

Phase II Research Proposal

Project title	Indigenising the blue economy
A. Short title:	Indigenising the blue economy
B. Theme/programme	Blue Economy

C. Project key researchers			
Role	Name	Institution/ company	Email
Co-lead	Dr John Reid	J D Reid LTD	jdreidltd@icloud.com
Co-lead	Dr Jason Mika	Massey University	J.P.Mika@massey.ac.nz jmika@waikato.ac.nz
Senior Researcher (synthesis team)	Dr Matthew Rout	ARC	
Researcher (synthesis team)	Dr Jay Whitehead	Matatihi	
Senior Researcher (case study)	Dr Annemarie Gillies	Whitimaia Ltd	
Senior Researcher (case study)	Fiona Wiremu	Te Whare Wānanga o Awanuiārangi	
Research Assistant	Georgia McLellan	Massey University	

D. Co-developed with			
Name	Role	Organisation / company /agency	Level of partnership
Linda Faulkner	Deputy Director	Sustainable Seas Science Challenge	Strong
Beth Tupara-Katene	Programme Leader: Tangaroa and Engagement Specialist – Māori	Sustainable Seas Science Challenge	Strong
Te Taiawatea Moko- Mead	Senior Analyst	Te Ohu Kaimoana	Case study partner
Kim Drummond	Kūrae Moana/Fisheries and Aquaculture Policy Manager	Te Ohu Kaimoana	Case study partner
Rik Tainui	Ōnuku Representative	Te Rūnanga o Ngāi Tahu	Case study partner
Jymal Morgan	Ōnuku Rūnanga Technical Advisor	Te Rūnanga o Ōnuku	Case study partner
Deena Whaitiri	Chair	Ngati Mutunga o Wharekauri Iwi Trust	Case study partner

Tony Blackett	CEO	Hokotehi Moriori Trust	Case study partner
Trevor Moeke	Chair	Ngāti Kahungunu Iwi Asset Holding Company Limited	Case study partner
Rawinia Lewis	Business Manager	Ngāti Kahungunu Iwi Asset Holding Company Limited	Case study partner
Cerasela Stancu	Sustainability Director	EnviroStrat LTD	Strong
Steve Urlich	Lecturer	Lincoln University	Strong
Elizabeth MacPherson	Senior Lecturer	University of Canterbury	Strong
Dan Hikuroa	Senior Lecturer	Auckland University	Strong
Chris Rosin	Senior Lecturer	Lincoln University	Strong

E. Abstract (250 words)

This project—Indigenising the blue economy in Aotearoa—extends the Phase I research—Whai Rawa, Whai Mana, Whai Oranga, which set out to map the Māori marine economy, both its institutions and enterprises and the business models they employ. The goal of this research is to partner with Māori authorities (iwi and pan-iwi entities and Māori enterprises) explore and to support Māori who aspire to a blue economy imbued with mātauranga Māori, treaty principles, and a focus on Māori wellbeing, human potential and relational balance with Tangaroa as our tīpuna.

In our co-development of this proposal, Māori enterprises identify three key constraints affecting Māori from transitioning to a restorative blue economy. The first is the fragmented regulatory and jurisdictional environment in which Māori operate. This inhibits long term integrated economic planning. The second is the concentration of Māori investment in certain fisheries assets, along with adherence to conventional business models that are vulnerable to systemic shifts (for example, from climate change, or changes in consumer preferences). The third constraint are the structural limitations on Māori coastal communities realising economic opportunities in the marine economy.

This research programme will explore a suite of processes, structures, technologies, and policies across three themes designed to address these constraints: **Pāhekoheko** (integration)—supporting Māori-led multi-generation integrated planning across economic sectors in their marine jurisdictions to maintain te mauri o ngā taonga katoa and enhance the efficiency of asset holding and resource utilisation; **Auahatanga** (differentiation)—differentiating kaitiaki generated products from commodities and diversify Māori activity in the marine economy; **Whakatautika** (balance)—creating employment, enterprise, and other economic opportunities for whānau and hapū in coastal communities, leveraging the assets of iwi and pan-iwi authorities. The programme will achieve these goals by working in close collaboration with five Māori authorities, (delivering significant local, regional, and national impact) seeking to address the range of constraints outlined above with a broad team of Māori and non-Māori researchers and practitioners.

F. Relevance to challenge objective (150 words)

This research programme is strongly aligned with the challenge objective: *enhanced utilisation of marine resources beyond biological constraints*. The programme takes a multi-pronged approach to addressing the key barriers that currently prevent Māori from using their marine resources in a more culturally-relevant, economically impactful, and environmentally sustainable manner. We aim to develop processes, structures, technologies, and policies that facilitate and encourage symbiotic economic relations between human and non-human communities to uphold and maintain the mana of ngā uri o Tangaroa and the mana of kaitiaki. In this way, we seek to restore the traditional holistic view of economy and environment while harnessing technology and practice in the marine sector and beyond.

G. Outputs

Outputs:	Linked to which Theory of Change Outputs:	Explain briefly your plan to ensure uptake by iwi and stakeholders:
(1) Literature review of the three key themes. The information gathered will form an analytical framework that identifies and operationalises themes and subthemes. The framework will guide ongoing research.	b, h, i	The framework will inform ongoing relationships with Māori authority case study partners in an iterative process. An online survey will be used to consult with key partners on the framework to assess potential areas of interest. This high level engagement will help refine the framework and enable the focus and scale of case studies across and within themes to be scoped and refined.
(2) Reports for all five case studies on qualitative and quantitative data gathered. Reports focus on key issues identified by each Māori authority across research themes/subthemes framework.	b, h, i	The focus of each report will be determined in consultation with each Māori authority case study, ensuring the research is tailored to their needs while also delivering a focused approach on several key subthemes for each. Engagement with relevant challenge research projects will be conducted once subthemes have been confirmed. Engagement will be achieved through group discussions with a broad range of case study stakeholders to identity key research priorities within the framework. Reports will incorporate field work research and engagement with specific themes and subthemes to provide provisional solutions to constraints for

		Māori authorities across a range of scales and subsectors.
(3) Case study reports and literature review will be synthesised into a consolidated report organised around, and finalising, the framework. This report will be used as the foundation for consequent publications and presentations.	b, h, i	Consolidated report will be result of the iterative co-development process, fusing national and international literature with qualitative and quantitative findings from case studies and feedback from partners. The consolidated report will refine provisional solutions from case studies as well as identifying convergences and clashes across themes.
(4) Multimedia presentations for five case studies. Combining literature review and case study reports, presentations will use video, infographics, and animated slides to clearly communicate key findings to Māori authorities, their constituents, and other stakeholders.	b, h, i	Presentations will be co-developed with each case study partner, using the initial findings of literature review, reports, and resulting feedback. Presentations will be customised to specific partner requirements and will be presented by senior/community researcher and made available online. These presentations will aim to serve as both strategic decision-making tools as well as educating wider stakeholders.
(5) Academic article one: Pāhekoheko—increasing integration. This article will present findings on thematic and sub-thematic analysis and relevant case studies.	b, h, i	The article will draw upon stakeholder interview data and specific examples from case studies to contextualise and ground theoretical and international thematic and sub-thematic elements for Māori audiences.
(6) Pāhekoheko creative presentation, building on subthemes and previous presentations to provide multimedia summary of how entities are integrating their approach and activity in the blue economy.	b, h, i	This presentation will communicate the findings from the Pāhekoheko research to Māori authorities and their constituents and other stakeholders. This presentation will serve as primer on key issues and solutions to the integration theme. The presentation will focus on iwi quota holders.
(7) Academic article two: Auahatanga—generating differentiation. This article will present findings on thematic (differentiation)	b, h, i	The article will use stakeholder interview quotes and specific examples from case studies to contextualise and ground theoretical and international thematic and sub-thematic elements for Māori audience.

