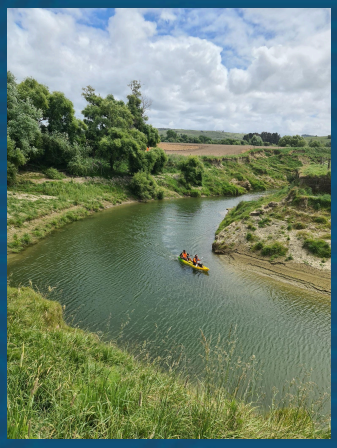
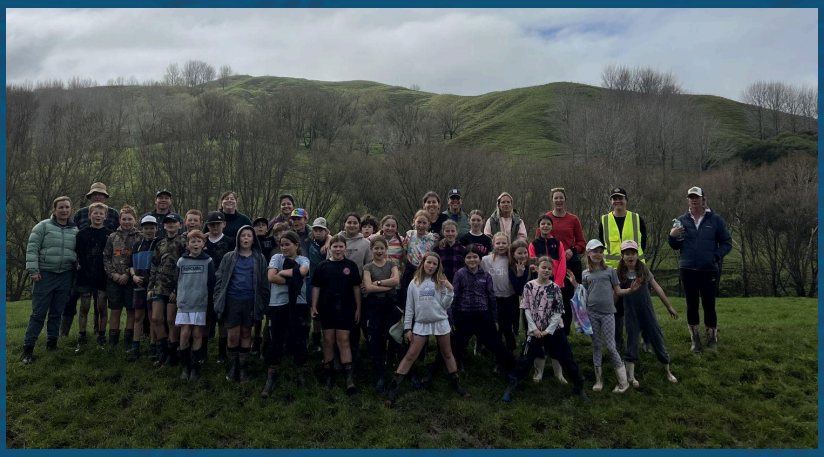
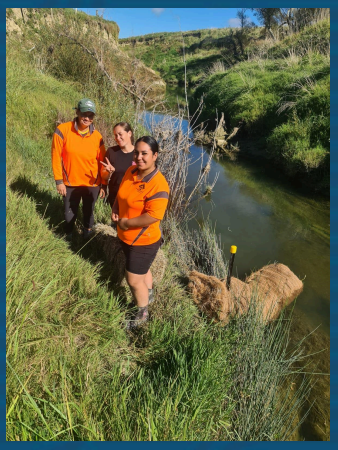
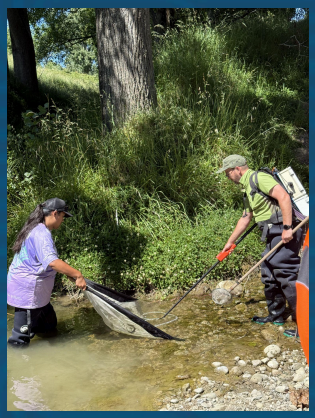
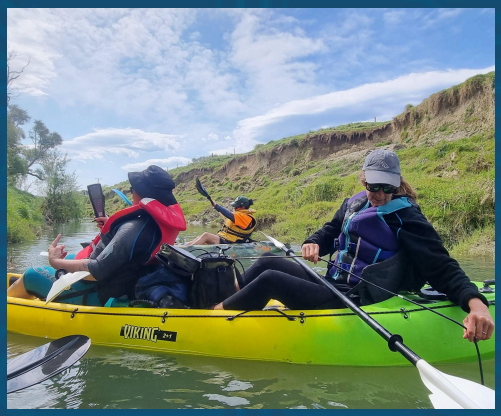
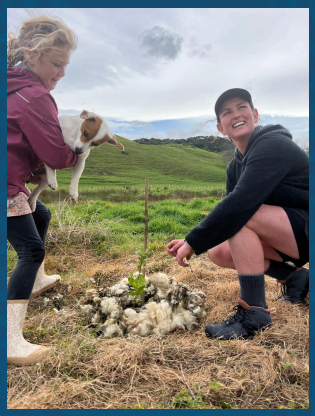








