



TE AO TŪROA

Kōtuia

Exploring Applied Kaupapa Māori Research

**SUSTAINABLE SEAS NATIONAL
SCIENCE CHALLENGE**

Te Ao Māori Synthesis Programme:
Taura Here Activity

JUNE 2024

Kōtuia

3

Exploring Applied Kaupapa Māori Research

SUSTAINABLE SEAS NATIONAL SCIENCE CHALLENGE

Te Ao Māori Synthesis Programme:
Taura Here Activity

LEAD AUTHOR:

Waiaria Rameka
Ngāti Tūwharetoa, Ngāti Raukawa

CO-AUTHORS:

Kelly Ratana
Ngāti Tūwharetoa, Ngāti Rangiwewehi

Te Rerekohu Tuterangiwhiu
Ngā Puhi, Ngāruahine, Ngāti Porou, Ngāti Ranginui, Tainui

This work was supported in full by the Sustainable Seas National Science Challenge, established by the Ministry of Business, Innovation and Enterprise, New Zealand. Project no. C01X1901.

Acknowledgments

KAIĀRAHI - SYNTHESIS STRAND LEADER

Caine Taiapa - Ngāti Ranginui, Ngāi Te Rangi, Ngāti Pūkenga

MĀTĀPUNA - CULTURAL ADVISORY GROUP

Teina Boasa-Dean - Ngāi Tūhoe, Ātiuan

Karl Leonard - Ngāti Rangiwewehi, Te Pahipoto, Ngāti Huri

Ruiha Ruwhiu - Te Whānau a Apanui, Ngāti Awa, Ngā Puhi

Reon Tuanau - Ngāti Te Rangi, Ngāti Ranginui

TE PUNA KŌRERO - TE AO MĀORI COLLECTIVE

T1: Awhi mai awhi atu: Enacting a kaitiakitanga-based approach to EBM

T3: Ngā tohu o te ao: Maramataka and marine management

T4: Te tāhuhu matatau: Empowering kaitiaki of Tangaroa

2.3: Indigenising the blue economy in Aotearoa

2.14: Whakaika te moana

2.15: Thinking outside the can: engineering toheroa aquaculture

2.16: A novel approach to aquaculture in Aotearoa NZ

3.1: Perceptions of risk and uncertainty

3.2: Communicating risk and uncertainty

4.1: Tangaroa Ararau: Treaty relationships and EBM

4.4: Understanding and communicating the various implications of scale for EBM

S3: Synthesis of Tangaroa phase one research

S7: Ki uta ki tai: Estuaries thresholds and values

Kōtuia : Exploring Applied Kaupapa Māori Research

Prepared and published by Kopare Solutions and Wheiao Whakaaro

ALL RIGHTS RESERVED

Any unauthorised copy, reprint or use of this material is prohibited. No part of this content may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system without express written permission from Kōpare Solutions and Wheiao Whakaaro

Professional Disclosure Statement

This report was prepared and published by Kopare Solutions and Wheiao Whakaaro and funded by the National Science Challenge (Sustainable Seas). The findings of this report are based on the research and information available at the date of publication and has been obtained from and is based on sources believed to be reliable and up to date. No responsibility will be accepted for any error of fact or opinion based on such reliance.

PUBLISHER:

Kopare Solutions
Tauranga, New Zealand
June 2024

DESIGNED BY:

Dixie Yates-Francis -
Te Aitanga-a-Mahaaki, Rongowhakaata, Te Arawa, Ngāti Maniapoto
Matangireia Yates-Francis -
Te Aitanga-a-Mahaaki, Rongowhakaata, Te Arawa, Ngāti Maniapoto

CITATION:

Rameka, W., Ratana, K., Tuterangiwhiu, T. R., Taiapa, C., Mātāpuna, & Te Puna Kōrero. (2024). Kōtuia : Exploring Applied Kaupapa Māori Research. Sustainable Seas National Science Challenge, Te Ao Māori Synthesis Programme, Taura Here Activity: Report 2. Kopare Solutions



TABLE OF CONTENTS

- 8 Kupu Whakauru – Introduction**
- 14 System Design**
 - Responsiveness and adaptability
 - Māori leadership
 - Dedicated space for Māori research
- 18 Project Design**
 - Lines of service
 - Mātauranga Māori
 - Team structure
 - Guiding principles
- 24 Research Design**
 - Research frameworks
 - Data collection and analysis methods
 - Research tools
 - Cultural spaces
- 28 Kōtuia– Final words**
- 30 References**

Kupu Whakauru

Introduction

SUSTAINABLE SEAS NATIONAL SCIENCE CHALLENGE

The Sustainable Seas National Science Challenge (the Challenge), one of New Zealand's 11 National Science Challenges, spanned a decade and aimed at enhancing the sustainability of marine resources for future generations. It involved research projects from across Aotearoa and brought together researchers from diverse disciplines, including mātauranga Māori, ecology, biophysical sciences, social science, economics, law and policy. In its second phase, the Challenge introduced the Sustainable Seas Synthesis programme. Designed to integrate insights from various projects and themes, the programme focused on legacy impact and aimed to produce holistic outcomes that exceed individual project results.