and sub-thematic analysis and relevant case studies.		
(8) Auahatanga—creative presentation building on subthemes and previous presentations to provide multimedia summary of the differentiation research findings.	b, h, i	This presentation will communicate the findings from the auahatanga publication to Māori authorities and their constituents and other stakeholders. This presentation will serve as primer on key issues and solutions in the differentiation theme. It will be designed for Māori fishing enterprises and collectives.
(9) Academic article three: Whakatautika—creating balance. This article will present findings on the balance theme and sub-thematic analysis and relevant case studies.	b, h, i	This article will use stakeholder interview data and specific examples from case studies to contextualise and ground theoretical and international thematic and sub-thematic elements for Māori audiences.
(10) Whakatautika—creative presentation building on subthemes and previous presentations to provide multimedia summary of balance theme.	b, h, i	This presentation will communicate the findings from the whakatautika research to Māori authorities and their constituents as well as other stakeholders. This presentation will serve as primer on key issues and solutions in this theme. This output will be largely aimed at whānau and hapū.

H. Outcomes	This project will contribute to the following theory of change outcomes:
FO1 Enhanced marine blue economies	Our analysis and engagement determined that quota fragmentation is a constraint on Māori enhancing blue economy activity. Current quota ownership arrangements place constraints on long term, multi-generational strategic planning (outlined below). This programme will develop potential solutions to these arrangements such as: (1) improved models for quota consolidation and market reform; (2) economic differentiation strategies with Māori authorities and commercial entities aimed at increasing the value and diversity of marine products while maintaining and enhancing environmental outcomes; (3) policy and strategy for iwi to create employment and other multipliers in Māori coastal communities.
FO2 Enhanced decision-making using an EBM approach	Māori authorities identified both regulatory and jurisdictional fragmentation and a lack of mana moana as issues. Māori want a stronger role in the planning and coordination of economic activity in their marine estates so they can achieve multi-generational restorative outcomes. They also want stronger integration between market and nonmarket (customary, and recreational) economic activity in fisheries management. Furthermore, integrative economic planning across other related sectors is sought (e.g., tourism, infrastructure, aquaculture). This

	programme will work alongside Māori authorities currently leading the planning of economic activity in their marine estates in partnership with Crown authorities and with stakeholders to identify optimal processes and institutions to support long-term economic planning. This initiative will contribute to the design of enhanced decision-making and EBM processes.
FO3 Improved health of our seas	This programme is focussed on developing Indigenous processes and institutions, and identifying key technologies needed for the long-term development of restorative economic activity. This requires multi-generational restorative economic planning, strategies that decrease pressure on marine resources through diversification, and innovations that increase the value of Māori marine products in contrast to volume.
FO4 Increased involvement of tikanga and Māori	This programme is built in partnership with Māori authorities. The research themes have been derived through detailed consultation, while the implementation of the research will take place through hapū, iwi, and pan-iwi communities and organisations. Māori values held in common underpin our research ethics, while the research will actively seek to find mātauranga-informed solutions to the problems identified and opportunities to be harnessed.

1. Introduction (max 500 words)

Developing this proposal included comprehensive engagement with Māori authorities and communities involved in commercial and customary economic activity in the marine estate across the fishing, aquaculture, tourism, and infrastructure sectors. This engagement helped identify three key constraints facing Māori transitioning to a restorative blue economy and harnessing opportunities that may emerge from this shift. The first constraint is regulatory, including quota fragmentation and concerns about the Quota Management System (QMS), marine regulations, and marine jurisdictions. The second constraint is the lack of differentiation, diversification, and value-add in some sectors of the Māori marine economy. The third constraint is the tensions between Māori corporate institutions and coastal communities seeking economic opportunities.

The three research themes of this programme seek to overcome each constraint and realise the opportunities inherent in this transition. The research theme Pāhekoheko (integration) explores Indigenous processes, structures, and technologies to support multi-generational integrated planning across economic sectors and investigate regulatory options and structures. The research theme Auahatanga (differentiation) will examine options for Māori enterprises to make their products distinct from other marine commodities and diversify their activity in the marine economy. The research theme Whakatautika (balance) seeks to create employment, enterprise, and other economic opportunities for whānau and hapū in coastal communities by leveraging the assets of iwi and pan-iwi authorities.

There is also potential for synergies within and across these themes, where for example, both integrated planning and value-adding strategies offer possible solutions for whānau and hapū development. Likewise, there are potential dissonances within and across the themes, where for example, improving the market efficiency of quota may disempower

whānau and hapū. As well as examining each theme individually, the programme will seek to identify and, where relevant, amplify or neutralise these synergies and dissonances.

We outline below how the research programme will be built on five Māori authority case studies that are actively working through the constraints, and realising opportunities associated with the aims of integration, differentiation, and balance as well as synergies across themes. The case studies include hapū, iwi, and pan-iwi organisations. The case study work will be supported by other challenge programmes that have the resources, skills, and capacity to explore each issue in more detail, specifically the EBM, Law, Policy, and Practice Programme and the Treaty and EBM programme. Strong interdependencies exist between the programme, the broader challenge and stakeholders, including robust long-term relationships with Māori authorities. The research programme is focused on exploring issues of fundamental economic importance to Māori and to the nation. We anticipate that the research will generate new modes of economic thinking and practice in the marine economy that are ultimately guided by te ao Māori insights, which may inform mainstream approaches.

J. Aims

Pāhekoheko—Increasing integration: This research theme aims to examine and implement solutions to the problems such as quota, regulatory, and jurisdictional fragmentation within the Māori marine economy in conjunction with Māori partner organisations. These solutions will seek to address issues including market inefficiencies, provide tools to help negotiate regulatory and jurisdictional barriers, and support multi-generational integrative economic planning for the establishment of a restorative and indigenised marine economy. The key subthemes will be determined in collaboration with case study partners.

Auahatanga—Generating differentiation: This research theme aims to support the differentiation of Māori seafood products and Māori enterprise initiatives in the marine economy. We will achieve this by working in partnership with Māori organisations to explore solutions including Indigenous market assurance options, premium markets, novel aquaculture options, new economic opportunities, marine tourism expansion, and the development of uneconomic species. The key subthemes will be determined in collaboration with case study partners.