Whāngārā Catchment Group - Tairāwhiti

Wai Connection Regional Summary

Regional provider Organisation for Wai Connection: Tairāwhiti Environment Centre
Regional provider Organisation for Whitebait Connection (WBC) and Experiencing Marine Reserves (EMR): He Awa Ora, He Tai Ora Trust
Wai Connection coordinators supporting Whāngārā Catchment Group:
Anne-Marie Vigeant - Catchment Coordinator (2024-25)
Sam Gibson - Catchment Coordinator (2024-25)
Kirsty Gaddum - Īnanga spawning programme coordinator (2024-26)
Amy Hardy - Catchment Coordinator (2024-26)
Hana Hardy - Catchment Coordinator (2024-26

TAIRĀWHITI ENVIRONMENT CENTRE
TE PUNA TAIAO O TE TAI RAWHITI

He Awa Ora, He Tai Ora Trust.

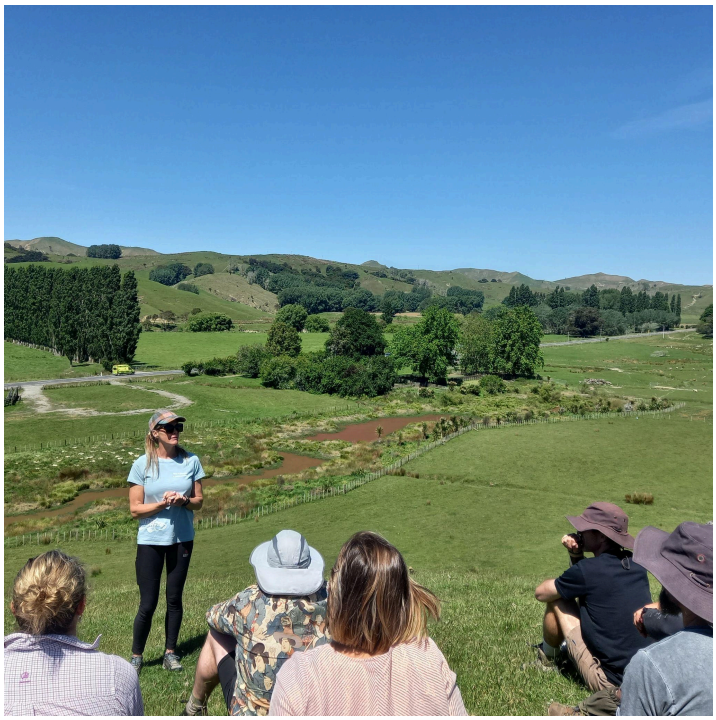
MOUNTAINS TO SEA CONSERVATION TRUST
WAI CONNECTION TATAI KI TE WAI
EXPERIENCING MARINE RESERVES
WHITEBAIT CONNECTION

Background

The Whāngārā Community Catchment Group (WCCG) has been operating for four years and is currently composed of 30 landowners, including intergenerational farmers, five forestry companies, and Ngati Konohi. They are working together with local schools and communities on projects which will protect and restore the taiao. This group has an invested passion for the biodiversity of Whāngārā's coastal, freshwater, and terrestrial environments, including wetland restoration for the purpose of attenuating storm flows, capturing sediment from erosion-prone land, and providing habitat for a number of rare wetland birds

The long-term running of WCCG as an Incorporated Society (including voluntary contributions towards its establishment) have been a big part of ensuring its long-term success. The catchment group includes the Pakarae, Waiomoko, Pouawa, and Turihaua Rivers, all of which have a direct influence on the East Coast marine environment. These sub-catchments comprise an area of approximately 38,000 ha, all of which were impacted by Cyclone Gabrielle, experiencing severe erosion. Our key focus is therefore at a catchment-wide scale, restoring the health of our ecosystems, and using nature-based solutions to ultimately protect and enhance Te Tapuwae o Rongokako Marine Reserve, the receiving environment of our land-based activities.

Wetland Wānanga



Wai Connection (WC) Tairāwhiti have worked with the WCCG on a number of exciting projects since the WC team started in June 2024. In November 2024, Dr. Rebecca Eivers, Wetland Ecologist of Wai Kōkopu Consulting was contracted to run a valuable wetlands wānanga which included field visits to a number of wetlands in the Whāngārā Catchment. This initiative was suggested by Catchment Group leads Sarah Williams and Steph Gardner, both local landowners within the catchment who are wanting to restore wetlands on their farms, as well as supporting other members of the catchment group who are wanting to do the same.

