

SUSTAINING THE NATIVE FRESHWATER FISHERY OF TE TAU IHU: AN IWI PERSPECTIVE

A Andrew, 4Sight Consulting on behalf of Te Tau Ihu Fisheries Forum

ABSTRACT (300 WORDS MAXIMUM)

The concept of whakapapa binds Māori to the mountains, land, forests, and waters - all things have mauri, all things have the same origin. Accordingly, the interaction between the environment and people is what determines the welfare of both.

This project was set in Te Taihū-o-te-Waka-a-Māui, meaning the prow of Māui's canoe, the traditional name for 'top of the South Island'. Today, eight tribes (Ngāti Kūia, Ngāti Toa Rangatira, Te Atiawa ki Te Waka a Maui, Ngāti Apa ki Te Ra To, Rangitane o Wairau, Ngāti Rarua, Ngāti Koata, Ngāti Tama ki Te Waipounamu) form the region's mana whenua. They are recognised through Crown legislation, and are regarded as kaitiaki, within their rohe. Despite the obligations imposed on resource management agencies by Te Tiriti o Waitangi and New Zealand's laws, the issue of incorporating Māori values into management practices remains problematic. The aim of this project was to provide an opportunity for Te Tau Ihu iwi to meaningfully express their views about the health of freshwater, and to participate more completely in the management of the freshwater fishery resource.

The project involved collating historical and current, scientific and cultural research to understand the current state of the freshwater fisheries of Te Tau Ihu. Interviews were designed to capture and understand traditional fishing histories, tikanga and kawa specific to hapū or iwi; mahinga kai sites, and taonga species. These were professionally filmed to create a 12 minute video that captures how it was then and how it is now, addressing issues and solutions, and iwi aspirations for the future. The final report also provided a technical base and visual representation of environmental and historical information using GIS mapping.

Te Tau Ihu rohe comprises a multitude of overlapping interests in all spheres - across rohe, water catchments, legislation, statutory areas, regulations and policies.

KEYWORDS

Freshwater ecology, cultural values, engagement, iwi perspective, native freshwater fishery, kaitiakitanga, Treaty of Waitangi, Te Tiriti o Waitangi, tikanga, customary fishery, Māori customary practices, rohe, mana whenua, kaitiaki.

PRESENTER PROFILE

Alice is co-founder and Director of planning and environmental firm, 4Sight Consulting. She manages the Land and Water Quality Team, and sustainability workstreams. With a background in Environmental Engineering she has developed extensive experience in environmental management and consulting for local government, iwi and private clients. Iwi affiliations Ngāti Toa Rangatira and Ngāi Tahu.

1 INTRODUCTION

Te Taihū-o-te-Waka-a-Māui, meaning the prow of the demigod Māui's canoe is the Māori name for the top of the South Island (The Nelson – Marlborough region). Today, eight tribes (Ngāti Kuia, Ngāti Toa Rangatira, Te Atiawa ki Te Waka a Maui, Ngāti Apa ki Te Ra To, Rangitane o Wairau, Ngāti Rarua, Ngāti Koata, Ngāti Tama ki Te Waipounamu) form the region's mana whenua. They are recognised as kaitiaki by the Crown.

Te Tau Ihu Forum is mandated to represent the customary fisheries interest of all eight iwi within Te Tau Ihu (Te Tau Ihu). The objective of the Te Tau Ihu FF is to promote the ongoing sustainable management of freshwater fisheries through provision of information on the state of the native fisheries.

In 2014 the Te Tau Ihu Forum identified the need to assess the state of native freshwater fisheries in the Te Tau Ihu rohe, as a key piece of work, in line with the high level objectives of the Te Waka a Maui Ona Toka Fisheries Plan.

A study on the State of the Native Freshwater Fishery of Te Tau Ihu was commissioned by Te Tau Ihu Forum, and funded by the Ministry for Primary Industries (MPI) Customary Fisheries Research Fund 2013/14.

The study involved compiling information on the state of the Te Tau Ihu rohe from a number of historical and scientific sources, collecting oral histories through interviews and reporting and mapping. The aim was to provide an opportunity for tangata whenua to meaningfully express their views about the health of the freshwater fishery, and to participate more effectively in the management of this resource. To help enable this, a short film of kaumatua sharing their oral histories was also created.