Whakatautika—Creating balance: This research theme aims to support the development of whānau and hapū economic initiatives in coastal communities with the goal of generating employment and other economic multipliers. It seeks to address issues with the Māori corporate-community divide and encourage economic planning and investment that focuses on economic multipliers. The key subthemes will be determined in consultation with case study partners.

K. Proposed research (2000 word max)

The development of this proposal involved comprehensive engagement with Māori authorities and communities at marae, iwi, and pan-iwi scales. These organisations are involved in commercial and customary economic activity in the marine estate across the following sectors: fishing, aquaculture, tourism, and infrastructure. Our engagement was organised around discovering the barriers to transitioning to a restorative blue economy and the opportunities that could be harnessed through such a transition. From this engagement and co-creation workshops three research themes emerged:

1. Fragmentation versus integration
2. Convention versus differentiation
3. Centre versus periphery.

Each of these themes is discussed below.

Fragmentation versus integration

Fragmentation occurs in several ways, posing challenges to Māori authorities and communities in meeting their aspirations and transitioning to restorative blue economies. These are:

- The distribution of fisheries assets amongst iwi during the settlement process fragmented quota ownership.ⁱ This means, as Te Ohu Kaimoana (TOKM) explains, “most individual Iwi do not own sufficient quota to undertake commercial fishing on their own.”ⁱⁱ TOKM notes that Māori dominance in the fishing sector is overstated as “not all Maori owned quota flows through Maori owned value chains. Instead it is fragmented into competing seafood companies.”ⁱⁱⁱ Further, iwi are unable to trade settlement quota (SET) beyond a limited pool of other iwi authorities.^{iv} This generates economic inefficiencies as small to medium iwi struggle to reach scale required to operate independently.^v Consequently, most iwi lease their quota as Annual Catch Entitlements (ACE)—a practice focussed on maximising short-term financial gain at the expense of long-term sustainable economic planning.^{vi} The result, as TOKM concludes, is that “most Iwi are passive quota owners who are not deeply engaged in the active fishing industry or well represented in the key decision-making structures within the wider fishing sector.”^{vii}
- Fragmentation is also generated by the division between market and nonmarket (customary and recreational) quota and multiple overlapping pieces of legislation and jurisdictions that regulate economic activity across the aquaculture, marine tourism, minerals, and infrastructure sectors.^{viii} This fragmentation does not support Māori aspirations for long-term integrative economic planning through seamless management of activity across market types and sectors. Rather it supports short-term economic opportunism through poorly regulated nonmarket activity (e.g., recreational overfishing) and opportunity capture (e.g., access to various property rights) by well-resourced and networked individuals and groups.^{ix}

There are two levels of potential solution to this fragmentation. The first level involves finding ways to work within existing institutional arrangements, while the second requires regulatory and policy reform toward a more integrated institutional framework.^x Māori

already work on innovative initiatives to address fragmentation at the first level, however, research support is needed in the following areas:

- Optimising collectivisation structures to manage quota ownership and distribution more effectively. Examples of such structures include the Iwi Collective Partnership (ICP) and the Port Nicholson Company (PNC).
- The development of community and marae-centric planning initiatives within hapū and iwi marine jurisdictions to coordinate and plan economic activity across sectors and according to multi-generation horizons (e.g., Te Korowai o Te Tai ō Marokura).
- Processes and structures for coordinating and managing economic activity across recreational, customary, and commercial sectors informed by data quantifying the scale and processes underpinning the nonmarket customary economy.
- Tools, particularly for small to medium hapū and iwi, for navigating the current marine regulatory and planning landscapes in the establishment of aquaculture, tourism, mining, and infrastructure initiatives.

In terms of the second level, Māori have ideas and aspirations but research is needed to fulfil them. These are outlined below:

- Improved quota market efficiency—Māori need the flexibility to manage quota holdings. Improvements would support small to medium iwi to invest in independent fishing enterprises, to scale, and undertake multi-generational planning.
- The formalisation of institutions and processes for the expression of tino rangatiratanga (self-determination) within their marine jurisdictions to enable iwi and hapū leadership in cross-sector economic planning.
- The streamlining and integration of regulations and planning processes in the marine estate to reduce compliance costs and support Māori investment in restorative economic initiatives.

Convention versus differentiation

Wild fisheries are profitable, with export volumes increasing by 0.2% per annum.^{xi} There is little room for volume growth, instead operational and supply-chain improvements, diversification, and innovations are required to add value.^{xii} Māori enterprises generally operate in the volume and commodity space, following low-cost strategies rather than high-value and product differentiation.^{xiii} There is a trend of moving from species to species as stock levels drop. Further, there is a strong trend of consolidating investment in higher value export species (kōura, pāua, snapper, and hoki) that are vulnerable to overfishing and climate change.^{xiv} This poses significant commercial risk to the Māori marine economy.^{xv} Similarly, aquaculture is focused on a small range of commercially proven species vulnerable to climate change including green-lipped mussels, salmon, and pāua.^{xvi} There is significant emphasis by Māori on conventional fisheries, aquaculture, and tourism initiatives, arguably at the expense of novel marine economy options that present sustainable economic opportunities.^{xvii}

While performing well commercially, Māori have generally been conventional and conservative in their approach, with some exceptions.^{xviii} Although more recently effort

has been made to add value through Indigenous branding and the values-centred business practice, our engagement with Māori suggests that research is needed to further support differentiation through the following avenues:^{xix}

- Developing robust market assurance systems that communicate to high-end customers the Indigenous values to differentiate products and obtain premiums. Such forms of assurance would need to be dovetailed with impactful technologies, operational improvements, and innovations required across supply chains to verify sustainability claims.
- Exploring ways in which mātauranga- and tikanga-guided governance, management, and operations can be utilised as a means of adding value in international markets through branding and marketing (e.g. as being developed by ICP in conjunction with the Kia tika te hī ika Sustainable Seas Project).^{xx}
- Identifying high-end national and international market segments willing to pay a premium for goods produced according to Māori values, ethics, and practices.
- Creating mechanisms for identifying and prioritising uneconomic quota species for commercialisation through the application and development of emerging and novel technologies and innovations.
- Identifying new aquaculture species and approaches (e.g., multitrophic) and the policy and investment structures (e.g., long-term research and development investments from government and impact investors) needed to support their development.
- Ascertaining opportunities for Māori in the marine economy beyond fisheries into new areas such as minerals, infrastructure, or carbon neutral marine transport.
- Opportunities for improved expansion into marine tourism options in a post-COVID-19 market and mechanisms for derisking transitions.

