with very low oxygen transmission rate, which can result in an extension of shelf life for fresh proteins. This means Moana New Zealand can continue to provide the world with New Zealand’s premium seafood while remaining true to their value of kaitiakitanga (Moana New Zealand, 2018).

⁴⁵ <http://business.scoop.co.nz/2019/05/21/moana-welcomes-ground-breaking-commercial-fishing-technology/>

⁴⁶ Interview with Moana New Zealand

Third, while Moana New Zealand is facing Total Allowable Commercial Catch (TACC) cuts in the next financial year and had cuts in 2018 financial year to their lobster quota, in accordance with their tikanga they have voluntarily shelved quota for hoki, and will experience a TACC cut in tarakihi, john dory and flounder. Moana New Zealand is working with Government and industry to come up with a fisheries management proposal that does not simply involve cutting TACC but takes a more holistic view towards looking after fish stocks (Moana New Zealand, 2018). Iwi Collective Partnership

Kaitiakitanga is a core ICP value, with the organisation explaining that this means, a) being an influential steward of the resources is a bottom line, b) [and therefore] it is our responsibility to ensure sustenance for the present and future generations. The Collective uses kaitiakitanga as a central component of their narrative to distinguish their products, achieve goals, aspirations and resolve issues from an indigenous perspective. The aims and values of ICP are reflected in their management practices and while a key focus is to optimise returns on their assets, their kaitiaki responsibilities are of higher importance. The New Zealand brand has a strong iwi component where New Zealand seafood is concerned, which adds value. As one representative said, this is:

Because it has a bunch of indigenous people that are focused around reputation and kaitiakitanga.⁴⁷

In addition, ICP also acknowledge, “Iwi still need to work more collaboratively towards consolidating their collective voice in terms of kaitiakitanga in how they manage their marine resources and estate”, with one representative explaining:

It’s about a good return but also factoring in a couple of other areas. One is employment opportunities and then the other is sustainability. I guess one more important one, and it goes hand in hand with that, financial return is our kaitiaki responsibilities.⁴⁸

Ngāi Tahu Seafood

As an iwi, Ngāi Tahu has a strong focus on kaitiakitanga. One of the key ways in which this manifests is that the tribe has over 165 customary protected areas (CPAs), an amount over five times higher than those found in the rest of New Zealand combined (Ministry for Primary Industries, 2019b). Ngāi Tahu even has a specialised customary fisheries team comprised of marine and freshwater ecologists who work to implement, monitor, enforce, and restore customary protected areas. Following settlement, the customary fishery team embarked on an initiative to construct a network of CPAs throughout the South Island, with the goal of establishing at least one CPA for each marae. The project involved “looking at what it is we’re trying to protect and match[ing] the tool to suit.” Also, matching the tool to “suit how it would impact others.”⁴⁹ As well as fulfilling their kaitiaki obligations, the scope of Ngāi Tahu customary protected areas can be seen as a fulfillment of their drive for rangatiratanga as well.

‘Tools’ that protect customary fishing areas include settlement-granted mātaimai, where commercial fishing is prohibited, and taiāpure, which allow for fisheries regulations, that enable the realisation of customary goals. Priority locations included those areas least likely to displace commercial fishing pressure elsewhere, as determined through collaborations with commercial and recreational fishers and analyses of commercial catch data from the Ministry of Fisheries.

⁴⁷ CP Informant, 2018.

⁴⁸ ICP Informant, 2018.

⁴⁹ Interview with Ngāi Tahu representative

With an additional twenty CPA requests slated for submission, the customary fishery team coordinator (CFTC) describes the most effective proposals as those in which Ngāi Tahu obtains support from other rights holders, namely commercial fishers, before submitting an application. Customary Protected Area applications require government approval to gain effect (Jackson, 2013). Ngāi Tahu customary fisheries team's support for applicants facilitates the iwi's ability to gain support from commercial industry stakeholders before engaging with government.

The customary fisheries team's projects also include support for Te Korowai o Te Tai o Marokura (2019), a community-led marine spatial planning initiative at Kaikōura. Upheld as an exemplary case of multi-stakeholder marine spatial planning, Te Korowai involved the establishment of a network of CPAs, MPAs, and commercial industry governing agreements, aimed to support tourism, commercial fishing, recreational fishing, conservation, and customary fishing initiatives. Modelled after a land–sea governing initiative deployed by Laurel Tierney and the Fiordland Marine Guardians (Tierney, 2003), the CFTC characterises the approach as the egg-model, whereby a 'white' of advisors from iwi, and central and local government agencies support the directives of a 'yolk' of local leaders.

At Te Korowai and elsewhere, Ngāi Tahu customary fisheries team is now working to support local managers' capacities to implement new management rules, restoration activities and also to monitor and enforce customary regulations. Restoration activities include attempts to control undaria, an invasive seaweed, as well as active initiatives that involve the reseeded of juvenile and translocated adult pāua. The team's active restoration works to offset slow population recovery rates, evidenced even in those places with rāhui, or bans on fishing. As a respondent observes,

It's interesting that humans can destroy quicker than nature can rebuild ... you think fisheries would be quite robust, but as I've seen with a lot of pāua fisheries, if you fish them down to a point where they struggle to breed properly, it can take a long time to recover.⁵⁰

The customary fisheries team is additionally working to build evidence of customary and recreational fishing activity by encouraging recreational fishers to report their catches and customary fishers to obtain authorisations for fish take. The CFTC notes that evidence of fishing activities builds Ngāi Tahu capacities to inform resource consent applications and water conservation orders. Aiming to further support succession planning, the team also developed a survey through which resource users can submit reports to the iwi on resource health at the completion of a fishing event. Analogous to a hotel satisfaction survey, the group is now working to facilitate adoption. Alongside this, the CFTC is working to obtain government endorsement and support for customary ranger positions, imbued with the authority to inspect users' catches, aiming to increase compliance by increasing oversight frequency.

Describing science as new territory, the CFTC notes that a strength of Ngāi Tahu in-house customary fisheries team is found in their ability to answer a variety of community research questions. By way of example, they note that engagement on food safety initiatives often leads to more research questions for the team to explore. The group collaborates with universities, and other research providers when needed, and runs its dive program through the University of Otago. With the longer-term goal of empowering Tāngata Tiaki to eventually take over the work, the CFTC observes that the team's adoption of scientific thinking is occurring alongside scientists' adoption of mātauranga ways of knowing. Examples of mātauranga thinking can be found in the team's

⁵⁰ Interview with Ngāi Tahu representative.

analyses of fish for human consumption. In response to community-level concerns, the team prioritises inquiries into food safety and abundance for the mana upheld in serving mahinga kai to visitors. As the CFTC explains, Tāngata Tiaki, “don’t worry so much about taking kai home and eating it themselves ... they do worry when they’re giving it away or using it on the marae to manaaki manuhiri.” Looking forward, they describe the goal of being able to say, ‘We’re effective guardians.’ “And what that comes to is, ‘is food abundant and safe to eat?’” Here we see kaitiakitanga helping to fulfil whanaungatanga and manaakitanga.

As the customary fisheries team works to collect data from resource users, in certain areas, kaitiaki, or customary fishery governors, attribute a lack of data to the restrictions on fish access imparted by ITQ system establishment. At Te Waihora, a historically important eel fishery, kaitiaki Phillip Tāmāti⁵¹ was instrumental in establishing a customary reserve area over a known kōhunga, or fish nursery ground. Tamati (2018) argues, however, that he is unable to monitor reserve effectiveness and fishery health, in part due to the boat, fuel, and labor costs associated with routine fishery access. Prior to quota system establishment, Tāmāti funded routine trips through the sale of small fish catches. He did not fish if he perceived the stock as needing recovery. As a result of this sustainability ethic, he did not have the 80% income from fishing necessary to obtain quota from the government (Hekia Bodwitch, 2017a). Describing his customary fishing practices, Tāmāti notes,

Fishing was about feeding the whole man. In other words, you had the full right of the fishery. That was the ability to gift it, sell it, or barter. You had the full ownership of the fishery ... like most people in our situations, it blew our socks

off when I realised, “Hey, no, you just can’t do that.”