This paper "An iwi perspective" focuses on the findings from the study around the issue of incorporating Māori values into management practices, and the challenges of delivering on kaitiakitanga obligations, and implementation of tikanga and customary practices, that despite the obligations imposed on resource management agencies by Te Tiriti o Waitangi and New Zealand's laws, remains problematic.

2 A BRIEF WORD ABOUT TE AO MĀORI

In Te Ao Māori (the Māori world view) the health of a waterway is directly connected to the land, and the waterways are also inextricably linked to tribal identities. Awa, a term that will be used in this paper, encompasses waterways such as rivers, streams, creeks, canals, gullies, gorges, grooves and furrows. Traditionally Māori do not distinguish between lakes, lagoons, rivers, swamps, or their associated beds. Māori land was not restricted to the water's edge, and included the bed of the water body. There is a distinction between land and water, but both are interconnected and Māori look at the environment holistically. Not as separate compartments.

Kaitiakitanga, the practice of physical and spiritual guardianship of the environment, is based on tikanga (customary protocols) within the domains of the Atua (gods).

The way freshwater (and water bodies) has been managed in NZ over time, through governments securing rights based upon English common law, has not accounted for the Māori understanding of the river and its ecosystem, nor their rights, interests or authority.

Additionally, western concepts of conservation and sustainable management often differ from the Māori view. Rather than conserving biodiversity and aesthetic values that are in existence, Te Tau Ihu want to have a living relationship with the natural environment, and believe that being engaged with the environment sustains the people and their identity. Tribal identity is bound up in mahinga kai, the practice of collecting, preparing, and eating food. Therefore, a river that is sustainably managed may be considered as being one that can provide an abundant and healthy food source, thus allowing for a cultural relationship to be fulfilled.

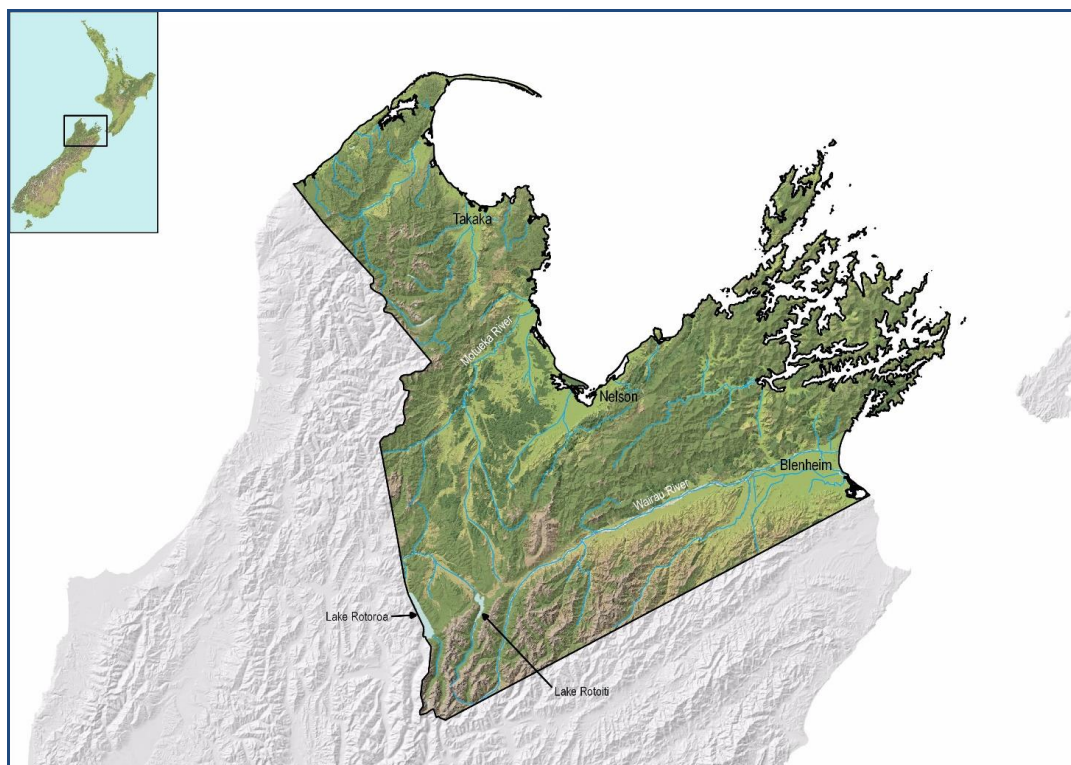
Recent changes to legislation, notably the National Policy Statement for Freshwater Management (NPS-FM), aims to ensure freshwater is managed in an integrated and sustainable way, with iwi and hapū to be included in freshwater decision making. This involves co-governance and collaboration to set freshwater objectives that reflect national and local values.