The Sustainable Seas Synthesis programme was structured into four Synthesis Strands: Ecosystem-Based Management, Blue Economy, Research Process, and Te Ao Māori. Each strand formed the basis for specific synthesis efforts, providing unique perspectives and approaches to conducting and delivering synthesis.

TE AO MĀORI SYNTHESIS STRAND

The Te Ao Māori synthesis strand aimed to draw together learnings from across the Challenge, synthesising insights from a Te Ao Māori perspective. This effort involved collaboration with two groups:

- Te Mātāpuna – the Te Ao Māori synthesis cultural advisory group
- Te Puna Kōrero (TPK) – the Te Ao Māori synthesis collective, a group of Challenge research projects that contributed to the synthesis programme.

The aim was to amplify the voices and perspectives of Te Ao Māori. The collaboration focused on creating products and facilitating events to drive impactful outcomes for Te Ao Māori.

The synthesis programme comprised four activities – He Taura Here, He Waka Taurua, Te Ao Tūroa, and Tūhonohono.¹ Although these activities pursued separate lines of inquiry, they worked collaboratively to design and deliver the overall synthesis programme.

This report contributes to the efforts undertaken in the Taura Here activity. A synthesis activity which aimed to draw insights from across the Challenge to deepen understanding of Māori epistemologies and research methodologies. This particular report focuses on elevating Kaupapa Māori research methods and Māori technical science² as crucial components of the Challenge's research.

'Kōtuia' the report's title, refers to the process of weaving together diverse strands of knowledge and perspectives to create a cohesive and comprehensive understanding. In the context of the synthesis programme, kōtuia involved collaborative efforts to integrate different research findings from across the TPK – with a particular focus on enhancing understanding of applied Kaupapa Māori research.

This study, as part of the broader synthesis programme, used the Te Ao Tūroa framework to guide its development and delivery. Data collection was facilitated through various tailored methods, including desktop data scans, literature reviews, clustered workshops, in-person wānanga and semi-structured interviews. Data analysis involved an iterative thematic coding approach, used to identify common themes and significant patterns across the collected data.³

¹ For more details about the Te Ao Māori Synthesis Activities, see He Taura Here Report - Rameka, W., Ratana, K., Tuterangiwhiu, T. R., Taiapa, C., Mātāpuna, & Te Puna Kōrero. (2024). He Taura Here: Te Ao Māori Synthesis Framework. Sustainable Seas National Science Challenge, Te Ao Māori Synthesis Programme, Taura Here Activity: Report 1. Kopare Solutions.

² 'Māori technical science', a term coined by Teina Boas-Dean during a Mātāpuna wānanga, encapsulates the knowledge and practices that Māori have developed through longstanding interactions with their environments. This scientific tradition offers a broad and sophisticated understanding of ecological systems, honed over generations through observation, experimentation and adaptation.

³ For more information regarding the synthesis research methods, see He Taura Here report – Rameka, W., Ratana, K., Tuterangiwhiu, T. R., Taiapa, C., Mātāpuna, & Te Puna Kōrero. (2024). He Taura Here: Te Ao Māori Synthesis Framework. Sustainable Seas National Science Challenge, Te Ao Māori Synthesis Programme, Taura Here Activity: Report 1. Kopare Solutions.

VISION MĀTAURANGA DIRECTIVES

In 2007, the Vision Mātauranga (VM) policy framework was released to provide directives towards increasing opportunities for Māori communities to make distinctive contributions to the research, science, and technology (RSI) sector. The mission of the policy framework being to 'unlock the innovation potential of Māori knowledge, resources and people to assist New Zealanders to create a better future'.⁴

From its inception, the implementation of the policy has evolved through several key initiatives. Of specific relevance to this study are the VM directives for the National Science Challenges, which mandated the integration of the VM policy into the design and delivery of research programmes.

In terms of the Sustainable Seas National Science Challenge, the VM policy statement has been critical in providing directives for creating space for research that serves to develop Māori knowledge, resources, people and innovation.

To align with these directives the Challenge established a range of strategic investment areas to enable development of research that supports Māori needs and aspirations for marine management. Of particular interest to this study are the various research models supported and facilitated by the Challenge.

To better contextualise this, a Māori Research Classification developed by Garth Harmsworth outlines five categories of research based on Māori involvement and suggests the expected level of Māori outcomes generated from each research model.⁵

⁴ Ministry of Research, Science and Technology (MoRST). (2007). Vision Mātauranga: Unlocking the innovation potential of Māori knowledge, resources and people. Ministry of Research, Science and Technology.

