COASTAL PEOPLE :
SOUTHERN SKIES

Centre of Research Excellence

Annual Report **2023**

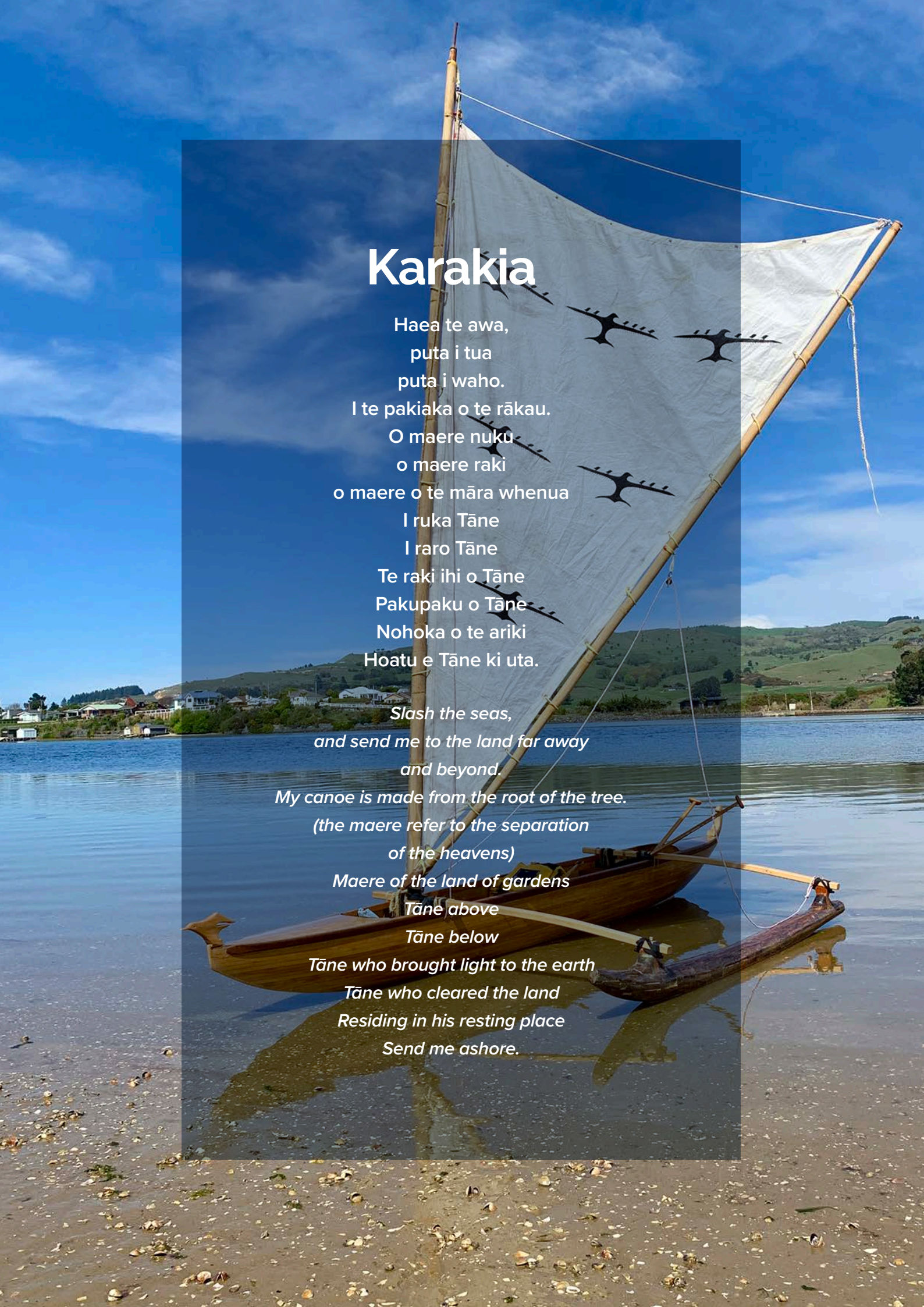
We acknowledge Governance Board Members Dr Rebecca McLeod and Professor Emeritus Khyla Russell, and Research Advisory Board members Professor Wendy Nelson, Professor Emeritus Terry Chaplin, Professor Catriona Hurd, Dr Ana Koloto and Professor Chellie Spiller whose service for Coastal People : Southern Skies ended during 2023.

Reflections of Waikouaiti awa and mauka. Photo credit: Suzi Flack

Front Cover photo: The Parāoa research team get ready with their cameras for photo-identification of parāoa when they surface. Photo credit: Far Out Ocean Research Collective

Contents

Photo: Marine resources at a women's market, Solomon Islands.
Photo credit: Karen Greig.



Karakia

Haea te awa,
puta i tua
puta i waho.
I te pakiaka o te rākau.
O maere nuku
o maere raki
o maere o te māra whenua
I ruka Tāne
I raro Tāne
Te raki ihi o Tāne
Pakupaku o Tāne
Nohoka o te ariki
Hoatu e Tāne ki uta.

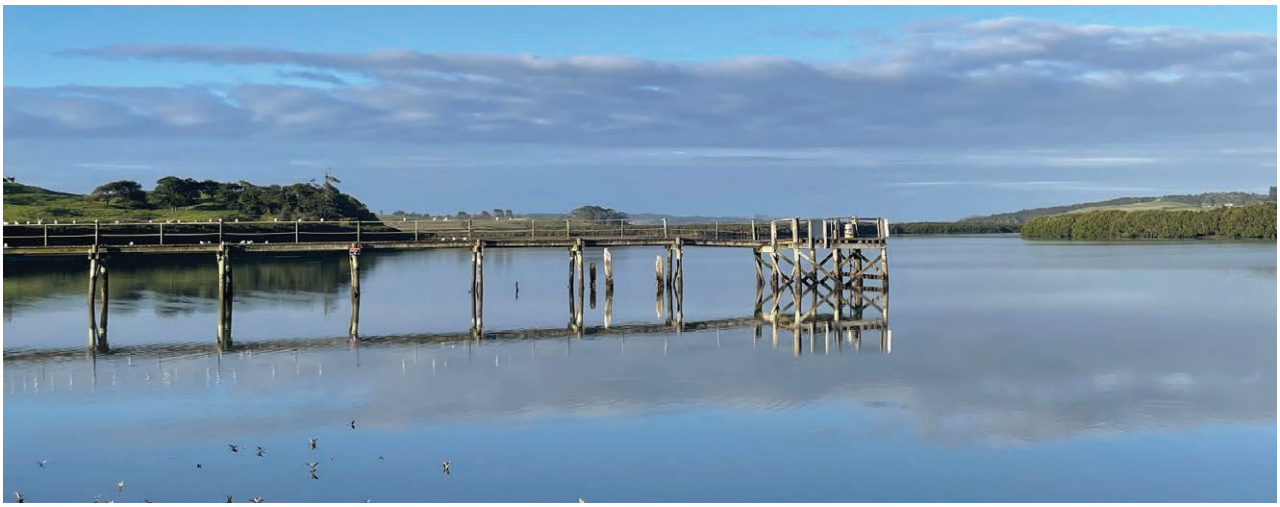
Slash the seas,
and send me to the land far away
and beyond.
My canoe is made from the root of the tree.
(the maere refer to the separation
of the heavens)
Maere of the land of gardens
Tāne above
Tāne below
Tāne who brought light to the earth
Tāne who cleared the land
Residing in his resting place
Send me ashore.

Ko wai mātou?
Who are we?

We are Coastal People : Southern Skies, a national Centre of Research Excellence funded by the Tertiary Education Commission. Our Centre brings together researchers from the tertiary sector and communities with a shared kaupapa. We provide a platform to enable inter-disciplinary connections between researchers and to facilitate the development of capability across all levels within a research programme that is relevant, world-leading and strategically focused. Our research programme is designed in a manner that enables knowledge transfer activities to occur at all levels including the education sector, government, communities, industry, and academia.

Our **vision** is flourishing wellness (mauri ora) of coastal communities.

Our **mission** is to connect, understand and restore coastal ecosystems of Aotearoa New Zealand and the South Pacific through transformative research, local action and by unlocking potential through utilising new pathways to learning.



The Oruawharo River in Kaipara, taken from the Port Albert boat ramp. Photo credit: Emma Ryan

Collaboration partners

Coastal People : Southern Skies is hosted by the University of Otago – Te Whare Wānanga o Otāgo and has nine Collaboration Partners.

University of Otago
Te Whare Wānanga o Otāgo
New Zealand

University of Auckland
Waipapa Taumata Rau
New Zealand

Te Rūnanga o Ngāi Tahu

Te Rūnanga Ngāti Whātua

Te Whare Wānanga o Awanuiārangi

Victoria University of Wellington
Te Herenga Waka

The University of Waikato
Te Whare Wānanga o Waikato

Coastguard Boating Education

NIWA
Taihoro Nukurangi

Report from the board chair

Coastal People : Southern Skies Centre of Research Excellence (CPSS) continued to go from strength to strength over the year. I was impressed by the leadership and action shown by CPSS in relation to the tragic weather events in Te Ika a Maui in early 2023. CPSS worked with Ngā Pae o te Māramatanga collecting and sharing information, and best practice in order to work out how to best support impacted communities. A robust process was developed, and three projects were funded and contracted by CPSS using the community-based contracting model and co-funding from both Ngā Pae o te Māramatanga and Te Koronga. This is a great example of two Centres of Research Excellence coming together and working to support the best interests of our communities to enable community-led research that will develop capability and provide valuable data to help impacted communities plan for future events.

Many of the initial (planned) projects have now been developed and been contracted, this includes all of our community-led research projects. The diversity of research within CPSS is outstanding and evident within the funded projects, this provides our students, early career researchers and community-based researchers opportunities for capability development that are outside of the standard academic experiences. An example that embodies the kaupapa of CPSS is the Central Moorings project. Our Whareponga anchor site (on the east coast of the north island) held a wānanga with Rob Hewitt (our Pou Tuarā Te Ika a Maui), the research team who had previously supported them, and a Te Herenga Waka / Victoria University of Wellington research team led by Dr Chris Cornwall. Following the wānanga and some further hui, Dr Cornwall developed the Central Moorings Project, and a PhD project was also conceived, located within the takiwā of the community, in consultation with the community.

A highlight in May was the inaugural CPSS Symposium which my fellow Board members and I attended along with representatives from the Tertiary Education Commission (TEC) and many of our members. It was an excellent day, and we were impressed by the student posters, the talks, and the community researcher panel.

Centres of Research Excellence are taxpayer funded through Vote Education funding, as such, a key area of focus is capability development. The data compiled for the funder (the Tertiary Education Commission) show increasing postgraduate student numbers with the increases being greatest at the Masters and Other (Honours and Postgraduate Diploma) levels. CPSS intentionally chose to focus on these levels, as they are areas where there are not a lot of scholarships available meaning many students cannot afford to pursue further study. Between 2022 and 2023, CPSS has more than a 50% increase in students studying at these levels. This is very encouraging and over time, this will likely lead to an increase in PhD students.

As would be expected with a programme of this scale, we have started to see some changes over this year. The founding Co-Director, Professor Chris Hepburn, resigned and Professor Rose Richards took on the Co-Director responsibilities. Later in the year, CPSS realised it's tripartite directorship model with the appointment of Professor Richard Walter as the third Co-Director (meaning the directors fulfilled Tangata Tiriti, Tangata Moana, and Tangata Whenua roles). I wish to take this opportunity to thank Professor Hepburn on behalf of the Board for his contributions to CPSS.

I would like to acknowledge my fellow Board members Mr Hoturoa Barclay-Kerr, Dr Paula Vivili, Professor Richard Blaikie, Dame Susan Devoy, Mr Tame Te Rangi, and Professor Tracey McIntosh for their oversight and advice. Two Board members stepped down during 2023, Professor Emeritus Khyla Russell and Dr Rebecca McLeod, I thank you for your time and wish you well, we will miss your valuable contributions to the Board. I would also like to thank the Co-Directors Professor Anne-Marie Jackson, Professor Rose Richards, Professor Richard Walter, and Professor Chris Hepburn along with the Kaiurungi Programme Manager AJ Woodhouse for their work during the year.

Tā Mark Solomon *Ngāi Tahu, Ngāti Kurī*
Chair

Directors Report

Tēnei te mauri
Te mauri ka tū
Te mauri ka oho
Te mauri ka rewa
Eke pānuku, eke Tangaroa
Whakatū Tarewa i re rangi
Uhi
Wero
Tau mai te mauri
Haramai te toki
Ko Whakatangataga-i-te-rā
Haumi e, hui e,
Tāiki e
Tēnā koutou katoa,

In this Pūrongo-ā-Tau Annual Report we share highlights from our national Centre of Research Excellence, Coastal People : Southern Skies (CPSS) over 2023. We are beginning to see the aspirations of CPSS come to life following the two year establishment period and we are looking forward to taking our kaupapa into its next phase of growth. Looking back, it is incredible to see what we have achieved over the past 30 months from the official start date.

We have now funded 19 projects which engage and connect teams located across Aotearoa in alignment with our vision and mission. We share three examples from across our research programme in this report. We have finally overcome the infrastructure, covid and weather-related delays that hindered our research programme initially, and almost all projects are contracted. Some of the successes we are now seeing, include CPSS researchers contributing to 189 research outputs over 2023 (from peer-reviewed journal articles and books, to published guides that can be used by the public exploring our coastline). This is a marked increase from 87 in 2022 and 81 in 2021. There are many different types of research outputs that show impact, and in 2024, we will be shifting our attention to expanding the definitions of research outputs to better encapsulate the full range of research activities in CPSS.