And so, when we had the Waitangi Tribunal here, I apologised to the Tribunal that I couldn’t provide the fish where I should. But that right had been taken away. One of the people said, “You could have done it under Reg 27, etc., etc.” And I said, “what is that? Because I don’t know what it is.” And she said, “You can provide fish for hui and tangi under reg 27, blah... blah.”

And I said, “I didn’t know that.” When I lost my commercial rights, I lost everything. That’s what I said to the Tribunal. When I lost my commercial right, I lost everything. I’m not longer master of my own fate.⁵²

Ngāi Tahu Seafood also has a strong focus on kaitiakitanga, explaining that:

Ki uta ki tai is a term which reflects the Ngāi Tahu view of environmental and resource management. It is a traditional concept representing kaitiakitanga (guardianship) from the mountains and great inland lakes, down the rivers to the hāpua (estuaries), and to the sea. Kaitiakitanga reflects the special relationship Ngāi Tahu has with its environmental heritage. It is fundamental to the tribe’s culture and identity.

The quota actively caught by Ngāi Tahu Seafood is fished by whānau operations, these “families have been fishing for generations, guided by the principles of kaitiakitanga—respect for the sea so what is taken today, will always be there for future generations.”⁵³

As an example of how the whānau fishing companies embody this kaitiakitanga in practice, the Stewarts⁵⁴ opposed the government’s increase of the total allowable commercial catch for the lake’s eel population in 2017 and chose not to fish their quota

51 This is a pseudonym.

52 Interview with Ngāi Tahu representative

53 <https://www.ngaitahuseafood.com/sustainability/>

54 Pseudonym.

the following year because the lake's eel population was at a level where “going fishing is the wrong thing to do.” The Stewarts attribute their decision to stop fishing as in part a reflection of shared risk model with Ngāi Tahu. In leasing ACE, the Stewarts do not pay unless the fish is caught. The Stewarts' lease agreement gives rise to different incentives, as compared to quota-holding fishers, to openly discuss the state of the eel fishery. For the Stewarts, a lack of fish is nonetheless consequential, not only for current income, but also for ability to access export markets. The Stewarts also provide their local tangata kaitiaki with updates on the fisheries status after each fishing trip. Because they live next door to this tangata kaitiaki and know them well the relationship is relatively informal but can be considered far more consistent than a formalised relationship would be.

Whakatōhea

While Eastern Sea Farms is still in the developmental phase there are several positive environmental aspects to the operation. First, Whakatōhea Māori Trust Board (WMTB) has taken a cautious approach to the development that favours research and knowledge creation as a key focus of the project. WMTB developed a “Kura ki Uta, Kura ki Tai” (Land to Surf to Sea) aquaculture research programme with its partners. Its aims are to build capacity (aquaculture and environmental training; develop opportunities (investing and growing in aquatic species such as green mussel spat, flat oysters, pacific oysters, seaweed, sponges, surf clams and fish); enhance the value of species; understand the environment and biology (where does water come from, what does it bring and where does it go to); and create new ecosystem environments (suitable to the location, optimal for the species that are sustainable). WMTB has engaged in several research projects including investigating the impact of climate change and how this may impact future Aquaculture production and marine space use. The research programme ensures that the marine farms are not only financially viable

but also help to guide the long-term sustainability of the project. ESF undertook five years of research and this was carried out by their science provider, The Cawthron Institute. The Cawthron Institute report “Feasibility of Open Ocean Aquaculture in New Zealand” examined the climatic influences that determine the engineering design requirements of open ocean farms and the availability of food, growth and condition measurements for mussels, scallops and oysters. From here the Cawthron Institute carried out a feasibility assessment of open ocean aquaculture at the Ōpōtiki site on eight species as well as a feasibility study into greenshell mussels and New Zealand sea cucumbers.

Second, even in the early stages, the outcomes of the farm have been positive on the wider environment. Previously the fish stocks in the rohe were depleted but with the development of Farm A, an abundance of sea-life has become attracted to the mussel farm creating a whole new ecosystem. Customary and recreational fishers are permitted to tie their fishing boats up to the buoys to fish. ESF and WMOL share the sea space with customary and recreational fishers. As well as showing how a focus on kaitiakitanga can help ensure whai rawa, this also shows how a commercial venture can ensure the social domain of whanaungatanga and manaakitanga as well.

Ngāti Kahungunu

Ngāti Kahungunu have been involved in setting up several customary fishing zones. Kaitiaki and the iwi look after the area for which they are responsible, with one clear example being in the Wairoa/Māhia Cray 3 area, in that fishers, kaitiaki and governance through the Taiwhenua o Te Wairoa and the Māhia Māori Committee communicate with each other at different levels and promote care and protection of the resource. There is acknowledged agreement that protecting the fishery via not overfishing has benefits for the community generally, showing the connection between kaitiakitanga and manaakitanga. Fishers,

whānau, hapū and iwi bid for both commercial and customary quota. Twenty-six marae in the region receive a box or two boxes of fish (snapper, tarakihi, gurnard etc) for tangihanga depending on the size of the tangihanga. A further distribution of \$1000 from Taiwhenua leased quota monies is made to each of the 26 Marae in Wairoa/Māhia region. Each marae also receives other seafood such as pāua, crayfish, mussels, kina and pipi for different events including tangihanga.

Aotearoa Clams

Kaitiakitanga and the mātauranga Māori needed to enact this value are both relevant and applied by Aotearoa Clams Ltd as these are concepts that are based on the way founders Tūroa Karatea, a commercial fisherman, and Peter Madden, an agribusiness consultant, were raised and the values and knowledge they live by. As Tūroa states in an interview, kaitiakitanga “is just part and parcel of what we were brought up with.” For Peter, mātauranga means Māori doing their own science, occupying the labs and then starting “to apply tikanga around that.” As Tūroa summarises, these concepts are as much a part of their business as they are a part of their lives.

Economic: Whai Rawa

Moana New Zealand

Moana New Zealand is a profitable, innovative and strategic business. Part of the driving force of Moana's profitability is that they have invested wisely in a range of different companies and have focused on adding value to a number of different species. For example, Moana New Zealand merged with Port Nicholson Fisheries in April 2016 to form New Zealand's largest Māori owned lobster business. Moana New Zealand reported an increased profit in 2018 despite cuts to the total allowable commercial catches of fin fish and wild pāua, high mortalities in the blue abalone farm

through high water temperature, and a tough year on sales largely driven by Port Nicholson, which delivered catch and price improvements.⁵⁵ Likewise, Moana has invested heavily in species, such as abalone, where they have achieved Aquaculture Stewardship Council (ASC) certification. ASC certification is recognised worldwide as the ‘gold standard’ for responsible aquaculture production in every respect, including best farming practise and environmental responsibility, and as such is a means of adding value to the product whilst also fulfilling the ethic of kaitiakitanga.