⁵ Rauika Māngai. (2020). A guide to Vision Mātauranga: Lessons from Māori voices in the New Zealand science sector.



The diagram presented here illustrates a progressive movement from research with no specific Māori component towards Kaupapa Māori research. It suggests that although significant efforts have been made across scientific research to better position mātauranga Māori as a valid and integral component of RSI, the journey does not end with Māori merely participating in Western science research. It indicates that Māori-centred research is not the endpoint but a stepping stone towards discovering the full potential that sits within Kaupapa Māori research methodology.

A noteworthy development to emerge from the Challenge VM directives is the recognition of Kaupapa Māori research as a valid and valuable research methodology for developing research focused on science and innovation. This report looks to explore how Kaupapa Māori research was applied in Challenge research, and how lessons from its delivery can contribute to informing continued progress towards the effective implementation of Kaupapa Māori research in RSI.

EXPLORING APPLIED KAUPAPA MĀORI RESEARCH

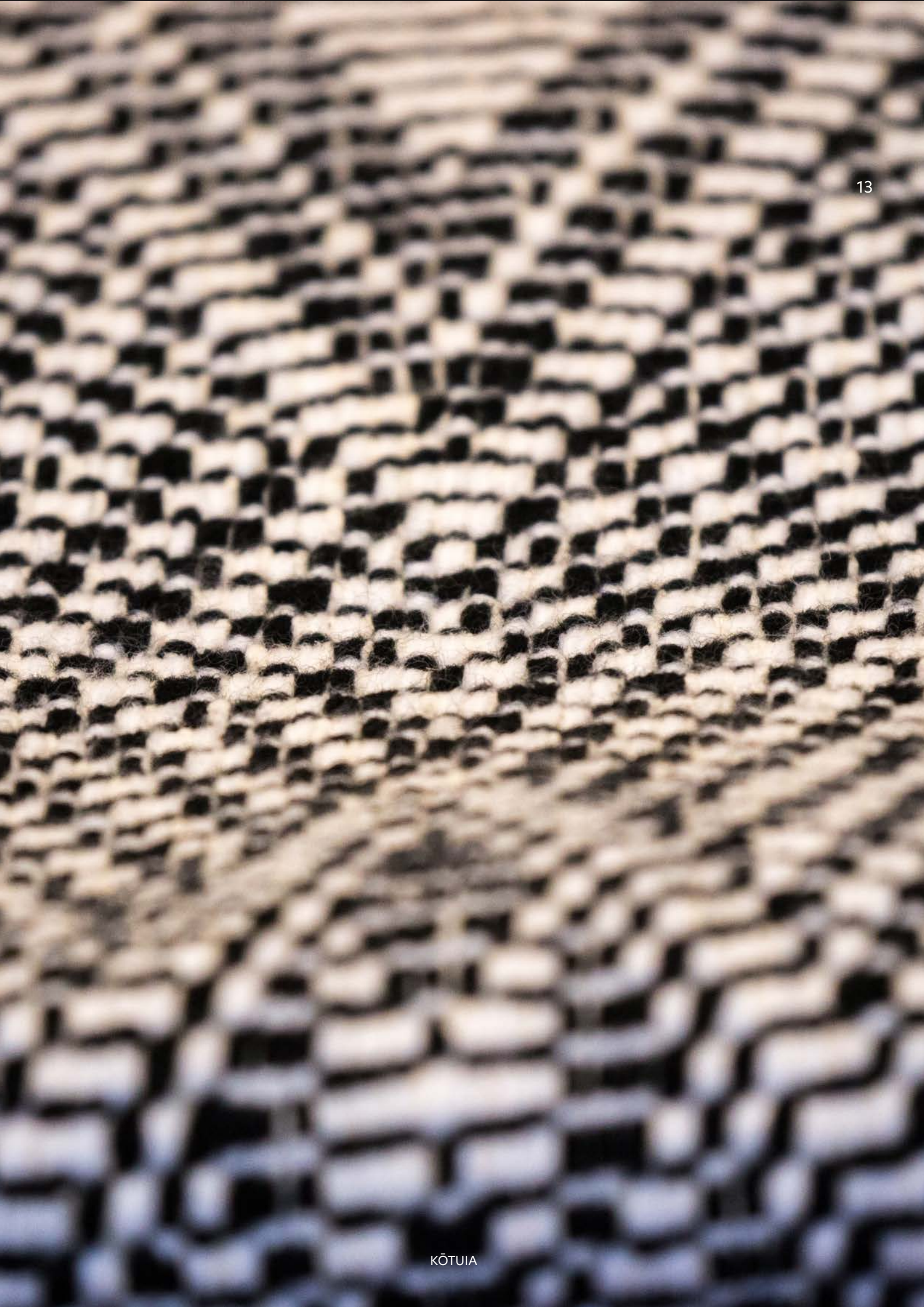
Developed over a number of years, Kaupapa Māori research is grounded in a substantial body of knowledge that provides comprehensive and expansive insights into its philosophy and theory.⁶ Although this study does not delve into the theoretical foundations of Kaupapa Māori research, it is important to consider the unique contributions and advantages that Kaupapa Māori research offers to science and innovation research – benefits that neither Western science-led or Māori-centred research fully provide.

