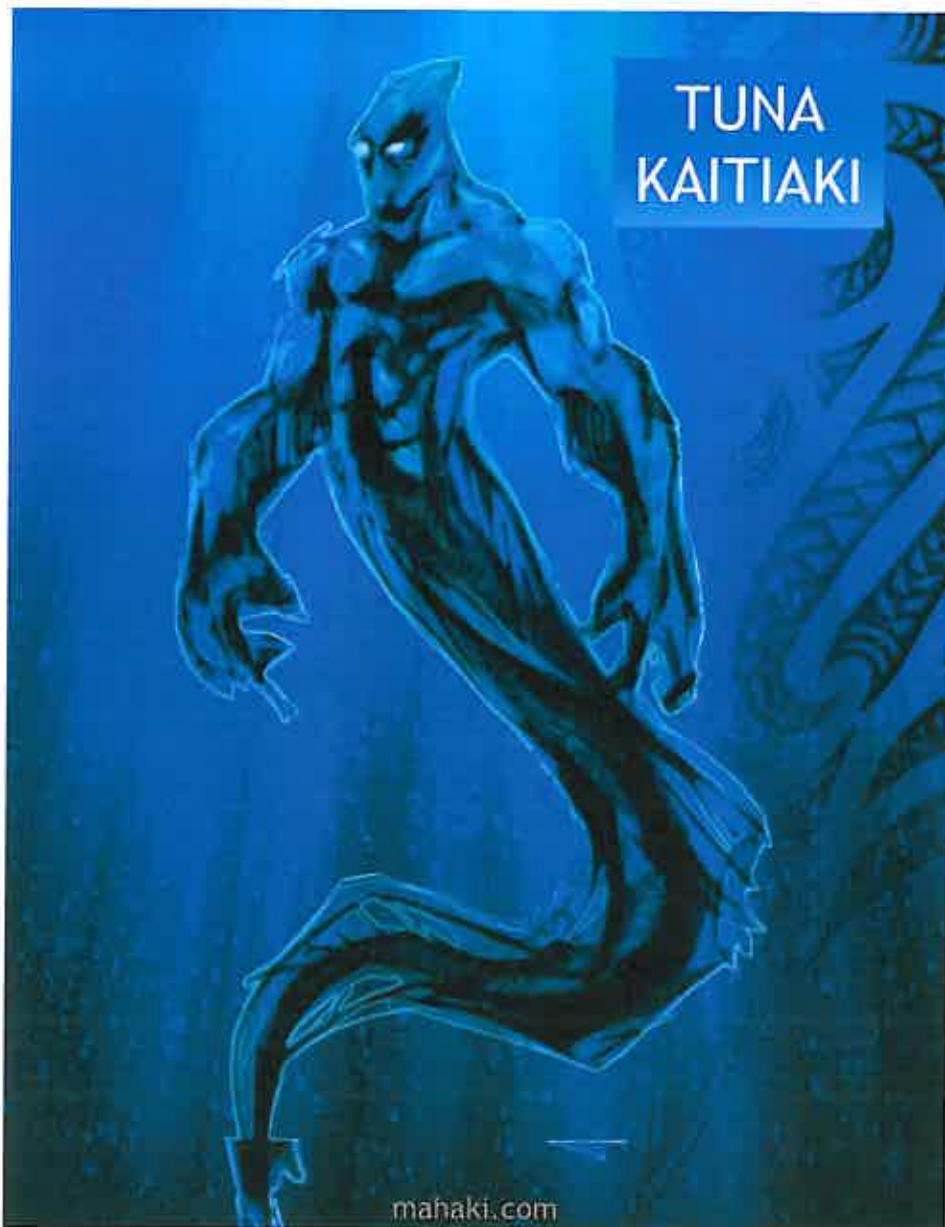


Te Aitanga a Mahaki “Eels as *Environmental Sentinels*”



Te Aitanga a Mahaki Trust

Ko Maungahaumi te Maunga

Ko Waipaoa te Awa

Ko Te Aitanga a Mahaki te Iwi



To Tai Riwhā Te Aitanga ā Māhaki

Recognised iwi at the Māori Fisheries Act 2004
 Population: 4501

Rohe (Tribal Area)

The Boundaries of Te Aitanga ā Mahaki - Henare Ruru II 1930 mas papers:

(a) I timata mai te rohe i Te Toka a Huru, he toka kai waho o te moana e hangai ano ki waho o Whangara: Te Toka a Huru, Matai Tangaroa, Te Pohu, Tūhūhūkaia, ka moemoe nga uri o Ruapani i nga uri o Waho o Te Rangī raua ko Korohi ka hoki mai te rohe ki Tuamotu:

(b) Tuamotu, Te Raha, Waikiri, Rarohau, Waimata, Te Roe o Tairu, Whakapapaekura (Pukokura), ka tukū ano ki: Tikowhakarō, Mōlunatai, Arakōi, Paikānapa, Parahaka, Tangahanga (Tirohanga), Tauwharepara, Pakihara, Hinatara, Te Whakakōrero, Te Ihu o Te Pōka, Tutamoa, Kakatoi, Keruhuhua, Te Whera o Toki, Arowhena, Te Metawai o Tutana, Te Rimu o Taumanga, Tawharanga. Te Pākū, kahuri mai ki: Waikiri, Te Pa o Houma, Te Tai o Ruarū, Mango o Nuku, Te Poroporo a Paia, Waipou, Te Tahora, Te Rangitūkaka, Aro a Mauku, Te Rewa, Taumatakaraitu, Kaimatangi, Whakapapaekōi, Mōhura, Moana, Maungapohatu, Te Ihu ki Paro, ka huri mai ki: Pōmarakeke, Te Kakapo a Te Uanai, Tupuru, Warapukē, Te Ana o Te Inaki, Wātangi, Kahurangi, Tangarua, Otata, Mōkōni a Rangī, Papōkaka, Tahungatēwe, Kōhīroa, Te Pohu, Waikura, Te Pōwha, Hanga a Hanga, Otusua, Papatu, ka huri mai ki: Te Taurua o Te Kai, Pōwhaka, Pōraka, Taumata o Tamawaho, Horopōkaka, Pūkōhū, Te Kūha, Te Whangai o Hineuru, Ohitarongo, ki waho o Tuamotu heere toru atu i te moana ka tukū ano ki Te Toka a Huru.