Moana New Zealand are focused on innovation across their entire operations, as well as the harvesting and packing innovations outlined above. There are several other important examples that show that the business has a focus on delivering economic returns through innovative strategies and developments. For example, their oyster business is exploring new harvesting innovations to gain husbandry efficiencies. The Ready to Eat division is developing new recipes, and in-market sales representatives in Dubai are dedicated to securing new channels to market. Moana New Zealand have continued to invest in facilities for future growth. This includes the completion of the Mt Wellington Fin Fish processing facilities upgrade, a new grow-out shed for Blue Abalone in Ruakākā, and continued investment in innovation across the organisation (Moana New Zealand, 2018). Moana New Zealand also invests in the diversification of products such as Ready to Eat type meals. This type of investment is one way of managing risk as well as providing a product to satisfy social and humanitarian goals:

So, in the off season they started producing Ready to Eat meals; so, they're long-life meals that are in a sachet, so it could be 250 grams or 450 grams and it's all Halal, that part of the

⁵⁵ <https://moana.co.nz/news/moana-new-zealand-profit-up-11/>

factory is Halal. And it could be a beef stew or a chicken curry. The humanitarian side is used in relief or aid where it's needed, so the Nepal earthquake was an example, and in fact we just gave some to Christchurch as well last month. So, it's long-life, Ready to Eat meals. One arm is for humanitarian aid and the other arm is around contract packing; so, it might not be our ingredients, but we'll pack because we've got the facility to do that. And the third one is Defence Force.⁵⁶

Showing how whai rawa also connects with whanaungatanga, Moana New Zealand has a strong focus on developing future capability: the company manages the Global Fisheries Scholarship—a scholarship for Māori that provides an opportunity for a student to work for a year at Nissui in Japan, their 50% partner in Sealord Group Limited. Additionally, 700 Northland kids were also supported by Moana New Zealand through the Kiwi Can programme (Moana New Zealand, 2018). As a Moana New Zealand respondent explains:

In terms of other sponsorships, we make an effort to sponsor or support kaupapa in the areas that we operate, so for Coromandel, Thames, Auckland area we've got a lot of inshore fishers so we support the Westpac rescuing helicopter in case any of our fishers get in trouble it's the rescue helicopter that they'll need. On the Chatham Islands they do a festival, so we support that. We also supply or help with supplying schoolbooks for kids out there, just exercise books. We give to Kiwi Can, so there's about 700 kids in Northland that we support through the Graeme Dingle Foundation, and then there's other conferences like the Māori Fisheries conference and our

industry conferences that we support. This year we did Te Matatini as well; we've been doing the Māori Sports Awards for ten years or so. There's a bunch of things that we sponsor around the country but essentially the criteria for monetary sponsorship is that they're Māori, that the kaupapa is Māori, or benefits Māori.⁵⁷

Iwi Collective Partnership

ICP have been able to build economies of scale through the collectivisation of iwi ACE, and the Collective have a focus on pursuing optimal returns on their ACE—though this is tempered by the need to operate with respect to their guiding values. However, rather than acting as a hindrance, these values can be seen as an economic asset. In their nine-years of operation, ICP have increased quota advantage and, *inter alia*, co-operation at the strategic level of ICP to maximise opportunities and investment with external potential partners. The reputation and the good name of ICP have increased such that opportunities for investment now land on the General Manager's table. The following assessment process is conducted: (1) Offers are investigated with due diligence; (2) If the general manager is satisfied all ICP requirements are met, the offer goes to the board, and then to the ICP iwi membership for expressions of interest; and (3) If there is sufficient interest, a feasibility study from a cost perspective will be undertaken.

ICP have entered into a number of joint ventures (JVs) with a 50/50 split with their commercial fishery partners to share the risks and the benefits. Benefits of using this model allow ICP to increase and improve its experience and knowledge within the industry without having to shoulder the risks in their entirety:

Owning your own fishing company comes with its own risks, challenges unless you know what you're doing.⁵⁸

56 Interview with Moana New Zealand representative

57 Interview with Moana New Zealand representative

58 ICP Informant, 2018.

There is also lower financial risk and risks are mitigated:

So, to us a joint venture gives you that foot hold and sufficient exposure to learn and understand without having to take full responsibility. Entering into a JV with a company who has experts and a good reputation, history and a good track record is a good way to transition and learn from them.⁵⁹

Furthermore, ICP members are willing to share and exchange their expertise among themselves to assist each other to collaborate, govern and manage their assets more effectively from their shared experiences in JVs. On the other hand, ICP always informs their JVs of its intention to become self-reliant and independent of fishing companies “to do our own thing.” This aspiration has always met with genuine support from JVs to assist ICP to achieve their aspirations as noted in the following quote:⁶⁰

So, we have always thrown it on the table that hey eventually we want to get to a point where we no longer need you, we can do our own thing. There has not been a single fishing company that has said “Oh nah that’s stink, we don’t want work with you.” They have said “Yeah that’s cool and in fact we’ll make that part of our operations to help you achieve that.”⁶¹

ICP also encourages collaboration opportunities with other iwi who can add value and who themselves appreciate transparency, integrity, respect and trust. This shows how the values that underpin the kaitiaki model, such as whanaungatanga guide the economic decision-making.

Ngāi Tahu Seafood

Ngāi Tahu Seafood is a highly profitable operation, driven by long-term strategic planning and ongoing innovation. In the fiscal year ending June 2018, Ngāi Tahu Seafood, who manage the majority of the iwi quota, reported its “Best year ever,” exhibiting a net profit of over \$28 million (Te Rūnanga o Ngāi Tahu, 2018). Ngāi Tahu Seafood’s primary quota management strategy involves leasing annual catch entitlement (ACE), the specific tonnage a quota right corresponds to, to highest bidders—usually non-Māori, vertically integrated fisher-processor operations, who then lease it on to fishers. The company uses the profits, in part, to purchase additional quota. Ngāi Tahu Seafood also runs a processing facility to process and sell higher-valued species, including lobster, Bluff oysters, and blue cod. For the fiscal year ending 30 June 2017, Ngāi Tahu fish quota valued at \$71,850 million, up 6.75% from 2015 (Deloitte, 2017). Kōura exhibited 66% of the seafood company’s cash generating units (Deloitte, 2017). Attributing the company’s 2018 success to the value of kōura in Chinese markets, the iwi’s annual report notes a need to diversify and develop an “innovative approach to getting value added from other quota species” (Te Rūnanga o Ngāi Tahu, 2018). As a niche supplier of the high-quality seafood to international and domestic markets, Ngāi Tahu Seafood sells through its own TAHU brand. Ngāi Tahu Seafood also holds substantial fishing quotas in other species.

At the whānau fisher scale, there is also opportunity for profit. The Stewart whānau, who lease ACE through the Murihiku Development Pool, missed out on quota when it was first allocated. A lifelong fisher, Thomas Stewart did not receive quota in the government’s initial allocation due to his adoption of diversified income strategies to subsist. Supporting

⁵⁹ ICP Informant, 2018.

⁶⁰ ICP Informant, 2018.

⁶¹ ICP Informant, 2018.

his family in part through his small-scale farming operation, Stewart did not have the 80% income, or capital, necessary to obtain quota through regulatory or market-based measures. Competing against other fishers, the Stewarts secured the lease in part by agreeing to pay Ngāi Tahu a tax for use of the lakebed bottom. Ngāi Tahu authority to implement the tax was a result of their lakebed ownership rights granted in the 1998 Ngāi Tahu Claims Settlement Act. Roger Stewart estimates investing at least NZD \$100,000 upfront to establish the operation. Formerly tying steel and working on the family's small-scale farm, for two years after obtaining the quota lease, the Stewarts lived in tents on the lake's shores to cover costs. The Stewarts supported their operation in part by leasing flounder and yellow-eyed mullet quota from United Seafoods, with the stipulation they land their catches back to United. Eventually, the Stewarts earned enough from fishing to purchase and resuscitate one hut, and, as of 2018, three huts on the lake's shores.

Roger Stewart reports that he pays "top dollar" for Ngāi Tahu quota ACE. However, as compared to ACE from processing facilities, access to Ngāi Tahu ACE provides him the flexibility to sell to whomever he wants, including himself, provided he meets the standards required to be a licensed processor. To obtain further value from fish sales, in 2017, the Stewarts opened their own processing facility. The Stewart's report their first season of processing plant operation as highly lucrative. The Stewarts obtained flounder quota from Ngāi Tahu and sold to grocery stores in New Zealand as well as the Sydney fish market. Stewart hired an additional skipper to man a second boat and employed four others for the season. Domestic grocery stores offered the more lucrative option, given the costs saved on shipping. As Roger Stewart describes, "You need to be getting good money for it to be worth sending." He exports fish to the Sydney market through Mainfreight, explaining:

They stick it in a steel box, and it's iced and chilled. It's at the market probably six hours after you drop it off... So, it's still well and truly within its temperature and time limit.