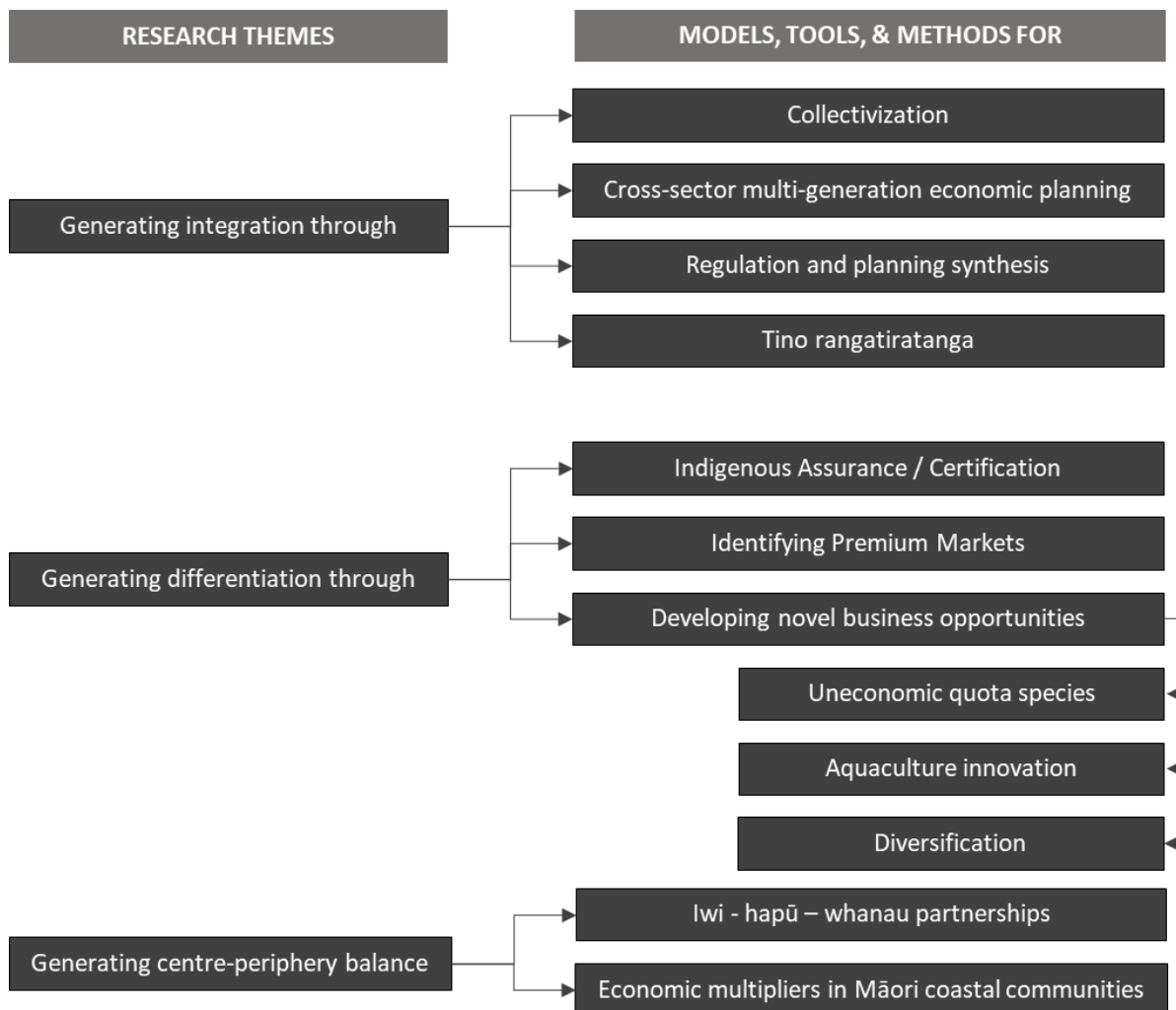
Centre versus periphery

The fisheries treaty settlements process has seen the consolidation of political and financial capital in the Māori marine economy at pan-iwi and iwi scales.^{xxi} While this was a necessary tool to engage in Crown negotiations these structures are contrary to traditional cultural forms, where hapū were the primary political and economic unit.^{xxii} This has led to the centre-periphery challenge, whereby empowerment (assets and political influence) is sought at hapū and whānau scales to manage marine resources, access investment to support whānau fishing enterprises, generate employment, and other multipliers in coastal communities.^{xxiii} Hapū and Māori commercial entities recognise a need to tackle the decentralisation challenge to improve the efficiency of resource utilisation and more fully indigenise the blue economy. New models can assist in this process, particularly in the case of small to medium sized iwi, given they may be empowered to operate independently and in partnership with hapū and whānau fishing enterprises, as has happened within Ngāi Tahu.^{xxiv} Models and methods, drawing upon traditional approaches and contemporary global insights, may be used to bridge the Māori corporate-community divide and encourage economic planning and investment that focuses on community multipliers in Māori coastal communities. Through such an approach, Māori marine economy-internal competition can be overcome and increased

cooperation encouraged through new business models that enable innovative actors to form mutually-beneficial partnerships with Māori communities.

A diagram summarising the key research themes and proposed research outputs is outlined in Figure 1.

Figure 1 Research themes

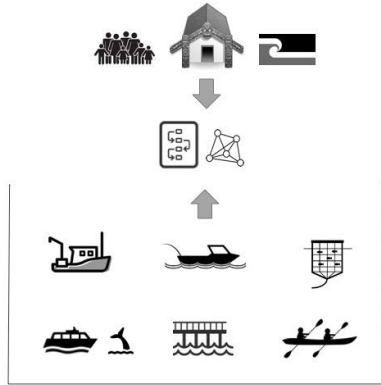


The research theme Pāhekoheko addresses the issue of fragmentation and seeks to answer two research questions: (1) how can Māori lead multi-generation integrated planning across economic sectors in their marine jurisdictions to maintain *te mauri o ngā taonga katoa*; and (2) how can the efficiency of quota distribution be improved? The research theme Auahatanga will address the problem of low-cost strategies by answering the research question: how can Māori differentiate their products and diversify their activity in the marine economy? The research theme Whakatautika will explore the centre-periphery challenge by answering the research question: how do we create employment, enterprises, and other economic opportunities for whānau and hapū in coastal communities by leveraging the assets of iwi and pan-iwi authorities? These themes and research questions are illustrated in Figure 2.

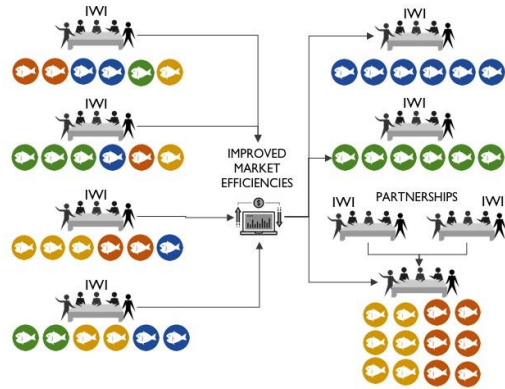
Figure 2 Research questions

1. PĀHEKOHEKO – INCREASING INTEGRATION

A. How can Māori lead multi-generation integrated planning across economic sectors and their marine jurisdictions to maintain the mauri of Nga Uri o Tangaroa?