To this end, this report explores key change agents within the Challenge that have enabled the application of Kaupapa Māori research. It examines how Kaupapa Māori research was applied, and explores critical success measures for its development and delivery. This report focuses on three specific areas of the Challenge:

1. **System design:** Focuses on specific directives and change agents positioned within the Challenge system that have created space for Kaupapa Māori research.
2. **Project Design:** Examines how Kaupapa Māori research projects were designed, including service lines, team structure and guiding principles.
3. **Research Design:** Explores the specific Kaupapa Māori research techniques used to collect and analyse data, including the tools and approaches that researchers used to conduct their research.
4. **Where to from here?** Drawing from the insights gathered, the final section provides considerations for future implementation of Kaupapa Māori research in RSI.

Note: Unless otherwise specified, all quotes in this report are from Te Puna Kōrero.

⁶ Developed from the seminal work of Linda Smith – Smith, L.T. (1999). *Decolonizing Methodologies: Research and Indigenous Peoples*. Zed Books.



System Design

NGĀ AHO - SUMMARY OF FINDINGS

Te Puna Kōrero (TPK) identified three critical change agents within the Challenge system design that were essential for enabling the implementation of Kaupapa Māori research.

- ▲ **1. Responsiveness and adaptability:** The design of the VM policy directives into the Challenge system was responsive to feedback, enabling intentional and ongoing development.
- ▲ **2. Māori leadership:** The strategic placement of Māori leadership roles throughout the design of the Challenge ensured a Māori voice in decision-making processes at all levels of the system.
- ▲ **3. Dedicated space for Māori research:** Prioritising the establishment of the Tangaroa Programme, a dedicated Māori research theme, created a unique, supportive and culturally safe environment for Māori research.

This section examines the Challenge system from the perspective of the TPK and identifies critical success factors that have enabled Kaupapa Māori research. It acknowledges the flow-on effects of sound policy directives that have shaped the system's design and structure.

Although this section does not encompass all initiatives initiated by the Challenge, it focuses on those aspects explicitly expressed by TPK research projects. This section focuses on VM responsiveness, Māori leadership and dedicated Māori space as critical change agents.

RESPONSIVENESS AND ADAPTABILITY

Over the tenure of the Challenge, a concerted effort was made to adapt and enhance the implementation of VM, demonstrating responsiveness to feedback and the evolving needs of Māori researchers. Two significant aspects of this adaptive response were identified.

Strengthening the influence of Vision Mātauranga policy: The integration of the VM policy into the structural design of the Challenge embedded Māori knowledge as integral and foundational to research rather than supplementary. This approach involved continued and intentional development to ensure meaningful alignment and implementation of the VM policy, building systems throughout the Challenge to appropriately enable Kaupapa Māori research.

Making adjustments to ensure the system is responsive: The Challenge evolved based on feedback from phase one. This openness to change led to better engagement with Māori researchers, enhanced governance structures, and more robust support mechanisms, all of which significantly improved the research experience in subsequent phases.

“ I think about the impact that the Vision Mātauranga policy had on the science space. It was a starting point; it was something that forced the research system to look at something a little bit deeper.”

“I have heard that feedback from some of the phase one researchers was not too great, but I think from that, the Challenge has made intentional changes to how they delivered the second phase of the programme, which I think has been quite successful in providing spaces for us to work.”

MĀORI LEADERSHIP

The Challenge made intentional efforts to increase Māori representation within its governance structures, leadership, and research teams. This increased involvement meant that Māori perspectives were directly included in the design of the whole Challenge system. This level of inclusion has been crucial for creating space for authentic and effective Kaupapa Māori research.

Strategic Māori leadership: Māori leadership within the Challenge has been key in advocating for Kaupapa Māori research. One example, reiterated by participants, is that the Manahautū role was crucial in embedding VM policy throughout the Challenge, ensuring Māori perspectives were central to both the research process and outcomes. This position was pivotal in guiding the safe implementation of Māori research, protecting Māori research spaces, and developing Māori research programmes across the Challenge.

Māori Advisory Group: The establishment of the Māori advisory group, Kāhui Māori, was crucial to ensuring Māori perspectives were integrated into the Challenge’s decision-making processes. As an advisory council, the group guided the design of the Challenge system, provided direction to Māori leadership teams, and oversaw Māori research projects. This advisory support was pivotal in maintaining the integrity of Kaupapa Māori within the Challenge’s system and its research projects.

