Mountains To Sea
Conservation Trust
Nga Maunga ki te Moana

Mountains to Sea Wānanga

A national marine and freshwater conference

Harataunga Marae, Coromandel

2021

www.emr.org.nz | www.whitebaitconnection.co.nz | info@emr.org.nz

Contents

Preface

Ngā maunga ki te moana, Mountains to Sea Conservation Trust (MTSCT), was created in 2002 as a vehicle and guiding entity to enable a team of extremely motivated individuals to effectively communicate marine and freshwater science to NZ communities, involve them in experiencing those environments first-hand and in taking action for it, believing that the end result will be an improved environment and a strong foundational ethic of kaitiakitanga. All via the programmes; Experiencing Marine Reserves (EMR) and Whitebait Connection (WBC).

This is taken from the original trust deed created in 2002 and remains the same today.

A Charitable Trust is hereby established for the purpose of achieving the following outcomes.

a) *Environmental educational strategies, programs, resources and community engagement activities will be created, fostered and offered to the community.*
b) *Advocate directly within communities and with Government for the establishment of a system of conservation measures and biodiversity protection areas.*
c) *Support and create opportunities for young environmental professionals to work and engage with schools and communities in environmental education and ecological restoration and conservation management.*
d) *Foster and support the pursuit of scientific research, understanding and traditional knowledge of aquatic ecosystems and biodiversity. Ensure that the results of the research are disseminated in the community.*
e) *Provide technical, scientific assistance to the community, schools and environmental advocacy groups for the purpose of furthering the aims of the Trust.*

Our team has grown and expanded in many ways since 2002 and currently has 8 trustees, 1 patron, 2 co-directors and a team of over 40 coordinators delivering EMR and WBC around NZ.

Our whakataukī is

Whakamana te maunga,

Whakamana te wai,

He mauri o ngā tangata.

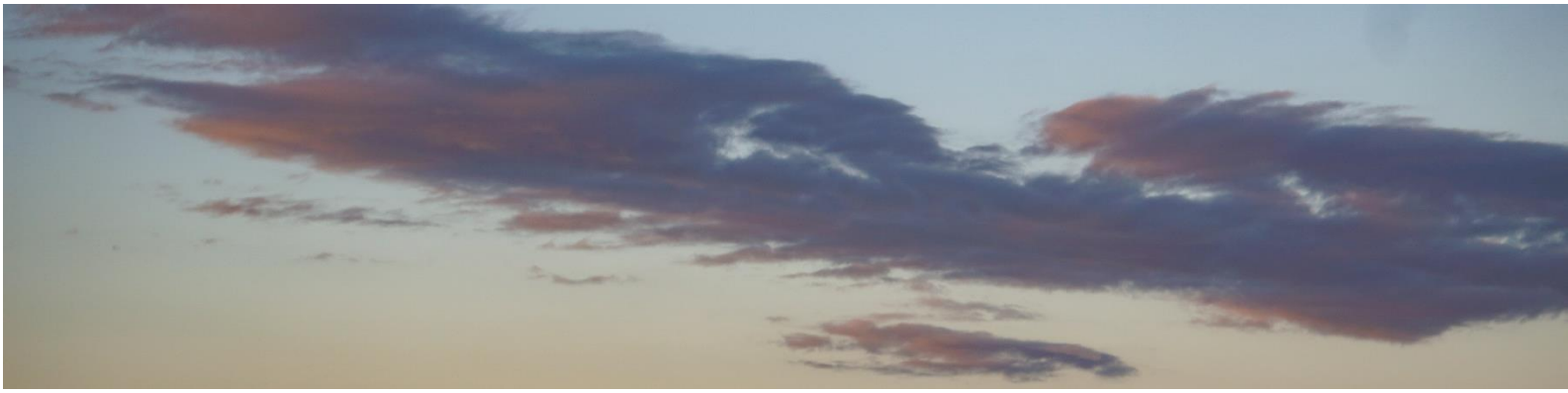
Ngā mea katoa he pai.

If we look after the water from

mountains to the sea,

it will look after us.

It is our life force.



That's a WHY – there's always a why – the why is one of the key motivating factors that leads thoughts and ideas into action and long-lasting behaviour change.

We all have slightly different 'whys' and many connections, things that unite us. Thank you to all those that had a role in what we created on this wānanga – we explored key themes as shown in these proceedings. We also created many non-tangible outcomes – the kind that spur us on and motivate us to keep going. Moments that become powerful memories that don't fade. The 'Why' and making space to connect and be inspired is powerful.

MTSCT has been facilitating wānanga since 2006 for each of our programmes, then in 2010 we combined resources to run the EMR and WBC annual coordinator training events as one and invite a wider range of people – making it a mountains to sea focus, always with a different theme.

The topic in 2019; He Wai Rangatira, came at a time where the trust was exploring what is at its core and was building a strategy for the future. The wānanga explored ways of future-proofing the work of the trust in an ever-changing environment and how freshwater and marine educators can position themselves to have long-lasting success.

Last year, the wānanga had to be postponed due to Covid-19. This year's topic; Partnerships, couldn't have come at a better time. After what felt like a very isolating year in 2020, this wānanga explored the importance of collaboration with partners and allowed everyone to reconnect with others around the country.

We very much look forward to the next wānanga which will be held in Northland in April 2022.

Video from wānanga

Photographs Google

Acknowledgements

Thank for you making this wānanga possible.

Lottery Grants Board
Te Puna Tahua
LOTTO FUNDS FOR YOUR COMMUNITY

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Te Kaunihera ā Rohe o Waikato

Department of Conservation
Te Papa Atawhai

Thank you to Sandy Thompson from Lead for your workshopping prowess.

LEAD
CENTRE FOR
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GOVERNANCE & LEADERSHIP

Thank you to Nic Mead from Auckland Sea Kayaks for keeping us safe on the water.

Auckland
Sea Kayaks

Special thanks to Te Whanau Ahi Kaa O Harataunga for welcoming us into their whānau.

Thank you to hau kainga – Ngāti Porou Ki Hauraki for hosting us.

Thank you to Jennifer Darling Catering for the yummy brain and soul food.

Thank you to Habitat Tuateawa for sharing their mahi in the local area.

WĀNANGA PROCEEDINGS

Day 1 - Introductions

We were given a warm pōwhiri welcome onto the Harataunga marae and made to feel like whānau. It was clear from the beginning, the whanau had big hearts, wanted to share their taonga with us and had enthusiasm to learn from us as well.

The theme for the wānanga was 'Partnerships' – an apt theme after an isolating Covid-19 2020. The wānanga gave us the opportunity to discuss the effectiveness of existing and potential partnerships that foster action for marine and freshwater conservation. We were encouraged to korero māori, listen, engage, reflect and participate.

We were asked to describe what we each hoped to get out of the wānanga. Responses included:

Learn • share • discover what others are working on • refocus

collaborative project possibilities • teaching tamariki

insights • possibilities • growth • participate • connect

become inspired • network • korero māori

20 Years of Mountains to Sea Conservation Trust

Kim Jones – Mountains to Sea Conservation Trust

PDF

The theme of this year's wānanga, 'partnerships,' is a key concept that has propelled MTSCT forward over the past 20 years. In 2006, WBC held their first wānanga. The first combined WBC and EMR wānanga was in 2009, when it was evident that we were stronger and more effective together.

The formula for our success is:

Effectively communicate marine and freshwater science to NZ communities
+
Involve them in experiencing those environments first-hand and empower them to take action
=
An improved environment and a strong foundational ethic of kaitiakitanga
Via the EMR and WBC programmes

Twenty years on, our guiding principals remain strong:

- The power of community action
- Relationships are central to our work
- Empowerment through education
- Kaitiakitanga
- The ability of passion and commitment to create change
- Positive connection with people and place through experiential education
- Being solution focused

Isabel Krauss – Whitebait Connection

PDF

Over the past 20 years, WBC has expanded to 8 regions with 40 coordinators. When the īnanga spawning programme began in 2014, there was only 1 site. Now 98 whitebait spawning sites have been adapted. A massive thanks to all the coordinators, the strong leadership and the schools and partners involved who have helped to produce these incredible statistics:

Here's to the next 20 years!

Samara Nicholas – Experiencing Marine Reserves

PDF

This is a good time to reflect on where we have come from. The evolution of gear and photography are small segments that demonstrate the growth of the organisation over 20 years. Back in 2001, on the first EMR trip to the Poor Knights, there were 3 schools. Twenty years on, 1000s of schools have taken part. Over 132,128 students have been through the EMR programme and 70,928 people have experienced a marine reserve. We are grateful for our sponsors and partners who fully support our programme. We are thankful or our volunteers who have put in a massive 171,440 hours to help us get people in the ocean. And we are thankful to our team of coordinators who continually inspire volunteers, students and the community to engage with and protect the marine environment.