Regional grocery stores, unlike Sydney, were willing to take the lake's black flounder, a species Stewart believes is less recognisable in Australia. Some domestic fish store operators, however, resisted taking the Stewarts' catches, on the grounds that doing so required these chains to tell their larger suppliers, namely Tallies, that they only wanted a select portion of the usual catch. Roger Stewart notes that access to supermarkets:

Depends on the nature of the person. You start dealing with individuals ... I'll go to the supermarket at Hornby, I'll go to Pak 'n' Save, that was one of my first stops. And then (I'd) go to the one of Moorhouse. They were really open just to buy fish off me and just tell Talley's "No, we don't want your fish, we don't want your flounders." But then you get other ones, like there's a Pak 'n' Save in Northlands, and the [individual] there that I approached a couple of times was just not prepared to tell Talley's that she didn't want their flounders, she only wanted the other species. She just wasn't – sort of felt embarrassed, I think, to tell them, "I'm going to get my flounders from somewhere else."

To maintain consistency, the Stewarts broke the catch up between their two primary supermarket buyers, even if one requested a larger amount.

Ngāti Kahungunu

There are a number of different threads to pull together for Ngāti Kahungunu, who are active in a range of different ventures. Ngāti Kahungunu has a

deepwater fishing asset in joint venture with Sealord that is its second most valuable asset after crayfish, and is therefore considered a significant holding. Sealord is owned by Aotearoa Fisheries Ltd and Japanese company Nissui based in Nelson. The joint venture 'Ihu to Mai' was up for renegotiation in 2018 and requires KAHC to again commit its deepwater quota, with Sealord matching that amount. In the seas around the East Coast, Sealord catches and processes deepwater fish species including hoki, squid, ling, silver warehou, alfonsino and orange roughy.⁶²

In 2016 KAHC entered into a new venture with Hawke's Bay Seafood's to purchase a 34-metre deepwater trawler.⁶³ More recently, KAHC indicated interest in purchasing up to a 100 percent stake of Hawke's Bay Seafoods. Given many employees of the company are Māori and most belong to Kahungunu iwi, growing Ngāti Kahungunu fisheries asset is a key priority for the iwi. Following the purchase in April 2019 the company is re-organising under the name Takitimu Seafoods.⁶⁴

Investment in Hawke's Bay Seafoods has been a long and enduring one for the iwi. Much of the inshore quota of the iwi is leased to this company, which remains the largest fishing business located in the Kahungunu rohe. As part of the iwi Pātaka system, Hawke's Bay Seafoods supplies seafood for tangihanga. The company has shop/retail and factory facilities in Ahuriri, 15 fishing vessels, and quota for wetfish (most commonly tarakihi, gurnard and snapper), crayfish and pāua. The company also has mobile retail vehicles and offers internet ordering and delivery.⁶⁵

Ngāti Kahungunu became involved with Fiordland Lobster Company through tribal affiliations to Wairoa and Māhia—Kahungunu and Rongomaiwahine—plus, through the QMS, Ngāti Kahungunu Iwi Incorporated had quota for lease to individuals, whānau and hapū in the Cray 3 area. In return for their quota Ngāti Kahungunu were offered a deal on shares in FLC. The relationship was lucrative for both the company and the iwi. Eventually the iwi built a factory at the airport in Auckland and FLC leases that factory from the iwi. The Company has three holding depots: two in the North Island at Masterton and Māhia, and one at Te Anau in the South Island. Both FLC and KAHC continually work to ensure that Ngāti Kahungunu and Rongomaiwahine fishermen and whānau continue to experience best outcomes:

...we tied a knot with Kahungunu, they had already 40 tonnes of cray 3. So, we brought them in and gave them a big parcel of shares at a very good rate. They became quite dominant in the company. Then they decided, instead of carting from all the various places, they decided they wanted a factory in Auckland, right at the airport. So, Kahungunu built a factory and the company now leases it.⁶⁶

Showing the connection between whai rawa and the importance of whanaungatanga and manaakitanga, maintaining and sustaining relationships, especially tribal relationships, has played a major part in Ngāti Kahungunu business and economic ventures, and partnerships have been enduring. Ngāti Kahungunu have also fostered relationships with Chinese and Japanese groups and other indigenous groups around the world.⁶⁷

62 <https://www.kahc.co.nz/copy-of-crayfish-2>

63 <https://www.kahc.co.nz/copy-of-crayfish-2>

64 <https://www.stuff.co.nz/business/110872055/ngti-kahungunu-plans-to-purchase>

65 <https://www.kahc.co.nz/copy-of-inshore>

66 Interview with Ngāti Kahungunu representative

67 <https://www.kahc.co.nz/copy-of-crayfish>

Aotearoa Clams

Aotearoa Clams' main mission is to help Māori to be leaders in the development of a relatively new fishery, readily found in different parts of the country. Aotearoa Clams also wants to stimulate the growth of local economy and employment opportunities. It will undertake the harvesting while initially subcontracting the processing to various third-party food processors. The company's marketing will be done by Lee, who already has a distribution network in New Zealand, Australia, China, and other Asian markets, through which he sells predominantly oysters and mussels for other New Zealand fishing companies. WDCL is currently undertaking a sanitary survey in the Central West Region (FMA 8) operating out of Port Whanganui, led by Cam Ormsby, a marine fisheries consultant from Kahungunu and supervised by Phil Jeffs from the Ministry for Primary Industries (MPI). The area covered by FMA 8 does not yet hold sanitation clearance for the commercialisation of surf clams (Ministry for Primary Industries, 2012).

Social: Whanaungatanga and Manaakitanga

Moana New Zealand

Moana New Zealand has entrenched manaakitanga into its governance and management, describing it as 'looking after people our way', as a core value that guides their operations, going on to state that "At Moana New Zealand we want to ensure we continue to care for and build the capability of our people, for the benefit of everyone. We strive for happy and healthy employees who live our values and have meaningful connections in our community." The company made a recent commitment to developing Māori capability (Moana New Zealand, 2018). In 2018:

- 2 Māori executives joined the company
- 3 Māori internal promotions into managerial and supervisory roles
- 1 Māori manager joined the company

- 48% of new recruits (permanent, fixed term and casual) were Māori
- 34% of our leaders, managers and supervisors are Māori
- 35% total workforce are Māori

With 400 employees across New Zealand, Moana New Zealand aims to be a best-in-class employer with highly engaged teams where individuals can build meaningful careers. The company also seeks to develop the next generation of leaders. According to the 2018 Annual Report, Moana New Zealand has recently completed a comprehensive review of their human resource governance structure, systems and processes. The results of this showed that while some HR initiatives and projects were carried out, many employees believed more work was required on engagement, training and communication (Moana New Zealand, 2018).