Dr. Eivers provided practical recommendations for multiple wetland habitats across the rohe which fostered a sense of achievability and optimism about restoring these valuable ecosystems. One example, was a wetland that has retained its naturally high water table and currently has relatively good hydrological connectivity to the Waiomoko River, thus enabling fish passage for migratory fish from the ocean. She outlined potential outcomes from further restoration, such as recreating essential nesting habitat for threatened native wetland birds, such as matuku-hūrepo (bittern) and mātātā (fern bird), and recreating essential spawning habitat for native fish species, such as banded and giant kōkopu and kōaro. Importantly, such wetlands would also detain and slow flood flows from the upper catchment during heavy rainstorm events.

Large Landscape Acoustic Survey

Sam Gibson coordinated a large landscape acoustic survey to provide the Whāngārā Catchment Group with a set of information and data to focus on the high value biodiversity needs within their catchment.

Paddy Stewart from Soundcounts was contracted to deploy 100 acoustic monitoring devices at strategic locations within the Whāngārā Catchment. The results of this survey showed the presence of: critically endangered long-tailed bats (Pekapeka), nationally at-risk spotless crakes (Pūweto), and fernbirds (Mātātā). Pekapeka were utilising farm ponds across much of the landscape and deep water bodies were utilised to forage and drink on the wing during the night.
They knew Pūweto were present at the modified wetland at the Waihau Bay turn off. This was the only known population on the East Coast with an individual bird sighted within the Waimata Catchment also in recent times. By deploying acoustic records at farm ponds throughout the entire catchment they hoped to see if the population extended beyond just the singular wetland.

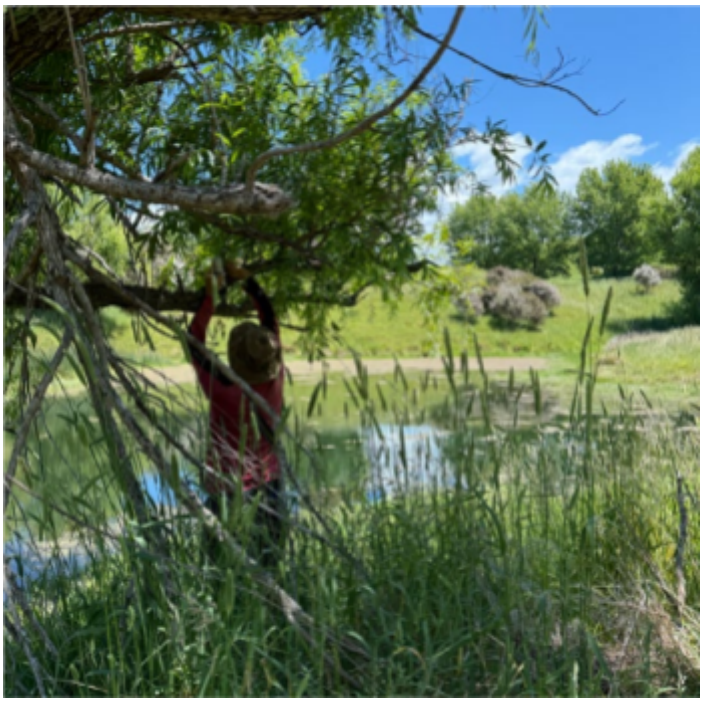
Results showed that Pūweto are fairly well distributed across the northern half of the catchment with presence highly correlated with raupo in farm ponds. They hypothesised that individuals were using multiple farm ponds to make up a single home range as available habitat was small and fragmented.

Matata were found in extremely low detection rates in the southern catchment. These findings were unpacked with the catchment group leaders and later the wider community with recommendations as follows:

- Half fencing farm ponds to prevent stock from browsing and damaging raupo habitat.