Keynote Speakers

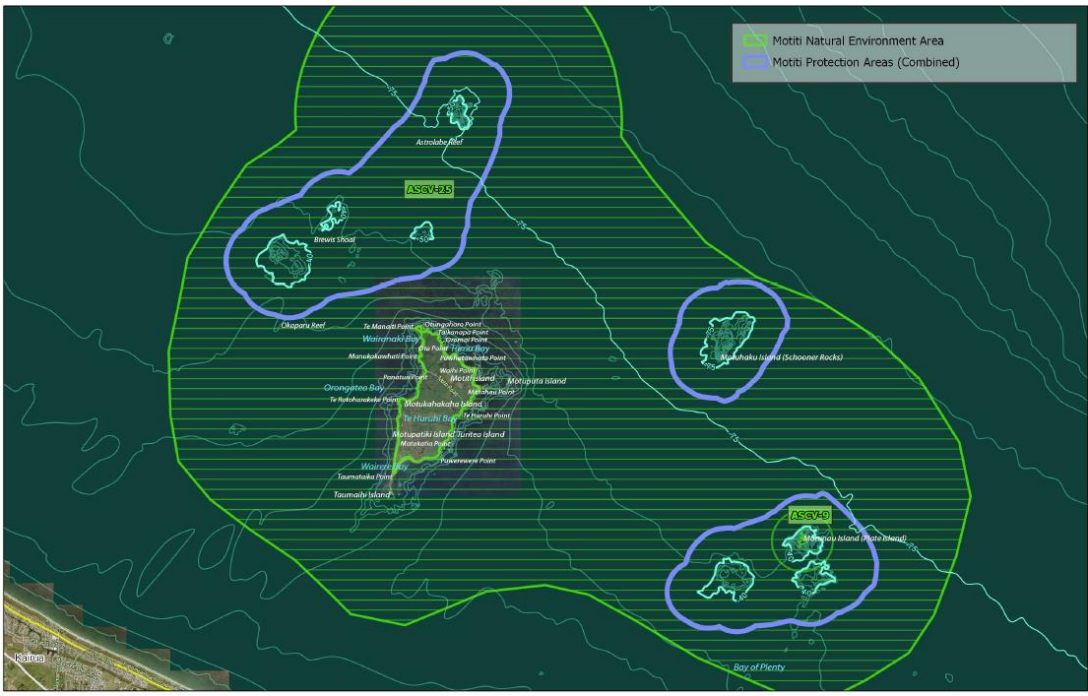
Te Atarangi Sayers - Motiti Rohe Moana Trust, Advisor "Taonga moana – pathways to restoration

PDF

We are all intrinsically tied to the marine ecosystem. Around Motiti, we were watching the large complex life systems slowly dwindle to barren conditions. We were losing our relationship with our taonga species. This was most easily represented by hapuku which were once a staple but are becoming extinct in local waters/ A lot of this is due to the inappropriate activities and industrialisation of fishing pressure which has scoured the benthic environment over the last 50 years. Because of this, in 1958, the kaumatua and community set out to preserve the cultural and natural landscape of the moana.

In 2009 the trust was established and given the daunting task of working a pathway through the quagmire which is the legislative system of the NZ Government. There is not just one act the governs the marine space, but many, depending on the activity taking place. Some of the largest marine protected areas in Aotearoa are created around the protection of oil infrastructure and cable zones rather than the protection of a species or habitat.

As one of the pressures around Motiti is overfishing, it made sense to start by looking at the Fisheries Act. The Fisheries Act's purpose is to fundamentally protect the act of fishing, not protect the lifeforce of the marine space. It manages the economic scale or opportunity of that resource as opposed to our intrinsic relationship with place and space. We soon exhausted the potential of the Fisheries Act by applying for a taiapure, then a mataitai, and seeking a section 186 rahui to preserve the benefits and the gains of the exclusion zone in the post Rena recovery. We were told there was no space for our sacred places to be protected under the Fisheries Act.



That lead to us establishing a declaration in the environment court in order to facilitate the controls around the Motiti Natural Environment area. The Motiti Rohe Moana was first generated as a discreet space by the Coastal Policy Statement in order to provide for the special natural characters and special relationships that are associated with the area. It is beyond just the act of fishing or just one activity but looks at the integrated relationship that space and place has and the associations that it provides for the wellbeing of our wider community.

It was important to come to an agreement that these places are special. We developed schedules using our native manage plans, which are hapu based, that enabled the natural character values to be represented in that marine area. This is in essence is what created the Motiti Natural Environment. On top of that we have cultural landscape that are further informed through the coastal environment planning process. We appealed the Coastal Environment Plan on the basis that it didn't provide for the NZ coastal policy statement and failed

to protect our waahi tapu, our waahi taonga, our associations, our relationships, our indigenous biodiversity, the habitats and landscape features that are associated with the nationally and regionally significant area. Within the Motiti Rohe Moana we have several waahi tapu or toka tapu which are scared places due to the sacrifices that our ancestors many generations ago. That story handed down from generation to generation enables us to the appreciate of the values associated with that life force or mauri that is held within these places and spaces. In the appeal, the court agreed that within areas where there were cumulative values or the concatenation of values, they warranted the protection and prohibited the destruction of flora and fauna. This meant that the reef systems could be protected as they are intrinsically linked to preserving the life force, biodiversity and habitat values.

We sought to argue, using biologist and ecologists, that the toka tapu required a biological buffer zone of at least one nautical mile in order to preserve that life force. Studies have shown that in other marine protected areas that destructive activities on the fringe have an effect within the protected area.

This has been an iterative process of developing marine spatial planning and informed marine management opportunities for developing better and more informed management regimes. When we protect something we see a restorative relationship occur with our marine space which occurs relatively rapidly. With the exclusion zone around Astrolabe Reef, within a manner of 3-4 years we saw a tremendous recovery, even with the Rena still there. It defines that you can have one of the biggest maritime disasters in Aotearoa and still see the ocean recover. That really lends to the idea that we need to restore our marine space in order to restore the life force and buffer the effects of climate change and the overextraction that has already been happening.

To recap where the divisions of government policy lie, if we are talking about fish inside a cage or the act of fishing it is governed by the Fisheries Act. But if we are talking about the relationship between toka tapu and the kainga or the home of the species, this is a relationship that can be managed by the Resource Management Act. It is because of the values of landscape, biodiversity, habitat, cultural association, national and regional significance that we have the opportunity to protect and preserve the places and spaces into the future.

Peter Miles – Revive our Gulf – The Mussel Reef Restoration Trust, Kaiwhakahaere/Programme Director

PDF

The Mussel Restoration Trust came about after some simple experiments showed that mussels could still survive in the Firth of Thames. It is group of concerned scientists and people that were connected to the Hauraki Gulf forum in 2012.

In the 1950s, there was around 500km2 of mussel reef and 1500kms of dredged area in the Hauraki Gulf. At this time, mussels were much larger, and dredging them was like pulling up rolls of carpet, with all the other benthic life at the same time. In the 1950s, fisheries officers were becoming concerned as mussels were becoming harder to find. There was talk that maybe dredging more would help to stimulate growth. By the 1970s, the mussel beds had basically collapsed.

Today, the Hauraki Gulf has a dead seabed. We are missing out on the mussels removing phytoplankton and sediment via filter feeding. Anything they do not want, they deposit as pseudo faeces in the ground which the crustaceans and worms feed on. The mussels also provide a 3D structure for fish to live in. Mussels can create a high biodiverse habitat. When compared it a soft sediment habitat, mussel beds have 4x the invertebrate density, 7x the biomass, 6x more productivity and 10x more fish abundance.

Biosystem services – a single adult mussel can filter around 350l of water per day. That means, mussels that were previously found in the Firth, could have filtered the entire body of water in the Firth in 1 day.

The planets are now aligning as there is a political and social will to do something about this. The funding and people capabilities are becoming available. The Hauraki Gulf Forum has the goal to restore 1000km2 of shellfish beds. Groups such as Legasea have pulled together to ban recreational scallop dredging. And no retailers now stock scallop dredgers.

Challenges: Mussels broadcast spawn, so the eggs drift off and need to find something to settle on such as seagrass and hydroids. This forms spat. Which eventually floats off again and then settles on hard surfaces, including other mussel shells, which the mussels then start forming.

In the Hauraki Gulf there are low levels of larval and spat, there is nothing to settle on, as it is too murky for seagrasses to grow, and there is predation. Restoration needs to be done at a sufficient scale to allow for lifecycle.

Transplanting live mussels is feasible but expensive - $20-$200 per m2

Opportunities: Finding a winning long-term solution requires combining western science, engineering and Te Ao Maori. The current operating model involves working with key stakeholders, interviewing iwi on historical mussel beds, involving existing projects. There are opportunities for engineers to create structures that can protect the shellfish from threats while they establish.

Kim Jones – Whitebait Connection, National Coordinator

PDF

As an introduction to whitebait, Kim presented the open source presentation on īnanga which is delivered to many school and community groups. WBC partnered with EOS Ecology to produce these resources which are also available in te reo māori and as ECE resources.

What are īnanga?

Whitebait is a collective term for the juvenile stage of 5 native species of fish (*Galaxiidae).* Īnanga are the adult stage of 1 of the whitebait species. Īnanga are in declining due to introduced predators and damage to their habitat.

After presenting the background information on īnanga, Kim's main focus was on īnanga spawning sites or 'love zones'. In relation to īnanga overall habitat, their spawning habitat is very small. It is a very critical, life stage specific habitat. Because of this, it is an area where we can make a lot of gains in finding and making sure it is well looked after. Everything must be just right in the 'love zone' for them to spawn successfully. The gradient of the banks needs to allow for the spring tides to get up over the grasses. A lot of modified areas have steep banks which does not allow this. Ideally there are lots of submerged aquatic plants for īnanga to hide in while waiting, dense grass and root mats for the eggs, and larger plants for shade.