“[the Manahautū] position in the Sustainable Seas structure has been absolutely critical for us to be able to deliver and design our project in a more Māori way. So she pretty much has looked after our kaupapa Māori research projects across all of the Sustainable Seas really. And without her in there advocating for our methods, and methodologies, I don’t know if we would have had the same experience.”

DEDICATED SPACE FOR MĀORI RESEARCH

The establishment of the Tangaroa programme was crucial for creating dedicated spaces where Māori research could develop. The Tangaroa theme acted as an agent for embedding mātauranga Māori into the Challenge's system, creating culturally safe environments where Māori researchers felt protected and supported, and fostering a sense of community that allowed researchers to conduct their projects in ways that aligned with Kaupapa Māori research principles.

Creation of dedicated spaces for Māori research: The Tangaroa programme provided a dedicated space for Māori research, ensuring that projects could be conducted in ways that respected and integrated Māori values, practices and methodologies. This focus not only addressed specific issues relevant to Māori communities; it also ensured that the research environment aligned with cultural values.

Māori leadership: Strong leadership within the Tangaroa programme was crucial in guiding and advocating for Māori perspectives and methodologies within the broader Challenge programme. Leadership roles were occupied by individuals committed to fostering an environment where Māori research could thrive.

Enhanced cultural safety: The Tangaroa programme was specifically designed to allow Māori research projects and teams to design, develop and deliver their projects in ways that were relevant to the environment and the people involved. All projects in the Tangaroa programme were led by Māori and conducted by Māori, fostering a safe space for project development. This programme eliminated the need to justify methods or approaches, as there was already an understanding of the complexities inherent in Māori research.

Supportive networks: The Tangaroa programme fostered supportive networks that enhanced collaboration and peer support among Māori researchers. Te Hononga, a Māori Research Group within the Challenge, aimed to create spaces for Māori researchers to gather, share insights and discuss progress. This network was essential for exchanging knowledge, methodologies and resources which, in turn, strengthened the collective capability of Māori researchers in the Challenge.

"I feel like because we're in the Tangaroa programme, we're quite protected and looked after. And having a space specifically for Māori, where we were led by Māori, we were able to do our projects in a Māori way, which was super important."



Project Design

NGĀ AHO - SUMMARY OF FINDINGS

Te Puna Kōrero (TPK) identified four key success factors as essential to the design of Kaupapa Māori research projects.

- ▲ **1. Lines of service:** Define clear service directives to ensure research is relevant and beneficial to Māori communities.
- ▲ **2. Mātauranga Māori:** Deliberately design research to incorporate meaningful exploration and reclamation of mātauranga Māori.
- ▲ **3. Team structure:** Carefully assemble research teams with expertise in the safe and appropriate exploration of Mātauranga Māori and experience in collaborating with Māori communities
- ▲ **4. Guiding principles:** Embed Māori cultural values into the entire research program, including its foundations, structure, ethics, and delivery.

This section of the report explores key project design features from participating TPK that have enabled alignment with Kaupapa Māori research principles and the development of culturally appropriate research programmes. This section focuses on lines of service, mātauranga Māori, team structure and guiding principles as key design features for achieving meaningful and beneficial research outcomes.

LINES OF SERVICE

Across the TPK projects, it was crucial that the service lines were clear and well-defined, serving as anchor points for the development and delivery of the research. This approach ensured that the research was designed to meet the specific needs and aspirations of whānau, hapū, iwi, Māori organisations and Māori businesses, fostering direct and locally relevant impacts. Some of the research service lines discussed by TPK are presented here.

Research partners: Researchers emphasised the significance of designing research to serve co-partners and case study groups, including whānau, hapū, iwi, and Māori organisations and Māori businesses. It was crucial to tailor research to meet the needs and aspirations of these partners. By focusing on direct and locally relevant service lines, such research addressed specific knowledge gaps and challenges faced by whānau.

Building capacity and capability: Capacity building emerged as a pivotal line of service across the TPK. Significant focus was on providing space to develop practical technical research capabilities, to enable partners to ultimately conduct research independently.

Cultural Practitioners: Some research projects emphasised the importance of reclaiming mātauranga Māori as a service line for the revitalisation of ancestral practices. These projects aimed to draw on ancestral knowledge repositories to deepen understanding and serve as a foundation for re-establishing cultural practices aligned with traditional knowledge systems.

Taiao: For all TPK projects, serving taiao and the moana was a central focus. Projects with direct service lines to taiao aimed to enhance the ecological wellbeing of marine and coastal areas using mātauranga Māori. These projects focused on re-establishing a flourishing Ao Tūroa, restoring mussel populations, reducing plastic pollution, and deepening understanding of how to better exercise kaitiakitanga for mahinga kai.