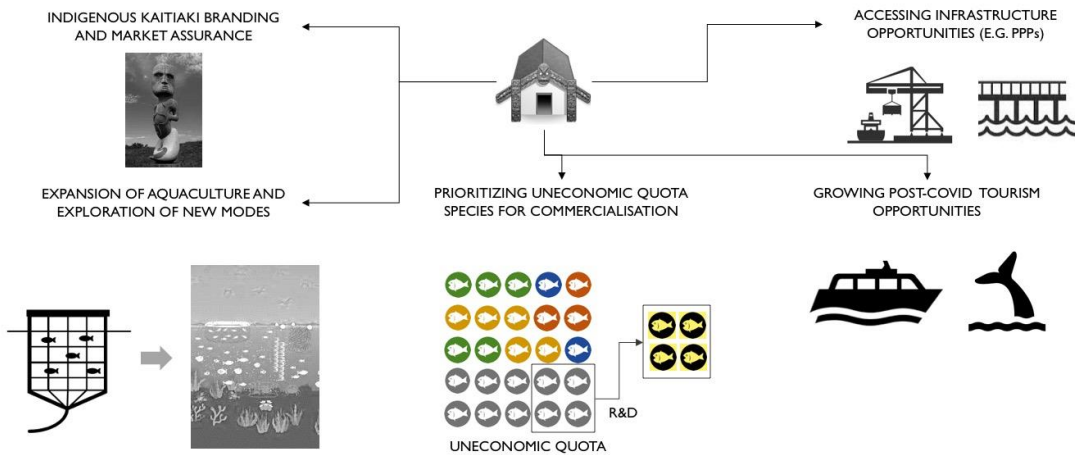


B. How can the efficiency of quota distribution be improved across iwi to grow scale and support sustainable fisheries management?
Collectivisation structures?
Market and policy reform?



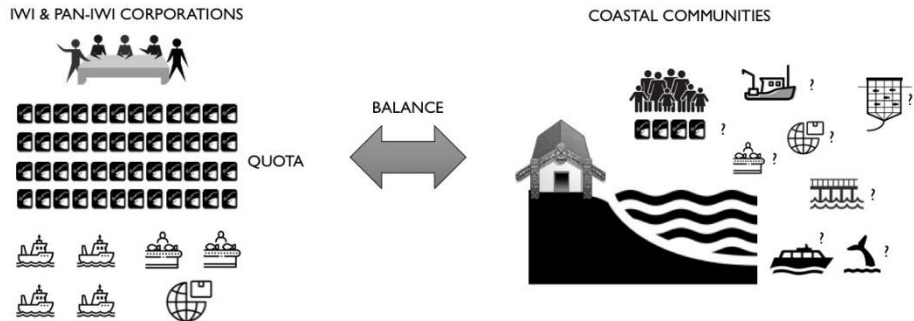
2. AUAHATANGA – GENERATING DIFFERENTIATION

How can Māori differentiate their products and diversify their activity in the marine economy?



3. WHAKATAUTIKA – CREATING BALANCE

How do we be create employment, enterprises, and other economic opportunities for whanau & hapū in coastal communities leveraging the assets and influence of iwi and pan-iwi authorities?



Methods

The proposed research themes and contexts are diverse and dynamic. To address this complexity, we propose a two-pronged approach to the research. First, case studies will be developed with Māori authorities that are actively attempting to work through the kinds of issues outlined above. Second, we will integrate the case study work with other Sustainable Seas National Science Challenge programmes that have the resources, skills, and capacity to explore each issue in more detail (see Section M for further information). Several case study organisations have been identified. Each, through engagement, have been involved in the development of this proposal. Case studies have been selected based on their suitability for examining one or more of the themes of integration, differentiation, and balance. They are also selected on their capacity to examine the themes at different scales, namely: pan-iwi, iwi, hapū, and whānau. Details of case studies are outlined below.

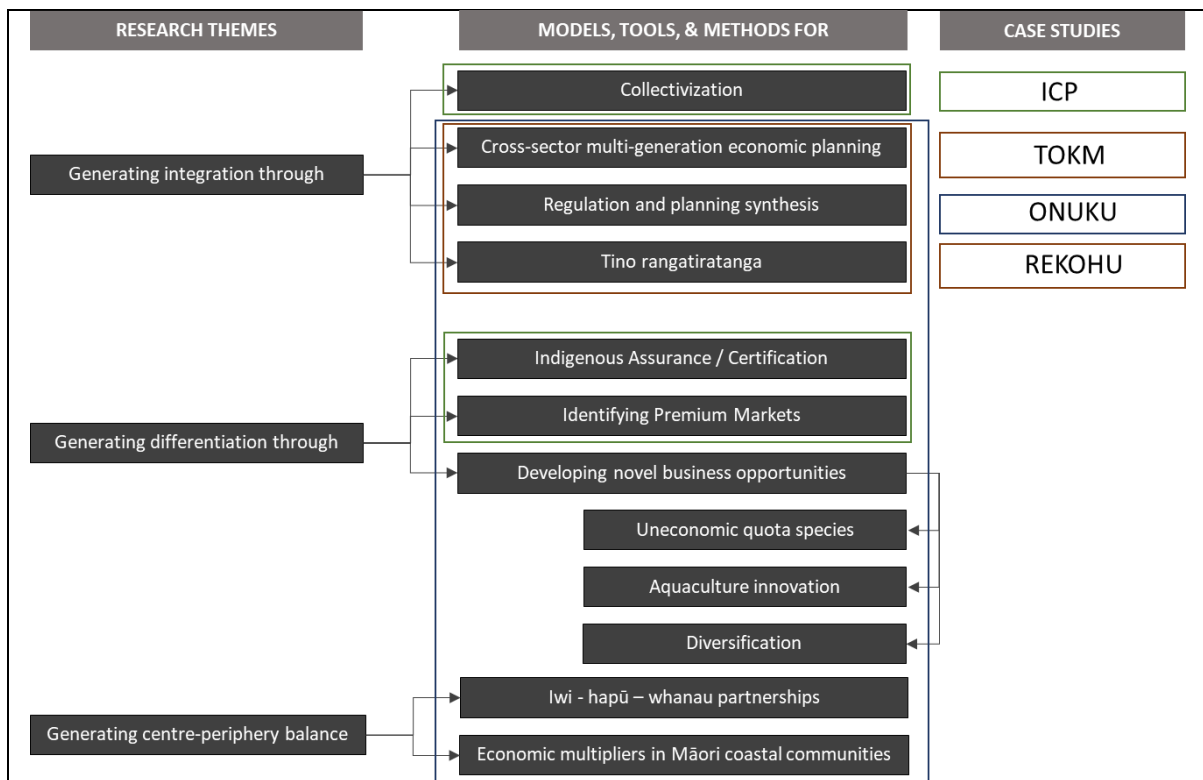
Table 1 Case study partners

Case Study	Description	Current status re: engagement
Ōnuku Rūnanga	Ōnuku Rūnanga represents the hapū of Ngāi Tawera and Ngāti Irekehu. They are involved in multiple areas of marine economic activity in Akaroa Harbour and Banks Peninsula providing an excellent partner to examine key issues, co-create solutions with challenge experts, and implement solutions at hapū scale. Specifically, they are involved in aquaculture; customary fishing; recreational fishing; marine tourism; community coastal economic planning; and multi-stakeholder management of marine resources in their takiwā.	Involvement confirmed via email from rūnanga chair.