Additional Images/documentation:

Te Aitanga ā Māhaki rohe (JPG, 183KB)

NOTE: The above document(s) may not be reproduced without the permission of Te Aitanga ā Māhaki Trust.

Iwi rohe interest in local authority regions and districts

This rohe of Te Aitanga ā Māhaki extends into the regions or districts of the following local authorities. This implies that the iwi has asserted a level of mana whenua / kaitiakianga in each of these local authorities and should be consulted on Resource Management Act matters if they impact on those areas.

Regional Council


Gisborne District Council

Territorial Authority

Gisborne District Council



Nga Hapu me Marae o Te Aitanga a Mahaki




Te Puni Kōkiri
Māori Language Centre

Te Kāhui Māngai
Directory of Iwi and Māori Organisations

Home
Find by Map
Find by Local Authority

Te Tei Rāwhiti
Te Aitanga ā Māhaki

 Recognised iwi in the Māori Fisheries Act 2004

Population: 4501

Hapū and Marae

Go to their website for more information on Te Aitanga ā Māhaki marae and hapū

Contact information for hapū and marae may be provided by the Representative Organisation at their discretion.

Hapū	Whare	Wharewāhi	Location
Ngā Pōhū	Māhaka	Tapapa	Motu Road, Mātāwai
	Tākitimu	Te Poho o Whakarau Oranga a Tamure	Lavenham Road, Waituhi
	Tapuhikūa	Te Aroha	Tapuhikūa Road, Te Karaka
Ngāi Tariatāe	Teihemū		Teihemū Lane, Whatahutu
Ngāi Tūketenu	Parimānaki	Te Poho o Māhaki	Domain Road, Waitare
Ngāi	Māngatu	Te Ngāwari	Te Whiwhi Street, Whatahutu
Ngāi Māhaka	Te Whiwhi	Te Whare o Hera	Mangemāe Road, Whatahutu
	Māhaka	Tapapa	Motu Road, Mātāwai
Ngāi Wahia	Māngatu	Te Ngāwari	Te Whiwhi Street, Whatahutu
	Parimānaki	Te Poho o Māhaki	Domain Road, Waitare
Te Whānau a Iwi	Rangikūa	Whakaha	Te Karaka
	Tarere	Te Aotū	Pikere Road, Makarake
Te Whānau a Kai	Ngākapa	Te Ao Aotearoa	Tolangi Road, Ngākapa
	Pākōwhiri	Te Poho o Hirana	402 Lavenham Road, Pākōwhiri
	Rongopai	Rongopai	Lavenham Road, Waituhi
Te Whānau a Taupara	Tākitimu	Te Poho o Whakarau Oranga a Tamure	Lavenham Road, Waituhi
	Māngatu	Te Ngāwari	Te Whiwhi Street, Whatahutu
	Takapu	Te Poho o Pūhoro	SH 2, Te Karaka
	Tapuhikūa	Te Aroha	Tapuhikūa Road, Te Karaka

12 Marae spread throughout the largest catchment in the Gisborne region
The 2,200 square kilometre Waipaoa River Catchment.

Te Aitanga a Mahaki Trust

Our Mission

The Te Aitanga a Mahaki Trust was incorporated in 1995 to 'advance and promote Te Aitanga a Mahaki as an Iwi.'

Our Mandate

Te Aitanga a Mahaki Trust represents Te Aitanga a Mahaki as an 'Iwi Authority' for the purposes of the Resource Management Act 1991 and as the 'Mandated Iwi Organisation' under the Maori Fisheries Act 2004.

THE CHALLENGE

What is killing these eels?



SOMETHING IS CAUSING THIS:

Bill Ruru, who has long been involved with customary and commercial fisheries management, helps to dispose of one of the 14 eels found dead in a Gisborne stream this week.

Picture supplied

by Alice Te Puni

MORE than a dozen eels found dead in a Gisborne stream are believed to have been poisoned by a chemical pollutant.

The eels — some more than a metre long — were found floating in a ditch near the Awapuni Road and McDonald Road intersection.

Environmental scientist Ian Ruru carried out an autopsy and discovered the eels were of the *Anguilla australis* (short fin) species and that

the larger eels were healthy, maturing females at least 15 years old.

Mr Ruru heads the Diploma in Tui Marine and Freshwater Studies through Te Wananga o Aotearoa and the Awapuni Stream is one of its monitoring sites.

He was also a lead fisheries scientist for a number of eel stock assessment projects throughout the country.

Mr Ruru said major amounts of contamination would have been required to kill the eels.

"Chemical contamination is my best guess, based on no external signs of trauma, no sign of internal parasites and the large number of dead eels in a single event.

"Shortfin eels (or silver bellies) prefer still water like lagoons or lakes but these eels were found upstream and exposed in a ditch.

"Given their age and size, they would have lived in Slatersons Lagoon, Matawhero, but a contaminant has flushed them out," said Mr Ruru.

Gisborne District Council water conservation team leader Dennis Croxie said "no cause of death" was evident.

"GDC water conservation staff have completed an intensive search of the area to determine possible causes of the eel deaths.

"Water samples have been taken and a decision will be made soon as to whether to forward the samples to Hamilton for testing for agricultural or hydrocarbons.

CONTINUED ON PAGE 3



'Public health issues' in cause of eels' death

FROM PAGE 1

"Our testing for regular parameters is completed by Hydrotechnologies Ltd in Gisborne. The water sample taken will be tested for 10 different chemicals and parameters."

Mr Ruru said tracking the cause of the eels' fatality was complex but should be a priority.