Currently there are 92 spawning sites located and adopted around NZ. These sites are logged on a Google Map. Sites include the Hoteo River, which was one of the first really big rivers that Whitebait Connection worked on. Spawning sites were found over a 4.8km stretch of river! The plan is to keep adding more sites and to grow a larger national database. The overall vision is catchment restoration. However, sometimes this can be overwhelming. Focussing on the egg and working your way up from there can be a really good hook for people which encourages them to start thinking of things further upstream. Catchment restoration even an īnanga egg focus cannot be done alone. To encourage more people to help, WBC has many open source resources available including:

- īnanga introduction
- How to find a spawning site
- How to locate a salt water wedge
- How to assess spawning habitat
- How to count eggs
- How to install artificial spawning habitat
- Short and long term maintenance
- Signage templates

Dave West – Awa restoration in Aotearoa, DOC

PDF

Dave presents from a scientific lens and takes the perspective of the awa. As scientists, we study one small part, but as ecologists we look at the bigger picture.

Why do we need to restore our awa?

New Zealand uses a lot of hydro power which means a lot of our larger rivers are dammed.

Most of our terrestrial based protected areas are headwaters, not rivers.

What is the awa?

Needs to be a body of water that flows from mountains to sea and larger than a stream.

How do we achieve awa restoration?

It can be easy to say how many fences and plants we have put in, but do we know if the mauri of the river is better.

Using the Waipoua Conceptual Model building as an example, we worked with mana whenua, regional council, native forest restoration trust and other ecologists, we did a hikoi of the entire awa. It was split into 4 similar zones to catch the values and the threats of each zone. There was a range of values and threats in each zone, which changed with who was using the land in each zone. These were then grouped into pressures or drivers, threats or issues, management responses and outcomes or values. This was a good way to capture the understanding of the area and move forward.

It is important to take a long term and holistic view when restoring the awa. Using the mauri compass is good for this. There are several Western science holistic frameworks that can be used which aim to align Western science and the mauri compass.

Who is involved?

You have to create trust between the stakeholders and follow through with promises. Creating a checklist of who to work with, so not just focussing on easy options and those that are willing. As these are not always the most important people to work with.

Key messages for awa restoration:

- Find your scope and scale – you have to know the full picture to be able to focus on a small section at time
- Know your awa – sampling is required to be able to fix anything
- Balance the sampling with actions that can be seen, like riparian planting
- Set objectives that you can achieve and document early

Sam Judd – Te Mahere Whakauka, Co Founder

Sam's journey to Te Mahere Whakauka started with Sustainable Coastlines 12 years, enabling others to start looking after the places that we love. They set a vision around wanting beautiful beaches and healthy waters and realised the most important part of that vision was the people. Without people, we can't fix anything. It is people that cause the problems for the rivers and the sea, but it also people that fix those problems. So the focus landed on the people.

The Love your Water programme went all over the country helping people to look after their waters. The scale needed for these programmes is quite mind boggling, so how do we go about scaling it up. Part of this happened by engaging with the community correction offenders 11 years ago. During this, it was discovered that it was important to run an education session first. By reducing the workday from 6 hours to 5 hours and starting with an hour presentation, productivity was doubled. Scaling up also involved looking at the budget and how money could be saved. Noticing over half the budget was spent on seedlings, they set up a nursery at the prison so the prisoners would raise the plants from seeds.

Success stories so far

Pūniu River Care use their values as a roadmap for decision making and success. They have successfully expanded and scaled up from planting half a million native seedlings a year to 1.5 million a year. This is a model that can be shared and scaled out to other regions. They fund 3 full time staff to do maintenance on the local marae. In return the kaumatua and kuia give them the mātauranga māori knowledge that can guide them through their journey.

Scaling up these initiatives doesn't just improve the health of the awa, it improves social impact indicators, which we cannot put a value on. These benefits include, people getting fitter and saving on health costs, mental health benefits, lowering benefit dependencies, giving people the opportunity to work up to a professional role and giving corrections offenders an opportunity to engage positively with the community and nature to reduce the chance of them be reconvicted.

There are 2 models for the restoration work. The Pūniu River is the rural model and urban model is from Ngāti Whatua o Orakei based at Pourewa Reserve. Both of these groups are willing to share their model so they can be recreated and expanded.

Food production models such as Kai Rotorua that is another scalable model.

The project has now established a network of 36 māori led enterprises across the country that are empathic to cleaning up the awa, creating jobs for the vulnerable and growing organic kai, who all want to share their learnings.

What's next?

We are creating a business case to present to government to look at the seed funding to grow this project and share open-source resources.

Also working with AgriSea and local Coromandel iwi to restore the area all the way from the Hunua Ranges to the Firth of Thames. This will include riparian planting all the way do to mixed aquaculture production and regenerating the reefs with seaweed.

Day 2 – Show and Tell

Laura Torre – WBC Auckland Projects

PDF

There are lots of projects on the go in Auckland. Here is the team that is making them all happen:

Laura – with a background of 9 years as Wai Care Coordinator at Auckland Council is now leading the love our eels, love our streams programme at a preschool in Massey. Laura leads a project for Papakura Local Board and is also applying for funding to get more projects running

Brendan – is new to the team and learning on the go, is currently a field trip assistant helping with the Wai Care audit

Briar – working in Northern Auckland, is the young child specialist working with ECE's on field trips to connect children with nature and inspire them. She also has a MSc in Freshwater Ecology

Ella – is the Simon Says Move Like a Bug champion and a key school presenter in Auckland

Kimberley – is the resource champion, helping to write funding applications and doing spawning work

Sarah – is doing spawning field work and has been mentoring Briar

Sophie – is currently wearing the EMR hat but also dips a toe into the freshwater, especially with school delivery

Eel-izabeth – the new eel puppet for use in ECE classes

Krysia Knowak – Taupo Environmental Education Collaborative (TEEC)

PDF

Initial aside: Tuna ECE resource

Taupō Environmental Education Collaborative (TEEC) was born after an educator at DOC was finding it difficult to find people that work in the same conservation education space. Now there are many partners working together, discussing how to achieve goals, H&S issues and how to continually build each other up. In the last couple of years, the partnerships have grown (check out all the partners logos). Collectively they have had 30 shared events in the last couple of years covering professional development, Ngā Korero (like TED talks for environmental science), nature art, tours of the aquarium, water colour workshops, community events and school programmes.

TEEC frequently has visitors from other districts who wish to learn and share, or simply feel connected to others in a similar field.

Next steps for TEEC include identifying skills and partners that are missing, and ensuring that the kaupapa still works for all the new partners. See the process for building a collaborative like TEEC here.

Beth Pearsall – Collecting and sowing seeds

Beth is a local in the Coromandel, living only 30 minutes from the marae. She has been involved in the harbour restoration in Colville for the past 4 years, starting a nursery, planting 30,000 trees and fencing off 5km of streams. Beth mostly works with pioneer species as she has found them easy to grow and the seeds are easy to collect. She defines 'eco-sourcing' in this area as seeds collected within a few kilometres of planting and has over 90% success rate with planting with no weed control.

Tips for different species:

Select healthy trees, and collect a few seeds from many plants, be patient and always collect more seeds than you think you need! Active observation to monitor when species are ripe to collect. It's also good to say a karakia or ask permission of the plant before harvesting seeds.

Mānuka: can be collected any time, up to 2 weeks before sowing, collect branches with plenty of seed heads on them, leave for 1 week in warm dry area in a paper bag in which time the seed heads will crack open, direct sow them into PB bags, top irrigation until they come up, and then not much more maintenance after that. More than one may germinate in each pot but don't worry they'll sort themselves out.

Kānuka: need to be picked at the right time (which can vary between regions), collect when the seed heads are bronzy, dry them out in a bag similar to manuka, and direct sow into pots

Ti Kouka: a species that is not easy to plan for, need to collect when ripe, strip and soak in a bucket of water for a week, it will turn into a mush, this turns the fruit into a thin membrane to get the seeds out once it is dried out. Be patient once you sow the seeds as they can take up to 2 months to come up.

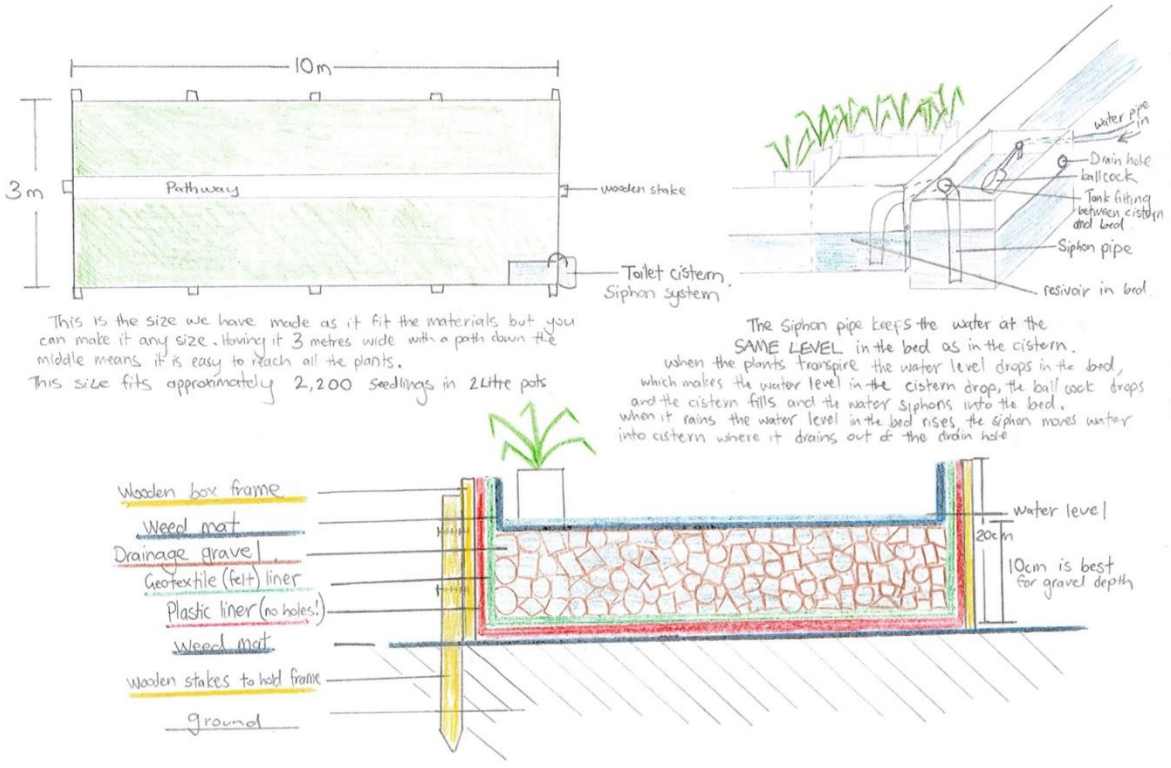
Kowhai: use fingernail clippers to clip the end of the seed and plant.