Research Practice: Participants also highlighted their commitment to advancing technical environmental research methods. One project focused on developing a mātauranga-informed monitoring framework for marine and coastal environments. Another used traditional fibre and weaving techniques to create viable mussel spat lines for mussel restoration efforts. Both projects provided innovative research solutions to contemporary challenges.

“The whole purpose around it was trying to find someone in those entities to bring in a researcher from them to help build their capacity and capability so that they can work alongside this research and develop outcomes that best suit them.”

“We all have a very strong focus on the service to Te Ao Māori, to mātauranga Māori, to Māori practice, to Māori knowledge.”

MĀTAURANGA MĀORI

Mātauranga Māori was identified as a critical body of knowledge for all TPK projects. All projects acknowledged the importance of mātauranga Māori for grounding research, using it in various ways to draw meaning and understanding. Presented here are the different mātauranga Māori repositories examined through various research projects, which guided the development of research frameworks, informed research inquiry, and ultimately produced impactful research outputs and outcomes.

Whakapapa: Whakapapa was acknowledged as a key source of mātauranga in several projects. It was explored as a vital knowledge system for understanding ecological relationships essential for restoring mahinga kai and aquatic aquaculture practices.

Tikanga: Tikanga provided guiding principles for exploring the development of culturally responsive policy frameworks and served as a blueprint for tracking natural environmental cycles, supporting the creation of a cultural indicator framework.

Puna Kōrero: All TPK projects called on experts to help explore mātauranga Māori. Mātanga reo, pūkenga taiao, ahikā, and kaumātua provided essential guidance and

20 oversight. These experts offered deeper access to ancestral wisdom, informing inquiry and driving outcomes. Their involvement ensured that the research was culturally grounded, respected traditional knowledge, and produced meaningful and relevant outcomes.

Pūrākau: Pūrākau were used to explore mātauranga Māori, facilitating the development of cultural digital repositories, deepening the understanding of the knowledge housed in maramataka, and reclaiming ancestral stories of moana, whenua and taonga.

Maramataka: Maramataka, as a knowledge repository, was an important source of traditional ecological knowledge. Some of the projects looked to reclaim and use maramataka knowledge to support marine monitoring programmes.

Traditional aquatic cultivation practices: Traditional aquatic cultivation practices were explored to re-establish sustainable practices informed by ancestral wisdom. One project, in particular, drew on cultural practices such as utu piharau, whakaparu and pā īnanga to understand and develop restoration methods that were culturally informed and environmentally appropriate.

Traditional weaving techniques: Traditional Māori weaving techniques were used to create biodegradable lines for collecting mussel spat. This integration of cultural practices into modern conservation efforts illustrates how traditional weaving practices can help to address contemporary environmental challenges.

“Whakaika has focused particularly on exploring aquatic cultivation practices. While many were discussed, three practices were explored further, including utu piharau used in the Whanganui River and both whakaparu and pā īnanga used at Ōeo Pā.”

TEAM STRUCTURE

When designing a Kaupapa Māori research project, the team structure and design are critical components. For TPK, it was essential to assemble teams that not only possessed the right expertise but also valued genuine collaboration and shared goals. The process of bringing together such teams involved careful consideration of prior relationships, technical expertise and shared aspirations. Ensuring the right mix of skills, cultural understanding and commitment to the research objectives was vital.

HOW WERE TEAMS PULLED TOGETHER?

Prior relationships: The formation of research teams strongly emphasised the importance of leveraging existing relationships. The formation of some teams was based on established connections within communities, hapū and iwi, ensuring a foundation of trust and mutual understanding that was vital for collaborative research.

Technical expertise: Technical expertise was strategically incorporated into team structures to equip teams with essential knowledge and skills such as mātauranga Māori, policy and law, business, industry, and science. Experts were involved from the project's inception until its review stages, to uphold the cultural integrity of the research.

Shared aspirations: Alignment of the teams was based on shared aspirations and goals that transcended individual projects, focusing on long-term benefits for the community and the advancement of Māori interests. This alignment helped ensure that all team members were motivated by a common vision, enhancing the coherence and impact of their efforts.

"But more importantly, we developed a relationship with different groups around the moana. And so that co-development whakaaro had already taken place in those projects. And we kind of looked at Sustainable Seas as an avenue to sort of say, we might be able to develop this further and put it in some form of a digital medium."

HOW WERE RESEARCH TEAMS STRUCTURED?

Expert advisors: Expert advisors played crucial roles in overseeing the project's integrity and aligning its methods with both mātauranga Māori and scientific standards. These advisors provided oversight and guidance throughout various stages of the research.

Māori leadership: Māori leadership was central to the design of the project teams. Leaders were often individuals who held significant respect within the community and were tasked with ensuring clear goals, maintaining the course, and ensuring cultural appropriateness and service of the research.