Another example of the way Māori values inform the social domain is that Moana New Zealand is part of the Pātaka programme that provides fish at no cost to whānau, hapū and iwi for cultural purposes such as for tangihanga:

It is quite dynamic. But we've got Māori contract divers that work for us so last year I think we paid out a million dollars to divers for their catch efforts. We've got Māori fishers who own their own vessels so they're their own business but fish Moana ACE. We connect through Pātaka Kai, so where we have a commercial arrangement with iwi we provide Pātaka for tangi. That's not coming off customary catch at the moment, that's coming straight off the bottom line, and it's fish fillets, so they're ready to go; and essentially, it's to help that first kai when you first get to the marae.⁶⁸

68 Interview with Moana New Zealand

A third example is Moana's wellness programme, *Hīkoi ki te Ora*, which won the Safe and Healthy Work Environment Award at the Primary Industries Good Employers Awards. Messaging the whakapapa of Moana New Zealand to staff of the enterprise is also a key focus of Moana New Zealand. Educational hui have been carried out to remember the history of Moana New Zealand and those who fought tirelessly for Māori rights under the Treaty of Waitangi (Moana New Zealand, 2018). The well-being of staff is an important priority for Moana New Zealand. A diverse number of programmes are carried out to improve the well-being of staff:

Because we're a business that was built by acquisition, we used to be quite siloed. *Hīkoi ki te Ora* was the first programme to go across all our sites. And so, each month we focus on a different kaupapa. Sometimes it's just educational, sometimes we're just drawing off the resources that the government or other agencies put out, so Breast Cancer Awareness or Diabetes. The aim of it was to be a holistic programme, so looking at physical wellness in terms of trying to get people moving, looking at what diets are, looking at nutrition and so we've had sugar-free demonstrations. We had people come in and do easy, simple recipes to try and get rid of this permanent noodle culture that we had. Also, about just practical tools as well, so we've got a high Pacific demographic who are sending money back to the islands. So, we ran some training around the best way to do that so that they're losing the least amount of money in that transaction.⁶⁹

The approach for implementing the well-being programmes is to encourage integration across teams so that accountability for well-being is not siloed:

So, for *Hīkoi ki te Ora* we try and make it a bottom-up approach; it's not about what management thinks that we need. We've got a group of champions, so we have either one or two people at each site depending on the size of the site. So, for Bell Ave we'll have one person upstairs to engage the office staff, but we also have someone on the factory floor because that engagement looks different ... The engagement is only as good as our champion, to be honest. And it's the same with sustainability so we have a sustainability working group, and we've got a representative from each site. We meet three or four times a year.⁷⁰

Iwi Collective Partnership

ICP understand their collective grouping is beneficial across a range of domains, explaining that "working together in a collective improves economic returns, creates cost savings and provides greater social and cultural opportunities for the benefit of our tribes and the communities they serve" (Iwi Collective Partnership, 2019). As well as showing the way a kaitiaki-centred business model focuses on the protecting and enhancing the social parameters, it also reveals the way the values are understood as interconnected, with economic and social outcomes viewed synergistically. ICP recognises the need to develop and maintain strong relationships and networks, in service of a prosperous Māori marine economy. There is clear evidence that relationships are especially important to ICP, as there are 15 iwi members within ICP with distinct and competing interests and needs. The ICP website states that "their whakapapa (shared genealogy) and shared DNA means we are effectively a very large family business."⁷¹ Whanaungatanga contributes to the holistic well-being of ICP. Cultural connections also

⁶⁹ Interview with Moana New Zealand

⁷⁰ Interview with Moana New Zealand

⁷¹ <iwicollective.co.nz>

play a strong role for iwi members in their shared experiences and working together, as well as contributing to developing ICP policies and initiatives. Relationships develop inherent whanaungatanga rights and obligations, which also serve to strengthen each iwi member. “We sort of assume within Māoridom and within our tikanga that our relationships are key. Relationships are important, not just outcomes and results. How you get there is important too.”⁷²

Ngāi Tahu Seafood

Ngāi Tahu have a system in place that allows customary harvest to be caught on commercial operations. The Stewarts’ access to commercial fisheries enables them to provide fish caught on customary-take permits for community events. The

Stewarts have the gear required to access large amounts of fish for Ngāi Tahu whānau and visitors. The Stewarts supply eel as well as pāua and fin-fish caught outside of the lake, for tangi and also for the international Te Matatini festival, which Ngāi Tahu hosted in Christchurch in 2015 (Hekia Bodwitch, 2017a). Acknowledging the time, and fuel, required to fill a customary permit request for (not unheard of) 300 pāua, Thomas Stewart describes his support for customary fish gathering practices as part of his exercise of mana. In reference to his lease of Ngāi Tahu eel ACE, Stewart explains that “I give so I can take” (Hekia Bodwitch, 2017b), Roger Stewart notes a feeling of obligation to supply fish to others, noting, “Being a sole customary fisher is a very expensive hobby. To have the capability solely for customary fishing is not really heard of.”

⁷² ICP Informant, 2018.

POLITICAL: RANGATIRATANGA, MANA WHAKAHAERE AND KOTAHITANGA

Moana New Zealand

Moana New Zealand's corporate governance is guided by core Māori values. There are a number of ways this is manifested in practice. First, Moana New Zealand has adopted best practice, integrated corporate reporting and are beginning to implement elements of the Natural Capital Protocol, a framework for sustainable business internationally, by measuring their environmental footprint (waste, water and energy efficiency) and considering all aspects of their business holistically. Moana New Zealand are educating staff about the importance of underpinning the entire business with the ethic of kaitiakitanga—sustainability. Moana New Zealand is building the capability of staff including fishers through a tailored sustainability awareness programme (Moana New Zealand, 2017). Moana New Zealand inshore are trained as responsible fishers through the Responsible Fisheries Awareness Programme. This ensures fishers understand the behaviours required at sea, on the wharf and in communities. The way the value of mana whakahaere (governance) leads to a focus on both people and planet is clear from these endeavours.

Second, Moana New Zealand has a 'tini ki te mano—many to many' engagement approach, which is about getting closer to shareholders and finding out what they want from their company and how they can deliver on that. According to the Integrated Annual Report in 2018, a survey was carried out to identify stakeholder priorities in order to inform Moana's business and sustainability strategies (Moana New Zealand, 2018). Internal and external stakeholders, including Iwi, Government, Non-Governmental Organisations, fishers, industry bodies, lobbyists and

customers took part (Moana New Zealand, 2018). Other ways that Moana New Zealand tries to connect with wider stakeholders and beneficiaries are through support of bespoke business models with iwi/hapū and the Pātaka redistribution programme:

We've already spoken about the, essentially, they're bespoke business models, which allows for a range of participation. And I guess it's part of our responsibility as well to grow the knowledge and capability of iwi in the fishing industry so that they can better manage their own assets...from Moana's perspective it's (Pātaka) just a good way for people to get access to fish from their own company as well when the need is the greatest. And then we've also got contract growers as well for oysters and processors, so that was a million dollars last year; eleven thousand kilos of Pātaka last year, \$11 million to Māori fishers last year.⁷³

These programmes demonstrate Moana New Zealand's commitment to the 'tini ki te mano—many to many' approach of engagement with iwi/hapū beneficiaries that sees them engaging their shareholders and seeking to deliver kotahitanga through mana whakahaere.

Iwi Collective Partnership

The legal entity for the governance collaborative model for ICP is limited partnerships. The advantage of limited partnerships is that limited partners have limited liability to business debts. Profits and losses pass through the business to the partners, who are then taxed via iwi asset holding companies. The ICP operational model is very lean with just one full-time staff member who is the General Manager. ICP has an annual turnover of \$5–10 million dollars. There is no retention of funds for investment, rather a six-month operating budget for cash flow, with the view that the

⁷³ Interview with Moana New Zealand

returns on investments flow directly back to the iwi members.

ICP encourage and practice good governance and active management. The ICP governance board is composed of six directors elected by the ICP's iwi members. The three largest iwi shareholders appoint three directors, while the remaining 12 shareholders elect the other three directors. The Board is comprised of directors with extensive commercial and traditional experience. Developing and investing in capacity building for good governance and proactive management in the commercial fisheries sector is another critical success factor for ICP.

Disputes are inevitable when differences of opinion arise between iwi members, as ICP actively acquires new assets through investment for its membership. The importance of having an effective dispute resolution forum and process within the ICP framework has been necessary, as iwi members have had divergent views on which investments suit the needs of their iwi. More significantly:

A real issue that we are dealing with is conflicts of interest where one iwi is buying an asset over there and another iwi is buying an asset over there, they're in business with products and they are competing with each other.⁷⁴

Much effort is directed to clarifying iwi member rights and expectations to prevent disputes occurring as there are a number of situations where particular iwi stand to "gain financially from a decision or discussion in the boardroom."⁷⁵ Further, while "competition is fine, and just part of the world we live in;" the telling

question was "to what degree should partners within a collective compete with one another?"⁷⁶

The partners of ICP work to foster relationships of trust so that should a dispute arise they are able to "kōrero kanohi ki te kanohi ([talk] face to face)"⁷⁷ at the office or marae, and to sort out their differences amicably essentially through tikanga. The adherence to tikanga and the underlying values of ICP means they do not require a formal dispute resolution process. The way ICP deal with disputes and potential conflicts of interest shows the power of the kaitiaki model, it provides a framework that guides tika (right) behaviour, with the political sphere governing and restricting the economic sphere.