3 UNDERSTANDING THE ROHE

Te Tau Ihu rohe comprises a multitude of overlapping interests in all spheres - across rohe, water catchments, legislation, statutory areas, regulations and policies. The eight tribes that are tangata whenua, mana whenua iwi of Te Tau Ihu are:

- Ngāti Apa ki te Rā Tō;
- Ngāti Kuia;
- Rangitāne o Wairau;
- Ngāti Koata;
- Ngāti Rārua;
- Ngāti Tama ki Te Waipounamu;
- Te Ātiawa a Te Waka-a-Maui; and
- Ngāti Toa Rangatira.

The takiwā over which Te Tau Ihu exercise interest is roughly in a line from Kahurangi Point on the west coast, to Lake Rotorua and the Wairau River in the east (1). The overlapping rohe of the eight iwi is shown in Figure 2.



1: Te Tau Ihu boundary



Figure 2: Rohe of Iwi constituting Te Tau Ihu.

3.1 REGULATORY AUTHORITIES

There are three unitary authorities across the rohe (performing the duties of both the district and regional councils), Tasman District Council, Marlborough District Council and Nelson City Council. With each council, state of the environment monitoring and reporting, regulatory plans, approaches, decision making, and engagement with iwi differs. However each apply to Te Tau Ihu interests.

The three councils do collaborate on various regional interests, and in some cases have shared services. This includes the Top of the South Maps, which is a recent joint project between Tasman District Council and Nelson City Council to provide one source of geographic and map information to the public.

As discussed later in this paper, other Central Government departments and agencies also play a role in the regulatory framework affecting management of freshwater and the associated fishery within the rohe.

3.2 MAJOR CATCHMENTS AND RIVERS (AWA)

The rohe has 16 catchments, as depicted in Figure 3 comprising of the land area draining to the major waterway systems.