Harekeke: snip some flower seed pods, require a week of drying in a paper bay, remove seeds from seed head and leave in fridge for a few weeks, sow in seed trays, be patient.

Wicking bed: use a 10x3m paddling pool – this can hold up to 5000 manuka or 2000 harekeke or ti kouka

Gravel in the bottom, weed matting on top, with plants sitting in bed, use a timer for flood irrigation every few days, or some are set up similar to a toilet cistern so the plants always have access to water. This creates strong, healthy trees.

Give it a go! Growing our native pioneer species is not as difficult as people may think.



Zoe Studd and Jorge Jimenez – Love Rimurimu and seaweed restoration

PDF

Love Rimurimu

Love Rimurimu is a year-long school programme that builds on the EMR programme and grew from the citizen science programme, Project Baseline, that documented kelp is in decline. The aim is to engage the community and schools to build on the citizen science and have a real focus on how awesome seaweed is.

Term 1 focusses on the role of seaweed, its 5 super powers (improving water quality, enhancing biodiversity, rebuilding ecosystems, fighting climate change, traditional and modern uses), incorporating the EMR snorkel so students could get in to water and experience a kelp forest, collecting and pressing seaweed samples so they can be uses to help identify species, experiments on carbon absorption and ecological roles in the ocean

Term 2 focuses on the human impacts and climate change. Due to Covid this was all presented online, inviting national experts to talk to the students. The human impacts ranged from sedimentation, overfishing, climate change, pollution.

Term 3 focuses on uses and reproduction – students use different rimurimu to make kai, bags, fertilizer, bioplastic, cosmetics and try to grow seaweed in the classroom

Term 4 focuses on taking action – looking at rubbish as a threat, using Sustainable Coastlines litter intelligence, whanau day to try the seaweed creations from the previous term,

Success: The programme has reached 120 students from 3 schools. Also ran 4 community snorkels with a seaweed focus.

The Future: Expand the programme to other regions, apply for WWF funding for 5 more classes in the Wellington region.

Restore Project

When looking at restoring an ecosystem, you want the whole system to get back into balance. We have proposed a seaweed restoration project in Wellington that could be a blueprint for blue carbon and bioremediation with the aim to regenerate 4 seaweed sites in the Wellington Harbour. The aim is also to build a toolkit that can be used by other regions. This is an alternative solution to a marine reserve as we cannot implement marine reserves everywhere.

Loss of seaweed is a global problem. This is a nature-based solution. So far there are not many examples of this type of marine restoration around the world and is the first of its kind in New Zealand. Part of the project is working in the community advocacy space so people can fall in love with seaweed and understand the benefits.

Kirsty Brennan – Streamed – community water quality

PDF

Kirsty is from EOS Ecology in Christchurch

Streamed was developed for 2 main reasons:

- Increased public concern for waterway health
- Community groups were collecting data with nowhere to put it and nowhere to see any of the outcomes

With the idea of connecting communities to their local waterway through participation, Streamed is a publicly accessible online platform where community groups can record their data and understand what it means. It focusses on water clarity (using water clarity tubes) as it is a simple data set that groups can collect accurately. This information can integrate the wider understanding of sediment and is an effective measure for community groups to measure well. It brings the efforts of community groups to life and gives the awa a voice.

It is built on the ArcGIS platform as it is a well supported system. Anyone can submit data onto the website, however you need a unique project ID (like a password which helps with quality control) to do so. On the data entry sheets, everything is dropdown or selectable to reduce potential errors. Error messages will also pop up if your repeat measures are outside the quality-assurance range that it should be. This is to make it as easy as possible for all community groups to use.

This platform has allowed groups to really move forward with enhancement efforts as they can easily interpret the data. Whereas previously, all the data was stored on data sheets and not easily accessible. It allows people to see changes over time, compare different streams, see the differences in topography and see other groups involved.

This is just the starting point for Streamed. In the future the team would like to have community groups all over New Zealand active on the site, and to work with other partners to integrate the Streamed water clarity database with other databases to get an even bigger vision of the streams.

Shane Orchard – Whitebait Watch

PDF

Whitebait Watch is a guidance kit and database that supports community members to identify and record whitebait spawning sites. This can help to locate areas for protection or restoration and contribute to monitoring the health of local rivers and streams. The simple methods are suitable for a wide range of groups including stream care and restoration groups, school groups and interested landowners nationwide. The basic survey is aimed at finding spawning sites and mapping them for either educational or monitoring purposes, and the Whitebait Watch database provides a user-friendly place to store and view the results. The project is currently being developed with support from the DOC Community Fund and University of Canterbury and will produce a step-by-step guidance resource later this year. In the meantime the database has already been set up on the iNaturalist platform and is available for anyone use. Follow the link to the project here.

Sophie Journee – EMR Auckland

PDF

The Auckland EMR team consists of Sophie Journee, Ella Walmsley, Koha Kahui-McConnell, Teschna Christie and Lorna Doogan. The team has delivered to 26 schools this season with a more recent focus on a combined Mountains to Sea programme involving both EMR and WBC and Para Kore Ki Tamaki. This programme is a more holistic programme, giving students the opportunity to have an overview of many aspects of the environment and issues faced. This has been made possible through funding from Auckland Council and Local Boards.

The events calendar has also expanded to include more habitats and unprotected sites, sites accessible from the mainland, and offshore islands. The record day is Torbay with 328 participants. Expanding the calendar to have more local events has meant we can engage with more people.

The calendar also now includes kayak and SUP days so we can access marine reserves and habitats that are not swimmable. And for the first time, a combined kayak and snorkel day at Lake Rototoa, one of Auckland's last remaining semi pristine dune lakes, with the help of our partners Aotearoa Lakes, Auckland Sea Kayaks and Auckland Council.

The volunteer programme continues to grow, upskilling the volunteers so they can be empowered to share their knowledge with participants. There are also rewards and incentives (such as first dibs on island trips) for those volunteers who commit the most time.

The next steps for the Auckland team are to look for corporate funding for schools, expand the full Mountains to Sea programme to more schools, apply for GIFT funding for monitoring or using the Love Rimurimu as a platform, expanding the rangatahi programme and continuing to expand our reach in Auckland.

Vicki Smith – Art & Ecology

PDF

Vicki is an interdisciplinary artist based in Wakatu, Nelson. She was commissioned to do public artwork for the upgrade of the Waterworks, a pumping and sluice station between sewage and the estuary. The idea was to tell the story of the estuary using offcut pvc to make a woven fence work. This evolved into working with local students on art projects to tell stories of their local streams as well.

Vicki created a grab bag of ideas of how to work with community around waterways. This has included numerous ways for communities to visualise their local awa and help to bring it back into people's mind. She is also involved in the Te Wairepo Project and Breathe.

Dr. Manue Martinez – Litter in Northland, a bitter issue?

PDF

Manue has a background as a cetologist, but after finding employment at NorthTec, she changed tack to help protect whales, dolphins and other marine creatures in a different way. Litter became the obvious topic – because it is an issue everywhere, even in the most remote locations. Manue realised there was a paucity of data to show how much of an issue litter is.

There are many groups in Northland, like F.O.R.C.E., that do litter clean ups, but no data are recorded. In addition, some citizen scientists take part in the Litter Intelligence programme (Sustainable Coastlines) that collects Tier 1 data. Between these two options on a spectrum, there was a big gap. This is how the Te Tai Tokerau Debris Monitoring Project (TTTDMP) started in 2019, giving citizen-scientists the opportunity to collect litter and record data. It can be done anytime, anywhere, with no minimum distance. TTTDMP has been working with schools to collect and sort rubbish found on their school grounds to start a korero of how much rubbish there is and what can we do to reduce that rubbish. It is also encouraging students to collect data and show them how important data is to make a change in the world. Data is also shared publicly on TTTDMP webpage.

One of the options to collected data for TTTDMP is to use the free Marine Debris Tracker App. The app allows each group to tailor their litter categories according to their requirements. It also records the GPS location of each item recorded as well as effort. As a result, GIS analyses can be conducted, including the location of hot spots. TTTDMP is part of a multi-layered approach that provides litter data for prevention, advocacy, and policy against litter in our environment.