"We need a better testing system and monitoring to ascertain what did

said Mr Ruru.

"People gather food from the waterways — it is a traditional hunting area and kapata kai (food cupboard).

Stan Perce of Rongowhaka was informed of the dead eels on Tuesday night and contacted Mr Ruru.

"We need to know what killed them and who is responsible. If something did poison them, what was it and how did it get there?"

"The council has responsibility for

PROJECT LEGACY



THE TEAM: Voluntary environmental specialists (back left to right) Hone Whaanga, Arthur Bowen, Angie Keropa, Ian Ruru, Hāhepa Keropa, Lee Cudd, Bill Ruru and (front) Doc Tipene, Mate Manuēl, Pene Brown, Mera Tamarii, Katrina Brown, Kevin Baker and Tiopira Rauma are investigating the deaths of 14 eels. Their research involves collecting data for an independent eel survey in the Awapuni catchment area, which includes the Centennial Marine Drive beachfront area near Midway Beach.

Pictures supplied

Eel sampling reveals liver abnormalities

by Alice Te Puni

A TEAM of environmental specialists are on the case to discover why more than a dozen eels were found dead in a Gisborne stream. Environmental scientist Ian Ruru is not satisfied with Gisborne District Council's "inconclusive test results" and has pulled together his own team of volunteers to monitor

the Awapuni catchment. The eels — some more than a metre long — were found floating in a ditch near the Awapuni Road-McDonald Road Intersection in March. Mr Ruru said Gisborne District Council's "full investigation" into the eel deaths was as useful as treating "acute appendicitis with a bandaid". It was "futile and costly" to test water samples from the area up to two weeks or 28 tides after

the eels had died and second, the dead eels themselves should have been tested, he said. Mr Ruru said the team's "first decent look" into the Awapuni environment had revealed some shocking results. "We weighed and measured 238 eels from 32 different sites, from the Gisborne airport out to the Waipaoa River mouth. The majority of the eels we sub-sampled had livers that were

discoloured and abnormal." Mr Ruru said the eels were excellent biological indicators for environmental health and finding so many with liver abnormalities suggested a wider environmental problem. "The liver is a vital organ that purifies the blood and is crucial for survival."

CONTINUED ON PAGE 2



BIOPSY: A large number of eels sub-sampled by a newly-formed group of voluntary environmental specialists show liver abnormalities that suggest a wider environmental problem. There were 238 eels weighed and measured at 32 different sites from Gisborne airport out to the Waipaoa River mouth.

Too early to 'point the finger' over eel deaths

FROM PAGE 1

Mr Ruru said while it was too early to point the finger at the source of the problem, there were a number of unique features in the Awapuni catchment not found in other parts of the region. "Although initially frustrated with the council's limited testing regime, I am hopeful we can design a comprehensive Awapuni environmental monitoring programme."

Mr Ruru said this would need the co-operative

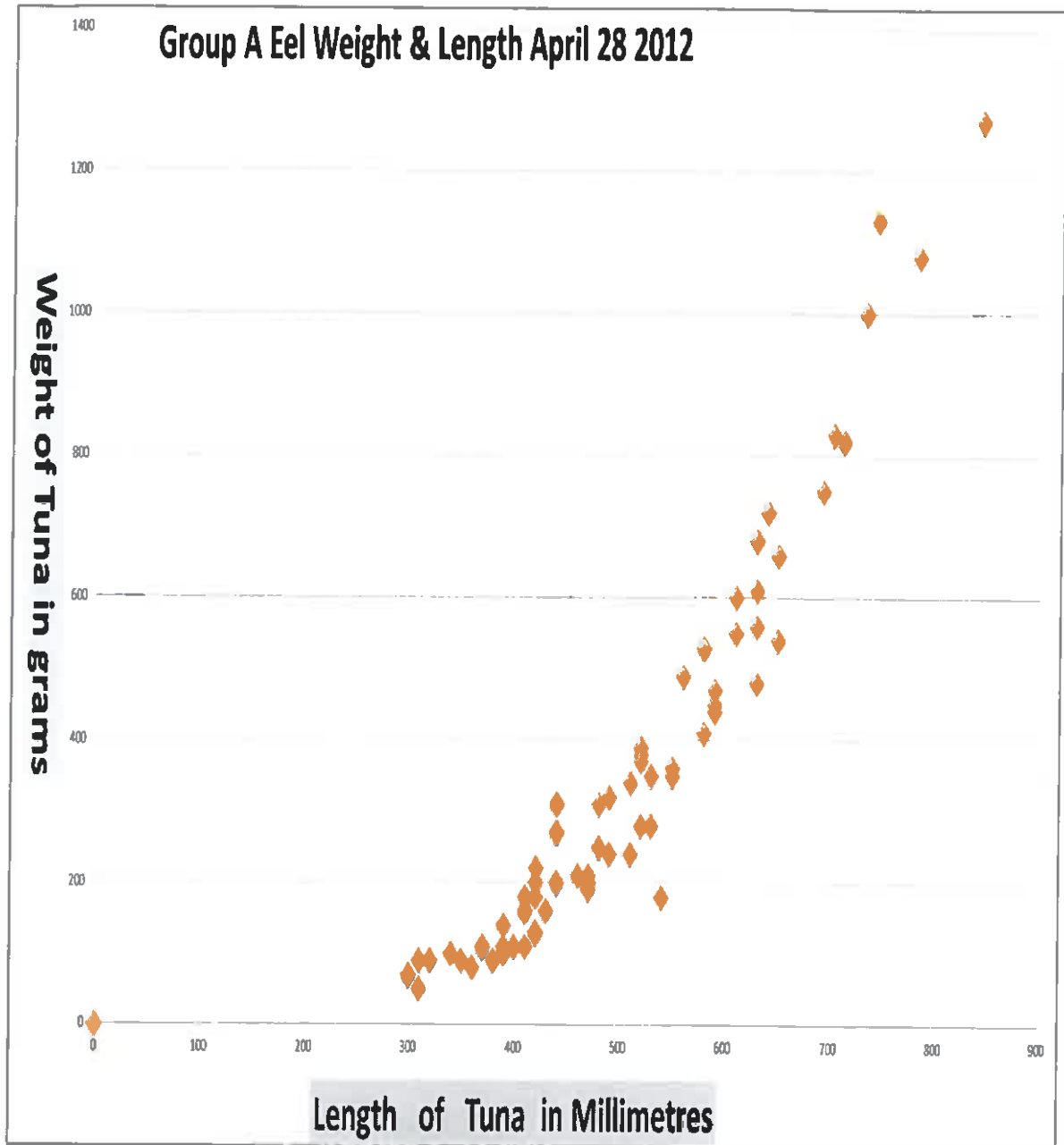
efforts of landowners, consent holders and the council. Mr Ruru said he and his team had met with "stake environmentalist" Alan Sturman and were preparing with his support to conduct an eel survey and research in his Matawhero property area before he passed away this month. "He welcomed the survey but passed away before the research was completed. We are saddened that he is no longer with us on our environmental quest for answers," said Mr Ruru.