Māori co-partners and case studies: Partnerships with Māori communities and organisations were essential for grounding the research in real-world contexts and needs. These partnerships involved collaborative efforts in data collection, analysis and reporting, reflecting a co-development approach that respected the autonomy and knowledge of Māori co-partners.

Ahikaa: Ahikaa, referring to those with ongoing and direct ties to their land and community, were integral to the research teams. Their presence in their communities added a layer of depth and authenticity to the research, ensuring it remained grounded in the realities and priorities of the people it aimed to serve.

Non-Māori technical support: Non-Māori technical support was also incorporated within the teams, providing specialised expertise that complemented the mātauranga Māori elements. This inclusion ensured a diverse range of skills and perspectives, facilitating an inclusive approach to the research where needed.

“Having people to check us in, check our biases in our own internal whakaaro was really important. So being able to bring in external experts to sit on each of the wananga was really great to keep that with an eye over things.”

“Supported and guided by project advisors and mātanga reo, this exploration delved into the inner meanings of kupu examining their structure inner coding and relationships to the broader maramataka system.”

GUIDING PRINCIPLES

Participants emphasised the importance of developing project-specific guiding principles, not merely as a procedural necessity but as a fundamental necessity for engaging in Kaupapa Māori research. These principles ensured that the research was culturally congruent, supported the autonomy and development of research partners, and fostered meaningful collaborations. Here, we present some key principles that guided the project teams through their research programmes.

Mana Motuhake – community autonomy: Ensuring Mana Motuhake involved recognising and fostering the authority of Māori researchers and communities over their cultural knowledge, resources, and research development pathways. This principle was vital in promoting self-determination and ensuring that the research supported the aspirations of Māori participants without imposing external agendas.

Collaborative decision-making: Collaboration in decision-making was crucial, involving all researchers, advisors and co-partners throughout the research process. For TPK projects, this approach went beyond mere consultation; it meant actively ensuring that research partners had a significant say in determining the research direction, methods and outcomes.

Equitable resourcing: Fair and adequate resourcing was identified as essential to ensuring meaningful research partnerships. This included providing sufficient financial and material resourcing to ensure that research partners and communities were able to engage effectively in the research without resource constraints.

“Although it was a collective kaupapa, we worked individually with each of the case study groups. I think that was important because it enabled each of the case study groups to move at their own speed and there wasn’t any expectation that they design up their programme in the same way as anyone else. Each individual case study group was able to design and deliver their programme in a way that was meaningful for them.”



Research Design

NGĀ AHO - SUMMARY OF FINDINGS

Te Puna Kōrero (TPK) identified four key insights for designing and delivering Kaupapa Māori research.

- ▲ **Research frameworks:** Design research frameworks grounded in mātauranga Māori, allowing for iterative development to meet community needs and maintain cultural relevance.
- ▲ **Data collection and analysis methods:** Utilise existing methods and develop new data collection and analysis techniques tailored to each project's requirements.
- ▲ **Research tools:** Explore the use of existing research tools and the development of new tailored tools informed by Mātauranga Māori.
- ▲ **Cultural spaces:** Incorporate wānanga as cultural spaces for collective learning and sharing, providing a safe environment for participants to engage with traditional knowledge.

The delivery of research varied across TPK projects, incorporating both traditional research methods and developing new methods relevant and responsive to the needs of the research programmes. Here, we present some of the key research design elements shared by TPK researchers.

RESEARCH FRAMEWORKS

For all TPK projects, research frameworks were informed by mātauranga Māori and incorporated iterative, adaptive approaches to ensure cultural responsiveness and relevance. These frameworks evolved organically, allowing continuous refinement of methods and practices based on the specific needs and insights of different research partners as well as the research communities.

“The Wao Atua framework evolved organically as the programme progressed. The first iteration was developed mid-way through the project allowing a full year-and-a-half to ground the programme in each research area.”

DATA COLLECTION AND ANALYSIS METHODS

Varied methods of data collection and analysis were implemented across all the TPK projects. Some used traditional research methods, while others explored and developed new methods that aligned with their specific research needs. Key to the delivery was the space to collect and analyse data in a Māori way, informed by mātauranga Māori. The exploration of these methods drew insights from cultural practices such as tiro, wetewete reo, and kōrero. Some were complemented by Western scientific methods.

Tiro – cultural observation: Tiro involved detailed tracking and monitoring of environmental indicators and cycles over time. Researchers committed to observing specific environmental systems to document changes and patterns from a Māori cultural perspective.

Kōrero – interviews: Interviews were conducted with community members, including kaumātua and cultural practitioners, to capture a wide range of perspectives and knowledge. These interviews provided rich kōrero, revealing deep connections to the environment and traditional practices.

Wete Reo – language semantics: Language semantics played a crucial role in data collection, where researchers engaged in reclaiming and understanding specific aspects of Te Reo Māori to gain a deeper understanding of environmental processes.