The next step is installing and auditing LittaTraps around Northland in 2021, with 53 sites so far, to figure out how much litter is travelling through our drains to our aquatic environment. Results will be linked with TTTDMP and Litter Intelligence to get a wider data set and increase our understanding of litter to better prevent and mitigate its adverse effects on marine and coastal ecosystems, wildlife, and human health.

Lyn Hamilton-Hunter – Breeding Giant Kōkopu, part of the recovery plan?

The giant kōkopu breeding programme started in 2012 by Jerry Rees-Webb at Mangakura Fish farm on the Kaipara Coast Highway, with an idealist view to "Save the GK" population, an endemic species only found in NZ. After years of deliberating on how that could be achieved, we came to the conclusion that the only sustainable and effective way was to breed for release into appropriate habitats in the wild. In the last year, the programme has made huge inroads into breeding successfully, humanely, ethically and sustainably

Years of observing and caring for the kōkopu in captivity has revealed how they may behave in the in the wild – they love shade, there is a hierarchy, they can tolerate temperate changes, when overfed they become fat (more due to poor husbandry skills in captivity), when underfed or overstocked they will feed or attack each other, and levels of activity and moods change throughout the year. Larval survival is not as high as maybe expected as they often feed on the weaker

The time has come to work with and support others to discover potential release sites, streams that already have a declining giant kokopu population or where they are now locally extinct, because unless there is an existing population of adult fish, recruitment of these diadromous species, probably won't happen as it is now the thinking that the release of species pheromones encourages larval recruitment, they will not naturally repopulate without there being an existing population.

Releasing strategy: 2000 adult fish in one go (such as has been done at Orewa) may be too much of a strain on the ecosystem. Protocols for release should take into consideration stream size, habitat, fish passage ability, recruitment catchment area, invertebrate life, and other existing species. My vision for this would be to have small number of mature adults up stream and after a period release a larger number of juveniles lower down, thus simulating a more natural situation. Then leave Nature to find a balance for the population. This should also be followed up with a monitoring program.

Now giant kokopu are at risk, declining (NZTCS). Although other classifications see them as threatened/vulnerable/endangered. They are certainly locally extinct in some areas. If we do not do something soon, we will lose them. For now, at Mangakura the focus is on giant kōkopu. If releases are successful, the blueprints of the breed for release programme could be used for other species that are in decline eg. Banded Kōkopu.

To have a better idea of our work, please watch the TVNZ Rural Delivery episode released on the 8th May.

Ric Balfour – Hooked on native fish/Kaingakau ana kit e ika takatake

Ric works for Landcare Trust, based in Thames and covers the Coromandel and Waikato, in a role that is designed to be a resource for land owners, iwi, schools and community groups to get things done, particularly with technical expertise or where to find it. There are lots of valuable resources on their website.

Landcare Trust is also working with eDNA to provide test kits for community groups. Thames High School was the first group he has completed a test with, and results came back with some very interesting findings from Karaka Stream in Thames. DNA from invasive freshwater jellyfish was abundant but whitebait species (galaxiids) were absent altogether. With this data they have approached the regional council about a restoration project and improving fish passage. It was not hard for the students to see how the channelization of the lower stream through town could be improved for fish better passage. (see below)

However, as an educational tool, Ric was a little disappointed with how the results are returned as a plain spreadsheet which is not very tangible for schools or communities. Now he is working with EPA and Wilderlab to help groups to create infographics for the data they collect so it is easy to digest and interpret. Data needs to have relatable meaning to be able to put it into action. Infographics are a fantastic tool in the art of science transfer to inform decision making.

Landcare Trust has a wide range of projects that they support. Another example is Project Kahikatea. Part of this is a bat monitoring programme and discovering bats in places no one thought they would still be surviving, primarily around kahikatea stands. The project helps to profile the critical habitat role of remnant kahikatea stands and aims to help reverse the decline from degradation. This also demonstrates the ability to connect the information to something that is charismatic, like a long-tailed bat, and using it as a way to leverage action, education and protection.

Brent Condon – Urban awa and the broken streams theory

PDF

‘A broken stream reflects a broken community.’ ‘But both can be revitalized.’

Our urban streams take on abuse due to high intensity of use and they need us all to be kaitiaki. Traditionally we have targeted children to take on the kaitiaki roles as they are clean canvases through educational channels. However, we need to start going where we have not been before, like community groups, churches, youth groups and sport clubs. This requires building mana and a relationship before spieling what you want of these people. It takes humility and social intelligence.

Get to know people first and find out their drivers before selling them on your conservation initiatives and ideas.

Historically human nature changes when we are on the brink. Look at the industrial age in the United Kingdom in cities such as London and Belfast for example. These city streams and waterways ran black and were laid lifeless devoid of insect life or salmon. Pivotal change occurred when key stakeholders came together. The common driver being the Wairua (spirit) of the river itself, even if all stakeholders have a different reason for restoring the health. I was witness to this in the early 2000s there was the first run of Atlantic salmon in 100 years ran the Lagan river in Belfast!

In Auckland, urban streams are in a bad state. But we are not completely on the brink yet!

But change needs to happen now. We can’t continue to be the ‘ambulance at the bottom of the cliff’ and put band aids on stream abuse and degradation issues through volunteer work alone. Communities need to take ownership over their streams, so they feel connected and want to conserve them. In South Auckland, Panuku (Auckland Council CCO) are working with various iwi and hapū to do stream cleans. However, stream cleans are not enough.

Education in schools and community groups is the next step. This included drawing/art projects that result in kid’s artwork on signs around the streams. The engagement is continued into communities with workshops with kids, church and sport groups and others - by creating local murals and playgrounds with educational elements connected to the awa and its life force.

All of these are encouraging people to take responsibility for their community taonga (assets) and their awa, as the 2 are intrinsically connected.

Lara Taylor – Enabling Kaitiakitanga and Ecosystem-Based Management – How Can 'We' Whakamana hapū and communities on the ground/on the moana?

There is a puraku – a story that is handed down – that shows us the importance of looking at the whole ecosystem.

When Ranginui, the Sky Father, and Papatuanuku, the Earth Mother separated there were many battles between their children. The swamplands was the peacemaker. Tane, the God of the Forest, ate the children of Tangaroa, the God of the Sea. Tangaroa took revenge by sending water into Tane's realm and drowning his children. This reflects the story of erosion. And shows us the importance of the swamplands which can take all the fighting, silt and excess water and give it back to the awa when it needs rehydrating. But we have demolished 90% of our swamplands. We need to learn from these stories. When dealing with the Gods, we cannot win against them and we cannot work in isolation. We need to work with communities across the landscape to achieve our goals.

Lara works for Landcare Research, and her current research is on sustainable seas and the national science challenge (there are 11 challenges that look at massive complex problems facing the nation). Lara currently co-leads a 3 year project to enable ecosystem based management and kaitiakitanga. They are working with a project advisory group that is made up of representatives from different spheres of influence (policy and crown agency spaces, māori fisheries, hapū). In this second year of the project they are focussing on scenario-based workshops and identifying areas where they can intervene and create institutional and systemic change. The third year will then focus on creating a toolkit of guidance, strategies and information to better enable co-governance and co-management around the country.

Dean Allen and Patricia Mikaere – Manaia River Restoration

PDF

Dean works for Waikato Regional Council who provide support for landowners and financial support (usually ranging from 35% to 50%) for catchment management works.

The Manaia catchment management plan has the support of the iwi and targets river restoration. They collected evidence and formulated a 10 year plan. After local hui, the iwi had many aspirations, including:

- Improving and maintaining water quality
- Reducing erosion and sedimentation
- Increasing biodiversity
- Establishing community-led initiatives
- Restoring and maintain the mauri of the river for future generations

In response to Covid-19, the government called for 'shovel ready' projects so the Manaia River Restoration Project was fast tracked to a 3 year project. This project is to focus on the river, its main tributaries, predator control, water quality monitoring, working with local kura, working with families on a tree nursery, and training 3-4 local staff as a Field Team.

Trish was recruited as Project Coordinator. Trish noted that after only being a team for 8 months, they have already achieved a lot, including a range of training from chainsaw operation to first aid, weed and pest control to electronic fishing. Year 1 has also focussed on much of the planning side and meeting with key stakeholders. In the next year they plan to expand on the work already completed, hosting community planting days, inviting experts to talk to the community, continuing with pest control and water quality monitoring.

James Muir – Listening to our water; Data driven community engagement on water quality

PDF

Three years ago, James set off on an ambitious journey to use technology to monitor water quality in real time. The reason for this journey was because data is information and information are stories and it is the stories that connect us to our environment. A river system as a whole is not isolated, so we need to have multiple data points. This is how the 'waka' was born. It has 5 sensors which measure the key parameters of water quality and health.

Now that we can collect the data, what do we do with it. We need to share data, no matter if it looks bad so people can help.

Data is the voice of the awa. It is the potential for people to see data and turn it into a story that is relevant and connects people to that place. Real time data allows us to be connected immediately with your river no matter how far away you are. It means you can ask your awa 'How are you today?' using your phone, wherever you are.

What does this look like for our Rangatahi?

How do conversations about the awa look like with rangatahi? It could be using an avatar that can speak about the history, health and well being, mauri, chemistry and fish of the awa. Maybe it is something that can be visualised so it can be turned into a story so people build a deeper connection.