Waipaoa River protection work was

But angry ratepayers said the

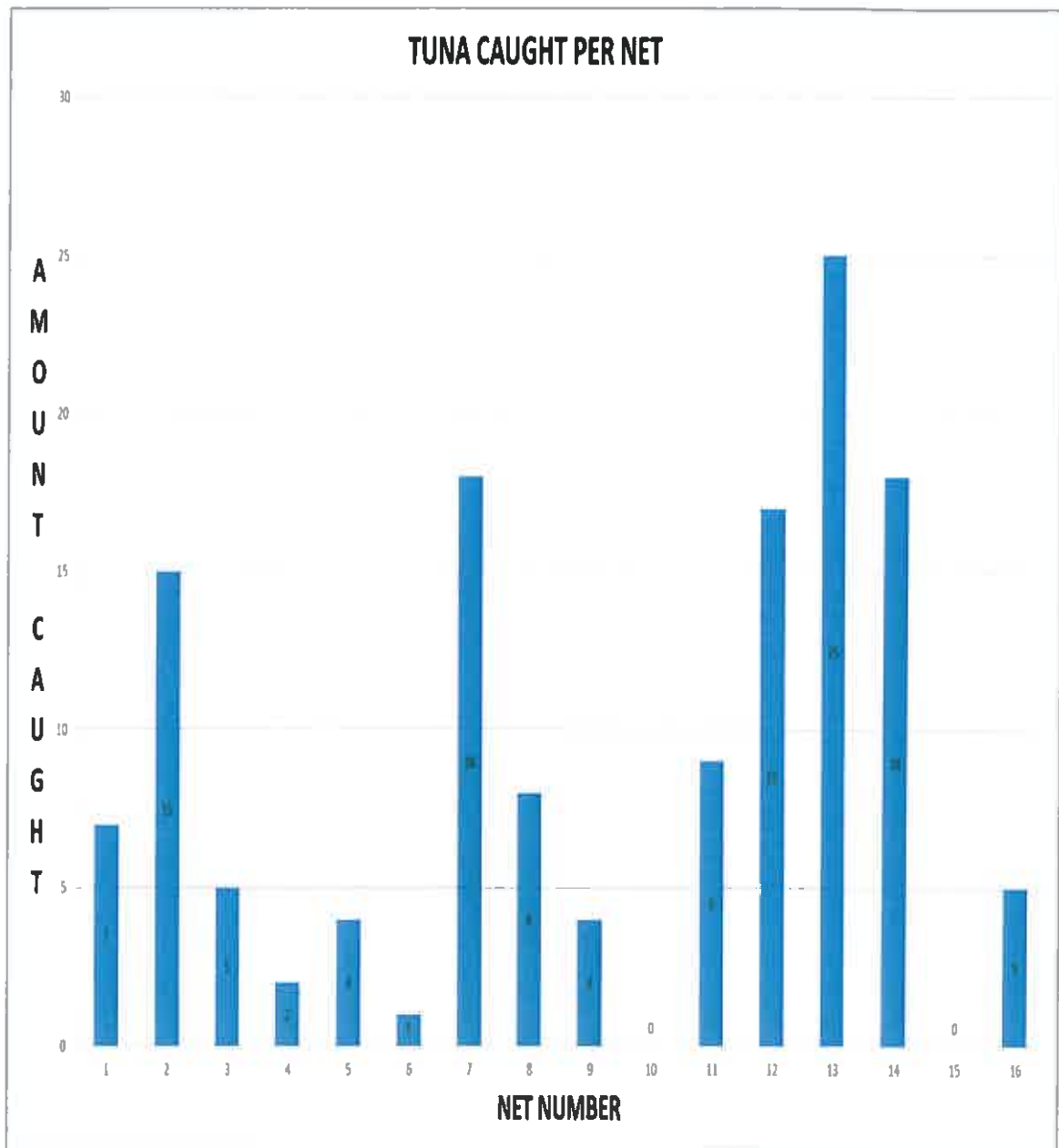
it is not fr the beach logs." Peter Higg