A distinct advantage of the longer-term funding of Centres of Research Excellence (CoREs) is that it enables agility and responsiveness, an example of this is the creation of a combined strategic research fund with a fellow CoRE, Ngā Pae o te Māramatanga, to undertake research following the cyclones of 2023. We hope to report on some of this mahi in the 2024 Annual Report.

Relationships with coastal communities are fundamental to the kaupapa of CPSS. We fund community-led projects at our five community anchor sites across Aotearoa in addition to research projects and student activities that are occurring alongside our communities across Aotearoa and the Pacific. In this report, we share the kōrero of one of our community-led anchor site projects, Rangatahi Tumeke, with Steph Blair and her whānau.

Our integrated approach is supported by two Pou Tuarā roles, Pou Tuarā ki Te Waipounamu Mr Brendan Flack and Pou Tuarā ki Te Waka ā Māui Mr Rob Hewitt. Brendan and Rob are both leaders in their respective iwi and hapū. Their roles focus on supporting our community anchor sites, new communities engaging with CPSS, and mentoring and guiding our CPSS researchers and tauira; to keep those involved in CPSS as culturally safe as possible.

Our capability and capacity building goals across CPSS are beginning to be realised. Two of our funded postdoctoral fellows who began in 2023, are featured in this report. We again congratulate Dr Terina Raureti (CPSS Māori Postdoctoral Fellowship) and Dr Jane Taafaki (CPSS Pacific Postdoctoral Fellowship) on their inaugural awards. We have 72 students who are aligned to CPSS and you will find profiles of some of our CPSS-funded tauira and learn a little about their various kaupapa in this report. Between 2022 and 2023, we have seen an increase in our student numbers across all areas of postgraduate study; PhD students have increased from 30 to 42, Masters from 12 to 23, and other (Hons, PGDipGrad) from 2 to 7. Importantly, we saw 25 student completions in 2023, nine of these were PhDs, ten Masters and six other (increases from five PhDs, one Masters and two other respectively in 2022).

CPSS continues to grow our membership base. There has been an increase in membership from 90 to 127 people across Aotearoa and the Pacific. 37% of our members are Māori or Pasfika. Our members also include 13 community-based researchers. This diversity, which we expect to continue to grow, provides a wonderful platform for our research and also capability building at every level (from students to researchers). A goal for 2024, is to increase our membership profile. We welcome new members who share our values and vision, if you are interested, please email cpss@otago.ac.nz.

As the co-Directors of Coastal People : Southern Skies (CPSS) we thank all who are involved in our kaupapa. It is wonderful to work alongside of so many likeminded individuals and communities. We acknowledge the work of the Board over the past year, particularly the Chair, Tā Mark Solomon, for his counsel, leadership and advocacy. We also thank the members of the Research Advisory Group for their service to CPSS, especially in the establishment of CPSS.

The end of 2024 marks the mid-point of funding for the national Centres of Research Excellence. Thus, on the horizon for CPSS for 2024 is assessing the impact of CPSS, submitting the 2025-2028 research plan to our funder (Tertiary Education Commission) and turning our attention to engaging with our members and partners to bring us closer together in our aspirations for the vision of mauri ora of coastal communities.

Nā,
Professor Anne-Marie Jackson (*Ngāti Whātua, Ngāpuhi, Ngāti Wai, Ngāti Kahu o Whangaroa)*
Professor Rose Richards *(Samoan)*
Professor Richard Walter *(Pākehā)*

Tā Mātou Rautaki | Our Strategy

The strategy of Coastal People : Southern Skies is outlined below in Figure 1.

Figure 1: Coastal People : Southern Skies Strategy

Our vision is flourishing wellness (mauri ora) of coastal communities

Our mission is to connect, understand and restore coastal ecosystems of Aotearoa New Zealand and the Pacific through transformative research, local action and by unlocking potential through new pathways to learning.

GOALS	**Research Excellence** Research excellence that transforms the realities for coastal peoples and coastal environments	**Capability and Capacity building** A Te Tiriti led, equity based, wellbeing informed research workforce equipped to work with, alongside and behind coastal communities	**Sustainability** Profit, people, planet, ethics, equity, culture, wellbeing, Wayfinding Leadership.
2021-2024 **Preparing the gardens**	• Deliver on all research in the annual plan in Aotearoa to a high standard • A connected research network	• Lay the foundations for a Te Tiriti led, equity based, wellbeing informed research workforce focused on growing Māori and Pacific researcher capacity and capability	• Build a model of operating based on Wayfinding Leadership • Operate within our budget constraints • Build a model for carbon neutrality
2025-2028 **Balancing the waka**	• Rebalance the waka in relation to wellbeing to deliver on all research in the annual plan in Aotearoa • A thriving research network	• Continue to build Māori and Pacific researcher capacity and capability • Lay the foundations to build cultural competency for researchers new to working in Māori and Pacific research and communities • Lay the foundations for rural focused capacity and capability building	• Grow co-funding for scholarships and postdocs • Grow resarch funding opportunities for co-funding at a CPSS level
2028-beyond **Gifting the fine mat**	Rebid with a focus on a stable waka (marine and wellbeing) with reach into the Pacific	• A co-led Māori and Pacific bid, with Māori and Pacific led research teams • Increased capability and capacity of Māori and Pacific researchers • Increased capability for communities and other researchers working in Māori and Pacific research projects	• A sustainable funding and operational model
2036 **Living our dream**	By 2036 we will have built sustainable relationships and importantly contributed to Pacific workforce development to the level that we can support a Pacific-led bid		

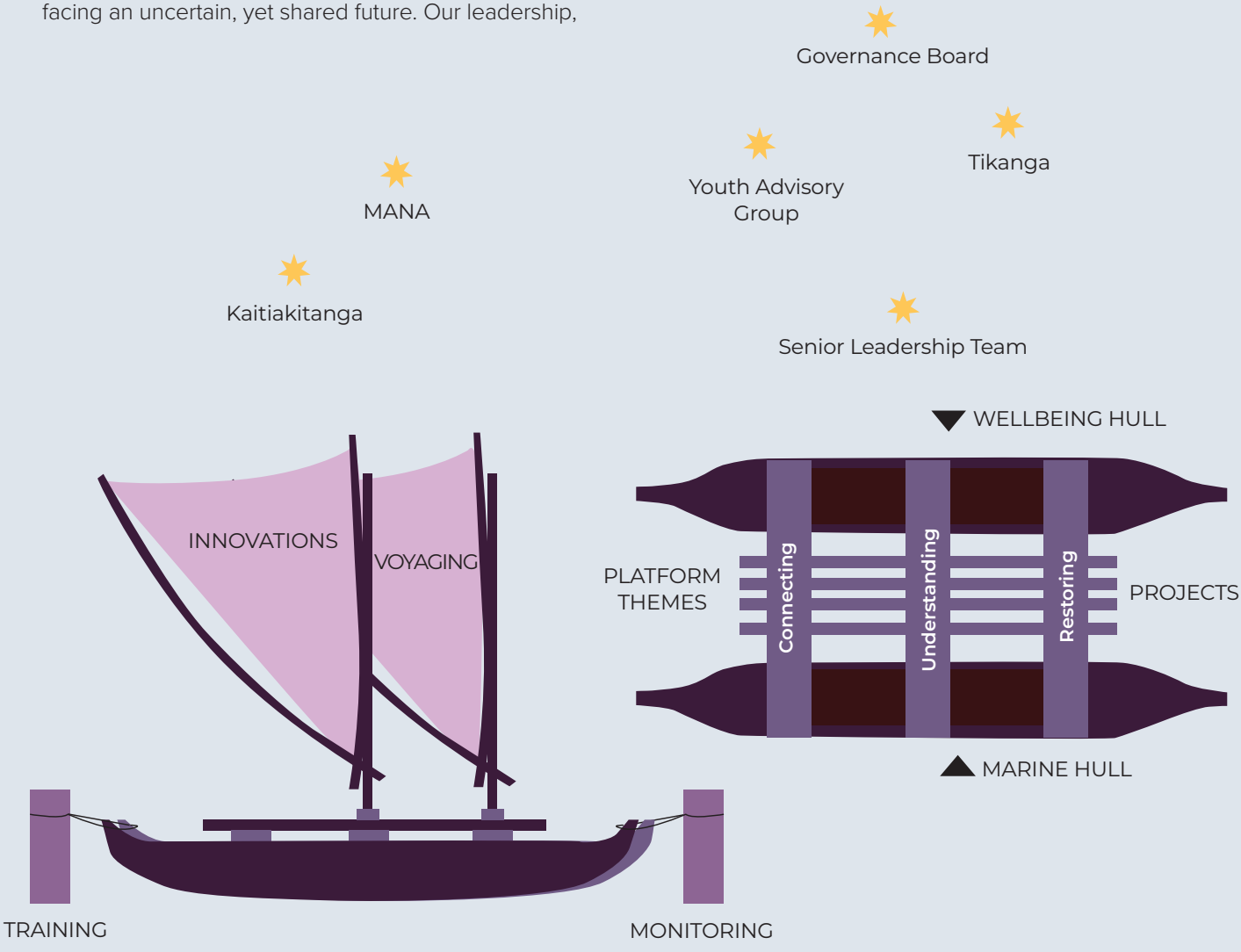
Ā Mātou Mahi

The research, leadership and governance of Coastal People : Southern Skies (CPSS) is structured around the metaphor of a voyaging canoe with Te Pae Māhutonga (the Southern Cross Star Constellation) reflecting Tā (Sir) Mason Durie's model of wellbeing, and our governance and management structure.

Our metaphorical waka has a Marine hull and a Wellbeing hull and two tumu (moorings): Monitoring at the bow, and Training at the stern. Connections to the moorings are threaded throughout each of the platform themes: Connecting, Understanding and Restoring. Each theme is connected and braced by a series of inter-connected projects that draw on both hulls to apply cross-disciplinary and cross-cultural approaches to our research. The two sails represent: Voyaging - acknowledging the Pacific Ocean that connects us and renews the excitement of learning between people of our island nations; and people of our island nations; and Innovations leading to a new journey and new destinations.

Te Pae Māhutonga reflects our location, shared history, and connections as coastal people of the South Pacific facing an uncertain, yet shared future. Our leadership, governance and management approaches are based on the principles of wayfinding leadership. Wayfinding leadership meets the needs of our community partners, aligns with our research programme, and values our researchers, students, and community partners. Over 2023, we have revised the structure and the Research Advisory Group will be replaced with the International Science Advisory Board as per TEC's guidelines.The four central stars represent the governance and management of the Centre; while the two pointer stars represent the values that underpin all that we do (Kaitiakitanga and MANA – Meaningful Authentic Natural Action)

The following pages introduce our Tumu and Themes.



Monitoring Tumu

Leaders: Dr Daniel Pritchard and Dr Kim Currie

The Monitoring Tumu develops and supports observation networks across Coastal People : Southern Skies that provide a holistic view of the status of social ecological systems, wellbeing of communities and the impacts of climate change around the marine environment.

Monitoring is fundamental to our understanding of the marine environment today and what will come in the future. To prepare for and predict what will be, we must know what is. To manage and restore, we must observe and record change. In Aotearoa New Zealand, there has been significant under-investment in high quality long-term marine monitoring, leaving coastal communities underprepared to confront the challenges of climate change.

In the metaphor of CPSS as a double-hulled waka, the Monitoring Tumu (mooring post) has a foundational and stabilising role, connecting back to fixed and permanent places. It spans the full 7.5-year term of CPSS, providing platforms and opportunities for monitoring and for the coordination, promotion, and support of high-quality data collection within CPSS. One of our key workstreams is to establish fixed-point, subtidal biogeochemical and environmental moorings within important habitats at anchor sites across the latitudinal gradient of Aotearoa New Zealand. The first anchor site is at Karitāne on the Otago coast. This project builds on a history of successful data collection, support for aligned research projects and community engagement and support. As well as implementing local monitoring, this first project will develop methods, approaches and resources that will be utilised within the Tumu and elsewhere within CPSS.

Monitoring strengthens our understanding of coastal seas, of coastal people and will connect our programme

Left: Dr Kim currie

Right: Dr Daniel Pritchard

Opposite page: CPSS Researcher Dr Daniel Pritchard (foreground) and community member Gill Chambers (distance) prepare to dive to service the climate change mooring in Akaroa Harbour. Photo credit: Roseanna Gamlen-Greene

across the South Pacific and beyond. Building on established models of marine monitoring aligned with CPSS we are establishing methodologies, networks and platforms to deliver essential baseline monitoring with the development of excellent practice in data collection and management. Alongside this, CPSS will work with partner communities to develop models and measures of wellbeing that resonate with communities.

Project: Maintaining and expanding longitudinal monitoring: Southern Moorings

This project re-established two benthic subtidal (underwater on the seabed) moorings to continuously measure pH, oxygen, temperature, pressure (water depth), salinity and light. These measurements are supplemented with regular (monthly) measurements of inorganic carbon (DIC), alkalinity, nutrients, and chlorophyll concentrations. This monitoring will enable researchers to tease apart key drivers of change in coastal seas and establish a baseline against which to measure both future degradation and future success of mitigation strategies and actions.

Project: Maintaining and expanding longitudinal monitoring: Central Moorings

This project extends the Southern Moorings project and will establish subtidal (underwater on the seabed) moorings in Te Tairāwhiti.