Field trips

After listening to all the amazing mahi that is being done around the country, it was time to stretch the legs out on the field trips to Tuateawa.

Stand up paddle boarding

True to the theme of 'Partnerships,' our event partners Auckland Sea Kayaks lead SUP sessions. Everyone received expert instruction from Nic on how to paddle and stay safe on the board. A small lagoon and creek provided a perfect location for people to practice their skills in a confined environment. Once people were more confident, we worked as a team to launch the boards into the surf. Out passed the waves, people were able to explore around the bay and hone their paddling techniques. Surfing back in on the waves was definitely a highlight.

Snorkelling

Sophie from EMR Auckland led snorkelling around the reef. The waves and stony beach presented some challenges, but would not stop the team exploring the reef. The stony beach dropped away to sand. Unfortunately the waves had stirred it up and visibility was not the greatest. However, people were still treated to the 'reliable' spotty, juvenile snapper and cool encrusting life. The snorkelling experience also provided some tips for regional EMR coordinators on how to make snorkelling events run more smoothly.

Freshwater investigation

Steve, Sue, Nicky and Alan from Habitat Tuateawa shared their story with us which we found really informative and showed our gratitude by giving back and releasing their plantings from weeds down by the boat ramp.

Here is more about the group and their extensive mahi:

Tuateawa is situated in a spectacular and special environment. It lies on a section of eastern Coromandel coastline featuring boulder and sandy beaches, rocky headlands, high cliffs and small offshore islands. The Kuoutunu Peninsula to the east, and the sanctuary islands of the Mercury Group and Cuvier Island further north provide an inspiring backdrop. Looking inland native forest extends in places from the sea to the high ridges. Some of the best examples of coastal kauri-podocarp-hardwood forest to remain in the northern North Island are to be found here. The small streams that flow down to the coast provide habitat for a variety of native species including tuna (eels), koura (freshwater crayfish) and kokopu and koaro (so-called “native trout”). The birdlife of course, cannot be overlooked. In the summer it is difficult to sleep-in because of the dawn chorus of korimako (bellbird), tui, kereru (NZ pigeon) and kaka. A stroll in the forest will reveal a surprising array of birds, many of which are rarely seen in these numbers elsewhere on the mainland. Tuateawa continues to be a haven for the endangered Coromandel brown kiwi which was recently confirmed as a separate type.

And people live here too. There is a long Maori history in this area preceding European settlement. The local Hapu is Ngati Raukatauri a Huarere, and the local whanau (Hovell descendants) Raukatauri ki Tuateawa. Tuateawa residents and Habitat Tuateawa members are keen to learn more, to acknowledge manawhenua and to incorporate tikanga in our activities. There is a fascinating history post- European settlement also, including gold mining, kauri logging, farming and quarrying, and fishing around the coast.

The Tuateawa subdivision is nestled beside the coast in a complex of regenerating forest and retired farmland. It is bordered on three sides by tall native forest featuring columnar kauri, majestic rata and, on lower slopes, pohutukawa. A diverse canopy of coastal hardwoods includes puriri and kohekohe, and podocarps such as rimu and matai. The understorey is dense with a profusion of other trees climbing towards the sky. A mix of permanent residents and part-time bach owners appreciate the distinctive natural environment of this area. More and more people are “discovering” what Tuateawa offers as an idyllic sanctuary, and a caring community.

Recognising that Tuateawa is an important wildlife haven, as well as a great place to live, residents set up the ‘Tuateawa Kiwi Care group nearly 20 years ago. Its aim was to protect the kiwi population by controlling critical pests. This group then became ‘Habitat Tuateawa’, with a focus on restoring bird populations more

generally, as well as kiwis. Local residents take responsibility for assigned bait or trap lines which ensure that possums, rats and stoats are effectively controlled so that birds can safely breed. These efforts have been wonderfully successful. Habitat Tuateawa volunteers also undertake quarterly bird counts to gain some impression of the response in native bird populations to our pest control. There would be few places anywhere on the New Zealand mainland where native birds are so numerous and where people can so easily interact with them. Habitat Tuateawa members are justifiably proud of their achievements.

While most people would say that having more birds is the greatest benefit from Habitat Tuateawa's activities, many would also observe that they just enjoy being involved. Habitat Tuateawa has become a focus for community get-togethers, and provides a wonderful opportunity for people to make friends and to become part of the community. People with a variety of interests, and from all walks of life, have become members and attend Habitat Tuateawa meetings, as well as the very popular New Year's barbeque. Education and training days are well attended. A core of voluntary "baiters, trappers and monitors" derive great satisfaction from contributing to pest control regimes.

Residents and visitors alike are most welcome to join Habitat Tuateawa. Feel free to talk to any committee member, or email our Chair, Sue Saunders at sue.saunders@clear.net.nz.

Social evening

After drying off from the day's adventures and a windy bus trip, we indulged in a social event hosted by [Tangiaro Kiwi Retreat] with entertainment by our very own DJ Koha.

Day 3 – Workshop

Workshop on Partnerships, Sandy from LEAD

PDF

The driving force for LEAD is social justice and creating sustainable futures for local communities. They work with leaders in a range of sectors all around New Zealand and the Pacific Islands. Support people to be the leaders they aspire to be and to support communities to make the change in the world they want to.

The first step in the workshop was to review the experiences of the wānanga so far. There were 4 questions:

1. What is the most important thing that you are taking away from the wānanga?
2. The most powerful learning moment (because maybe we can create that powerful learning moment for others)?
3. The most important thing you learned personally?
4. How will you use what you have learned?

1. Important learnings

- Listening is more important that talking
- Connecting to people and hearing their journey
- We can achieve so much more together than we can alone
- Platform to bridge all the small organisations networking
- There are people across the country doing similar mahi that can join up or support
- Connection and inspiration
- We are not alone
- Celebrating the awesomeness
- Re-connecting
- Re-energizing
- New connections
- New methods for mahi
- Hurdles to success still exist and there is still work to be done
- Working in isolation has its merit but to move forward and grow we need others
- Full reflection happens on the drive home
- Focus on the things that are important and meaningful
- Family of Mountains to Sea Conservation Trust
- Tasman Bay Team
- Communication is important to stay empowered with the mahi (the like minded empowers)
- Reminded of support available – part of a bigger team
- Showing up
- Being inspired
- Helps with reinforcing and defining own Kaupapa
- The conservation community is broad and effective not in silos
- Stay focussed on the issues and not the personalities
- We have 2 ears and 1 mouth
- Kaitiakitanga – the care and protection of our land, seas and rivers
- Connections
- There is someone somewhere working on my passion
- The genuine desire for partnership and collaboration is here and growing
- So many of us with same vision
- To connect together makes us stronger
- Importance of getting community and its people behind a project to be successful
- Connections and inspiration
- Connections with people and programme that inspire me to continue to build and share
- Connections
- The importance of continuing these wānanga
- That there are so many different groups and organisations around the country all heading in roughly the same direction
- Energy for the mahi
- Enthusiasm and solidarity
- Seeing people in person is awesome
- Knowing there is a team behind you

- Listening to the community group at the harbour
- The extensive network of talent across Aotearoa
- Who is out there (other organisations) we can connect/collaborate with
- What awesome stuff people are doing which is presentable to communities/citizen science
- Time in Harataunga environment
- Face to face connection - All in the same waka and Kaupapa, but sometimes feel a bit disconnected from national team, especially after covid – good to reconnect

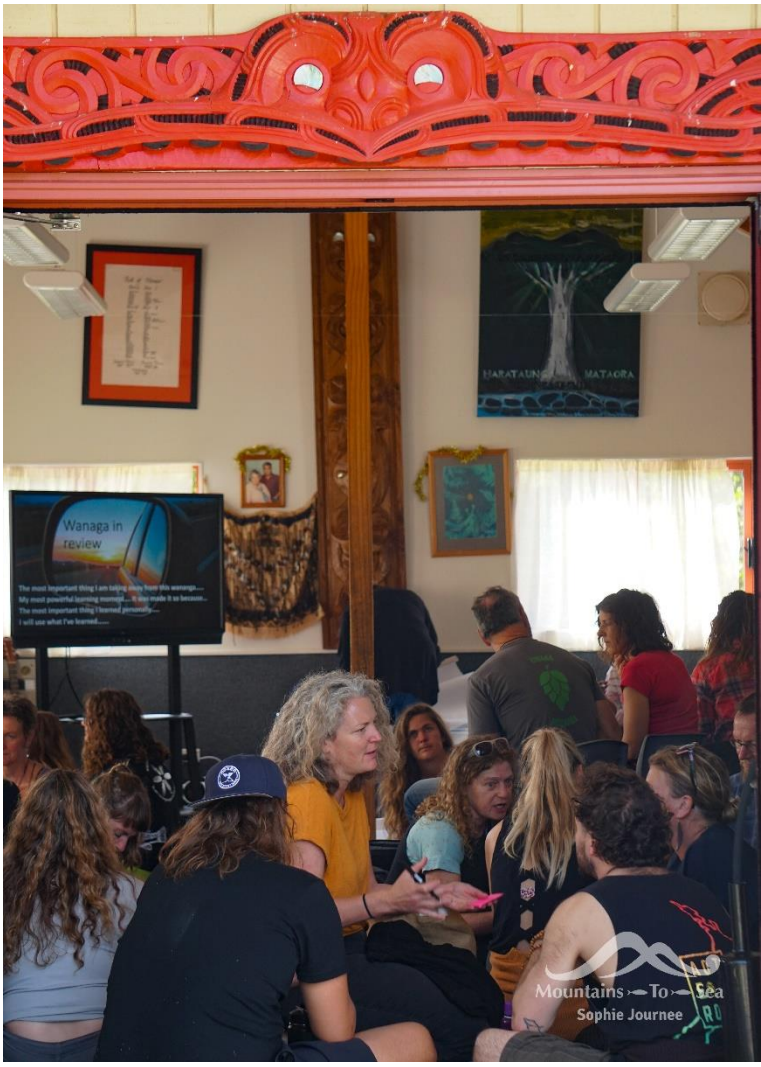
- He tangata, he tangata, he tangata
- Connections
- Empowering to see all these people in one space and how it all connects together
- Keeping the connections going and keeping people in the loop. Our individual mahi is special, but when it comes together it becomes more spectacular
- People are doing 'doable' stuff that we all can take home to our communities and teach them
- Inspired by others mahi