Length vs Weight



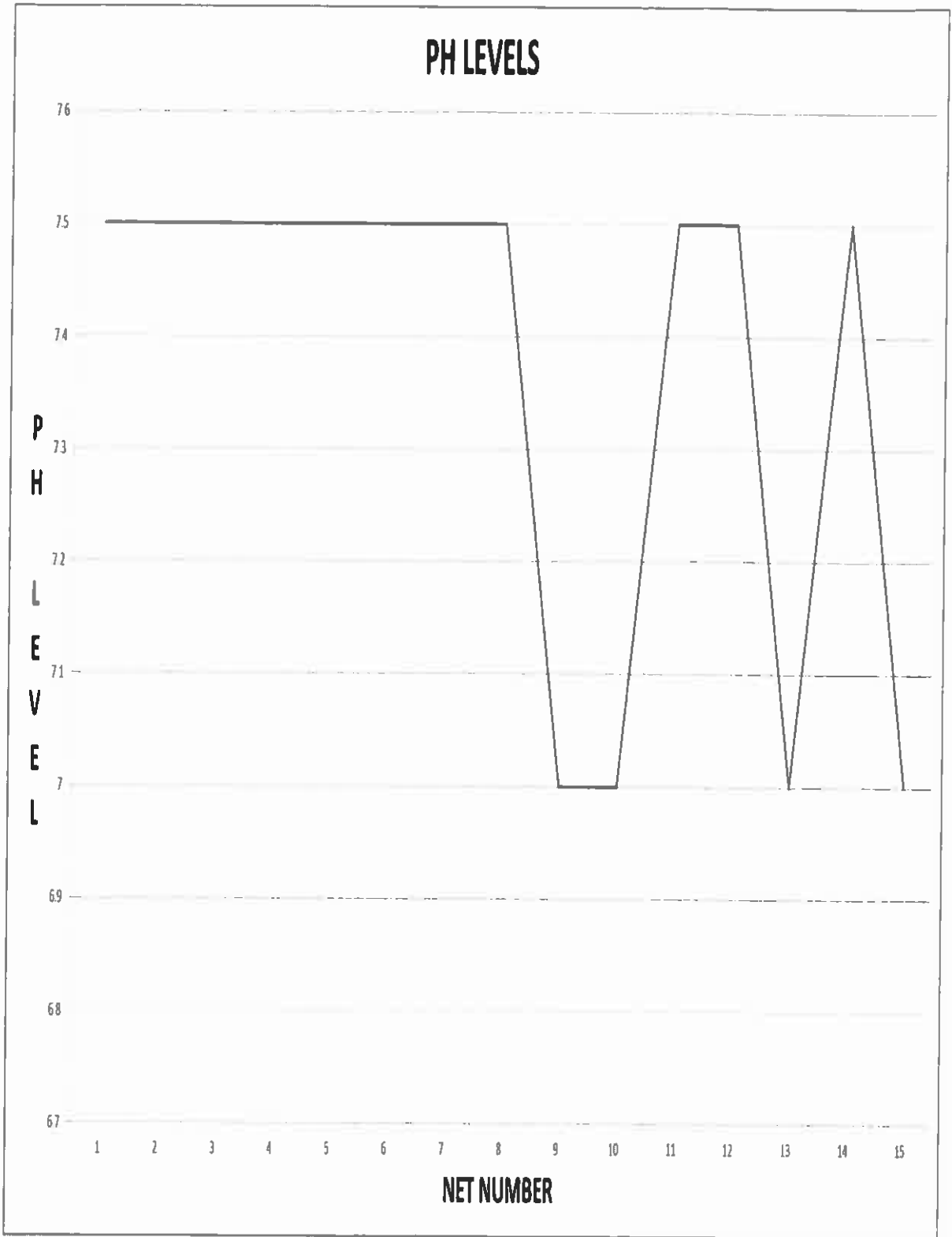
Ian

Catch per Net



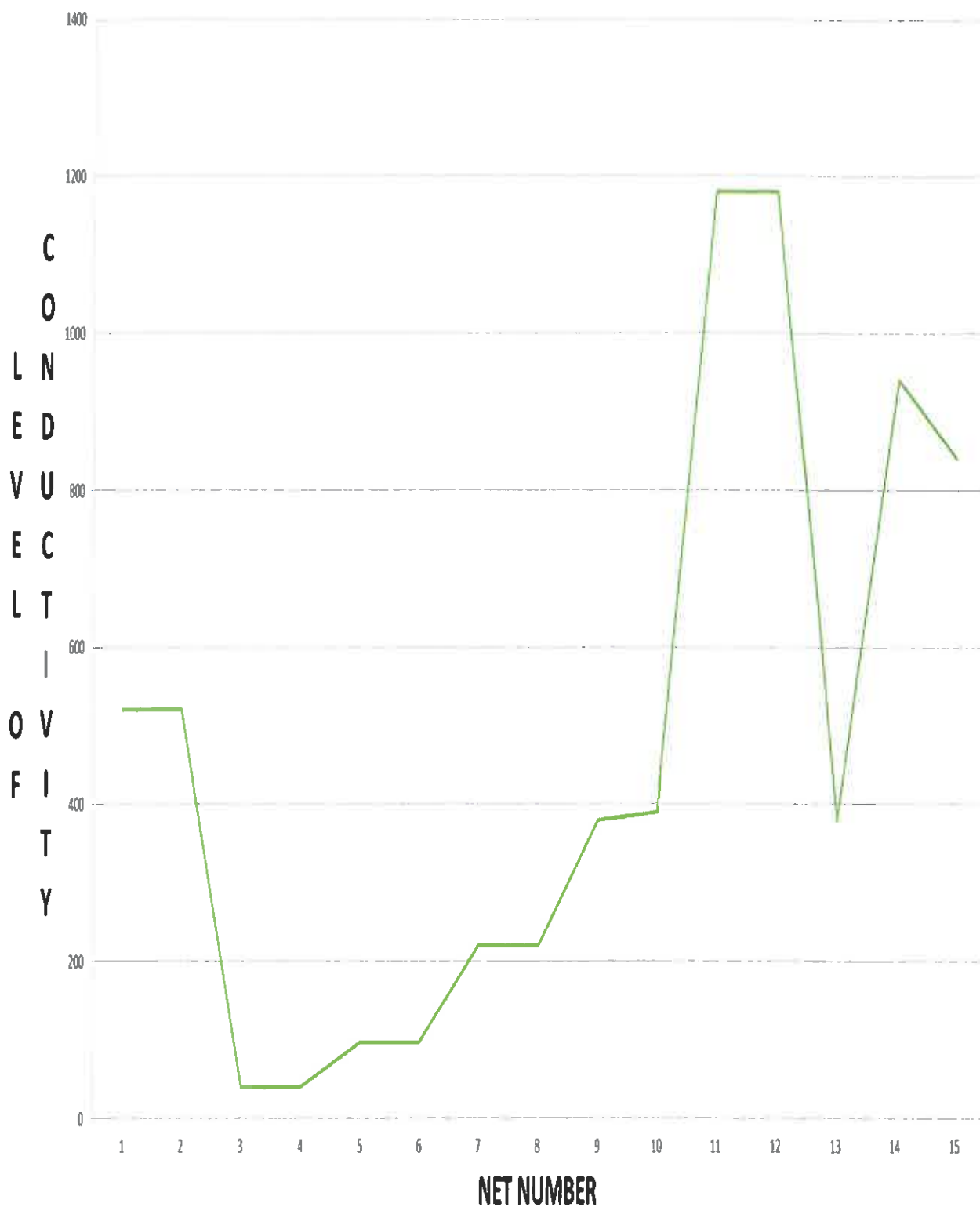
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PH LEVELS