Project: Developing and establishing new methods and programmes

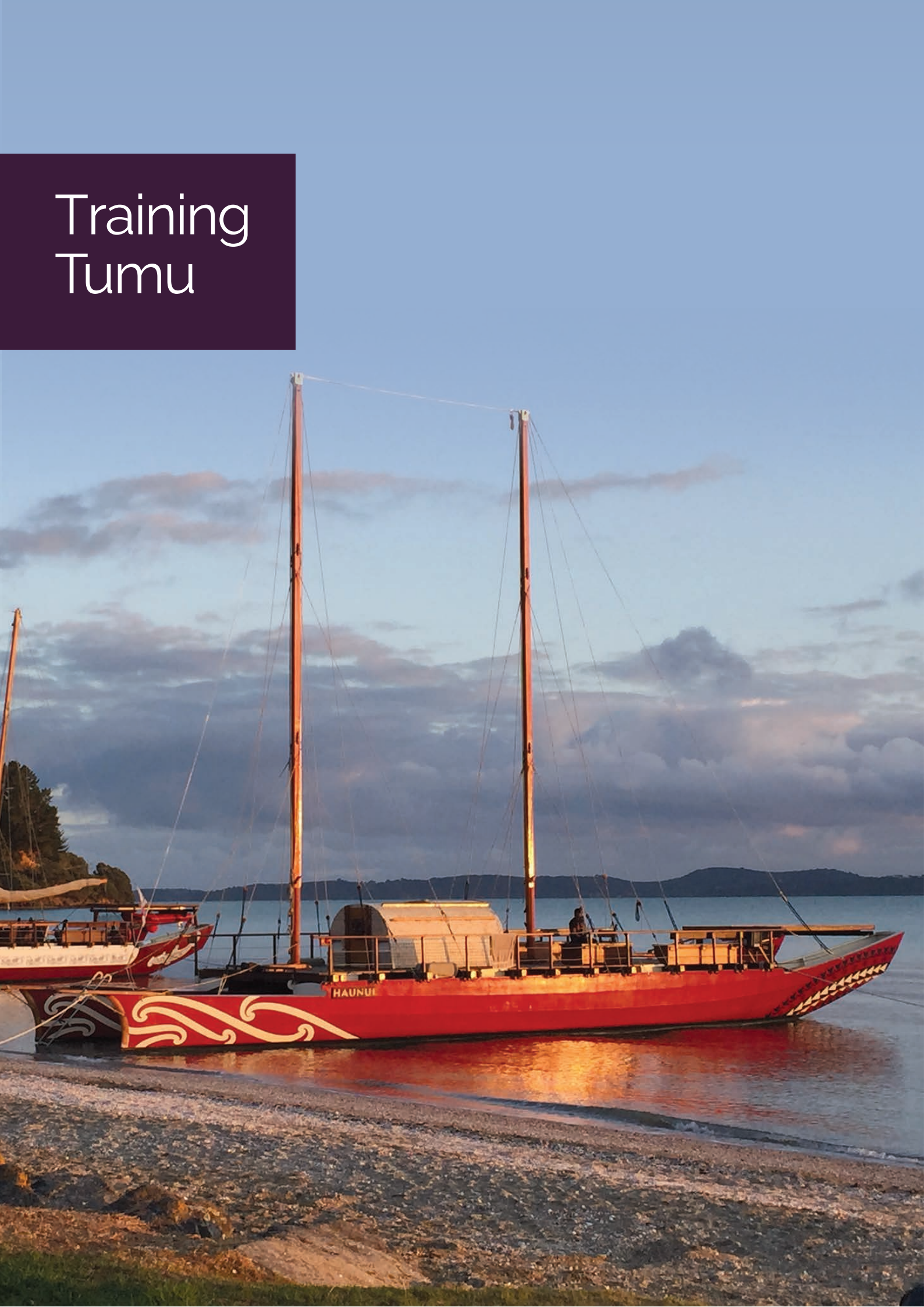
This project enables new monitoring sites and partnerships to be established and new methods added to existing sites to respond to the needs of communities, researchers or industry. Our first new programme (Monitoring in the Akaroa Taiāpure) was established in 2023.

Project: Supporting excellence in data collection and management

For observations to be of use in a variety of contexts, measurements need to be made comparable and collatable. This project ensures the development of processes to assist CPSS researchers and partners with consistent methods and management of data and metadata.

Dr Kim Currie prepares a pH sensor for deployment on the mooring. Photo credit: Roseanna Gamlen-Greene

Training Tumu



Leaders: Dr Chanel Phillips and Dr Peter Dillingham

Coastal People : Southern Skies (CPSS) celebrates and promotes mana-enhancing leadership and world class training opportunities that reflect and celebrate diversity. Training is interwoven through all of our work.

Community and student-centred learning is at the heart of our approach. CPSS has a strong focus on growing the capability and capacity of students, researchers and communities and is intentionally creating a 'pipeline' of capacity development.

The Training Tumu builds on successful place-based and environmentally-informed learning programmes with a focus on research pathways, practical training opportunities, wānanga for end-users, professional development for industry and outreach.

Above: CPSS tauira present their research in a poster session, CPSS symposium, May 2023.
Photo credit: Eugene Yeo

Below: CPSS community-based researchers panel, CPSS symposium, May 2023.
Photo credit: Eugene Yeo

Opposite page: Haunui, Waka Hourua, Te Toki Voyaging Trust.
Photo credit: John Reid- Willison

Connecting Theme

Left to right: Dr Karen Greig, Dr Naomi Simmonds and Associate Professor Will Rayment

Opposite page: Connecting Coastal Communities across Moana Nui a Kiwa: Women's use of marine resources, Solomon Islands. Credit: Karen Greig

Leaders: Dr Karen Greig, Dr Naomi Simmonds and Associate Professor Will Rayment

The aim of the Connecting Theme is to build understanding of the diverse ways in which coastal communities form enduring connections to the marine environment, and the connections between coastal peoples and marine ecosystems across Aotearoa New Zealand and the Pacific.

The Connecting Theme includes projects that investigate the changing cultural, economic, and spiritual relationships between coastal communities and their environments, and how these connections contribute to long-term wellbeing. This work recognises the diverse cultural traditions and practices that structure how communities interact with coastal ecosystems and landscapes in Aotearoa New Zealand and across the Pacific.

Connecting people, ecosystems, and climate change-related problems at multiple levels and across space and time, draws on different knowledge systems, research disciplines, academic and practical skills, and cultural traditions. We conduct research to understand ecosystems, and how people interact with coastal ecosystems in the past, presently and into the future. We trace past and present human and other migrations/dispersal, to predict and prepare for the social and ecological consequences of generations of climate refugees. Connectivity is more than collaboration – it is the space where radically different perspectives and worldviews interact to create a place of innovation, empowerment, and resilience.

Project: Connecting coastal communities across Te Moana Nui a Kiwa
Coastal communities in Aotearoa and the wider Pacific are facing increasing challenges around the management of, and access to, their traditional marine resources. This project builds on existing relationships with two villages in the Western Solomon Islands and will undertake research and develop strategies to enhance wellbeing, explore economic opportunities, and respond to climate change risks.

Project: Parāoa of the South Pacific
The aim of this project is to connect communities in Aotearoa New Zealand and the Pacific through shared learning from other communities that have important connections relationships with sperm whales. Improving understanding of parāoa and the impacts they are facing will help traditionally important connections persist and thrive into the future.

Project: Nau mai e ngā hua e hora nei – Exploring Economies of Manaaki
This project explores customary economic practices of food redistribution for coastal communities. Mahinga kai sites for wahine, pakeke, rangatahi and tamariki ensured the entire community maintained opportunities for economic contribution, while the fit and able were able to access greater abundance, and redistributed that abundance throughout the community according to the tikanga of manaaki, culminating in a powerful expression of mana moana.

Project: Connecting to our coastal heritage places
This project addresses the potential loss of coastal heritage places arising from sea-level rise and climate change and the implications for wellbeing and community resilience in case study locations in three regions: the Kaipara Harbour and Awhitu Peninsula (West Auckland), Cape Kidnappers and Kairakau (Central Hawkes Bay) and Rakiura and the Catlins (Southland).

Understanding Theme

Left to right: Dr Chris Cornwall, Dr Emma Ryan and Associate Professor Ocean Mercier

Oppositer page: CPSS researchers capture a sediment core in the Kaipara Moana to explore spatial and temporal variation in water quality.
Photo credit: Emma Ryan

Leaders: Dr Chris Cornwall, Dr Emma Ryan and Associate Professor Ocean Mercier

The Understanding Theme allows us to apply multidisciplinary and cross-cultural approaches to build local understanding and context to the global change we are experiencing. It also enables capacity building and the collection and analysis of key data to support evidence-based decision making.

Within this theme we use predictions of sensitivity and response of social-ecological systems to changing ocean climate at local and regional scales across latitudinal gradients. Aotearoa New Zealand and Pacific Island nations have a deep connection to their marine ecosystems and a shared future in a changing ocean.

Understanding the impacts of climate change on important processes in the coastal-marine environment and implications for the values, culture, and wellbeing that coastal and marine areas provide is a priority. We will determine how local stressors (that can be managed locally also) interact with globally driven stressors that cannot be managed locally. Coastal communities and researchers will co-create new knowledge and connections to enable preparation for a changed marine environment and focus management to maximise climate change resilience.

Project: Understanding interactions between local and global stressors: A pathway to local action
This project establishes experimental systems across Aotearoa to determine how global stressors (ocean acidification, ocean warming, hypoxia) and local stressors (sedimentation, nutrient addition, pollution, parasitism) interact to affect key New Zealand and Pacific Island marine taxa over ecologically relevant time scales and across environmental gradients.

Project: Understanding local and regional thermal regimes to prepare for climate change
This project is focussed on developing a framework for predicting the locations and processes that lead to local oceanographic resilience, as well as vulnerability, in a warming ocean.

Project: Understanding impacts of rising seas from global to local
For localised adaption to sea-level rise to be successful, research is needed to understand how communities can be empowered to collect and exercise ownership of data and direct research and management relevant to their own coast. This project undertakes community lead research where the intellectual property of the collected data resides within the community, and where the results of the research lead to deeper understanding of coastal change that directly feeds into local adaptation kōrero.

Project: Aotearoa One Pae Tata
This project is focussed on the development of a plan for the redesign of one waka hourua into a research waka re-fitted for observation and data collection, creating a traditional and contemporary research vessel.

Left to right: Dr Gaya Gnanalingam and Professor Rose Richards

Opposite: Juvenile pāua
Photo credit: New Zealand Marine Studies Centre (NZMSC)

Leaders: Dr Gaya Gnanalingam and Professor Rose Richards

The Restoring Theme focuses on restoration that acknowledges the past and uses knowledge of the present and future to guide action that provides meaningful benefits today and for generations to come. The act of restoration brings benefits not just for the ecosystem but also for the people who actively engage in the restoration. Restoration is both the process and the outcome of this theme - restoring ecosystems to build resilience to climate change.

We employ holistic approaches that integrate ecological / environmental restoration with the restoration and empowerment of communities. We are focusing on critical processes, habitats, and species (e.g. ecosystem engineers, cultural keystones). The broader effects of future-focused ecosystem restoration on coastal communities (e.g. social cohesion, capacity) will also be examined.

With the inevitability of change, we will identify local initiatives to strengthen social-ecological systems and support coastal people as they prepare for change. The Centre provides the opportunity to have a research programme that will allow us to assess the effectiveness of restoration programmes on coastal ecosystems through long term monitoring.

Project: Falafolaloa: Spreading the mats of belonging and welcome
In dialogue with members of the Ōtepoti Pacific community, this project aims to explore connections between coastal environments and notions of well-being and to understand traditional Pacific concepts analogous to kaitiakitanga as a foundation for further research.

Project: Using cultural keystone species as a focus for restoration
Building on 10+ years of research on pāua ecology and community led management in customary protection areas around southern Aotearoa New Zealand, this project has three components. Monitoring: assessing pāua demography and recovery relative to management; stock enhancement: reseeding and translocation to actively restore declining stocks, and; strategies for harvesting: identifying strategies for reopening closed fisheries for long term restoration success.

Project: Māra Moana: Restoring the foundations of flourishing coastal ecosystems
Kōauau (Macrocystis pyrifera) forests are globally declining due to rising ocean temperature, increased sedimentation and other anthropogenic stressors. This project seeks to understand the conditions that allow kōauau to thrive, to identify attributes that will be advantageous under future climate scenarios and to trial and optimise out-planting strategies.

Restoring Theme

Highlighting the Parāoa Project

Unveiling the secret lives of female parāoa

At home in the deep submarine canyons off the Kaikōura coast, parāoa (sperm whale, Physeter macrocephalus) have been researched for over 30 years by the University of Otago's Marine Megafauna Research group. The long-term study of this taonga species which is strongly entwined with the history and lifestyle of Kaikōura, is now recognised as one of the world's longest-running studies on cetaceans.

Dr Marta Guerra has been involved with the Kaikōura research for over ten years, including studying the foraging ecology of parāoa for her doctorate, and she explains the waters are a deep-sea habitat for solitary male sperm whales who spend much of their time feeding in cold productive waters.

"As only males are present at Kaikōura, means that we know very little about the lives of females in New Zealand," Guerra says.

As one of the first projects to receive Coastal People : Southern Skies funding in 2021, the research group led by Marine Scientist Associate Professor Will

Rayment, has expanded its kaupapa to other locations around Aotearoa that include the warmer northern waters where groups of female parāoa and their young can be found.