Whakatōhea

Each entity that has an interest in Eastern Sea Farms is mandated by their respective Trust Deeds to serve the purposes of its shareholders/stakeholders. The abundance of collective knowledge inclusive of the aquaculture industry, mātauranga Māori and subject-matter expertise held by these governors is supplemented by their world views (in te ao Māori and te ao Pākehā). Every board member on the various entities has their own established networks and relationships (formal and informal) which intertwine to support the viability and sustainability of these activities. Maintaining oversight of sustainable marine governance practices within the rohe includes an understanding of responsibilities and sharing the marine space and its resources between commercial, recreational and customary fishers. Here the link between mana whakahaere is clear, with the ability to lead, and the knowledge necessary to do so well, understood as critical for kaitiakitanga.

⁷⁴ ICP Informant, 2018.

⁷⁵ <tpk.govt.nz>.

⁷⁶ ICP Informant, 2018.

CONCLUSION

Across the case studies the kaitiaki-centred model is clear, even when it is moderated by the legislative constraints Māori face in the seafood sector. From small start-ups like Aotearoa Clams to big operations like Ngāi Tahu Seafood, from smaller joint ventures like Whakatōhea aquaculture through to massive outfits like Moana New Zealand, Māori express their core values in governance, management and operations across the environmental, economic, social and political domains.

Unsurprisingly, kaitiakitanga is a powerful guiding force in all the case studies, informing the methods used to fish through to the packaging the products are sold in, from the self-imposed rāhui by individual operators when fish stocks are low through to the creation and management of customary fishing areas by iwi as a means of preserving fish stocks for future generations.

Whai rawa is also a guiding force in the case studies, with joint venture companies existing primarily as means of making their quota economically viable. All the businesses discussed have a focus on economic performance, generally delivering this through innovation, supply chain control, adding value and a long-term focus. The joint venture companies provide an excellent mechanism for lower risk while increasing profit, making the most out of a legislative restraint by turning a weakness into a relative strength. Likewise, all the case studies reveal the emphasis these entities put on whanaungatanga and manaakitanga, with a key focus on the welfare of their workers and the wider whānau expressed across the case studies. The provision of customary harvest for tangi and other events is central to the expression of these values, so too is working in a collective nature with all shareholders and stakeholders. Finally, the governance and management of the entities

studied also shows the influence of the key values of rangatiratanga, mana whakahaere and kotahitanga, with many showing a collaborative and consensus-based style of decision-making that engages in face to face interactions.

Furthermore, the way the Māori values interact in mutually supportive ways is evident in the case studies. Moana New Zealand's precision seafood harvesting technology not only enables them to meet their kaitiaki responsibilities, but also offers a way of delivering whai rawa. For Ngāi Tahu, the customary protection areas are a fulfilment of both kaitiakitanga and rangatiratanga. In focusing on capability development, Moana is able to deliver whai rawa and whanaungatanga. ICP is able to achieve this same combination through working with other iwi and Māori fishing companies to achieve mutually beneficial outcomes. The values are also able to constrain one another where there is a need, such as the example of ICP's disputes resolution process that provides a framework that guides tika (right) behaviour, with the political sphere governing and restricting the economic sphere. The values are additive when implemented in a coordinated manner. They work in tandem to deliver outcomes that are positive across the environmental, economic and social spheres, as guided by tika political decision-making.

While there are many ways in which the different values can interact, there is one set that seems to embody the kaitiaki-centred business model the most: kaitiakitanga is facilitated by rangatiratanga and mana whakahaere and leads not only to whanaungatanga and manaakitanga but also whai rawa. The power of the kaitiaki-centred business model is that these values are all mutually supportive and ensure that the environmental, economic and social domains all benefit.

REFERENCES

- American Psychological Association. (2010). *Publication manual of the American Psychological Association* (Sixth ed.). Washington, DC: Author.
- Aquaculture Direct. (October 2014). *Summary of aquaculture projects – Nutraceutical, spat and biosecurity* (Prepared for Bay of Plenty Regional Council). Retrieved from <http://www.bayofconnections.com/downloads/Master%20Covering%20Report%20on%20Aquaculture%20Projects%202014.pdf>
- Arkema, K. K., Abramson, S. C., & Dewsbury, B. M. (2006). Marine ecosystem-based management: From characterization to implementation. *Frontiers in Ecology and the Environment*, 4(10), 525-532.
- Armitage, D. R., Plummer, R., Berkes, F., Arthur, R. I., Charles, A. T., Davidson-Hunt, I. J., . . . Wollenberg, E. K. (2008). Adaptive co-management for social-ecological complexity. *Frontiers in Ecology and the Environment*, 7(2), 95-102. 10.1890/070089
- Ban, N. C., Mills, M., Tam, J., Hicks, C. C., Klain, S., Stoeckl, N., . . . Chan, K. M. (2013). A social-ecological approach to conservation planning: embedding social considerations. *Frontiers in Ecology and the Environment*, 11(4), 194-202. 10.1890/110205
- Bargh, M. (2014). A blue economy for Aotearoa New Zealand? *Environment, Development and Sustainability*, 16(3), 459-470. 10.1007/s10668-013-9487-4
- Batstone, C. (2017). *Extending open ocean aquaculture in the Eastern Bay of Plenty* (Initial Opportunity Assessment). Retrieved from <https://www.odc.govt.nz/SiteCollectionDocuments/OUR%20COUNCIL/Current%20Projects/Opotiki%20Harbour%20Development%20Project/Reports/Supporting%20innovation%20workstream%20reports/2017%20-%20Extending%20Open%20Ocean%20Aquaculture%20in%20the%20EBOP%20-%20Batstone%20Associates.pdf>
- Bay of Connections. (2018). *Aquaculture strategy 2018*. Retrieved from http://www.bayofconnections.com/downloads/070819_FINAL-DOC_SPR18016-Aquaculture-PAGES.pdf
- Beverley, P., Ehler, C., Battershill, C., Hikuroa, D., & Boven, R. (2014). *First Review Report of the Sea Change Tai Timu Tai Pari* (Independent Review Panel). Retrieved from <https://www.seachange.org.nz/assets/Sea-Change/IRP-first-review-report.pdf>
- Bodwitch, H. (2017a). Challenges for New Zealand's individual transferable quota system: Processor consolidation, fisher exclusion, & Māori quota rights. *Marine Policy*, 88-95(June), 88-95. <http://dx.doi.org/10.1016/j.marpol.2016.11.030>
- Bodwitch, H. (2017b). *Property is not sovereignty: Barriers to Indigenous economic development in Aotearoa/ New Zealand's fisheries*. (Doctor of Philosophy), UC Berkeley,
- Bodwitch, H. (in review). Limited recognition: Indigenous development in a sacrifice zone. *Global Environmental Politics*
- Buchan, D., & Wyatt, S. (2011). *Opotiki aquaculture and harbour development projects: Assessment of social and community benefits*. Retrieved from http://www.toi-eda.co.nz/getattachment/About-Toi-Eda/Bay-of-Connections-strategies/corydon-consultants-limited-opotiki-aquaculture-and-harbour-development-projects_-_assessment-of-social-and-community-benefits-december-2011.pdf.aspx
- Cranfield, H., Michael, K., Stotter, D., & Doonan, I. (1994). Distribution, biomass and yield estimates of surf clams off New Zealand beaches. *New Zealand Fisheries Assessment Research Document*, 94(1), 17.
- Cross, T., Wilson, M., Earle, D., Scott, G., Kilby, C., & Soke, C. (1991). Iwi and whānau economic development: Social problems and policy implications. In J. Whitewell & M. A. Thompson (Eds.), *Society and culture: Economic perspectives* (Vol. 1, pp. 180-190). Wellington, New Zealand: New Zealand Association of Economists Incorporated.
- Dana, L.-P., & Anderson, R. B. (Eds.). (2007). *International handbook of research on indigenous entrepreneurship*. Cheltenham, UK; Northampton, MA: Edward Elgar.
- Deloitte. (2017). *Ngāi Tahu Charitable Trust Group financial statements for the year ended 30 June 2017*.
- Environment Canterbury. (2016). *Selwyn Te Waihora plan change*. Christchurch, New Zealand.
- Farrington, G. (2014). *Enhancing New Zealand surf clam fisheries*. Auckland University of Technology,
- Haines, L. (1991). *Small Business is Big Business: A Review of Trends and Policies*. Wellington, New Zealand: New Zealand Planning Council.
- Harris, S., & Davie, T. (2017). *Selwyn Te Waihora Zone. Memorandum on the implications of meeting the national policy statement for freshwater management objectives for lake environments in Te Waihora*.
- Hauraki Gulf Forum. (2011). *State of our Gulf: Tikapa Moana – Hauraki Gulf*. State of the Environment Report 2011.
- Hauraki Gulf Forum. (2014). *State of our Gulf: Tikapa Moana – Hauraki Gulf*. State of the Environment Report 2014.
- Hauraki Gulf Marine Park Act. (2000). Retrieved from <http://www.legislation.govt.nz/act/public/2000/0001/latest/whole.html#DLM52558>
- Heasman, K. G., & Knight, B. R. (2014). *Review of Greenshell mussel (GSM), Perna canaliculus, spat-falls in the Bay of Plenty region*. Prepared for Aquaculture Direct (No. 2519). Cawthron Institute. Retrieved from <http://www.bayofconnections.com/downloads/Report%20No%20%202519%20-%20Review%20of%20Greenshell%20Mussel%20%28GSM%29%20Perna%20Canaliculus%20spat-fall%20in%20the%20Bay%20of%20Plenty%20Region.pdf>