ICP	The ICP is a cross-iwi collectivisation structure designed to support the consolidation of quota and improve efficiencies of scale. The ICP is an important partner for examining and optimising collectivisation processes. However, ICP is particularly interested in examining the development of Indigenous assurance systems and identifying premium markets.	Positive signals and involvement to date. More consultation needed.
Rekohu – Ngāti Mutunga o Wharekauri and Hokotehi Moriori Trust	These authorities are seeking to lead the coordination and planning of economic activity across recreational, customary, and commercial sectors on the Chatham Islands in the face of growing pressure on marine resources. Furthermore, there is interest in exploring optimal institutions and processes for expressing tino rangatiratanga within their marine jurisdictions.	Confirmation of support via email correspondence
Ngāti Kahungunu	Ngāti Kahungunu has assets and activities that span the value chain of marine enterprise from harvesting and processing fisheries and selling seafood products. We see alignment in the goals of the research and our values, aspirations and capabilities. Ngāti Kahungunu are exploring a regional aquaculture venture called Hinemoana (ocean maiden), which focuses on developing open-sea mussel farming in the Hawkes Bay. This has potential to contribute to an understanding of partnership-based development of the blue economy and how this can be done sustainably and in line with iwi values and aspirations.	Letter of support confirming participation attached.

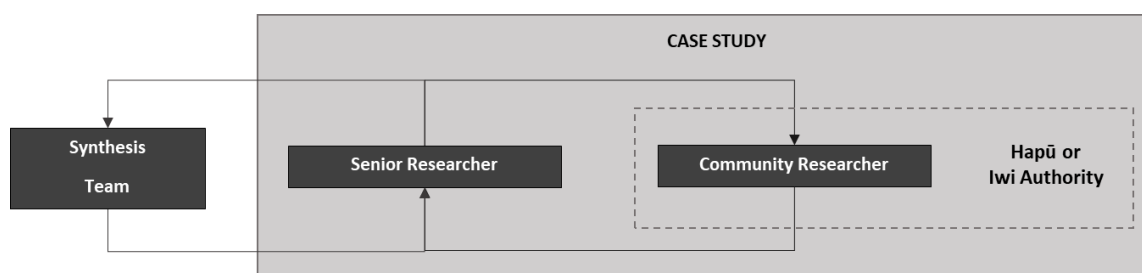
Figure 3 shows the areas of research pertinent to each case study to demonstrate how the case study approach will permit exploration across research themes.

Figure 3 Research themes, methods and case studies



The research will be conducted using the process outlined in Figure 4. A community researcher will be employed within each case study. The community researcher will be a member of the hapū or iwi, or selected by the hapū or iwi. Their role will be to undertake liaison, primary fieldwork, and ensure that results are communicated in formats that resonate with the community. The community researcher will be supported by a Senior Māori researcher who will guide the investigation, undertake analysis, and develop case study reports. The synthesis team will comprise Māori and non-Māori research specialists who will analyse case study data to synthesise findings and generate research and practice-based outputs.

Figure 4 Case study research process



The role of community researchers

Each case study will utilise a range of methodologies depending on its chosen subthemes. It is envisioned that there will be a mix of quantitative and qualitative methods including key stakeholder interviews, archival record research, focus group discussion, desktop analysis, and value chain analysis. In the case studies the community researcher will conduct interviews, communicate and coordinate with the Māori authority regarding the

co-development phases of the programme, and help determine the most appropriate and useful forms of presentation and framing through dialogue with Māori authorities.

The role of senior researchers

The senior researchers (case studies) have several roles. They will work on communication with the Māori authorities, particularly regarding the high level engagement required to set and clarify the subthemes for each case study, as well as the form and content of the presentations. The senior researchers will act as a conduit between the synthesis team and the community researcher, communicating specific requests and necessary information between them. Finally, the senior researchers will write the case study reports and will provide the material for the presentations on each case study.

The role of the synthesis team

The synthesis team will create the analytical framework and subsequent survey, ensuring a balance of key subthemes across the three themes. They will coordinate with the senior researchers to ensure timely, effective, and consistent flow of information from the community researchers required for analysis. They will also compile and/or deliver many of the outputs, excluding the case study reports and material for case study presentations.

L. Links to Phase I Research (150 words)

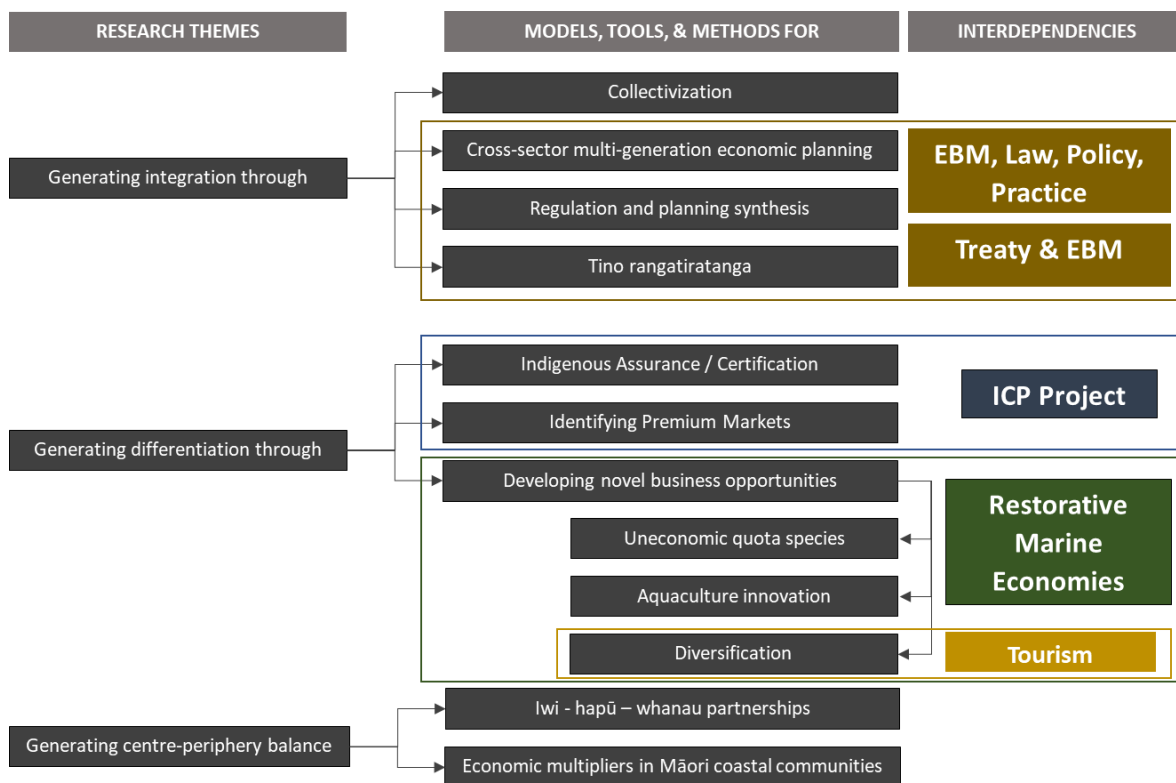
This research is based on research findings within Phase I exploring the Māori marine economy. That research detailed the history, structure, function, and operations of the Māori marine economy. In addition, an analysis was undertaken of Māori authorities operating in the Māori marine economy and the kaitiaki (stewardship) principles underpinning their operations. Through this analysis many of the issues concerning fragmentation, convention, and over-centralisation were identified. A subsequent business environmental analysis of the Māori marine economy was undertaken for the challenge. This work involved multiple interviews with key Māori leaders in the Māori marine economy, identified further issues and enabled the team to further refine key research themes.