2. Powerful learning moments

- Realising the number of people/groups/organisations working in citizen science/community based space
- Everything is connected by something – shared passion, experience, whanau, friends, mahi

- Marae spaces – acknowledging of all efforts to te reo
- The reminder that the work we are doing is so important for the future of the environment even though it can feel isolated and small

- One to one korero with people with similar vision, sharing the experience to help me get to the next level
- Networking to be stronger together
- TA Sayer talk on fisheries, damages done and how we can replenish the moana
- Knowledge that there is support and like-minded people
- We are not in a silo
- Leadership at this wānanga is at all levels and that's something to celebrate
- When we had to relocate – because it showed me the importance of us working as a team
- Freshwater field trip – korero from trappers – valuable info shared of a highly successful model
- Active listening
- Stories of Mātauranga Māori helping me to understand how it links into scientific thinking
- How data sets are still not cohesive
- Sam Judd speech – importance of strategic community engagement from the bottom up – powerful delivery
- Over-abundance of help where I didn't know where to start before
- The severity of damage done to the astrolabe reef outside Motiti Island
- Tuateawa fresh water korero
- New pathways for marine protection grounded in holistic values
- Logistics for other regions and EMR
- Brent Condon – A river can connect a community
- Walk backwards with fins
- Hearing the korero
- Passion and action
- Build relationships fast
- Uptake of māori culture, language, concepts
- Lots of good intention and good will



- However critical to proceed "kia tupato" carefully
- Tika, pono, aroha
- Critical to understand and respect concepts/terms if/when using them
- īnanga spawning data – so much
- Both pōwhiri
- Hearing that we are all working towards shared vision
- Everyone is working on different parts of the puzzle
- Te Atarangi Sayers talk on Motiti – powerful and holistic use of the legislation

3. Personal learnings

- Deeper connection to māori culture and to myself
- E Tangata, e tangata, e tangata
- There is support out there
- Future leaders (kids) on the marae
- Connections on a much deeper level
- Pōwhiri and deeper connection to Mātaurangi māori
- I feed off the other people's excitement
- How bouncing off others can lead to much more creative outcomes
- Long mahi, much mahi

- There are lots of people to get advice from
- About Whitebait Watch! There are other people out there doing and sharing this mahi. Awesome to see the 'bubble' is expanding
- New connections with people and re-establishing existing connections is something that revitalises the reasons for working away
- Most important thing is to reach out to others for help
- Inspiration
- Connections
- Whaka whanaunga tonga
- Learning and sharing ideas and ways of doing
- The respect and appreciation of Te Reo me te Tikanga Māori
- Life gets in the way of passion and to refocus on these things
- Learning about Love your Rimurimu and how we can this Kaupapa back home
- I need some quiet alone time to recharge
- Adding lyrics to existing tunes can be a fun way to communicate
- Our individual mahi is special, but individual pieces of a larger jigsaw. As we korero we can see how those good works intersect and I can see the stirrings of something spectacular
- Being present in my body, present in the moment
- Inspiring to do more
- Reminded me the importance of reaching out, connecting and inclusion

4. How will you use what you learned?

- Shared experience with our Tasman Bay Guardians whanau making us stronger
- Make stronger connections to my region and communicate the vision
- I will use what I have learned to reach out more to others for collaboration and support
- Knowledge of new online resources and creating a hub for the resources
- Keep in contact with people I've met – see how we can work together for an overall better (environmental) output
- How not to fall off the paddle board
- Better reach local communities, get them to engage in something they're passionate about. This will help better protect our environment
- To connect to the dots and step away for room to grow beyond my own ideas
- New tools and projects for schools – Streamed, giant kōkopu, mussel regeneration
- I will use the network of this group
- Sharing experiences
- To inspire me and expand boundaries
- Keep up connections
- Find out if we can get giant kōkopu into our stream though captive breeding
- Find more īnanga spawning grounds
- See if our kahikatea have bats living in them
- Get more demanding at work for science to be incorporated
- Continue/start conversations with other organisations to collaborate
- Reflect more, slow down, it can't be done over night
- I will use what I have learned to increase tikanga modelling back at school
- To communicate my work better
- To apply it to my working routine and prioritise my workload
- I will use my networking connections to link more people in
- To just keep moving forward, even if you can't do it all right now
- Taking the waiata back and learning more te reo and committing to practice
- To help with my interactions with community groups
- We welcome youth and kids participation but acknowledge the focus of our wānanga is more for adults – idea to have a youth MTSCT wānanga

Leading in Complexity

We are all leaders! We are all leading communities, teams, even 1 other person to create change. As a community sector, we cannot continue to work the way we have. We still face many of the same issues and Sandy believes it is because we have stepped away from thinking we are part of a system. If we operate in silos we are competing with each other and are perpetuating a deficit mindset which creates a lot of the worlds problems.

Problem solving can be grouped into 3 categories:

1. Simple – things that you have seen before, like a recipe if you apply the same process you will get the same result if the equipment and people are the same. This is easy leadership. You can pretty much predict the outcome
2. Complicated – when you look at the issue you are not quite sure what is behind it, but you can pull it apart (like a car) to see how each part works. Each part will function on its own and when with other parts may function differently
3. Complex – this is the environment that we work in because it is made up of interconnected parts and we cannot understand what those parts are and how they are interconnected.

Simple problem solving ignores the complex issues.

<u>To be able to lead change in complexity we need to:</u>

- Be flexible and go with the flow
- Identify where we want to put our energy and go with that because continually pushing against something will suck all our energy
- Have ongoing learning because individually we do not know everything
- Cope with ambiguity – as leaders we need to be able to say 'I don't know' – people will still have faith in us and respect us because collectively we can seek the answers
- Operate transformational approaches rather than a transactional manner which only results in short term outputs
- Embrace change
- Share leadership as we need different perspectives, energies, wisdom – we cannot have egos as it makes us work in competing silos
- Collaboration

<u>There is a continuum of how people can work together:</u>

- Alliance: you are mostly working independently but have loose alliances with others
- Collaboration: working together for shared outputs, you may have similar mission or cause, there is a shared thread, we may have different reasons to the same outcome
- Integration: people coming together in a merger or acquisition

Effective organisations use a mixture of these. Working in collaboration takes time and it can be messy and chaotic. It is important to work out what type of collaboration you want and what you want to get out of it. Remember not everyone makes good partners and not everyone has to collaborate on everything!

Thinking outside the square. We were asked to name uses for a hubcap? Some ideas included:

Plate • Shelter • Art • Skim board • Bird scarer • Windchime • Window shutter • Fry pan • Brassier • Washing clothes • Planter • Seed pan • Gold pan • Toboggan • Frisbee • Ash tray • Baking tray • Template • Shield • Weapon • Hat • Water bath for birds • Hubcap

This activity encouraged collaboration and demonstrated everyone thinks differently. Sometimes it is also important to think outside the box of your you could collaborate with.

Pecha Kucha presentations

Pecha Kucha presentations are 20 images, shown for 20 seconds, allowing the presenter 400 seconds to tell their story.

Shawn Elise Tierney & Camden Howitt – The Litter Intelligence Programme, Sustainable Coastlines

Recently the team have redefined who they are at Sustainable Coastlines. The core of their DNA is partnerships and to deliver their purpose of inspiring change and connecting people with nature we must collaborate. We cannot have healthy beaches by doing it alone.

Why do we measure litter on the beach?

- We cannot improve what we do not measure and we cannot manage what we do not measure. We need to use the evidence to enact change
- Informing and inspiring better decisions
- Bringing in data to create insights and inspire action

What is the Litter Intelligence programme?

- It is a Citizen Science programme to build a national database which is modelled after the United nations Environment Programme methodologies
- Data that works at all levels, from top tier to open source data available at community level
- Education programme uses the data and works with students to come up with solutions and become influences in their community
- So far there are 700 surveys from 200 sites submitted to the platform
- 60 schools are involved in the programme

Success:

- Businesses making changes or finding alternatives to the products they make that is inspired by data and stories from the community.
- Education programme – students using the data and the process to tell stories – eg. Stories in the local paper and creating community mural
- Government using the data in the marine environment report.
- Being able to supply actual evidence for what has previously only been known anecdotally

Collaborators:

- United Nations Environment Programme, Ministry for the Environment (funding), Statistics NZ (quality control for statistics), DOC (methodology), NIWA, Palmy Plastic Pollution Challenge, terrestrial monitoring groups (work together to categorize the litter the same way so it can align across all platforms in marine, freshwater, stormwater, beach, terrestrial environments)

Strengths:

- Volunteer power in the communities across the country
- Partnerships – finding people to work with
- Creating person to person relationships
- Education programme – built on 3 years of social science research, is a holistic approach, focusses on professional development

Resource needs:

- How do we get into different parts of the country that may be more remote or challenging
- Supply training and kits to community groups – how to continue to do this when currently based in Auckland
- Technology support

Challenges:

- Covid – rolling out nationally and supporting remotely
- Long term motivation and incentivisation in the regions

Opportunities

- Expand into fresh water and stormwater monitoring (which is not current team expertise) to integrate with marine
- Have spent a lot of time and resource building the tech platform which can be shared in many ways
- Scale up across the Pacific as litter has no boundaries

Liz Gibson (Mountains to Sea Wellington) & Sherryl Miller (Greater Wellington Regional Council) – Wellington Freshwater Citizen Science Programmes

What is the citizen science programme?