- Hēnare, M. (2016). In search of harmony: Indigenous traditions of the Pacific and ecology. In W. J. Jenkins, M. E. Tucker, & J. Grim (Eds.), *Routledge Handbook of Religion and Ecology* (pp. 129-137). London, England: Routledge.
- Heron, M. (2018). *Whakatōhea Māori Trust Board Investigation under Section 33 Māori Trust Boards Act - Report to the Minister*. Retrieved from http://mhqc.co.nz/wp-content/uploads/2018/10/whakat%C5%8Dhea_m%C4%81ori_trust_board_final_report.pdf
- Hikuroa, D. (2017). Mātauranga Māori—the ūkaipō of knowledge in New Zealand. *Journal of the Royal Society of New Zealand*, 47(1), 5-10. 10.1080/03036758.2016.1252407
- Hughey, K. (2016, July 11-15). *Long term gain from medium term pain – Lessons for fisheries managers from integrated ecosystem based and collaborative approaches in New Zealand*. Paper presented at the Eighteenth Biennial Conference of the International Institute of Fisheries Economics and Trade, Aberdeen, U.K.
- Imcs. (2017). *Report of the fifth global fisheries enforcement training workshop*. Auckland, New Zealand: The Food and Agriculture Organization of the United Nations and Institute for Governance and Sustainable Development.
- Iwi Collective Partnership. (2019). *Nai mau: Welcome to the Iwi Collective Partnership*. Retrieved from <https://www.iwicollective.co.nz/>
- Jackson, A. M. (2013). Erosion of Māori fishing rights in customary fisheries management. *Waikato Law Review*, 21, 59-75.
- Joseph, R., Tahana, A., Kilgour, J., Mika, J. P., Rakena, M., & Jefferies, T. P. (2016). *Te Pai Tawhiti: Exploring the horizons of Māori economic performance through effective collaboration*. Auckland, New Zealand: Ngā Pae o Te Māramatanga. Retrieved from https://www.waikato.ac.nz/_data/assets/pdf_file/0006/322188/MAIN-FINAL-Te-Pai-Tawhiti-Report-Nov-11-2016.pdf
- King, D. T., Goff, J., & Skipper, A. (2007). Māori environmental knowledge and natural hazards in Aotearoa New Zealand. *Journal of the Royal Society of New Zealand*, 37(2), 59-73. <https://doi.org/10.1080/03014220709510536>
- Knight, B., Forrest, B., Taylor, D., Mackenzie, L., & Vennell, R. (2017). *Potential aquaculture expansion in the Eastern Bay of Plenty: A high-level scoping study of environmental issues* (No. 3056). Cawthron Institute. Retrieved from https://www.boprc.govt.nz/media/670456/cawrpt_3056_bop-new-aquaculture-areas-evaluation.pdf
- Lock, K., & Leslie, S. (2007). New Zealand's quota management system: a history of the first 20 years. Lomax, A. J., Johnston, K. A., Hughey, K. F. D., & Taylor, K. J. W. (Eds.). (2015). *Te Waihora/Lake Ellesmere: State of the Lake 2015: Waihora Ellesmere Trust Technical Report No.2*.
- Luks, F., & Siebenhüner, B. (2007). Transdisciplinarity for social learning? The contribution of the German socio-ecological research initiative to sustainability governance. *Ecological Economics*, 63(2-3), 418-426. 10.1016/j.ecolecon.2006.11.007
- Marsden, R. M. (2003). Kaitiakitanga: A definitive introduction to the holistic worldview of the Māori. In T. A. C. Royal (Ed.), *The Woven Universe: Selected Writings of Rev. Maori Marsden* (pp. 54–72). Otaki: Estate of Rev. Maori Marsden.
- McCormack, F. (2011). Rāhui: A blunting of teeth. *Journal of the Polynesian Society*, 120(1), 43-55.
- Ministry for Primary Industries. (2012). *Total allowable catch review for surf clams FMA 8*.
- Ministry for Primary Industries. (2019a). EEZ: Definition. Retrieved from <https://fs.fish.govt.nz/Page.aspx?pk=78&dk=1180>
- Ministry for Primary Industries. (2019b). *National aquatic biodiversity information system*. Retrieved from <https://maps.mpi.govt.nz/templates/MPIViewer/?appid=96f54e1918554ebba17f965f0d961e1>
- Moana New Zealand. (2015). About us. Retrieved 23 May 2019 from <https://moana.co.nz/about-us/>
- Moana New Zealand. (2017). *Our sustainability journey 2017*. Auckland, New Zealand: Moana New Zealand.
- Moana New Zealand. (2018). *Integrated annual report 2018*. Auckland, New Zealand: Moana New Zealand.
- Moana New Zealand. (2019). About us. Retrieved 23 May 2019 from <https://moana.co.nz/about-us/>
- New Zealand Companies Office. (n.d.). Eastern Sea Farms Limited. <https://app.companiesoffice.govt.nz/companies/app/ui/pages/companies/1089136?backurl=H4slAAAAAAAAEXLMQ7CMAyF4dtkYSgMjBZiAAY6ILUXsBIDkZo42A4ot6ellr b%2FfdLrCt5IO8%2BpYI5zKaH4%2B%2B4BB1Qjyau B0FG2aG1shRT2f%2FswdCqnoRr% 2BXLmNqUchRMsPTI4DEFI9f9e4EztxRLAqaEYrN0UUzTYbJ1eZwyf5xOzp3DBTBOYVHKJA8HP3%2BnFqtI9AAAA>
- Pauli, G. A. (2010). *The blue economy: 10 years, 100 innovations, 100 million jobs*. Taos, NM: Paradigm Publications.
- Peart, R. (2019). Marine spatial planning: Sea Change Tai Timu Tai Pari: Reflections on marine spatial planning in the Hauraki Gulf. In M. Brown & K. Peters (Eds.), *Living with the Sea* (pp. 50-69). New York, NY: Routledge.
- Precision Seafood Harvesting. (2019). Retrieved May 23 2019 from <http://www.precisionseafoodharvesting.co.nz/>
- Reid, J., & Rout, M. (2016). Getting to know your food: The insights of indigenous thinking in food provenance. *Agriculture and Human Values*, 33(2), 427-438.