- Retaining clear water through periodic clearing of farm ponds using a digger to retain stock drinking access and clear water for duck shooting.
- Riparian planting and establishment of raupo where it is absent.
- Predator control at site for stoats, ferrets and cats.

While bats are using the landscape for feeding, the effort required to have a meaningful impact on bat populations through predator control was beyond the capacity of the catchment group at this time. Further funding to control pest populations could increase the quality of habitat and ultimately enhance feeding habitat to support bat populations and protect these species.



Wetland eDNA project

Whāngārā has the greatest number of wetlands and farm ponds across any catchment in Tairawhiti. It was an aspiration of the catchment group to understand what species were present in these wetlands to provide them with the information and data to undertake wetland restoration projects and where to prioritise their initial restoration efforts.

Sam Gibson worked with Paddy Stewart and JNL forests to undertake eDNA monitoring across 5 representative sites in the Whāngārā Catchment.

Species identified included longfin and shortfin tuna and common bullies. Conversely rainbow and brown trout were found in several of the larger water bodies.

One very important piece of information was identified and this is the presence of Sika Deer. This was unknown and Sika Deer are known to have a devastating impact on forest ecosystems. Goats are locally present so forest fragments are being degraded anyhow but the long term impacts of a Sika Deer herd are dire. Their impacts being much greater than red or fallow deer.

Further investigation showed a small population present across a small area of the Whāngārā and Waimata Catchments. The Department of Conservation was made aware of these results and funding is being sought to deal with the issue.

The value and impact of wetland restoration was further reinforced by Paddy Stewarts acoustic surveys in addition to these eDNA results.
Recommendations from this extensive survey included: further planting around these water bodies, and increasing the number of ponds, which should result in improved farm resilience and wildlife habitat for both bats, fish and birds.

Additional recommendations were to continue to use automated monitoring equipment to enhance understanding of cryptic wildlife species behaviour within the catchment, and thus improve the outcomes for wildlife throughout the WCCG area.

Īnanga Spawning Habitat Restoration Project

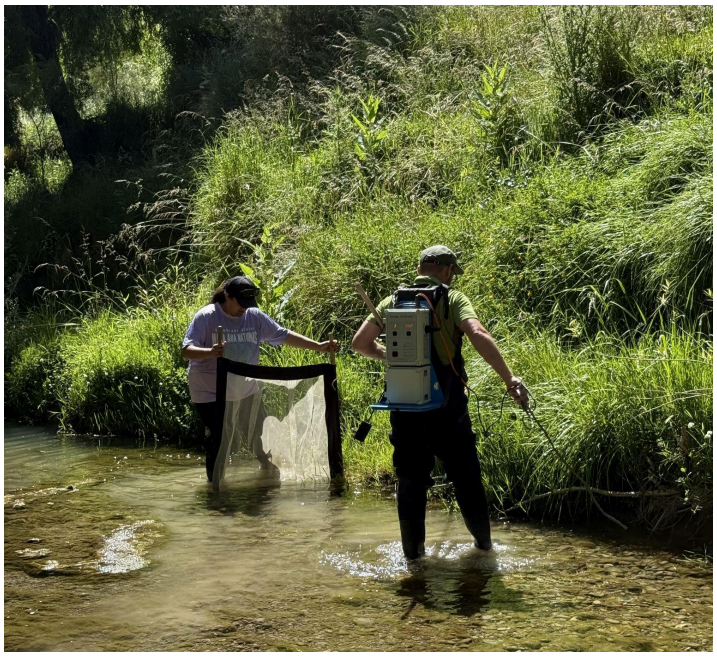
One aspect of the WC project was to support WCCG to identify if whitebait are able to migrate from the ocean into upstream adult habitat within the Pouawa, Turihaua, Pakarae and Waiomoko catchments to identify any fish barriers that need remediating and if habitat is suitable within each life cycle environment. Included in this project has been regular saltwater wedge mapping to identify specific Īnanga spawning habitat. Kirsty Gaddum, WC's Inanga Spawning Programme Coordinator, has been enlisting catchment group volunteers to paddle various awa in the catchment to investigate the extent of the 'love zone', the area where the salt water and fresh water meet, and where native Īnanga spawn during spring high tides. This mapping identifies whether the riparian margins are suitable for the adult Īnanga to lay their eggs, and whether these areas would benefit from riparian plantings and temporary artificial spawning habitat.