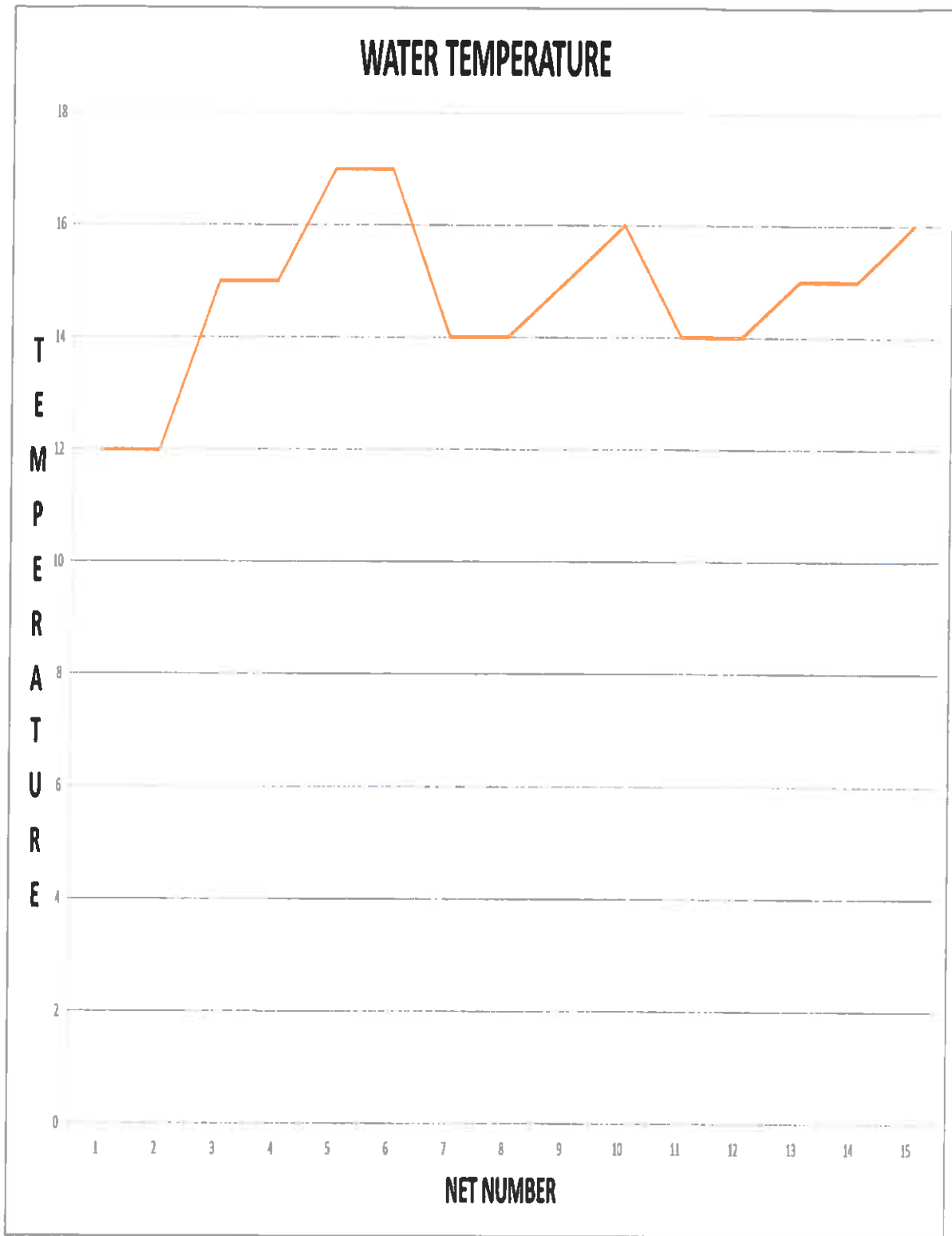


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CONDUCTIVITY

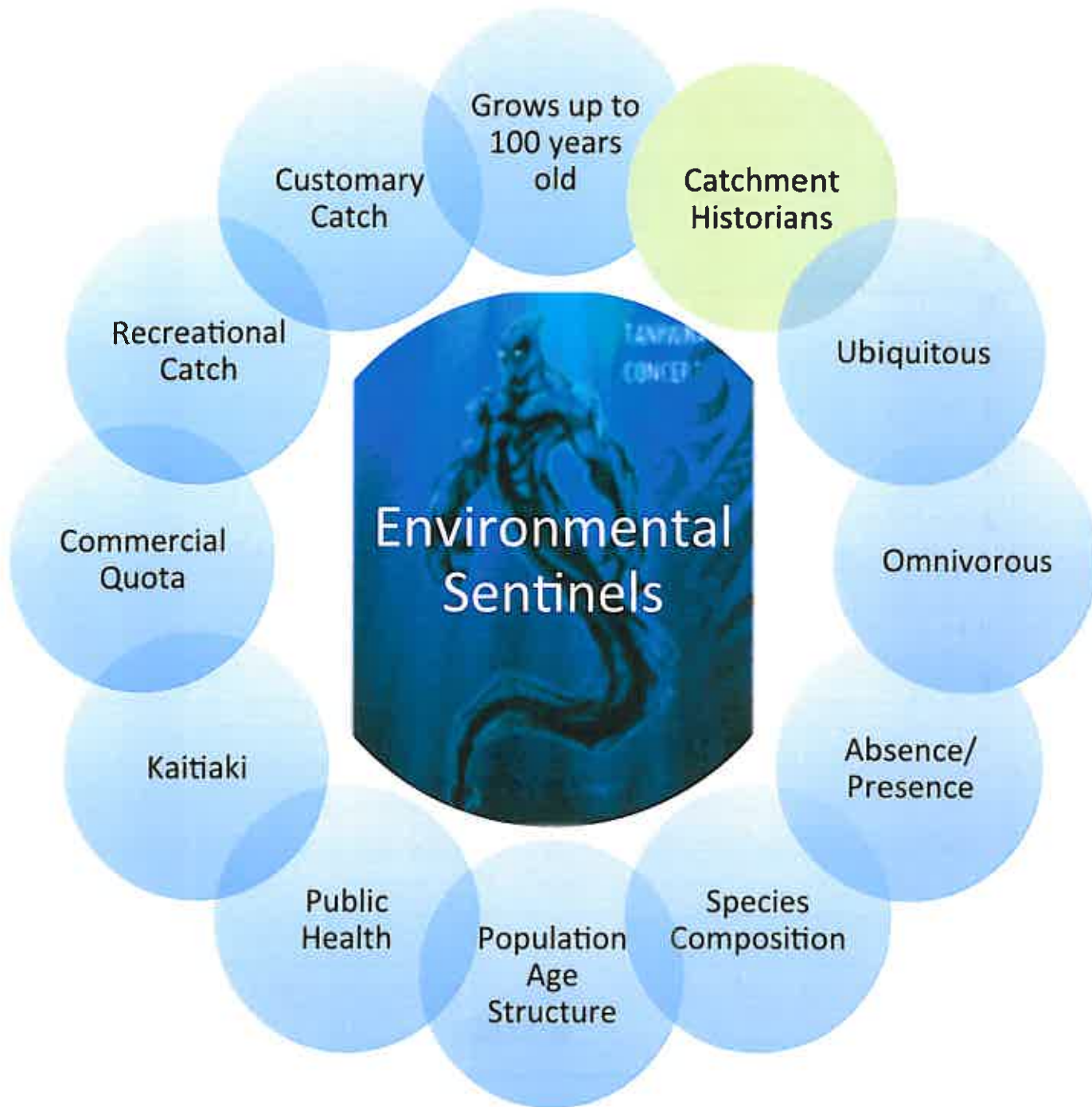


Ian



Ian

Te Aitanga a Mahaki Promotes Eels as Environmental Sentinels because...



Top of eel head removed to reveal 1 of 2 otoliths



Otolith magnified 10x



The size of the gap between growth rings indicates years of high annual rainfall



Otolith after crack and burn technique showing annual growth rings

0 10mm 23 1

Project Legacy





Te Wānanga o Aotearoa

0800 355 553 / www.twoa.ac.nz

Local Problem Local People Local Solution



IWI MARINE & FRESHWATER STUDIES

Diploma in Iwi Marine & Freshwater Studies

LEVEL

6

The Diploma in Iwi Marine & Freshwater Studies is for people who would like to manage their iwi fisheries assets in an effective way to ensure they are sustainable. The programme provides practical learning experiences that intertwine mātauranga Māori with Western science. Key success factors include a blend of guardianship of the

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15 weeks

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Tutor: Ian Ruru | 630 Childers Road, Gisborne | www.twoa.ac.nz | 0800 355 553
mahaki.com

Freshwater Policy Statement
Te Mana o Taiao o Te Aitanga a Mahaki
Environmental Management Planning Group

BACKGROUND

This Freshwater Policy Statement was drafted by Te Mana o Taiao o Te Aitanga a Mahaki – the Environmental Management Group of Te Aitanga a Mahaki. It contributes to the overall vision of the iwi to 'restore the mauri of the Waipaoa' by articulating priorities and action points to be both a reminder and a point to measure achievements towards the vision.