Leading the Tai Tokerau (Northland) fieldwork and at the completion of the three-year project in late 2024, Guerra will have overseen the first six seasons of observations and research covering both summer and winter months.

The mahi has broken new ground as the first systematic surveys off New Zealand to have sighted calves which is exciting evidence of a breeding population.

“It’s incredibly special to be able to see them,” Guerra says. “Females behave so differently to the males and it’s almost like studying a different animal. They are often found in tight social groups made up of various adult females that spend most of their lives together - usually whānau, including sisters, mothers, nanas, and aunties - and their young.

“Like males, they dive and hunt for prey, but they also spend a lot of time interacting with each other, chilling, frolicking and resting together.”

This formative work with females is also providing the science for the first genome-wide study looking at the New Zealand sperm whale population. Detailed genetic analysis of minute skin samples that whales leave in their wake is providing a leading opportunity to accurately piece together population structure and movements across regions.

Overseeing the genetic analysis of the project is Dr Alana Alexander (Ngāpuhi: Te Hikutu, Pākehā) who explains analysing genetic markers using state-of-the-art sequencing and genotyping techniques from both female and males provides a wealth of information.

"The data is a lot richer and provides much more subtlety for defining relationship categories, such as half-siblings," Alexander says. "It can tell us who is related to who and how the whales are connected between and within each of the study areas. By building up a dataset of how the different whales are related to each other, we'll be able to get an idea of the societal structure of parāoa in Aotearoa."

By November 2023, 120 skin samples had been collected for genetic analysis, supplemented by an additional 50 samples from New Zealand's cetacean and tissue archives obtained from individuals that stranded.

"We can't wait to see what the genetic data tell us about how parāoa in Aotearoa are interconnected, and who might be their whanaunga in the Pacific," says Guerra who has led the sample collection and genetic processing part of the project. "We will also be able to find out how individual males who we've known from Kaikōura for several decades are related to each other. "Some males have special affinity for each other, forming long-term bonds. This new analysis could tell us if these pairs are perhaps brothers, cousins, or simply very good buddies."

In addition to the new research area of Tai Tokerau, the project has also supported the first dedicated survey work of the marine environment off the Otago coast. The submarine canyons incising the Otago shelf are now regarded as reliable year-round habitat for male parāoa, similar to Kaikōura several hundred kilometres north.

Describing the initial years of seasonal fieldwork undertaken, Rayment says discovering connections between the Kaikōura and Otago regions is broadening the scope and value of the research. Using approaches including photo identification and comparisons of acoustic dialects, a male sperm whale last observed in Kaikoura in 2018 was identified off Otago during the 2023 winter survey.

"This first match between Kaikōura and Otago is really exciting as it's the first piece of evidence revealing where male sperm whales go when they aren't at Kaikōura," Rayment says. "We have also found some interesting behavioural differences between the Kaikōura and Otago study areas, such as the length of time whales spend at surface between dives and the depth at which they start searching for food using their echolocation."

A particularly fulfilling part of the project for Rayment has been the opportunity to work more closely with local communities, including, Kāti Huirapa ki Puketeraki who have joined the researchers on research voyages.

"We get to learn from them and see the excitement they have observing whales in the moana," Rayment says. "A highlight has also been working with the rangatahi from the rūnaka to gift names to the nine sperm whales which have been recorded off Otago to date."

"With so many opportunities for research and community engagement, the Coastal People : Southern Skies supported project is already making a real difference to this taonga species and the communities parāoa are closely connected to."

Dr Alexander says the incorporation of community and tohunga expertise through collaboration with Dr Ramari Oliphant Stewart allows the researchers to whakanui what this traditional knowledge means for us and our relationship with these animals.

"Being exposed as scientists to Mātauranga Māori knowledge and unique ways of looking at the world highlights how different components of te taiao are interconnected," Alexander says. "The great thing about this project is all the different types of data coming together which will help increase our understanding of these wonderful animals and the threats they are facing especially with climate change."

"One of the cool challenges in science is how we can

honour this knowledge and at the same time keep it safe, as it's important to wrap it up with the appropriate tikanga."

Meanwhile, in Tai Tokerau, new connections continue to be woven with communities and research partners including the Far Out Ocean Research Collective. As the deep waters where paraōa reside are much further away from the coastline than at Kaikōura and Otago, the fieldwork is conducted for several days at sea at a time from the Collective's 72ft ketch.

"This is pretty special," Guerra reflects. "We get to see sunsets and sunrises at sea, with nothing but ocean and seabirds surrounding us, and no sight of land. My favourite perk is searching for sperm whales at night with a clear sky, using the stars to keep track of the direction where their sounds come from, so that we might find them in the morning."

Previous page: Groups of parāoa often rest together at the surface. Photo credit: Far Out Ocean Research Collective

Below left: Dr Martha Guerra uses an acoustic recorder attached to a towed hydrophone to record and listen to live echolocation sounds of parāoa. Photo credit: Far Out Ocean Research Collective

> By building up a dataset of how the different whales are related to each other, we'll be able to get an idea of the societal structure of parāoa in Aotearoa."

Highlighting the Coastal Heritage Project

Exploring connections to coastal heritage

On Aotearoa's southern-most permanently populated island of Rakiura, a project articulating the community's connection to their coastal heritage is taking place. With an archaeological perspective and using an innovative social art approach, the community has brought their collective values to life to inform their path for a resilient future.

The Rakiura community is one of several around the motu who are engaging in the three-year Coastal People : Southern Skies supported project led by University of Otago archaeology researchers in collaboration with science communication and social arts practitioner Dr Jenny Rock.

Archaeologists Professor Richard Walter and Dr Karen Greig, co-Directors of the Research Unit Southern Pacific Archaeological Research, and CPSS Principal Investigators, describe heritage as more than tangible places and archaeological sites, including oral traditions, narratives, and socio-cultural practices. When recognised in this way, heritage makes an important contribution to individual and community wellbeing, identity and resilience.

Through their decades of research and work with communities, the team have been listening to and sharing stories that link people, places and the past, and describe the enduring narrative as one that highlights generations of change and adaptation.

"What springs out of the archaeological record is how dynamic and fascinating New Zealand's relatively short history is," Greig says. "When we look at the past what we see is change and evidence of how society continually adapts and evolves."

Driving the current project, Greig describes contemporary concerns around loss of coastal marae, pā, cultural sites and disturbance of urupā that are under threat from sea level rise and other climate change processes. "Loss of these places can also mean loss of knowledge and of the stories associated with the land," Greig says. "We know climate change is affecting the practices and places that connect communities to the environment. How can communities flourish when these connections are being eroded?"

The project's mahi is focused on eliciting social reflection on the values that communities hold in their coastal places and practices, and using this knowledge to facilitate action plans to prepare for a resilient future. The ultimate aspiration is supporting communities to adapt and flourish, while keeping The project addresses the potential loss of coastal heritage and the implications for well-being and resilience with communities in several locations. The first focus has been on Rakiura, with other projects planned for Kaipara Harbour, Cape Kidnappers, and the Catlins.

The starting point of multiple sessions and workshops undertaken with the Rakiura community, explains Rock, was using a social arts practice

Community artwork reflecting coastal heritage values. Photo credit: Jenny Rock

> “. . .seeing heritage as evolving and self-driven, as much as it is representative of ancestors, gives a community agency when deciding how they want a place to carry forward.”

The artwork representing the community’s coastal heritage values was displayed as a midden. Photo credit: Jenny Rock

approach inviting people to consider their connections to the island and surrounds. Using a combination of techniques, including printmaking, focus groups and mapping for this community-expressive work, these activities connect the past, present and future in islanders' thinking about their coastal heritage. "Through reflecting on what's important - what's part of local identity and valued ways of being that people want to carry forward - we can get ourselves to a point of critically and proactively thinking about what actions need to happen to achieve this in the face of rapid change," Rock explains.

She adds the printmaking aspect of the process facilitates the creation of an "open and generous" flow of information as it allows thinking about perspectives while hands are busy creating prints. The activity is also accessible and engaging for families and different ages, which is "rich, as you get cross generational reflection and expression."

The physical output of the printmaking process expressing the community's coastal heritage values was displayed as a midden, made using a wire mesh reflecting an archaeological sieving screen. "And while it might look like a midden of the past", Rock says, "the print artefacts people made show it's still so obviously a midden of the present and thus the future."

"Which pushes to the fore the idea that heritage is living and can continue through our actions in the present that then maintains or becomes our heritage in the future. So, seeing heritage as evolving and self-driven, as much as it is representative of ancestors, gives a community agency when deciding how they want a place to carry forward."

The midden motif has been used to link the project elements together in a resource named 'Midden in a Box' developed by Greig, in collaboration with Sally Carson, the Outreach Manager for Coastal People : Southern Skies. The kit has introduced tamariki to archaeology and what middens can say about peoples' historic relationships with place, and in turn what this suggests about future actions and strategies.

Walter describes archaeology as an entry point to engage with place, and from there more widely with cultural heritage. Archaeology can then add value by providing a toolkit informing management plans and conservation practices for future adaptation and resilience of communities.

While the project's aim is to work with communities responding to climate change challenges, it's also providing new information enabling the incorporation of cultural values into risk-based climate change models.

"To date much of the focus around climate change resilience is about physical threats such as coastal hazards and loss of biodiversity, so this project provides a great opportunity to put coastal heritage into a traditionally environmental space," Greig says.

The co-Directors of Southern Pacific Archaeological Research have worked extensively with communities around the wider Pacific region, and are currently undertaking a similar Coastal People : Southern Skies supported project in the Solomon Islands that connects several communities across Moana Nui a Kiwa.

"We think in terms of the whole of the Pacific as we are a Pacific people and country," Walter says. "It's difficult to understand New Zealand cultural history at all without a wider Pacific understanding."

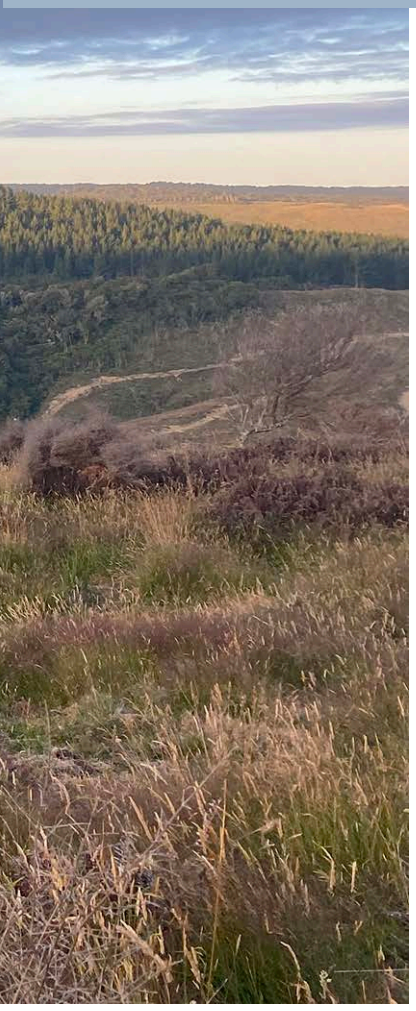
Back on Rakiura, the community-created midden was on display for two months in the Rakiura Museum, Te Puka o Te Waka, and created a tangible reference point for community connection and discussion.

Rock says the midden represents the articulation of the coastal heritage values held by the southern island community as they relate to its long-term resilience.

"We are aiming to provide a mirror for a community to understand itself and how to adapt through empowerment achieved by active realization and memory. The result is a midden of present and past that play a critical role in co-producing the future."

The local maunga Uira, at Chaslands in the Catlins. Photo credit: Steph Blair

Highlighting Rangatahi Tumeke: A community led project



Preparing for a place of belonging

At the age of nine, Mya Kairau (Ngā Puhi me Ngāi Tahu) was one of the first students to participate in Rangatahi Tumeke, following its launch in 2013. Growing with the programme on her own journey from tamariki through to tuakana, Kairau credits the experience for the person she is now. “Everyone has come out of the programme as a leader and it’s led us to all sorts of areas of life,” Kairau says. “It develops each kid to pursue what they are meant for.”

For Steph Blair (Ngāi Tahu, Kati Mamoe me Waitaha) who brought Rangatahi Tumeke to life with its focus on traditional mahika kai practices, the need for the programme was clear.

“What inspired it was seeing rangatahi who were not being fulfilled in who they are,” Blair explains. “I could see that their eyes had stopped shining, so I said to my whānau let’s bring them home to te taiao.”

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Coastal People : Southern Skies is now supporting the Rangatahi Tumeke Charitable Trust's aspiration to create a whare in the Catlins for these rangatahi and the whānau. The funded three-year project supports the mahi involved with the design, planning and preparation of the whare's future site in readiness for its physical construction.

Located close to her childhood upbringing in Waikawa and nearby Māori Reserve whenua on Tautuku Peninsula, the whare will be built on Blair's whānau land. Surrounded by the ngahere which she grew up in, the location of the whare looks to the Uira maunga and borders the Waipati river.

"A lot of the mahi we do with the rangatahi is about sustainability and science, and learning in the environment is both powerful and inspirational," Blair says. "It's all about the land and respecting it, as they are our next generation and future kaitiaki. The whare will ultimately strengthen that connection, and be a place the rangatahi and the whānau can call home and be one as Māori."

Annually, Rangatahi Tumeke run up to four five-day camps which are attended by 20-25 rangatahi. Since 2013, almost 400 participants aged between 12-17 have taken part in the programme, and while the courses have changed over time, the kaupapa based on mahika kai and traditional practices remains.