Kirsty has completed an Īnanga restoration plan for WCCG which is to ultimately, protect, restore and enhance these spawning zones to enable future Īnanga populations.

However, without pest control measures in place and numbers contained, restoration efforts of these sites may not be successful. Therefore, any restoration efforts within this catchment area will need to be aligned strongly with pest control methods. Funding to cover both aspects will inevitably contribute towards the protection of these native fish and bird species.

Electrofishing with Matt Brady, Freshwater Fish and Pest Species Expert

Matt Brady, migratory fish and pest species expert from Department of Conservation delivered an electrofishing event in Tairāwhiti to educate catchment groups about various freshwater fish species and their habitat requirements.



Electrofishing was conducted on the Turihaua, Pakarae and Waiomoko catchments with the following fish species identified in the tables below:

Turihaua River - Electrofishing results:

Common Name	Scientific name	Conservation status	No.	Size mm	
				Max	Min
Short Finn eel (Tuna)	Anguilla australis	Not threatened	2	70	70
Koaro	Galaxias brevipinnis	At risk declining	1	50	-
Redfin bully	Gobiomorphus huttoni	Not threatened	5	62	35

Previously taken eDNA samples from this awa indicates 9 species of native fish including Inanga, redfin bully, common bully, giant bully, smelt, longfin eel, shortfin eel, banded kokopu and torrent fish.

Waiomoko River - Electrofishing results:

Common Name	Scientific name	Conservation status	No.	Size mm	
				Max	Min
Common bully	Gobiomorphus cotidianus	Not threatened	20	85	25
Shortfin eel	Anguilla australis	Not threatened	9	90	60
Bully sp*			abundant	15>	

* We found a large number of small bullies that were unidentifiable but presumably juvenile common bullies.

eDNA samples for this site indicates 9 species of native fish including Inanga, redfin bully common butty, giant bully, smelt, longfin eel, shortfin eel, kokopu torrent fish, grey mullet, speckled eel and Dinah's Bully.

Pakarae River

WWCG and WC coordinators met with Bob Jackman, and local hapu, Ngati Kohohi, to do some spotlighting near the confluence of the Pakarae River and Makahakaha streams.

This site had been prompted by the detection of Shortjaw Kokopu DNA in testing carried out at the West Ho road bridge. The landowners were also very interested to better understand the stream and specific species present to inform future management.

No electrofishing was carried out at this site, however, comprehensive 6 replicate eDNA sampling was taken at the confluence of the two waterways. Fish species and the sequence counts are recorded below.

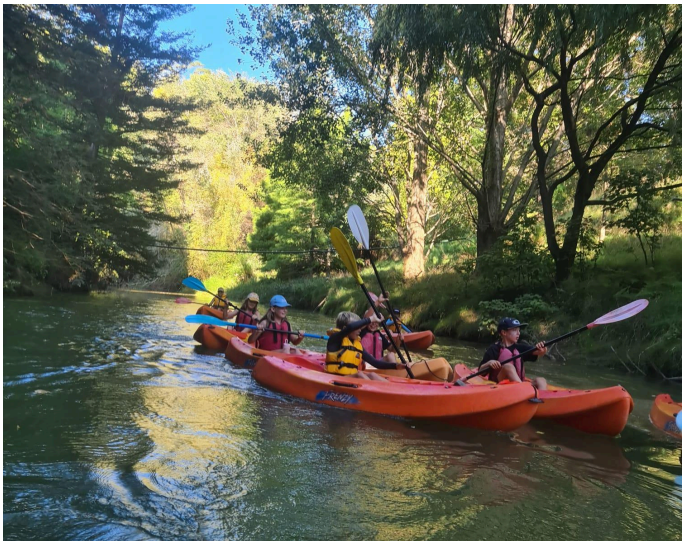
Common name	Scientific name	Conservation status	max sequence count*
Common bully	Gobiomorphus cotidianus	Not threatened	79976
Bluegilled bully	Gobiomorphus hubbsi	At Risk declining	8816
Longfin eel	Anguilla dieffenbachii	At Risk declining	5745
Inanga	Galaxias maculatus	At Risk declining	3025
Shortfin eel	Anguilla australis	Not threatened	4105
Torrentfish	Cheimarrichthys fosteri	At Risk declining	1315
Speckled longfin eel	Anguilla reinhardtii	Coloniser	2480