This document becomes another important Chapter of the ever-evolving Te Aitanga a Mahaki Environmental Inventory. The Environmental Inventory is available to the public at www.mahaki.com. The 'results section', identifying milestones and achievements made towards the action points can also be found and updated regularly on the website.

We acknowledge the support that the Maruwhenua Team from the Ministry for the Environment has provided for the development of the Environmental Inventory.

1 PROTECTING SITE SPECIFIC CULTURAL HERITAGE

1.1 Scope

A series of action plans are intended to pilot a different range of models and mechanisms to support and strengthen the ability of TAAM to protect and manage cultural heritage sites in the TAAM rohe. Pilot studies will be site or issue specific and are intended to cover the range of current heritage protection issues facing TAAM.

The topics proposed include:

- a) Development of cultural heritage strategies in selected areas.
- b) The protection of a cultural heritage site impacted on by flood protection works.
- c) The protection of a cultural heritage site impacted on by public purpose designations such as recreation reserve.
- d) The protection of a cultural heritage sites in urban, rural and

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WAIPAOA - RESTORE THE MAURI

Freshwater Policy Statement

Te Mana o Taiao o Te Aitanga a Mahaki
Environmental Management Planning Group

coastal environments.

- e) The preservation and restoration of a pa kāinga

1.2 Actions

- a) That Te Mana Taiao receives, analyses and provides recommendations to TAAM regarding all issues pertaining to Local Council developments and the Resource Management Act.
- b) Develop and Implement management plans for the conservation, protection or restoration of selected sites and areas.
- c) Work with agencies with heritage functions to provide formal protection to selected sites and areas.