- It is a programme that has been delivered for the last 3-4 years focussing on fresh water monitoring and fish monitoring training for communities
- It shows people how to use the tools available and why it is important to do the monitoring
- It was created as a response to community feedback – communities wanted to be able to use the SHMAK to tell local councils of the issues faced by their streams
- Empowering the community to take action
- Use for educational purposes
- Used for getting baseline data before starting restoration projects

What does success look like?:

- Getting people involved and in the water
- Having fun doing the monitoring
- Having 'borrowing kits' at community hubs
- Learning new skills
- Communities have independence and confidence in monitoring on their own
- Knowledge feedback and hearing the stories of what is happening

- Seeing graphs of the changes are over time
- Communities being able to spot the changes in the streams and take action
- Allowing communities to advocate for their waterway
- Enabling communities to talk to government officials about their concerns for the waterways
- Bringing people together
- Robust and regular data that you can rely on
- All levels (from government to community) are able to trust and use the data

Partnerships:

- Thankful to all the partners involved, community hubs that hold the kits, community groups involved, schools, partner organisations that want to do professional development, iwi, ranger network, city and regional council

Resources that are needed:

- Funding to purchase kits, training, venues,
- Wider geographic spread of coordinators is limiting
- Knowledge
- Experts in the field
- SHMAK kit and materials for monitoring
- eDNA kits
- Venues to hold night courses with the right equipment
- Accessible and safe freshwater spaces
- Internet and technology

Strengths:

- Experience
- Past successes – some community groups have been monitoring for 10 years
- Well connected of wide networks
- Partnering with the Regional Council
- Kete of interactive resources
- Wealth of engagement experience

- Pro tips – the things you can't learn by reading a manual
- Flexibility and adaptability
- Personality
- Confidence

Challenges:

- Weather
- Timing
- Risk and safety
- Geographical spread of people that want to be involved and being able to meet their needs
- Varying levels of knowledge
- Diverse community needs
- Knowing own limitations and being able to ask for help
- Being realistic with goals
- Managing community expectations on what can be achieved and the timeline involved
- Working to incorporate cultural methodologies for cultural health monitoring
- Supplying appropriate and available methods
- Data sovereignty – data is precious and meaningful and how do we manage peoples varying needs around privacy of their data

After listening to these two presentations we were asked three questions. Here are some of the responses:

1. What is it about the project that would attract partners/collaborators?
    a. Solid reliable data
2. What key message could the group communicate to attract partners?
    a. Already invested money into technology that you are welcome to use
    b. Water is life
3. Who could this group partner with that would surprise everyone?
    a. NZTA
    b. Breweries
    c. Firestone
    d. Campervan association
    e. Air NZ
    f. Rubbish dump

Collaborations and partnerships are not a choice, but a necessity to strengthen our efficiencies and effectiveness, and to generate a bigger impact for a better world. When creating partnerships we need to stop, reflect on ourselves and consider these three questions:

1. What are the qualities of a good partnership?
2. What time of partner are we?
3. What do we bring to the partnership?

Funding partnerships

There are three buckets of funding:

- We fund ourselves - raffles, volunteers, low key fundraising, what we do in the community
- They fund us - government gives grant, communities give grants
- We earn it – things we sell, profit earning activity

To be sustainable we need to have partners in each of these buckets. Think about which of these buckets is full for your organisation and which one needs topping up.

Questions/comments/reflections

- How do you deal with a partnership that exists but is not good, for example a partner that is intrinsic to programme but are not team players?
    - If it was in a different part of you life what would you do (marriage councillor etc) – talk on how to make it better and work better for us.
- Kim Reflect – with covid we had diverse funds which was a saving grace

Evaluations and feedback

Overall

	Score							
	1	2	3	4	5	6	N/A	Total respondents
Venue				1	13	14		28
Food				1	2	25		28
Timeframe			1	4	12	11		28
Overall organisation					8	20		28
Value for money				2	7	10	9	28

How effective was the wānanga in incorporating the theme "Partnerships"?

Score						
1	2	3	4	5	6	Total respondents
			3	8	8	19

"But I think it would be very 'partnershipy' anyway" "Strong theme throughout" "Could there have been 'ecosystem' strands" "Strong theme throughout" "Strong theme" "Very valuable to deal with current complex issues. Together we're stronger" "The theme is very relevant and will help us improve our mahi" "Awesome, but maybe some form of partnership forming activity" "Would be great to workshop a bit more with other organisations" "It was great to view how we are working through this lens. It made me more aware of how good partnerships can really achieve a lot and also where the gaps are for my own work" "Could have spent more time on the workshop morning" "Some team building exercises?" "Speed dating – mahi driven links too" "Could be a few more partners involved" "Workshop on Friday morning could have fleshed out the topic more and get people working towards new partnerships more" "Love the topic! Now what? Would have liked more idea-generation and road-mapping exercises in Friday workshop" "Some good partners here – more would be better" "Was definitely a strong link/connector. Could be some more interactive activities around its meaning especially in Aotearoa context?"

Rate the wānanga for effectiveness for networking

Score							
1	2	3	4	5	6	To Be Seen	Total respondents
				6	18	2	26

"Awesome people in area" "Awesome collaboration workshop" "Please send out contact and organisation info" "Some more outside activities and spaces to communicate" "Great for those who are confident – could have more structured networking for those that are not so outgoing" "Be great to have everyone's contact details" "Will let you know next year"

What do you think about the time of year that we hold the wānanga?

Score		
April is Good	Disagree with April	Total respondents
19	4	23

"Great to be able to get in the water" "Better in late January?" "a little hard in the school holidays" "Quieter time of year. Not too hot. Not too close to end of financial year/reporting" "Great to be in the school holidays. Maybe first week would be better" Good time of year apart from being during spawning season" "Best July bigger break" "Avoids busy times and heat/cold/rain" "Great time of year – maybe avoid ANZAC Day" "All good – maybe avoid school holidays" "Great! Love the holiday options"

Aha moments and highlights

- Connecting with so many like-minded people in the same field
- We are all in this together and can find ways to be more effective
- Together we are much more effective than alone
- Marine restoration stories and potential
- Meeting face to face for the first time
- Reconnecting with EMR training buddies
- Collaboration involves being comfortable with the ambiguous (from Sandy's session)
- Meeting those with the same vision
- "I don't get rap" Ella, EMR wānanga 2021
- Whakamana te reo!
- Love rimurimu
- Beth's planting tips
- Snorkelling
- Powhiri/marae stay
- General informal networking
- Connection to the whanau and the people
- Re-energising
- Seeing the national team in person
- Walking together between venues very valuable
- Not yet – probably on the drive home
- Drop down menus reduce errors when collecting data
- Highlight: talk from Te Atarangi
- Learning about the variety of mahi
- Giant kokopu
- Mussel bed regeneration
- Streamed – clarity recording
- Community plant nursery's
- E tangata, e tangata, e tangata
- Inspiring mahi
- Inspiring people
- Love your rimurimu
- You are not alone
- Art and ecology
- Giant kokopu breeding
- Bat detectors
- Collaborations are super important

- People doing amazing things they are happy to share
- Finding other plant growing people
- Honest discussion
- Learning about whitebait watch
- Seeing Kim present the NISP
- Thinking more broadly about funding and partnerships
- Time with people
- People
- Working through how to work with others around the country

Ideas for improvement

- Would have been nice to go paddle boarding (bigger capacity)
- Would have been great to have a practical training component during field trips
- Other speakers/organisations could run workshops/field trip activity
- Great to have local field trip activity – good to do something
- Great to have a gear list emailed earlier for planning
- Allowance for buses to connect to flights
- Interactive collaboration apps and real time use
- More/longer field trip and more practical – maybe more options eg breakouts
- Kayaking activity
- 1 day of training only
- EMR/WBC only at a different time of year
- Maybe just a EMR/WBC retreat would be a good idea (2 days) - I think 5 days is too long (family)
- More structured games/collaborative sessions
- Gear list earlier
- 30 minutes quiet time scheduled in
- Breaks during presentations
- Maybe 4 days to get everything in without such long days
- 2-3 5 minute breaks so can stay alert during wonderful presentations and show and tell
- Too much downtime
- More interactive stuff for presentations/show and tell etc
- More field trips and more time for field trips
- ½ hour scheduled down time each day
- Some days are too long, but necessary I guess
- Some downtime for networking would be good
- Option to camp
- Water use, Recycling, composting and pig bucket options need to be stated and reinforced all weekend
- A good intro into the geography/history of the area would be great, especially for people new to the area
- A break during show and tell so get time to absorb all the info
- No skits