Rūnanga/Pūmahara – collective reflection and analysis: Monthly rūnanga (councils of experts) were convened to reflect on cultural observations and share insights. This collective approach to data analysis integrated the wisdom and knowledge from various researchers over time.

Science Monitoring: Some projects included scientific monitoring, with a particular focus on mahinga kai (traditional food-gathering areas). This approach involved identifying mahinga kai areas and monitoring the health and abundance of key species over time.

“Ko te mea nui ki ahau me noho i te whakaiti i ngā wā katoa. Ehara i te mea ko mātou kē ngā pūkenga kei roto i ngā mātauranga e pā ana ki te moana. Kei a rātou ngā mātanga kē, ngā tohunga kē. So, I think it was really appropriate for us to go out and talk to the many different strands that attach to Tangaroa Ararau to make sure that we can get as wide and diverse a range of whakaaro as we can.”

RESEARCH TOOLS

A variety of mātauranga Māori research tools were employed across the projects, integrating traditional knowledge and techniques with modern scientific methods. One example was the use of traditional weaving techniques to create biodegradable lines for collecting mussel spat. Another example was the development of maramataka dials.

“The development of taura kuku using mātauranga Māori methods and materials proved a successful biodegradable tool for the settlement of wild mussel spat.”

CULTURAL SPACES

Wānanga provided a platform for collective learning and sharing in a culturally safe environment. Wānanga allowed researchers and participants to delve deeply into traditional knowledge and practices. They facilitated the reconnection with ancestral knowledge and provided a supportive environment for open discussions and collaborative exploration.

“Wānanga creates a real safe welcoming space for people to come in and share kōrero. Wānanga is the way that we deliver it; it was you know three days long. So you are able to stay with the whānau eat with the whānau. And you kind of develop a real strong relationship not only for the people but for the marae and the whenua and the wai.”



Kōtuia – Recommendations

This report provides a comprehensive analysis of the Kaupapa Māori research conducted in the Challenge, identifying key change agents and success factors across three key areas of research delivery: system design, project design, and research design. The collective findings indicate that a whole system approach is essential for truly empowering Kaupapa Māori research. This involves intentionally integrating Kaupapa Māori principles and mātauranga Māori into every aspect of the research system.

In the context of the Challenge, the VM policy statement has been critical in establishing directives that have created space for research that serves Māori knowledge, resources and people. Leveraging the foundational framework provided by the VM policy and the insights from the Challenge, this final section concludes by providing considerations for the next iteration of RSI, with a focus on empowering and enabling applied Kaupapa Māori research.

Designing a culturally responsive research system

Responsiveness and adaptability: Ensure a level of system adaptability to allow for ongoing responsiveness to feedback and continuous system development.

Māori leadership: Ensure strategic placement of Māori leadership roles throughout the research system, to ensure Māori voices and perspectives are included in decision-making processes at all levels.

Dedicated space for Māori research: Create dedicated research programmes for Māori research. These programmes should be developed and delivered by Māori, for Māori, and using Māori methods.

Designing Kaupapa Māori research projects

Lines of service: Provide for research that creates direct benefit to Māori communities and their environment.

Mātauranga Māori: Provide for research that seeks to delve into the depths of mātauranga Māori.

Team structure: Provide for research that has Māori-led teams, Māori research teams and Māori research partners.

Guiding principles: Provide for research that embeds Māori cultural values and principles at the core of the project.

Designing Kaupapa Māori research

29

Research frameworks: Provide for research that applies or develops cultural research frameworks grounded in mātauranga Māori.

Data collection and analysis methods: Provide for research that develops or uses mātauranga Māori informed data collection and analysis methods.

Research tools: Provide for research that develops and uses research tools informed by mātauranga Māori.

Wānanga: Provide for research that uses wānanga as an essential cultural space for collective exploration of mātauranga Māori.

References

Ministry of Research, Science and Technology (MoRST). (2007). *Vision Mātauranga: Unlocking the innovation potential of Māori knowledge, resources and people*. Ministry of Research, Science and Technology.

Rameka, W., Ratana, K., Tuterangiwhiu, T. R., Taiapa, C., Mātāpuna, & Te Puna Kōrero. (2024). *He Taura Here: Te Ao Māori Synthesis Framework*. Sustainable Seas National Science Challenge, Te Ao Māori Synthesis Programme, Taura Here Activity: Report 1. Kopare Solutions.

Rauika Māngai. (2020). *A guide to Vision Mātauranga: Lessons from Māori voices in the New Zealand science sector*.

Smith, L.T. (1999). *Decolonizing Methodologies: Research and Indigenous Peoples*. Zed Books.





TE AO TŪROA

KŌTUIA

Exploring Applied Kaupapa Māori Research

**SUSTAINABLE SEAS NATIONAL
SCIENCE CHALLENGE**

Te Ao Māori Synthesis Programme:
Taura Here Activity