2 MANAGING & PROTECTING THE WAIPAQA CATCHMENT

2.1 Scope

Catchment based plans¹ allow TAAM to track environmental changes, undertake restoration activities, improve understandings about local conditions and the management of land use effects. They provide a holistic context for a number of specific actions that collectively contribute to the sustainability of catchment ecosystems. Restoring the natural ability of Waipaoa catchment rivers to regulate water flows and availability during times of flood and drought; re-planting a network of forests for birds and other plant and animal life are the kinds of issues that would be addressed on a catchment wide basis.

2.2 Actions

- a) To develop catchment based strategies to:
 - o Protect land and encourage well-suited land uses.
 - o Re-establish an inter-connected forest network.
 - o Sustain minimum water quantity and quality standards.

¹ Reference: Whaka Te Mahere Taiao a Hauraki

Freshwater Policy Statement

Te Mana o Taiao o Te Aitanga a Mahaki
Environmental Management Planning Group

4 SUSTAINING & DEVELOPING NATIVE FRESHWATER FISHERIES

4.1 Scope

Action plans should focus on the restoration of former fisheries sites or the development of new ones, ways to protect, manage and monitor these sites and their fisheries.

4.2 Actions

- a) Develop catchment-based strategies for the recovery of tuna and other fisheries.
- b) Develop a programme to monitor recovery of the tuna etc fisheries.
- c) Develop agreements with the Ministry of Fisheries to co-manage freshwater customary fisheries.
- d) Develop and implement a glass eel and eel-monitoring project on the Waipaoa River.
- e) Survey the Waipaoa River to determine the nature and extent of other fisheries and its plant habitat.
- f) Trial and develop pilot commercial tuna farms within the Waipaoa catchment.
- g) Work with the GDC and the Department of Conservation to remove barriers of access for native fisheries.

5 AUDITING GDC & RMA POLICY STATEMENTS & PLANS

5.1 Scope

Audit and make findings accessible on the extent to which RMA and GDC policy statements and plans in the TAAM rohe make provision for the interests of Te Aitanga a Mahaki.

5.2 Actions

- a) Assess whether the policy statements and plans of the GDC can/have taken into account two planning documents.
- b) Develop and disseminate report findings.

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WAIPAOA - RESTORE THE MAURI

Freshwater Policy Statement

Te Mana o Taiao o Te Aitanga a Mahaki
Environmental Management Planning Group

- o Restore wetlands and riparian plantings to reduce flood damage and lessen the effect of drought.
 - o Select tributaries for restoration of habitat for fisheries and other resources.
- b) To develop a catchment monitoring programme that monitors:
- o land-use suitability
 - o recovery rates for erosion
 - o forest inter-connectedness
 - o flood reduction
 - o water quality and quantity
 - o habitat recovery / resource recovery
 - o Wahi tapu and cultural heritage protection
- c) Develop and disseminate educational materials and guidelines on the value of catchment base planning as a tool for managing local environments.

3 RESTORING RIVER & WETLAND ECOSYSTEMS

3.1 Scope

These actions are focused on the restoration of river and wetland ecosystems. Here are found the gathering places for tuna, inanga, harakeke, rongoa, watercress and many other resources essential for the cultural, social and economic lifestyle of Te Aitanga a Mahaki.

3.2 Actions

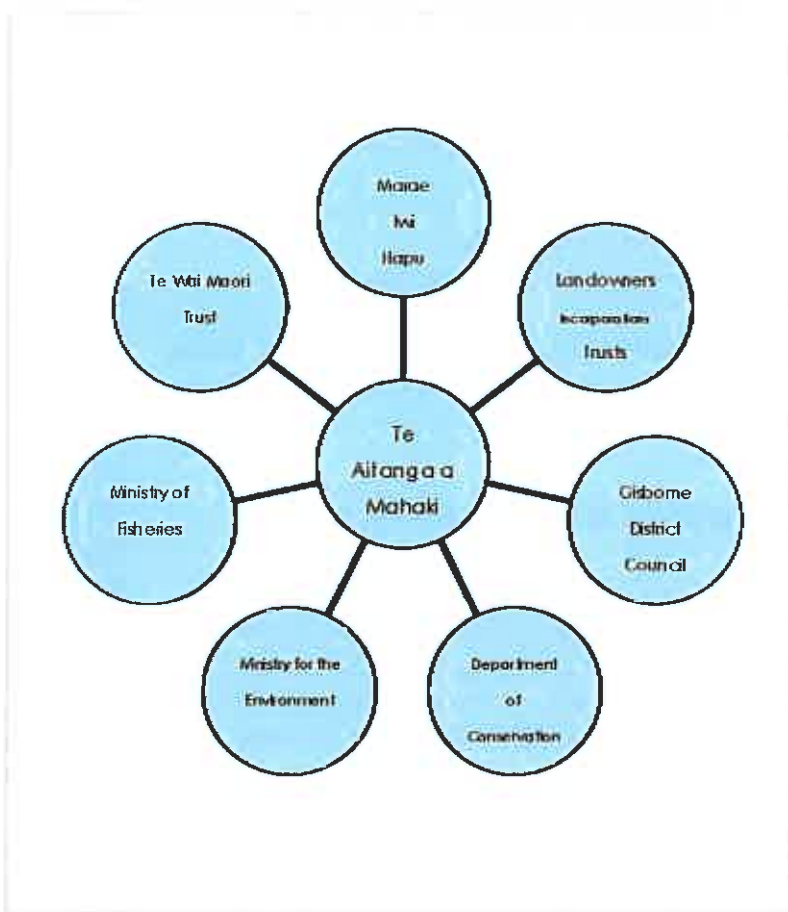
- a) Survey and select sites for wetland and river habitat restoration.
- b) Prepare manuals and educational materials
- c) Develop sites and restore habitats
- d) Select sites and plant harakeke beds
- e) Monitor habitat recovery

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WAIPAOA - RESTORE THE MAURI

6 KEY RELATIONSHIPS



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MAI PAOA: RESTORE THE MAURI

EEL ENVIRONMENTAL SENTINEL