The programme focuses on instilling a sense of belonging, achievement, and identity by reconnecting the rangatahi with themselves, the ngahere, moana and whenua. Manaakitanga and supporting each other is at the heart of the programme, the rangatahi also learn from scientists who engage the participants with activities in their fields of expertise.

NIWA scientists have shared their expertise on the importance of fresh water, its relationship to health, and how simple changes can improve its quality. Linking to the Coastal People : Southern Skies supported Coastal Heritage project, the resource kit 'Midden in a Box' developed by Dr Karen Greig (a Principal Investigator in Coastal People : Southern Skies) and Sally Carson (the Coastal People : Southern Skies Outreach Manager), has also been presented on the programme. Blair describes these learnings as important for the rangatahi as kaitiaki and the voice for te taiao into the future.

"Our rangatahi are scientists in a Māori world view, and western science can sit alongside our Mātauranga Māori," Blair says. "The knowledge shared can work together to enhance learning about the natural world and improve the outcomes for te taiao."

As the full-time Director of Rangatahi Tumeke Charitable Trust, Blair is currently supported by Manaaki Whenua for five years to run the programme. The wider team includes a mixture of kaiako, and individuals from a variety of backgrounds and skillsets. All are volunteers, and Blair says the success of the programme is the result of their shared vision. "It's all about the rangatahi which is why it's worked."

Ultimately, Rangatahi Tumeke is a leadership programme that nurtures the older rangatahi as tuakana to lead activities and build inspiration, both for themselves and as role models for the younger participants.

Kairau, who is now studying politics and developing her own business with indigenous collaborators describes her own path to tuakana as part of an ongoing continuum. "We see the older ones leave the nest, and we have the younger ones below us so its ongoing," she says.

One of the programme's strengths for Kairau was observing relationships between people and the structure of how successful information is passed from adults to tuakana to rangatahi. It's this process

of communication and inclusion that's now been offered to the rangatahi who are contributing ideas to the future whare's design and the site on which it will sit. Sharing what's important to them, rangatahi have suggested the creation of walking tracks through ngahere including the naming the trees, creating stories and timelines. When the time comes to clear the site for the whare, they will also help to move and transplant punga.

Kairau sees the future whare as a place of generational grounding. "The whenua is home, but the whare will be a structure and place that can be called home," she says. "It will be a place to go and it's yours."

For Blair, whose connection with te taiao and traditional practices was instilled from childhood, the Rangatahi Tumeke programme offers the opportunity to share her skills and Mātauranga Māori with the next generation to pass on and keep the practices and memories of her tūpuna alive.

"One of the students said we are walking in the footsteps of our tūpuna," Blair reflects. "The whare project is about reconnecting to the whenua and creating a space where the rangatahi and all who follow can be themselves and are supported to grow and flourish. The fact that it will be on a place where our tūpuna were, means the story is already being written for us."

Steph Blair and her whānau meet at the site of the proposed whare build. Photo credit: Cedric Blair

Transect survey of the intertidal zone on Huriawa Peninsula, Karitane. Photo credit: NZMSC

Highlighting an outreach project All about Pāua

Located on the Otago Harbour, at a place where land and water meet near Portobello, the New Zealand Marine Studies Centre (NZMSC) is at the forefront of marine and coastal environment education for communities and younger generations.

Since opening in 1997, the NZMSC has provided a wide range of educational programmes and resources for school tauira and coastal communities across the motu, and is an outreach centre with a kaupapa focused on learning and growth. Now in collaboration as an outreach partner for Coastal People : Southern Skies projects, the NZMSC is building on its depth of experience and expanding its specialist science extension and enrichment programme.

Sally Carson, Director of the NZMSC and the Outreach Manager for Coastal People : Southern Skies, says that while the Centre has been running these extension and enrichment programmes for year 9 and 10 tauira for many years, the recent partnering with Coastal People : Southern Skies research projects has unlocked new potential and opportunities.

“Often the questions of why and how with respect to the research are as important as the results, especially when looking to educate ākonga about potential study pathways,” Carson says. “It’s exciting, as the students are introduced to science of local relevance in a hands-on way. They are given the opportunity to undertake their own experiments which are wrapped around an environmental issue. That means a lot when they realise the science is not only related to current research but is making a real contribution to coastal communities.”

All about Pāua is the first outreach programme of this kind connected to the Coastal People : Southern Skies supported marine project Pāua: Restoring a cultural icon that’s undertaking research in the East Otago Taiāpure (EOT) A story on this project featured in the 2022 Annual Report.

Twelve years ago, due to the growing concern around declining pāua stocks, a rāhui was placed on the gathering of pāua (Haliotis iris) around the Huriawa Peninsula in the small settlement of Karitāne.

The research project, led by marine scientist Dr Gaya Gnanalingam, is supporting the community in the restoration of pāua stocks.

Crucially, the community’s aspiration is to establish sustainable harvesting and management practices to protect the area and its taonga for future generations.

Co-ordinated by the NZMSC, researchers and community, the All about Pāua extension programme consisted of two four-day programmes attended by students from kura across the lower half of the South Island. One course was designated for Māori rangatahi and a second programme with a high number of Pacific students and staff.

Fieldwork at Karitāne was supplemented by follow-up work in the Portobello Marine Laboratory and included a further two days analysing and preparing the results to present to whānau and researchers at the conclusion.

Tangata Tiaki for Kāti Huirapa and Coastal People : Southern Skies Pou Tuarā, Brendan Flack (Kāi Tahu, Kāti Mamoe, Kāi Te Ruahikihiki), and Dr Gnanalingam introduced them to the science and cultural importance of pāua. Students were placed in research teams and mentored by postgraduate students including Finn Ryder, a PhD student who researched pāua habitat preferences for his thesis.

“What was fantastic is we took them to a long-term monitoring site at the Huriawa Peninsula we regularly access for marine science work in the EOT. The age group are really enthusiastic and keen to learn,” Ryder adds.

Ryder says it was inspiring to work with the students and guide them through the whole science process from start to finish, and observe their pride when presenting results to whānau and other researchers at the end of the programme.

“It was also a great feeling teaching school students about my study species for the first time. The bonus was the development of my own communication skills which can be loaded with jargon when working in the academic environment.”

The students explored a range of projects that included both fieldwork and laboratory components and used research frameworks weaving together ecological science and indigenous knowledge. The projects covered a variety of topics related to pāua including food preference, predator reaction and population abundance in relation to environmental and habitat factors.

Hanna Ravn (Professional Practice Fellow based at the NZMSC and a 2024 Coastal People : Southern Skies Postgraduate Scholarship recipient) who led the All about Pāua extension programme says the community-centred approach of Coastal People : Southern Skies research is different to the type of science generally taught in classrooms, and is perfect for introducing

Testing pāua response to changing salinities at the New Zealand Marine Studies Centre. Photo credit: NZMSC

students to the value of undertaking science and conservation directly with those stakeholders.

“The students get to meet the communities, conduct their own science, and analyse and present their findings, so they experience the whole scientific cycle,” Ravn says. “What this also does is make research more approachable and relatable by removing the perception of scientists in labs who conduct investigation in isolation.”

Alongside the strengthening of technical science skills, is the equally important learning of soft-skills which naturally accompany community-inspired work. While the projects support skills such as

Testing pāua response to changing salinities at the New Zealand Marine Studies Centre. Photo credit: NZMSC

> **What this also does is make research more approachable and relatable by removing the perception of scientists in labs who conduct investigation in isolation."**

teamwork and collaboration, an openness to ideas, and gaining confidence, Carson says the students also learn that marine research draws on a range of science disciplines and knowledge systems, including Mātauranga Māori.

This multi-dimensional nature of science underpins a board game that's currently under development and explores the topic of pāua management and harvesting. The game presents ideas and scenarios of how pāua populations could be impacted by different harvesting strategies and changes in the environment and will ultimately be part of NZMSC's learning resources distributed to schools.

Carson says that providing these opportunities to students from rural schools and those who demonstrate a particular passion for science is a valuable introduction to the meaningful contribution science can make to communities and their aspirations for flourishing health.

"What's exciting is that every year we will be linking into a different Coastal People : Southern Skies research project which keeps it relevant, fresh and topical," Carson says. "These students are eager to learn and have so much to offer, so it's fantastic to be able to feed their thirst for knowledge and support them on their learning journey."

Building our Capacity

Profiling Our First Contestable Postdoctoral Fellows

Wharekura tamāhine learning Kauora pūkenga “Kia maanu Kia Ora” in Ōtaki awa. Photo credit: Shelley Ashton

Dr Terina Raureti: Re-engaging with Wai

Coastal People : Southern Skies Postdoctoral Fellow Dr Terina Raureti (Ngāti Raukawa, Ngāti Rangitihi) describes the work she’s undertaking with her Ōtaki community kura as reviving traditional practices in a modern context and setting.

Raureti’s mahi developing a swimming programme for the kura whānau of Te-Kura-ā-iwi o Whakatupuranga Rua Mano is to support reengaging with wai from a kaupapa Māori perspective.

Having developed Kauora, a theory of swimming for her doctorate thesis, Raureti is now applying the learnings of that theoretical framework to create a programme based on a set of pukenga (competencies) that responds to the specific waterways and aspirations associated with the kura.

“As no programme currently exists connecting the tamariki with the local awa, this is exciting and transformative mahi as it’s supporting growing their own relationships with local waterways,” Raureti says. “My vision for the Kura’s programme is for the tamariki to develop swimming competencies by learning alongside te taiao, and that whānau have their own mana to run it.”

Raureti refers to the process as her own ‘journey of reconnection’ to the local awa and waterways of her upbringing in Ōtaki. However, her drive for the mahi emerged from a childhood experience of disconnection, specifically as the awa she was brought up alongside wasn’t used to develop competencies around wai and swimming.

Instead, Raureti and other tamariki travelled off-site to join pool-based swimming lessons, away from te taiao and the awa that have traditionally provided the canvas for such learning and teaching opportunities.

Wharekura tama learning Kauora pūkenga “Mauria mai ngā taputapu” in Ōtaki awa. Photo credit: Shelley Ashton

“Traditionally, the transfer of knowledge and skills was intergenerational, including kai gathering, fishing, and even recreationally just being with whānau and aunties at the awa. However, in today’s society we aren’t connecting with te taiao as much so these skills aren’t been naturally transferred.”

Raureti counts herself fortunate in other ways as one of the first students to attend the whānau led and te reo Māori focussed Te-Kura-ā-iwi o Whakatupuranga Rua Mano in Ōtaki. “The Kura was the vision of my nan who wanted to create a space where we could be ourselves and be Māori in our education. It started with around 20 of us cousins and whānau of Ngāti Raukawa who had the same aspirations.”

When she moved from Ōtaki at the age of eight, Raureti continued to pursue her strength with competitive swimming. This passion coupled with her earlier experience of disconnection over time inspired her studies and doctorate thesis at the University of Otago.

“For my research to be authentic to who I am and of benefit to my community, I felt strongly that I needed to do it with my own whānau, in our own river and waterway.”

Raureti undertook her research in Te Koronga with her whānau of Ngāti Raukawa and Ngāti Kapu in Ōtaki, as well as the Otago-based Karitāne whānau, in which she developed Kauora, a model for understanding swimming from a whānau Māori perspective.

“The research aimed to understand how whānau practice and perceive swimming and its contribution to whānau health and well-being, and to create a swimming initiative that satisfies the needs of our whānau and wider iwi Māori,” Raureti explains.

Specifically, Kauora embodies three interconnected pou (pillars), as kaukau (swimming as play), kauhoe (providing), and kautiaki (protection). Together these pou embrace elements of whānau health around

interactions with wai, and from these pūkenga (competencies) can be developed.

It's this framework that Raureti's now applying to Te Kura-ā-iwi o Whakatupuranga Rua Mano in her postdoctoral project Kura Kauora. Having moved back to Ōtaki with her own whānau, the wairua of her thesis and its learnings live on, and pūkenga are being brought to life for the Kura in a programme they will ultimately run themselves.

Initially working with over 20 tamariki across Years 10-13 in a ten-week course, the pūkenga will be introduced, trialled, and refined. The intention of working with this older age cohort as a starting marker, is for them to be introduced to a set of wai competencies before they leave the Kura.

"It's exciting as it's bringing it all to life," Raureti says. "What's awesome is that it's a kaupapa that's been created based on our own whānau ancestral pūrākau, and which has been applied to the Kura started by our nan so we can grow as Māori. That this mahi contributes to the same bigger kaupapa is what makes it so special about doing it here."

It's critical that the swimming programme and its pūkenga be relevant to the unique aspirations of the Kura and wider community. Raureti says this alignment of the programme with the mātāpono of the community is essential to support the flourishing hauora of both tamariki and wider whānau.

"What's also important is recognising that every local waterway has its own unique characteristics and wairua, so the real skill in learning competencies is being able to go to different places and adapt to the local environment," Raureti explains. "What I would like to see is the tamariki also using the principles they learn in their everyday lives so they can flourish in their own lives."

Raureti's mahi is shifting the space of learning to te taiao and local waterways, with the goal to keep whānau safe. "Developing Kura Kauora will enable us as Māori and indigenous people to reclaim how we swim, to be comfortable in the wai, and remain safe . It also means we will not have to step out of our space to meet our needs as Māori and our ancestral waterways."

"Developing Kura Kauora will enable us as Māori and indigenous people to reclaim how we swim, to be comfortable in the wai, and remain safe."