- Romanazzi, D. (2014). *Lipid and fatty acids composition of New Zealand Green Shell Mussels (GSM) from three farming sites. Prepared for Bay of Connections.* (No. 2532). Cawthron Institute. Retrieved from <http://www.bayofconnections.com/downloads/Cawthron%20report%202532%20-%20Nutraceutial.pdf>
- Rout, M., Reid, J., Bodwitch, H., Gillies, A., Lythberg, B., Hikuroa, D., . . . Davies, K. (2018). *Māori marine economy: A review of literature concerning the historical and contemporary structure of the Māori marine economy* (First ed.). Palmerston North, New Zealand: Massey University.
- Sahlins, M. (1972). *Stone age economics*. New York: Aldine De Gruyter.
- Scott, N. (2018). *Author interview*.
- Sea Change. (2017). *Sea Change – Tai Timu Tai Pari: Hauraki Gulf marine spatial plan*. Retrieved from <https://www.seachange.org.nz/assets/Sea-Change/5086-SCHTTP-Marine-Spatial-Plan-WR.pdf>
- Silver, J. J., Gray, N. J., Campbell, L. M., Fairbanks, L. W., & Gruby, R. L. (2015). Blue economy and competing discourses in international oceans governance. *The Journal of Environment and Development*, 24(2), 135-160. <https://doi.org/10.1177/1070496515580797>
- Sissenwine, M. P., & Mace, P. M. (1992). ITQs in New Zealand: The era of fixed quota in perpetuity. *Fishery Bulletin*, 90, 147-160.
- Smith, G. H., Gillies, A., Wiremu, F., Mika, J. P., & Puketapu-Watson, J. H. (2017). *Tairāwhiti Māori economic development report: Critical analysis and strategic options*. Gisborne, New Zealand: Kimihia He Oranga.
- Smith, G. H., Tinirau, R. S., Gillies, A., & Warriner, V. C. A. (2015). *He Mangōpare Amohia: Strategies for Māori Economic Development*. Whakatāne, New Zealand: Te Whare Wānanga o Awanuiāranui.
- Spence, C. C. (1980). The golden age of dredging: The development of an industry and its environmental impact. *The Western Historical Quarterly*, 11(4), 401-414. [10.2307/968288](https://doi.org/10.2307/968288)
- Spiller, C., Erakovic, L., Hēnare, M., & Pio, E. (2011). Relational well-being and wealth: Māori businesses and an ethic of care. *Journal of Business Ethics*, 98(1), 153-169.
- Statistics New Zealand. (2013). *Individual Iwi Profile: Ngāi Tahu/Kāi Tahu*. Retrieved from http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/iwi-profiles-individual.aspx?request_value=24632&parent_id=24623&tabname=&sc_device=pdf
- Statistics New Zealand. (2013a). *Whakatōhea Iwi profile*. Retrieved from http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/iwi-profiles-individual.aspx?request_value=24579&parent_id=24571&tabname=&sc_device=pdf
- Statistics New Zealand. (2013b). *Census QuickStats about a place: Opotiki District*. Retrieved from http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx?request_value=13978&parent_id=13853&tabname=&p=y&printall=true
- Stephenson, J., & Moller, H. (2009). Cross-cultural environmental research and management: Challenges and progress. *Journal of the Royal Society of New Zealand*, 39(4), 139-149. [10.1080/03014220909510567](https://doi.org/10.1080/03014220909510567)
- Stewart, R., & Stewart, T. (2018). *Author interview*.
- Takutai Trust. (n.d.). The Māori aquaculture Trust: Iwi aquaculture organisations - Bay of Plenty. Retrieved September 02 2018 from <http://www.takutai.maori.nz/regions/bop.htm>
- Tamati, P. (2018). *Author interview*.
- Te Korowai o Te Tai o Marokura Kaikoura Coastal Marine Guardians. (2019). Te Korowai o Te Tai o Marokura? Retrieved from https://www.kaikoura.co.nz/wp-content/uploads/2017/03/website_info_for_kdc_isite_1.pdf
- Te Korowai o Te Tai o Marokura, K. C. M. G. (2019). Te Korowai o Te Tai o Marokura? Retrieved from https://www.kaikoura.co.nz/wp-content/uploads/2017/03/website_info_for_kdc_isite_1.pdf
- Te Rūnanga o Ngāi Tahu. (2017a). Ngāi Tahu annual report 2017: Ngā pāpātupu rūnanga map. Retrieved from <https://ngaitahu.iwi.nz/investment/ngai-tahu-annual-reports/2017-annual-report/#back-to-top>
- Te Rūnanga o Ngāi Tahu. (2017b). Ngāi Tahu annual report 2017: Organisational structure. Retrieved from <https://ngaitahu.iwi.nz/investment/ngai-tahu-annual-reports/2017-annual-report/#back-to-top>
- Te Rūnanga o Ngāi Tahu. (2018). Annual report. Retrieved from <https://ngaitahu.iwi.nz/investment/Ngai-tahu-annual-reports/2018-annual-report/>
- Tierney, L. (2003). *Beneath the reflections: Fiordland marine conservation strategy: Te Kaupapa Atawhai o Te Moana o Atawhenua*. Invercargill, New Zealand: Guardians of Fiordland's Fisheries & Marine Environment.
- Tremlett, J. (2015). *One ocean: Principles for the stewardship of a healthy and productive ocean*. Wellington, New Zealand: McGuinness Institute. Retrieved from <https://apo.org.au/node/68515>
- Tū Ake Whakatōhea Collective. (2016). *Whakatōhea Pre-Settlement Claims Trust: Mandate strategy*. Retrieved from <https://www.tpk.govt.nz/docs/tpk-tuakemandatestrategy-2016.pdf>
- Waitangi Tribunal. (1992). *Ngāi Tahu sea fisheries report (Wai 27)*. Wellington, New Zealand: Brooker and Friend.
- Waitangi Tribunal. (2002). *Te Ahu Moana: The aquaculture and marine farming report* (No. WAI 953). Retrieved from https://forms.justice.govt.nz/search/Documents/WT/wt_DOC_68004143/Ahu%20Moana.pdf
- Walrond, C. (2006). *Fishing industry – Who owns quota? Te Ara – the encyclopedia of New Zealand*. Te Ara - the Encyclopedia of New Zealand.

- Watson, J., & Everett, J. E. (1996). Do Small Businesses Have High Failure Rates? Evidence from Australian Retailers. *Journal of Small Business Management*, 34(4), 45-61.
- Whakatōhea Fisheries Trust. (2017a). *Annual report 2017*.
- Whakatōhea Fisheries Trust. (2017b). *Annual reports 2011-2016*.
- Whakatōhea Fisheries Trust. (2018). *Annual report 2018*.
- Whakatōhea Māori Trust Board. (2018). Annual report. Retrieved from <http://www.whakatohea.co.nz/>
- Whakatōhea Mussels (Opotiki) Limited. (2018). *Annual financial statements for the year ended 30 June 2018*. Retrieved from <https://app.companiesoffice.govt.nz/companies/app/service/services/documents/C100CC0FAA5E27182AA4D8489E37C5CE>
- Workman, K. (1995). *Biculturalism in the public service - Revisiting kaupapa*. Paper presented at the Department of Internal Affairs Maori Staff National Hui 27 April 1995, Tapu Te Ranga Marae, Wellington, New Zealand.
- Zeldis, J. R., Walters, R. A., Greig, M. J. N., & Image, K. (2004). Circulation over the northeastern New Zealand continental slope, shelf and adjacent Hauraki Gulf, during spring and summer. *Continental Shelf Research*, 24(4), 543-561. <https://doi.org/10.1016/j.csr.2003.11.007>
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