* Maximum sequence count out of the 6 eDNA samples taken

Recommendation for this Pakarae site is to follow up on Shortjaw kokopu eDNA hits further up the catchment into the forestry, where native riparian strips are present. Whilst the river topography may have been right for providing habitat this area didn't have the forest cover typically associated with short jaw kokopu habitat.

Marine and Freshwater Education Programmes with local kura

He Awa Ora, He Tai Ora (HAOHTO) is the regional provider organisation for the Mountains to Sea Education Trust education programmes called Whitebait Connection (WBC) and Experiencing Marine Reserves (EMR).



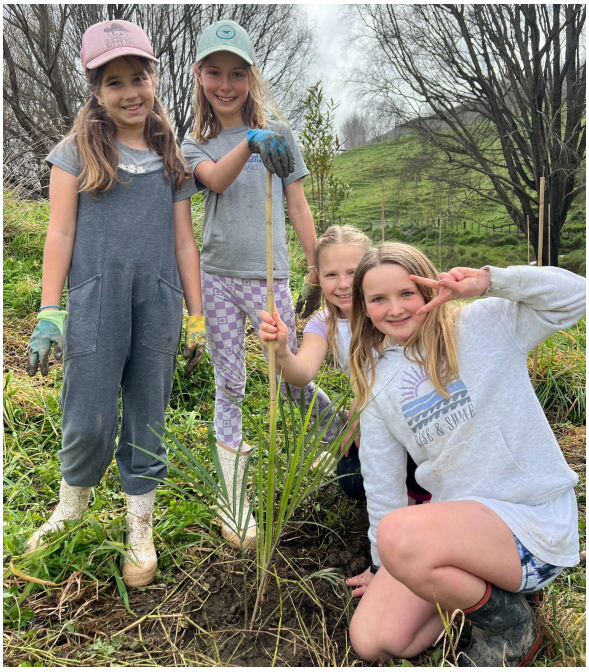
HAOHTO have been supporting WCCG with educational programmes with both local kura, Whāngārā School and Wainui Beach School since the early 2000's. This programme is delivered by WC coordinators Amy Hardy, Hana Hardy and Joe Palmer. The WBC programme involves tamariki learning about īnanga, their life cycle, identifying spawning zones and habitats and what we can do to protect this precious tāonga.

WBC is delivered in class, and then extends out of the classroom to learn an abundance of knowledge around water monitoring to identify suitable water quality conditions for specific species and tolerance to contaminants, identifying macroinvertebrates and fish, investigations of the saltwater wedge via kayaking events, learning how to make and install artificial spawning habitat, and identifying eggs. This programme then leads to restoration efforts such as planting days, fish remediation initiatives and advocating for improved protection.

Students from the Gisborne Homeschool group have also participated in the WBC programme where they kayaked up the Turihaua River to learn how to conduct salt water wedge mapping using the salinity meter. Having sites within the Whāngārā Catchment area that can be utilised by all tamariki in our region is beneficial for expanding their curriculum links and increasing their understanding of all river systems and impacts in Tairawhiti.

HAOHTO also delivered the EMR programme to Whāngāra and Wainui school where they learnt about how the impacts further upstream can impact the marine environment significantly. They have participated in the EMR programme, learning about the importance of marine protected areas, local threats to this environment, and experiencing first hand the abundance of marine life with a snorkel on the reef at Te Tapuwae o Rongokako Marine Reserve.

This has led to students providing letters to the Te Tapuwae o Rongokako Marine Reserve Committee and DoC to ensure the protection of this area remains and how significant this area is for marine life regeneration. It is a great opportunity to incorporate the WCCG mahi into this programme as students can then align their restoration efforts and action projects to help restore the environments further upstream to improve the impacts on the marine receiving environment. This led Wainui School students to planting natives along the riparian zone of the Turihaua River to prevent further erosion and create habitat for our native fish species.