M. Links to & interdependencies with other Phase II research projects (200 words)

This programme has strong interdependencies and relationships with five other research programmes within the challenge. These are outlined in Figure 5. Firstly, in this programme we will be working alongside our Māori authority case studies in their existing engagement with different market (e.g., fisheries, tourism, infrastructure, transport) and nonmarket (e.g., cultural, recreational, and conservation) actors in their marine estates to identify mechanisms for optimising the planning and coordination of restorative economic activity. Such Māori-led stakeholder planning processes connect strongly with two programmes: the EBM, Law, Policy, and Practice Programme led by Elizabeth MacPherson and Steve Ulrich; and the Treaty and EBM programme led by Beth Tupara-Katene. We will involve the expertise of these leaders and their teams in our co-creation research process with iwi and hapū partners. Collaboration with these Sustainable Seas National Science Challenge teams will occur within the Pāhekoheko theme, where their expertise on legislative, governance and treaty issues will be most useful. Secondly, the

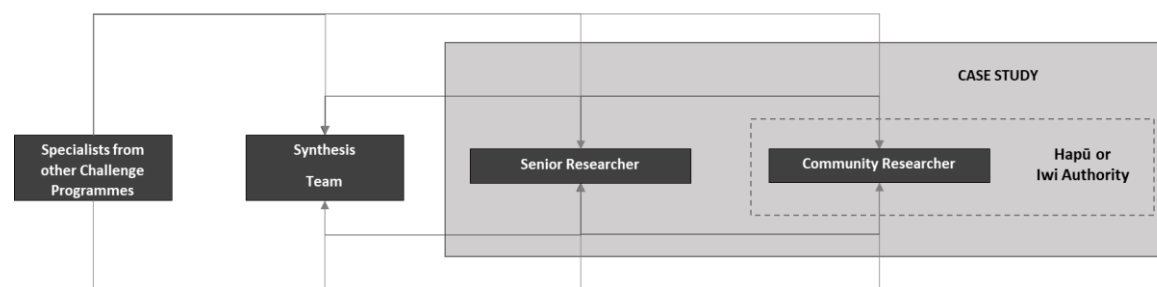
ICP is undertaking a research project to develop a market assurance system to communicate to high-end customers the Indigenous values underpinning their business practices, which aligns well with the Auahatanga theme. We aim to support the ICP in this endeavour, and will bring expertise and experience into their development process. Thirdly, we will work closely with the Restorative Marine Economies programme led by Nigel Bradley and Cerasela Stancu. We will draw upon their expertise in a range of novel and creative economic approaches and business opportunities to underpin our research in the Auahatanga theme. Fourthly, we will draw upon the Tourism Programme – principally through our connection with Chris Rosin – which also aligns with the Auahatanga theme. The interdependencies are outlined in Figure 5.

Figure 5 Interdependencies with other research



The parallel teams will be built into the research process as outlined in Figure 6 below. They will be engaged with both the synthesis team and in providing technical insights and support to the Senior Researchers leading the case studies.

Figure 6 Research teams and relationships



N. Vision mātauranga (400 words)

This programme delivers across all vision mātauranga themes. The research is embedded within hapū, iwi, and pan-iwi case studies, and has been designed based upon feedback and inclusion of a range of Māori perspectives.

Hauora—The programme is designed to identify optimal approaches and strategies for maintaining te mauri o ngā uri o Tangaroa. Given the integral understanding that Māori have regarding the connections between human health and environmental health, this programme aims to improve the health of non-human communities (ngā uri o Tangaroa), which in-turn translates into human health, through human access to clean environments and kaimoana. Furthermore, through maintaining the mana of ngā uri o Tangaroa, the mana of kaitiaki is also maintained, which in turn supports and uplifts the wairua of mana moana as well as the mauri ora of the tangata whenua in terms of their oranga.

Mātauranga—This programme is centred on co-development, and in particular, the development of models, techniques, and processes emerging through a creative collaboration between mātauranga-holders and the research team. Mātauranga Māori will inform and underpin the development of processes for integrated planning, optimal mechanisms for quota distribution, Indigenous differentiation strategies and marketing, and economic models for supporting community economic development.

Indigenous Innovation—The co-creation processes that underpin this programme supports Indigenous innovation. Our programme involves key thought leaders from Māori enterprise, policy, and community development (outlined in the partnership section), and as outlined above, is geared toward the development of new models, techniques, and processes for integration, differentiation and balance among Māori-marine based enterprises.

Taiao—The fundamental outcome of this programme is research that increases and maintains benefits for te mauri o ngā uri o Tangaroa as well as delivering economic activity that supports Māori communities economically. This means that the programme is primarily focused on maintaining and increasing te mauri o te taiao.

[O. Engagement required with iwi & stakeholders \(200 words\)](#)

This research is embedded within our key stakeholder entities including Māori communities, authorities at various scales, and businesses outlined above. Engagement will entail the contracting of community researchers within these institutions to maintain relationships and connections and undertake needed fieldwork, wānanga, and hui. This will ensure that relationships are actively maintained with partner organisations through strong information flows between the research team and stakeholders. In addition the leadership team will ensure ongoing relationships are maintained with senior policy makers from ministries including Te Puni Kokiri and the Ministry for Primary Industries. Finally, the programme is embedded across the National Science Challenge with links to various partner programmes within Tangaroa, Blue Economy, and the EBM, Law, Policy and Practice themes.