Having recently moved back to Ōtaki, Raureti says the years spent away undertaking research and learning widely about other whānau connection to wai have been invaluable for bringing back and applying in her own place.

"My own pepi is at the kōhanga now, and it's exciting that this kaupapa could be completely normal for them and removes another barrier they won't have to deal with. My mahi builds on that which our whānau planted for us, and it makes me excited to know how much can continue to be built on this normalisation in time."

'My journey of reconnection' is how Raureti describes her own ongoing journey of exploring and the growth of her relationship with wai. "What is fantastic is that Coastal People : Southern Skies support these important kaupapa which is helping us and our communities to grow and flourish."

Oamaru Pacific Island Community Group (OPICG) Christmas parade float. Photo credit: Dr Jane Taafaki

Jane Taafaki: Lessons learned from Covid-19

Just before the pandemic arrived in early 2019, Dr Jane Taafaki moved from Hawaii to Oamaru with her young family. With her years of research and professional work in community health that timing proved to be serendipitous. Within weeks, Taafaki was leading the Oamaru Pacific Island Community Group's Covid-19 vaccination clinics, drive-throughs, and testing clinics.

Taafaki quickly became known in her new community, and in turn she grew to know the wider Waitaki region well. "We provided clinics between milkings, at meat works, and rugby games," she says. "Anywhere the community is, it was essential to mobilise and get there."

Of Tuvaluan and English descent, Taafaki's life has been grounded in her heritage, including her postgraduate research in Hawaii that studied the community health experiences of Micronesian people within the American healthcare system.

"The reason I came to Otago for my PhD was because of the Centre for Pacific Health," Taafaki explains, "and Oamaru was our preferred town to live not only due to its large Pacific population, but I was fascinated that a sizeable population of Tuvaluan live there." Of the approximately 10,000 Tuvaluan people living globally, about 200 reside in Waitaki's largest urban centre.

For her doctoral thesis, Taafaki expanded on her masters work researching the experiences of Tuvaluan health in the New Zealand system, which grew over time to include rural Pacific health. She says when the family moved to Oamaru and the opportunity came up

to help serve the Pacific community during Covid, she jumped at it.

Responding to the Pacific community's specific needs, Taafaki led the local project to develop and run their own vaccination clinics, which became the only community provider of immunisations for the Waitaki District. "As a Pacific provider, the programme became much bigger than anticipated and made us think outside of the box," she says. "No manual existed for a rural, non-clinical community-based immunisation programme."

At the top of the list was recognising the specific challenges faced by the rural-based Pacific community and eliminating as many barriers as possible. "There's a significant amount of navigation that needs to happen to take the service to the community or to facilitate them receiving the service."

The Oamaru Pacific Island Community Group advocated for developing a tailored service that was culturally appropriate, outside of normal working hours, and offered additional services like laminating vaccination passes and delivering welfare support at home.

Operating in a small coastal Otago town, a key aspect of the programme was operating inclusively and offering the services to the entire Oamaru community, explains Taafaki. "As a result, it really changed the face of Pasifika in this town. Everyone who attended the clinics not only had a great experience, but also a culturally rich and clinically sound one."

"Our community was always at the forefront of the service provision, but what we learnt was what is good for Pasifika is good for everyone. We immunised thousands, and as the ultimate goal is for self-management, there was also a strong focus on education and advocating for better health."

Now in her role as a Postdoctoral Fellow with Coastal People : Southern Skies, Taafaki is reviewing the community's Covid-response to help inform the development of a wider health-emergency response model.

"The project is looking at what we did, how it ran, and where it is now, and using that information to create a model for other non-clinical community organisations to use in the event of the next pandemic or other type of emergency. In essence, we are exploring the lessons of the immunisation and welfare programme that can be used by other organisations as a starting point for their own projects and purposes."

Taking vaccinations to wider rural-based Waitaki community. Photo credit: OPICG

A particular strength of the programme was mobilising the local health industry providers and practitioners as it grew. "A review highlighted that we provided a great service using the capacity and resources available in our own community," Taafaki says. "Much of its success comes down to relationships, which for Pasifika is everything."

As a facilitator of Pacific health in Oamaru, the Oamaru Pacific Island Group's work has now expanded to other immunisation and screening services, based on the model developed responding to Covid. "We aim to be the conduit for good health for the Pacific community here with a particular focus on prevention," Taafaki says. "The health of our community is a priority so we can thrive."

She describes Oamaru as a "wonderful and dynamic" place to raise children and the impetus behind her work is to tell the story of the community. "For me it's very important to serve the community in any way possible," Taafaki says. "Right now, it's about telling the story of our Covid experience and what we can learn from that story. It's rewarding knowing what we're doing through developing a great model of care can help other communities in the future."

Our 2023 Scholarship Taiura

The following tauira received Coastal People : Southern Skies scholarships in 2023.
We have invited each of them to share their journey to date.

Denise Berbece

Kia ora, my name is Denisa Berbece, and I am a PhD student at Te Herenga Waka Victoria University of Wellington. While born in Romania, I was raised in Rotorua and have now been in Te Whanganui-a-Tara, Wellington, for the last five years. I have always had a fascination for the natural world and far too many burning questions, so an undergraduate degree in marine biology and ecology seemed like a logical fit! This was soon followed by a Masters in Marine Biology, which (with much excitement and good fortune) I was able to extend into the PhD I am currently pursuing.

My research is focused on the responses of coralline algae to multiple drivers of climate change, particularly ocean acidification and ocean warming. You could potentially describe coralline algae as the corals of the plant world. They form and cement reefs, so play an essential role in structuring our marine ecosystems. Additionally, they're also indispensable in the settlement of many species of macroalgae, as well as kina, and pāua. Unfortunately due to their skeletal structure, they are incredibly susceptible to the impacts of ocean acidification. My PhD aims to describe the physiological responses of our coralline algae to these stressors and determine whether resilience and tolerance can be developed over multiple generations of exposure. This research will hopefully provide insight into the survival of this taxa within future reefs, a taxa which plays an essential ecological role in the survival of many taonga species. In addition, I hope to contribute to the continued guardianship of our coastal environments and better help future predictions on the nature of our reefs under future climate change.

The 2023 postgraduate scholarship awarded to me by Coastal People : Southern Skies has greatly supported me in my research journey. I will always be grateful for the opportunities it has opened up for me. Primarily, it has allowed me to conduct this research, so I thank them endlessly for supporting my burning research questions. I hope to give back with this research as much as they (and many others) have given to me.

Larissa Hinds

My name is Larissa Hinds and I am a tauiwi humanities scholar, with a background in law and physical geography. I have recently submitted my thesis towards the degree of Master of Planning. I grew up in Ōtepoti and am located within Te Iho Whenua | School of Geography at Otago University.

I have long been interested in Marine Protected Areas (MPAs), which are commonly regarded as a desirable way to enhance biodiversity and resilience to climate change.

Increasingly in Aotearoa-New Zealand, collaborative platforms are instituted to advise Ministers on how and where MPAs might be implemented in the coastal sea. However, marine reserves and MPAs are traditionally a conservation approach – this can sit at odds with the constitutional anchors provided by Te Tiriti o Waitangi, and fail to grapple with conflicts between diverse environmental values.

Focussing on three areas in the Kāi Tahu takiwā of Te Waipounamu, I wanted to give deeper analysis to how decisions about MPAs are negotiated 'inside' collaborative platforms.

Furthermore, I explored how fragmented oceans legislation was affecting the ability of collaborative platforms to deliver high-quality policy options for MPAs. In brief, I identified that the 'decision-making arena' for MPAs has transformed over time.

It was interesting and challenging to complete this research in the evolving political context of 2023. I am grateful to have participated in the poster plenary of the inaugural Coastal People : Southern Skies Symposium, to connect with other CPSS partners as well as set in motion my field research. Later on, I was fortunate to meet with most of my interviewees in-person in their hometown, allowing my fieldwork to anchor in the landscapes and seascapes of Te Waipounamu. This research would not have been possible without CPSS through both the postgraduate scholarship, and through their support for interdisciplinary research. I am grateful to have been welcomed into the CPSS community of practice. While I await examination of my thesis, I intend to complete the postgraduate publication bursary, and make the most of summer along the beautiful Otago coastline. I am indebted to my supervisor, Professor Nicola Wheen of Te Kaupeka Tātai Ture | Faculty of Law, for her guidance in this part of my academic journey.

Kieva Dunlop

Ko Te Aroha te maunga
Ko Tuapiro te awa
Ko Māmaru tōku waka
Ko Ngāti Kahu te iwi
Ko Ngāti Tara Hape te hapū
Ko Kauhanga te marae
Ko Tuahara te whānau
Kei Katikati taku kāinga
Ko Kieva Dunlop tōku ingoa
Nō reira, tēnā koutou, tēnā koutou, tēna koutou katoa.

Kia ora, my name is Kieva Dunlop, I am a recent marine science honours graduate from the University of Otago. I grew up in a small town in the Bay of Plenty called Katikati, but whakapapa back to Ngāti Kahu in the far north where I would spend most summers camping on the beach near Houhora. These trips sparked my interest in coastal processes and marine systems from an early age, leading me to applying for a marine science degree out of high school.

My research aimed to assist in predicting and estimating potential pāua larvae movement in and around the East Otago Taiāpure (EOT). The EOT is a community-lead management area established in 1999 with the aim of managing key taonga species for future customary fisheries practices. Pāua across Aotearoa is one of these taonga species, therefore many efforts to create effective and sustainable regulations to ensure the species' continuation have been made. In understanding this movement of pāua larvae a greater refinement of future management efforts to key source and sink pāua populations can be made.

To conduct my research, I used past survey data alongside local mātauranga Māori to identify key pāua reef sites within the EOT. With this knowledge I could apply these reef locations to an ocean current simulator called OpenDrift to estimate how these pāua reefs may be interconnected. Pāua have a pelagic free floating larval phase, meaning that the individuals are reliant primarily on wind and ocean currents to help disperse the larvae along the coastline potentially connecting these otherwise separated pāua reefs. Understanding these connections between reefs may help to identify reefs at greater risk of overfishing if little incoming migration of larvae is occurring, and key reefs to the EOT if larval supply to various other reefs is occurring.

Being awarded the Coastal People : Southern Skies scholarship supported me immensely during my studies as it allowed me to focus on producing research, and for that I am so thankful. Big thanks also to members of the East Otago Taiāpure committee and Otago Marine Science Department for trusting me with their knowledge required to complete this study. In particular, the following individuals: Rob Smith, Gaya Gnanalingam, Pete Russell and Brendan Flack.

I hope my research opens a door to using alternative methods of studying these taonga species in combination with traditional mātauranga Māori methods within the taiāpure to better protect future customary fisheries practices.

Meg Threlfall

Kia ora koutou, my name is Meg. I completed my Honours Marine Science degree at the University of Otago, working on kelp forest research supported by CPSS. I grew up in the rock pools and far-reaching coast of Pūrākaunui, Ōtepoti, with daily walks on the beach and weekends spent in the surf and bays undoubtedly shaping my connection and interest in studying the moana. My research with Professor Chris Hepburn focused on investigating carbon limitation and predicting its impact on giant kelp forest productivity in a high CO2 world. Working in the kelp forest so close to home in Te awa Mokihi, Butterfly Bay in Karitane, has been a memorable experience. Since starting my research, I've learnt about the kaitiakitanga of the North Otago coast, which has deepened my appreciation for my home and the people who work so hard to protect it.

The CPSS postgraduate scholarship has been instrumental in my research journey within marine science. I stood at the crossroads at the start of 2023, contemplating whether to pursue further studies. If I was going to begin a project, I wanted it to align with the needs and interests of local coastal communities. The CPSS postgraduate scholarship helped affirm that my research addressed issues relevant to my local communities. The postgraduate scholarship has provided continual financial support, alleviating financial pressures, which allowed me to dedicate my time to my research throughout the year.

I am incredibly grateful to have had the support of CPSS, my supervisor, Professor Chris Hepburn and my advisor, Dr Daniel Pritchard, during my postgraduate journey. I hope my research has helped to provide greater insight into how our coastal kelp forests might look in the future.

Mino Cleverley

I am a PhD student with a diverse background in Civil/ Structural Engineering, Management Consulting, and Education. Aotearoa born of Samoan descent, my journey has led me to pursue a PhD at the Centre for Sustainability at the University of Otago, driven by my desire to make a meaningful contribution to my community and the wider Pacific region.

My research focuses on the societal impacts of climate change in Samoa, specifically exploring the effects of forced relocation due to rising sea levels and increased flooding.

The forced relocation of communities poses significant social, cultural, and economic impacts, particularly for Indigenous communities who uphold strong ties to ancestral lands.

These sacred lands, where the ancestors walked, are the locus of being and identity for many Indigenous Peoples, including Samoans, and underscore the interconnectedness between Indigenous Peoples, the environment, and culture. Given that forced relocation is inevitable, will Samoan people's climate change vulnerability and adaptive potential be affected? This 'insider' research project responds to Euro-Western-centric climate scholarship that usually relates to the (limited) dimensions of physical fragility and tangible impacts of climate change, such as destruction, displacement, and physical adaptation.

Indigeneity, associated non-physical dimensions, and transcendental fragility, including identity, genealogical connection, spirituality, and the sense of belonging to 'place', are usually overlooked in climate scholarship and policy making.

This research aims to provide some valuable insights into the field and the challenges Samoan communities face, highlighting the importance of Indigenous perspectives and non- physical aspects of climate change. The research is set to bring some much-needed insights into the complex challenges of climate change and help develop effective strategies for adaptation and resilience. I am thankful for my CPSS scholarship, which provides financial support and connections to people, support and opportunities related to my research.