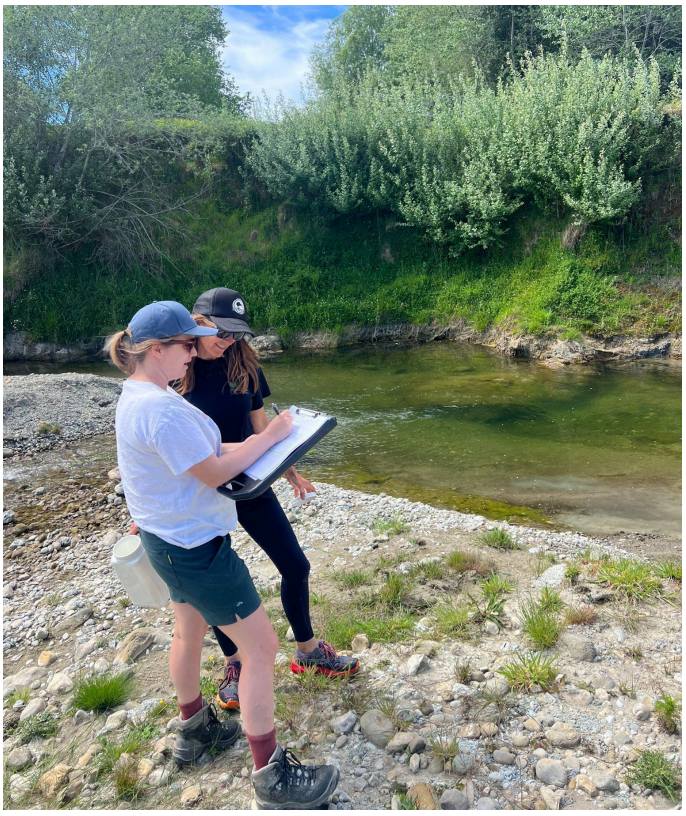
Education outside the classroom has also included Wainui School and Gisborne Intermediate School planting around a sizable wetland at Mangaone Station that Sophie Land and her family have fenced off and are restoring. This wetland was part of the wetlands wānanga and provided a model for restoration projects in the catchment.

HAOHTO have Whāngārā and Wainui School booked in again for 2026 to undergo further assessments of the Waiomoko, Turihaua and Pouawa Rivers where they will complete the WBC programme in term 1 and 2 followed by EMR in term 4.

Stream Health Monitoring Assessment Kit (SHMAK) Training and Farm Environmental Plans

WC coordinators, Amy Hardy and Kirsty Gaddum, worked with members of the WCCG to undergo water monitoring assessments for farm environmental plans through AgFirst.

This enabled catchment group members to learn how to use the SHMAK kit developed by NIWA and gather baseline water monitoring data at different sites located throughout the Whāngārā Catchment area. This information can be used to inform where restoration initiatives can be prioritised and ensure protection of specific species identified.



Continuing on from these assessments, WC coordinators will provide the WCCG with a water monitoring plan to collect ongoing data and complete further assessments to inform future strategic decision making around restoring these freshwater environments and protecting all native fish and bird species identified in the catchment area.

Next steps

The Whāngārā Community Catchment Group is looking to pull all the environmental baseline monitoring carried out with WC to inform their future strategy and direction. Key areas of focus being the management of animal pests and restoration of habitat for terrestrial and freshwater native fauna species, as well as the restoration of inanga spawning zones. The strategy will be developed through workshops with the local hapu, farmers and foresters, interwoven with local hapu aspirations and involvement.

WC coordinators will continue to provide support until June 2026 with events, wetland restoration initiatives, inanga spawning zone restoration planting, incorporating local tamariki into all activities and events, freshwater monitoring and data collection, and working alongside their iwi taiao representative to co-deliver workshops and community engagement events.

WC support the WCCG in their mahi towards protecting and restoring their whenua, wetlands, freshwater and marine environments and controlling pest populations within their catchment as a priority to ensure restoration efforts are successful.