[P. Project communications \(150 words\)](#)

We will manage project communications through Massey University’s Te Au Rangahau, including providing all stakeholders, case study partners, and the Challenge with information and updates, and providing opportunities for input into project activity and outcomes. We will work closely with the Challenge’s communications team to produce information that is meaningful, useful and applicable to multiple stakeholder interests, including iwi and Māori enterprises and communities, industry, government and community organisations. We will work closely with the synthesis project team of the challenge to develop information that translates research into highly accessible and effective forms, including print and video.


Q. Risk & mitigation (150 words)

Size of programme relative to budget—this programme has significant scope and areas for research, which poses a risk for delivery within budget and timeframes. However, the case study design approach will ensure that the research is bounded by areas of research interest pertinent to our case study partners. This means that our research questions and aims will be contextualised and framed by our case studies, with a research report to be delivered by a lead researcher in partnership with a community researcher. Our synthesis team will then take data from case study reports to identify and develop high level discoveries and themes.

Case study partner participation—there is a risk that case study participation is difficult to maintain and secure. Resourcing community researchers within Māori authorities should reduce this risk, along with the stakeholder engagement strategy outlined above.

Consents and approval required to undertake research	
--	--

SUBMISSION APPROVAL

Project Name	2.3 Indigenising the blue economy		
This proposal is authorised for submission by:			
Name	Sasha Molchanov		
Role	Acting Head of School of School of Economics and Finance		
Organisation	Massey University		
Signature		Date:	11/08/2021

ⁱ Reid, J., Rout, M., & Mika, J. P. (2019). *Mapping the Māori marine economy*. Report for Sustainable Seas, Whai Rawa, Whai Mana, Whai Oranga, Wellington: Sustainable Seas; Memon, P. A., & Cullen, R. (1992). Fishery policies and their impact on the New Zealand Maori. *Marine Resource Economics*, 7(3), 153-167.

ⁱⁱ Te Ohu Kaimoana (2017). Maori Fishing Strategy. 24. Retrieved from <https://teohu.maori.nz/wp-content/uploads/2018/12/Maori-Fisheries-Strategy.pdf>

ⁱⁱⁱ Te Ohu Kaimoana (2017), 24.

^{iv} Reid, Rout, and Mika (2019).

^v Day & Emanuel (2010).

^{vi} Katene (2011).

^{vii} Te Ohu Kaimoana (2017), 50.

^{viii} Reid, J., Rout, M., & Mika, J. (2019). *Mapping the Māori marine economy*. Report for Sustainable Seas, Whai Rawa, Whai Mana, Whai Oranga, Wellington: Sustainable Seas.

^{ix} De Alessi, M. (2012). The political economy of fishing rights and claims: the Maori experience in New Zealand. *Journal of Agrarian Change*, 12(2-3), 390-412; Bodwitch, H. (2017). Challenges for New Zealand's individual transferable quota system: Processor consolidation, fisher exclusion, & Māori quota rights. *Marine Policy*, 80, 88-95.

^x Joseph, R., Rakena, M., Jones, M. T. K., Sterling, R., & Rakena, C. (2018). *The Treaty, Tikanga Māori, ecosystem-based management, mainstream law and power sharing for environmental integrity in Aotearoa New Zealand – Possible ways forward*. Wellington, New Zealand: Sustainable Seas National Science Challenge.

^{xi} Inns, J. (2013). Maori in the Seafood Sector (Fisheries and Aquaculture)—the Year in Review. *Māori Law Review*. Retrieved from <https://maorilawreview.co.nz/2014/06/maori-in-the-seafood-sector-fisheries-and-aquaculture-the-year-in-review-2/>

^{xii} Ministry for Primary Industries. (2019). *Situation and Outlook for Primary Industries*. Ministry for Primary Industries Economic Intelligence Unit: Wellington. Retrieved from <https://www.mpi.govt.nz/dmsdocument/33361/direct>

^{xiii} Interviews 1 and 3.

^{xiv} Pinkerton, M. H. (2017). Impacts of climate change on New Zealand fisheries and aquaculture. In Phillips, B., & Pérez-Ramírez, M. (Eds.). *The impacts of climate change on fisheries and aquaculture: a global analysis*, 91-118. Hoboken, N.J.: John Wiley & Sons Ltd.

^{xv} Reid, Rout, and Mika (2019).

^{xvi} Pinkerton (2017); Taunton, E. (2019, May 6). Climate change hits NZ King Salmon fish stocks and forecast earnings. *Stuff*. Retrieved from <https://i.stuff.co.nz/business/farming/112404171/climate-change-hits-nz-king-salmon-fish-stocks-and-forecast-earnings>

^{xvii} Day & Emanuel (2010).

^{xviii} Day & Emanuel (2010); Haar, J., & Delaney, B. (2009). Entrepreneurship and Maori cultural values: using 'whanaungatanga' to understanding Maori business. *New Zealand Journal of Applied Business Research*, 7(1), 25.

-
- ^{xix} Memon, P. A., & Kirk, N. A. (2011). Maori commercial fisheries governance in Aotearoa/New Zealand within the bounds of a neoliberal fisheries management regime. *Asia Pacific Viewpoint*, 52(1), 106-118. <https://doi.org/https://doi.org/10.1111/j.1467-8373.2010.01437.x>; 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; Rout, M., Reid, J. Bodwitch, H., Gillies, A., Lythberg, B., Hikuroa, D., Makey, L., Awatere, S., Mika, J., Wiremu, F., Rakena, M., & Davies, K. (2018). *Māori marine economy: A review of literature concerning the historical and contemporary structure of the Māori marine economy*. Report for Sustainable Seas, Whai Rawa, Whai Mana, Whai Oranga, Wellington: Sustainable Seas.
- ^{xx} <https://www.sustainableseaschallenge.co.nz/assets/dms/Proposals/Kia-tika-te-hi-ika-Exploring-fisheries-tikanga-and-matauranga/2.17-Kia-tika-te-hi-ika-Exploring-fisheries-tikanga-and-matauranga-Project-proposal-WEBVERSION.pdf>
- ^{xxi} Webster, S. (2002). Māori retribalization and Treaty rights to the New Zealand fisheries. *The Contemporary Pacific*, 14(2), 341-376; Bourassa, S. C., & Strong, A. L. (2000). Restitution of fishing rights to Maori: representation, social justice and community development. *Asia Pacific Viewpoint*, 41(2), 155-175; McCormack, F. (2010). Fish is my daily bread: Owning and transacting in Maori fisheries. *Anthropological Forum* 20(1), 19-39; De Alessi, M. (2012). The political economy of fishing rights and claims: the Maori experience in New Zealand. *Journal of Agrarian Change*, 12(2-3), 390-412.
- ^{xxii} Webster (2002); Bourassa & Strong (2000); McCormack (2010)
- ^{xxiii} Webster (2002); Barcham, M. (1998). The challenge of urban Maori: reconciling conceptions of indigeneity and social change. *Asia Pacific Viewpoint*, 39(3), 303-314.
- ^{xxiv} Bodwitch (2017); Rout et al. (2018).