Preston Maluafiti

Kia ora, my name's Preston Maluafiti and I recently completed my honours within the Marine Science department. I was born and raised in Christchurch as a first-generation Samoan. I began my study in Dunedin in 2020 with my final honours project focusing on the ecology of Undaria pinnatifida (Wakame), an invasive Asian kelp within soft sediment (mud/sand) in Otago Harbour. The aim of the research was to further understand the invasive capabilities of U. pinnatifida throughout New Zealand.

I began my honours project by performing a series of field surveys at various sites throughout the harbour to understand the composition of soft sediment red algal communities containing U. pinnatifida. To build upon this, a larger scale assessment of soft sediment U. pinnatifida at one site was recorded to understand how they are distributed. Furthermore, physical measurements were taken from a wide range of individuals to describe their morphology.

Lastly, a field experiment was conducted to see if what I observed in the field was able to be replicated under similar conditions.

Kāti Huirapa Rūnaka ki Puketeraki have spearheaded a removal programme of U. pinnatifida along the east coast. This research showed that U. pinnatifida composes a notable amount of biomass in red algal soft sediment communities. The information from this research furthered knowledge on the invasive capability of U. pinnatifida which may be used in management decisions in the future.

The Coastal People : Southern Skies scholarship supported me through my last year of study significantly. I now look to the future for a job in fisheries where I hope to use my knowledge gained from my time studying to better the sustainability of New Zealand's marine resources.

Ā Mātau Tāngata/Our People

Strategic Advisory / Governance Board

Tā Mark Solomon (Chair)

Tā Mark Solomon (Ngāi Tahu, Ngāti Kurī) is committed to the betterment of his iwi, kotahitanga for Māori and the wider wellbeing of people and the environment. He is a strong advocate for the Māori economy and was instrumental in setting up the Iwi Chairs Forum (2005). He was the elected Kaiwhakahaere (Chair) of Te Rūnanga o Ngāi Tahu from 1998 to December 2016 and represented his local Papatipu Rūnanga, Te Rūnanga o Kaikōura from 1995 to December 2016. In 2013 he was awarded Knight Companion of the New Zealand Order of Merit for services to Māori and Business. In April 2015, he received an Honorary Doctorate from Lincoln University as Doctor of Natural Resources, recognising his enduring interest and concern for our natural environment.

Tā Mark's contribution to his community has been diverse and significant, ranging from roles as aschool board trustee, to a past board member of the Museum of New Zealand (Te Papa Tongarewa).

Tā Mark attributes his wider whānau (family) for early guidance and it is this experience that has driven his passion for encouraging educational opportunities for young Māori. He is a patron of He Toki Ki Te Rika, a Christchurch-based Māori pre-trade training programme, and the related He Toki Ki Te Mahi, an apprenticeship initiative both born from the Christchurch earthquake rebuild. He believes young Māori should strive for formal training to maximise their talents and to be the best theycan be.

Tā Mark believes a true rangatira is a servant of the people, a fact underpinned by his core philosophy of 'strength with humility'. Whilst the commercial success of Ngāi Tahu is acknowledged, Tā Mark is especially proud of the tribe's achievements in education and the development of the Iwi savings scheme Whai Rawa. Tā Mark is a committed advocate for the sanctity of whānau and takes a strong stance against whānau violence. He is passionate about his people and is determined to facilitate both iwi and wider Māori success by unlocking the potential of the Māori economy for the good of all.

Mr Hoturoa Barclay-Kerr

Hoturoa Barclay-Kerr (Tainui) is the captain of the oceangoing waka Haunui. Hotu has been sailing around the Pacific for more than thirty-five years. He paddles waka, sails waka, teaches waka. In 2020 he was awarded Companion of the New Zealand Order of Merit for services to Māori and heritage commemoration.

Hoturoa grew up with his numerous elders who nurtured and cared for him on the many marae of Waikato. He is a native Māori speaker and spent the first six years of his life with the Tūhoe people in Rūātoki, where his parents taught at the Rūātoki District High School. Mr Barclay-Kerr lectured at Waikato University for almost 20 years and has more recently specialised in education and leadership programmes that use waka as a platform for learning and development, including working with former youth offenders to help them transform their lives through waka education.

He co-authored the book 'Wayfinding Leadership: Ground-breaking Wisdom for Developing Leaders'. He was a director of 'A Waka Odyssey', the major voyaging event that opened the New Zealand Festival in 2018.

He was co-Chair of the National Coordinating Committee for 'Tuia 250 - Encounters', the national commemoration in 2019 marking the first meetings between Māori and Pākehā during the arrival of HMS Endeavour in 1769, as well as celebrating more than 1,000 years of Pacific voyaging, migration and settlement of Aotearoa. His vision, leadership and mana were critical to the success of Tuia 250 and ensuring a comprehensive national programme, amidst controversy about the framing of the commemoration. He was instrumental in ensuring the waka and tall ships of the voyaging flotilla reflected the dual heritage of the commemoration and those involved had the appropriate cultural capabilities.

Hoturoa is an orator on his marae at Kāwhia, the home of Haunui, and the ancient landing and settlement place of his ancestral waka, Tainui and his ancestor Hoturoa. He is a trustee on a number of trust boards and is currently the chairman of Te Toki Voyaging Trust.

Professor Richard Blaikie FRNZ

Professor Richard Blaikie is the host representative on the Strategic Advisory / Governance Board. He is the Deputy Vice-Chancellor (Research and Enterprise) at the University of Otago and a Professor in the Department of Physics. Professor Blaikie is a former Director of the MacDiarmid Institute (2008-2011), a former member of the Marsden Fund Council, and he served for one year on the New Zealand Science Board (2011). Professor Blaikie was awarded the Hector Medal in 2013 for his fundamental and wide-ranging contributions to the field of nano-optics and the Thomson Medal in 2015 in recognition of his science leadership.

Dame Susan Devoy

Dame Susan Devoy is one of New Zealand's most celebrated sportswomen, as well as being a recognised volunteer and advocate. Awarded a CBE and MBE she was made a Dame in 1998 for her services to sport in New Zealand. These honours recognise her achievements as a world champion for four years, her work as chair of the Halberg Foundation for 12 years, and the leadership she showed as a patron of the Muscular Dystrophy Association when she walked the length of New Zealand in 1988 raising over $500,000 for research and support networks.

Dame Susan was the Race Relations Commissioner for five years and throughout her tenure she was known for her empathy with people and her ability to relate to all people, respecting and learning their rituals, beliefs, challenges, and issues. This human-centred focus adds value to scientific and environmental strategies. Known for her practical and common-sense approach, Dame Susan brings an outside view, in a manner that is direct and questioning; informed by her experiences as a CEO and chairperson alongside her many other achievements.

Professor Tracey McIntosh

Tracey McIntosh (Ngāi Tūhoe) is Professor of Indigenous Studies at Wānanga o Waipapa (School of Māori Studies and Pacific Studies) at the University of Auckland. She is the Chief Science Advisor for the Ministry of Social Development and a Commissioner of Te Kāhui Tātari Ture: Criminal Cases Review Commission. She was the former Co-Director of Ngā Pae o te Māramatanga New Zealand's Māori Centre of Research Excellence.

She previously taught in the sociology and criminology programme at the University of Auckland. In 2012 Tracey served as the co-Chair of the Children's Commissioner's Expert Advisory Group on Solutions to Child Poverty. In 2018- 2019 she was a member of the Welfare Expert Advisory Group (WEAG) which released the report 'Whakmana Tangata: Restoring Dignity to Social Security in New Zealand' (2019). She was also a member of Te Uepū Hapai i te Ora - The Safe and Effective Justice Advisory Group which released the report 'He Waka Roimata: Transforming our Criminal Justice System' (2019) and 'Turuki! Turuki!' (2019). She sits on a range of advisory groups and boards for government and community organisations. She is currently contributing to the Royal Commission of Abuse in Care in an advisory capacity and is a Board member of He Whenua Taurikura.

Her recent research focused on incarceration (particularly of Māori and Indigenous peoples) and issues pertaining to poverty, inequality and social justice. She recognises the significance of working with those that have lived expertise of incarceration and marginalisation and acknowledges them as experts of their own condition. She has a strong interest in the interface between research and policy.

Dr Rebecca McLeod (until August 2023)

Dr Rebecca McLeod is a marine scientist, specialising in temperate, sub-Antarctic and Antarctic marine ecosystems. She gained her PhD at the University of Otago and has since worked in academic, private and government settings. In 2011, Rebecca was appointed to the Fiordland Marine Guardians under the Fiordland (Te Moana o Atawhenua) Marine Management Act 2005, and she has chaired this board since 2015. The Guardians promote integrated management with a view to maintaining or improving the environment and fisheries for future generations.

A career highlight for Rebecca was facilitating the development of the Antarctic Science Platform during her tenure as Science Advisor at Antarctica New Zealand and the New Zealand Antarctic Research Institute. Rebecca is currently a Leader on the MBIE Endeavour programme “Natural carbon sequestration in our southern fjords – a pathway towards carbon neutrality” and oversees the transformation of science results into policy. Rebecca lives in Ōtepoti Dunedin with her young family and spends as much time in and on the water as possible.

Professor Emeritus Khyla Russell (until June 2023)

Professor Emeritus Russell started her academic pathway as a mature student gaining her first degree, a Bachelor of Arts, through Massey University. This was followed by a PhD in Anthropology from the University of Otago in 2001, on Kāi Tahu perceptions of landscapes. She started her mahi at Otago Polytechnic (now Te Pūkenga) in 1980 and was appointed Kaitohutohu from 2004 – 2015. Throughout this time she was responsible for overseeing the incorporation of Te Tiriti o Waitangi into day-to-day operations at Otago Polytechnic alongside adherence to Otago Polytechnic’s Memorandum of Understanding with Kā Papatipu Rūnaka. Khyla was instrumental in the development of the Māori Strategic Framework that continues to guide the embedding of Te Ao Māori in all aspects of daily life within the institution and the Māori Annual Report presented to Kā Papatipu Rūnaka. Following her retirement in 2015, Khyla has continued to serve as Kaumātua to the Kaitohutohu Office through consultancies on iwi knowledge, te reo and related aspects of tikaka and kawa and our tauira journeys by sharing her mātauranga and kōrero through her role as sponsor on noho marae.

Professor Russell is an experienced researcher working as an Assessor for Capable NZ for Māori learners, as a member of the University of Otago Ngāi Tahu Research Consultation Committee and working alongside coastal communities in the development of research projects that support marine protection.

Dr Paula Vivili

Dr Paula Vivili is the Deputy Director-General Science and Capability at the Pacific Community (SPC) – an inter-government organisation with 27 members: 22 Pacific Island countries and territories and five metropolitan members –Australia, France, New Zealand, UK, and USA. He oversees SPC's technical programmes including its Geoscience, Energy and Maritime Division. Prior to this role, he was the Director of SPC's Public Health Division for six years. Dr Vivili has an intimate knowledge of SPC, its people, and partners. He is from Tonga where he worked for 15 years before joining SPC.

Dr Vivili holds undergraduate degrees in Human Nutrition (University of Otago) and Medicine (University of the South Pacific) as well as a Masters degree in International Public Health (University of Sydney). He has undertaken a World Health Organisation Fellowship at the University of Auckland and Auckland Hospital in Ophthalmology.

Tame Te Rangi (from July 2023)

Tame Te Rangi (Ngāti Whātua, Ngāpuhi) is a representative of Te Rūnanga o Ngāti Whātua, one of two signed iwi partners of Coastal People : Southern Skies.

Tame Te Rangi is the current chair of the Kaipara Moana Remediation Joint Committee. Tame provides tangata whenua advice to local government as well as Council Controlled organisations, including Auckland Council and Te Kārearea Strategic Partnership Standing Committee for Whangārei District Council. He chaired the selection panel for Auckland Council's Independent Māori Statutory Board for the initial three appointment cycles.

He is also a Co-Chair of Whakaruruhau Matua, the national forum of the Māori standards-setting body for the New Zealand Qualifications Authority. He currently lives in Mangākahia with his whānau spread across the marae and hapū based activities of those homelands.

Our Directors

Professor Anne-Marie Jackson
Co-Director

(Ngāti Whātua, Ngāti Kahu o Whangaroa, Ngāpuhi, Ngātiwai)

As a Co-Director of Coastal People : Southern Skies, Anne-Marie leads the strategy of the Centre and has administrative oversight. She is Kaihautū of the Centre of Indigenous Science and Te Koronga at the University of Otago. Her mahi focuses on mauri ora (flourishing wellness), namely through the application of te ao Māori, te Tiriti o Waitangi and kaupapa Māori. She has recently completed a Health Research Council funded Rangahau Hauora Māori Project Tangaroa Ara Rau: Māori water safety programme for whānau and a Marsden Fund project Te whai wawewawe Māuitikitiki-ā-Taranga: Revitalisation of Māori string figure knowledge and practice.

Professor Chris Hepburn
Co-Director

As a Co-Director of Coastal People : Southern Skies, Chris has been responsible for the foundational relationships of the Centre. He is a PhD graduate from Otago who grew up in Cromwell. Chris and his team of students and collaborators work alongside coastal communities in their struggles to restore and maintain ways of life associated with productive coastal ecosystems and fisheries. Application of his research and teaching to support local action that has helped return local fisheries rights to local people has been a highlight of his work to date. He is a proud member of the East Otago Taiāpure Management Committee.

Professor Rosalina (Rose) Richards Co-Director

Rose is Co-Director of Coastal People : Southern Skies and a co-leader of the Restoring Platform. Rose is also Deputy Director of the Va'a o Tautai – Centre for Pacific Health in the Division of Health Sciences, where her research focuses on Pacific wellbeing across a variety of health professions and community led visions of ola manuia (living in Wellbeing). From Samoan and English ancestry, she was born and raised in Te Wai Pounamu, the South Island of Aotearoa. Her academic background is in psychology, public health and Pacific health.

Professor Richard Walter Co-Director

Richard stepped into the role of Co-Director following Chris's resignation from his Co-Director role in November 2023.

Richard is a field archaeologist who works in Aotearoa and the Pacific islands with ongoing projects in the Solomon Islands, Cook Islands and Aotearoa. Alongside his CPSS Co-Director role, Richard is leading the Connecting Coastal Communities across Moana Nui a Kiwa project within the Connecting Theme of CPSS. He is also a founder and co-director of Southern Pacific Archaeological Research

(SPAR) which is a research unit within the Division of Humanities at the University of Otago. Richard, and his SPAR team, work on archaeological research, and on community focussed heritage projects throughout Aotearoa and the tropical Pacific.

Governance & Management Groups

Strategic Advisory / Governance Board

Tā Mark Solomon	**Chair**	Independent Director
Hoturoa Barclay-Kerr	**Partner Representative**	Te Toki Voyaging Trust
Professor Richard Blaikie	**Host Representative**	University of Otago
Dame Susan Devoy	**Independent Member**	Independent Director
Professor Tracey McIntosh	**Partner Representative**	University of Auckland
Dr Rebecca McLeod	**Independent Member (until August 2023)**	Fiordland Marine Guardians
Professor Emeritus Khyla Russell	**Partner Representative (until June 2023)**	Te Rūnanga o NgāiTahu
Tame Te Rangi	**Partner Representative (from July 2023)**	Te Rūnanga o Ngāti Whātua
Dr Paula Vivili	**Independent Member**	Pacific Community –SPC
Professor Anne-Marie Jackson	**(ex officio) Co-Director**	University of Otago
Professor Rose Richards	**(exofficio) Co-Director**	University of Otago
Mrs AJ Woodhouse	**(ex officio) Kaiurungi Programme Manager**	University of Otago
Ondine Godtschalk	**(ex-officio) Secretary/Kaiwhakahaer e Tari**	University of Otago

Research Advisory Group

Professor Wendy Nelson (Chair)	NIWA / University of Auckland
Professor Emeritus Terry Chapin	University of Alaska Fairbanks
Professor Catriona Hurd	University of Tasmania
Dr Ana Koloto	Ministry for Pacific Peoples
Professor Chellie Spiller	University of Waikato
Professor Richard Walter	University of Otago

Co-Directors

Professor Anne-Marie Jackson	Co-Director	University of Otago
Professor Rose Richards	Co-Director	University of Otago
Professor Chris Hepburn	Co-Director (until November 2023)	University of Otago
Professor Richard Walter	Co-Director (fromNovember 2023)	University of Otago

Theme Leaders

Ms Sally Carson	University of Otago
Dr Chris Cornwall	Victoria University of Wellington
Dr Kim Currie	National Institute of Water and Atmospheric Research (NIWA)
Dr Peter Dillingham	University of Otago
Dr Gaya Gnanalingam	University of Otago
Dr Karen Greig	University of Otago
Professor Anne-Marie Jackson	University of Otago
Associate Professor Ocean Mercier	Victoria University of Wellington
Dr Chanel Phillips	University of Otago
Dr Daniel Pritchard	University of Otago / TMKResearch Ltd
Associate Professor Will Rayment	University of Otago
Professor Rose Richards	University of Otago
Dr Emma Ryan	The University of Auckland
Dr Naomi Simmonds	Community-based researcher

Researchers

Chris Hepburn (Co-Director)	University of Otago
Anne-Marie Jackson (Co-Director)	University of Otago
Rose Richards (Co-Director)	University of Otago
Richard Walter (Co-Director)	University of Otago
Clare Adams	Ministry for Primary Industries
Alana Alexander	University of Otago
Bridie Allan	University of Otago
Hoturoa Barclay-Kerr	Te Toki Voyaging Trust
Georgia Bell	Institute of Environmental and Scientific Research (ESR)
James Bell	Victoria University of Wellington
Anna Bertram	Te Toki Voyaging Trust
Caitlin Blain	The University of Auckland
Steph Blair	Community-based researcher
Clare Bradley	AgriSea
Tane Bradley	AgriSea
Daniel Breen	Auckland University of Technology
Justine Camp	University of Otago
Sally Carson	University of Otago
Sean Connell	University of Adelaide
Chris Cornwall	Victoria University of Wellington
Kim Currie	National Institute of Water and Atmospheric Research (NIWA)
Roberta Archino	National Institute of Water and Atmospheric Research (NIWA)
Matt Desmond	University of Otago
Mark Dickson	The University of Auckland
Peter Dillingham	University of Otago
Hinemoa Elder	The University of Auckland
Brendan Flack	Community-based researcher
Murray Ford	The University of Auckland
Crid Fraser	University of Otago
Roseanna Gamlen-Greene	University of Otago
Gaya Gnanalingam	University of Otago
Karen Greig	University of Otago
Marta Guerra	University of Otago
Hauiti Hakopa	True North Research & Mapping Limited
Richard Hamilton	The Nature Conservancy
Palatasa Havea	Massey University
Rob Hewitt	Te Whare Wānanga o Awanuiārangi
Linn Hoffmann	University of Otago
Brendan Hokowhitu	University of Queensland
Samantha Jackson	Southern District Health Board
Jennifer Jamieson	Community-based researcher
Sheri Johnson	University of Otago
Ani Kainamu-Murchie	National Institute of Water and Atmospheric Research (NIWA)
Nathan Kenny	University of Otago

Researchers

Anna Kluibenschedl	University of Otago
Michael Knapp	University of Otago
Henry Lane	National Institute of Water and Atmospheric Research (NIWA)
Cliff Law National	Institute of Water and Atmospheric Research (NIWA)
Duong Le	University of Otago
Gianna Leoni	Te Hiku Media/Te Reo Iritangi o Te Hiku o te Ika
Julian Lilkendey	Auckland University of Technology
Bridgette Masters-Awatere	University of Waikato
Christina McGraw	University of Otago
Ocean Mercier	Victoria University of Wellington
Aubrey Miller	University of Otago
Ngahuia Mita	University of Otago
Losa Moata'ane	University of Otago
Mark Morrison	National Institute of Water and AtmosphericResearch (NIWA)
Judith Murdoch	University of Otago
Wendy Nelson	The University of Auckland / NIWA /Auckland Museum
Eliz Ngarimu	Community-based researcher
Tina Ngata	Manaaki Matakaoa
Chanel Phillips	University of Otago
John Pirker	University of Canterbury
Margherita Poto	Centre for the Law of the Sea (Norway)
Robert Poulin	University of Otago
Daniel Pritchard	University of Otago / TMK Research
Charles Radclyffe	University of Otago
Stevie Rae-Blair	Community-based researcher
Terina Raureti	University of Otago
Will Rayment	University of Otago
Poia Rewi	Te Mātāwai
Tangiwai Rewi	Ministry for Primary Industries
Christina Riesselman	University of Otago
Jenny Rock	University of Otago
Alice Rogers	Victoria University of Wellington
Phillip Ross	University of Waikato
Troy Ruhe	University of Otago
Jacinta Ruru	University of Otago
Pete Russell	University of Otago
Emma Ryan	The University of Auckland
Armagan Sabetian	Auckland University of Technology
Candida Savage	University of Otago
Nigel Scott	Te Rūnanga o Ngāi Tahu
Nicholas Shears	The University of Auckland
Naomi Simmonds	Community-based researcher
Pascal Sirguey	University of Otago
Robert Smith	University of Otago
Zane Smith	Community-based researcher
Janet Stephenson	University of Otago
Wayne Stephenson	University of Otago
Jane Taafaki	University of Otago

Ken Taiapa	Massey University
Mena Taripo	University of Otago
Richard Taylor	The University of Auckland
Tame Te Rangi	Community-based researcher
Hone Tipuna Tibble	Community-based researcher
Emily Tidey	University of Otago
Jordan Waiti	University of Waikato
Jon Waters	University of Otago
Nicola Wheen	University of Otago
Lindsey White	Auckland University of Technology
Megan Wilson	University of Otago

Tauira

Louise Bennett-Jones*	University of Otago	PhD #
Benjamin Hanara	University of Otago	PhD #
Alexander Hayward	University of Otago	PhD #
Pascale Lubbe	University of Otago	PhD #
William Pearman	University of Otago	PhD #
Finn Ryder	University of Otago	PhD #
Franscesca Strano	Victoria University of Wellington	PhD #
Aleluia Taise Victoria	University of Wellington	PhD #
Berivan Temiz	University of Otago	PhD #
Sebastian Alvarez Costes	University of Otago	PhD
Unai Arrieta Armendariz	AUT	PhD
Zoe Battershill	University of Otago	PhD
Jacinta Beckwith*	University of Otago	PhD
Denisa Berbece*	Victoria University of Wellington	PhD
Manon Broadribb	Victoria University of Wellington	PhD
Imogen Bunting	Victoria University of Wellington	PhD
Katherine Buschang	University of Otago	PhD
Namrata Chand*	University of Otago	PhD
Alex Charlton	University of Otago	PhD
Mino Cleverley*	University of Otago	PhD
Lucy Coyle	University of Otago	PhD
Bridget Fellows	University of Otago	PhD
Katie Fenton	Victoria University of Wellington	PhD
Mary Hawkes	University of Otago	PhD
Holly Koch Victoria	University of Wellington	PhD
Xiaoyue (Pluto) Liu	University of Otago	PhD
Edward Moody	University of Otago	PhD
Brenda Muga	University of Otago	PhD
Te Amohaere (Amo) Ngata-Aerengamate	Victoria University of Wellington	PhD
Arianna Nisa-Waller	University of Otago	PhD
Miriam Perotti	Victoria University of Wellington	PhD
Mere Takoko	Victoria University of Wellington	PhD
Brooke Tucker	University of Otago	PhD
Monica Vallendar	University of Otago	PhD

Tauira

Lisa van Halderen	University of Otago	PhD
Anne-Fleur van Leeuwen	University of Auckland	PhD
Meriam Van Os	University of Otago	PhD
Inano Walter	University of Otago	PhD
Ben Williams	University of Otago	PhD
Gabriela Wood	Victoria University of Wellington	PhD
Sabre Baker-Anderson	University of Otago	Master's #
Rachel Cannon	University of Otago	Master's #
Vanessa Clark	University of Otago	Master's #
Mackenzie Dagg	University of Otago	Master's #
Larissa Hinds*	University of Otago	Master's #
Wikitoria Moore	University of Otago	Master's #
Josh Percy	University of Otago	Master's #
Te Kahurangi Skelton*	University of Otago	Master's #
Tessa Thomson	Victoria University of Wellington	Master's #
Xianrui Wang	University of Otago	Master's #
Dominic Bravenboer	AUT	Master's
Abbey Browne*	University of Auckland	Master's
Ella Dewar	University of Otago	Master's
Helen Hoang	AUT	Master's
Emily Jupp	AUT	Master's
Grace Martin	AUT	Master's
Breana Riordan	University of Otago	Master's
Jessie Scarrott	University of Auckland	Master's
Jordan Sparrow	University of Otago	Master's
Whitney Steidl	University of Otago	Master's
Sarndra Theobold	University of Auckland	Master's
Yuhan Zhou	University of Otago	Master's
Stella Simpson*	University of Otago	Master's
Kieva Dunlop*	University of Otago	Other #
Devon Gamble	University of Otago	Other #
Preston Maluafiti*	University of Otago	Other #
William McCoy	University of Otago	Other #
Sevanaia Seeto	University of Otago	Other #
Meg Threlfall*	University of Otago	Other #
Laura Bomemann	Victoria University of Wellington	Other

*Indicates Coastal People : Southern Skies scholarship recipient.
# Indicates qualification completed

2023 Financial Report

The finances for the 2023 year (1 January 2023 to 31 December 2023) are reported below. All figures are GST exclusive.

	Actual '000s	Budget '000s
CoRE FUNDED INCOME		
Government funding		
CoRE funding	4,300	4,300
Surplus/deficit carried forward	3595	(615)
Total CoRE funding	**7,895**	**3,685**
CoRE FUNDING EXPENDITURE		
Salaries		
Salaries and salary-related costs (funded by the CoRE)	1,312	1,478
Total salaries and salary-related costs	**1,312**	**1,478**
Other costs		
Indirect costs:		
Overheads	1,200	1,354
Direct costs:		
Project costs	495	1,300
Travel costs	0	0
Postgraduate students	348	384
Equipment depreciation/rental	0	0
Subcontractor(s)	200	400
Extraordinary expenditure	0	0
Total other costs	**2,243**	**3,437**
TOTAL CORE EXPENDITURE		
Total expenses	**3,554**	**4,915**
Net surplus/(deficit)	**4,396**	**(1230)**
CO-FUNDING		
Other government funding		
Total other government funding	55	0
Non-government funding		
Total non-government funding	0	0
TOTAL INCOME	**7,950**	**3,685**

Research Outputs aligned to CPSS Kaupapa

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Our strength is not made from us alone,
but made from many.

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