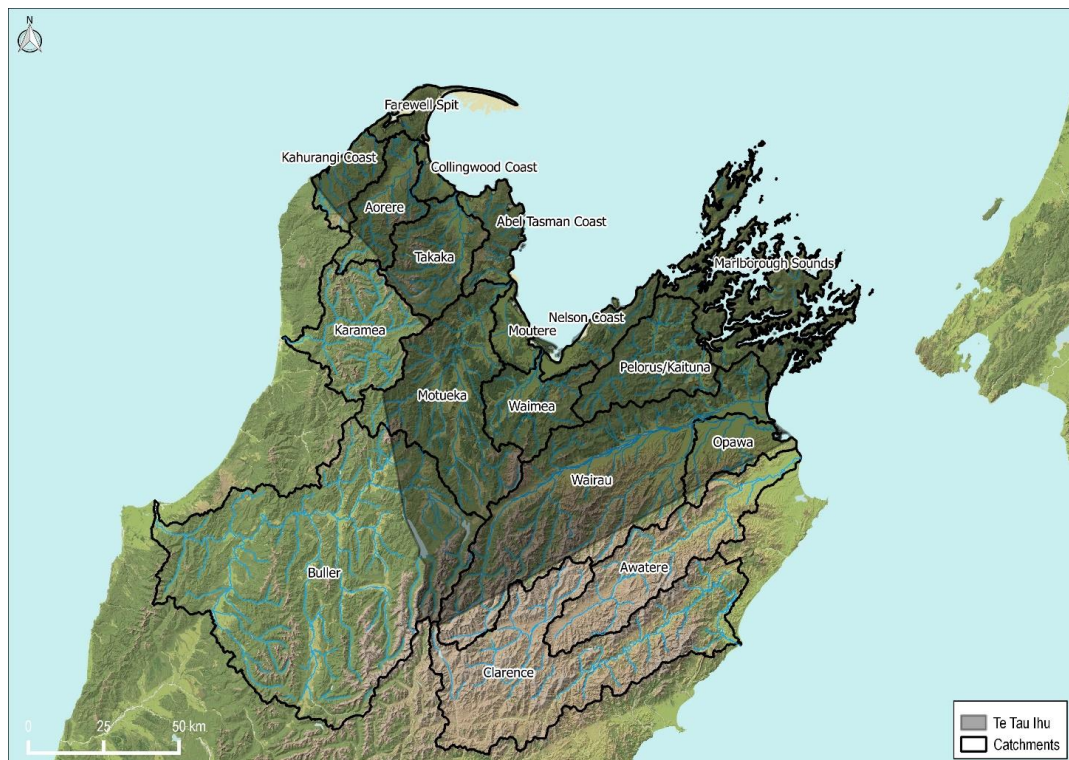


Figure 3: Major catchments in Te Tau Ihu

The river and stream character varies greatly in these catchments, from the small steep-sided rocky streams in the headwaters to wide-open braided swift flowing rivers or slow-moving water in meandering channels of rivers in the lowlands. Most of the large river systems form estuaries, deltas or inlets when they reach the coast. The surrounding land uses also vary, from natural forest to agricultural, industrial, commercial and residential land use. The effect of these land uses on awa is discussed later in the paper.

As can be seen, not only are there overlapping areas of interest across the catchments between the iwi within the rohe, but also overlapping interest outside the Te Tau Ihu rohe

where catchments extend past the rohe boundary. These catchments also cross the Council boundaries. There is no rohe-wide collective management approach for freshwater management. Difficulties can arise due to the number of stakeholders and perceived blurred lines of responsibility.

3.3 STATUTORY ACKNOWLEDGEMENTS

The importance of the waterways (arawai) and freshwater fisheries (ikawai) to iwi of Te Tau Ihu in historic times has been well documented in the Te Tau Ihu Statutory Acknowledgements (2014). Te Tau Ihu Statutory Acknowledgments provide for legal recognition of statutory areas that are of particular cultural, spiritual, historical and traditional associations of the eight Iwi (Figures 1 and 2). These statutory areas were identified during the Treaty settlement process, and with their formal recognition, specific obligations are placed on councils. Many of the statutory acknowledgements include areas which are of significance for customary freshwater fisheries.

The purpose of statutory acknowledgements are to:

- Require consent authorities, the Environment Court and Heritage New Zealand to have regard to the statutory acknowledgements;
- Require consent authorities to forward summaries of resource consent applications for activities that would affect the area to which the statutory acknowledgement applies to the governance entity; and
- Enable the governance entity and any member of the relevant iwi to cite a statutory acknowledgement as evidence of the association of the iwi with the areas to which the statutory acknowledgement relates.

Statutory acknowledgements enhance the ability of iwi to participate in Resource Management Act 1991 processes. A statutory area can have more than one statutory acknowledgment from more than one iwi associated with it.

3.4 SITES AND SPECIES OF IMPORTANCE & MAHINGA KAI

Mahinga kai (food gathering/fishing sites) were critical to the survival of iwi and are therefore identified in Statutory Acknowledgments. Iwi depended upon the shared knowledge of mahinga kai, and participation in gathering from mahinga kai was important for maintaining traditional practices and a healthy diet. It was also important that water quantity and quality was maintained as they impacted on these cultural values and traditional knowledge and practices.

Ika -fish – tuna, inanga, kōkopu, as well as kōura and kākahi living in rivers, streams and estuaries near kāinga (ancestral home) and pā (villages) were important sources of kai (food), and plants growing in wetlands such as harakeke were important materials. Sites of importance range from settlements to seasonal food gathering sites (where people moved temporarily to inland lakes, river mouths and estuaries) and also travel routes. Rivers were the routes along which people moved from district to district, and the kai from the rivers sustained people during their travels.

Not surprisingly the eight tribes of Te Tau Ihu shared many of the same waterways, lakes, wetlands and estuaries at different times for food gathering or fishing. Thus many of the same mahinga kai are significant to the Iwi of Te Tau Ihu.

Using information from the Statutory Acknowledgements (2014) a map was compiled to paint a general picture of the key sites of importance for the historic freshwater fishery.

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Although many of these sites now have degraded habitat and depleted fishery resources, they are still highly valued by iwi. Many of these places were mentioned during the interviews with Kaumātua. These may provide a focus for the future protection and restoration of the freshwater fisheries. These sites are shown in Figure 4.

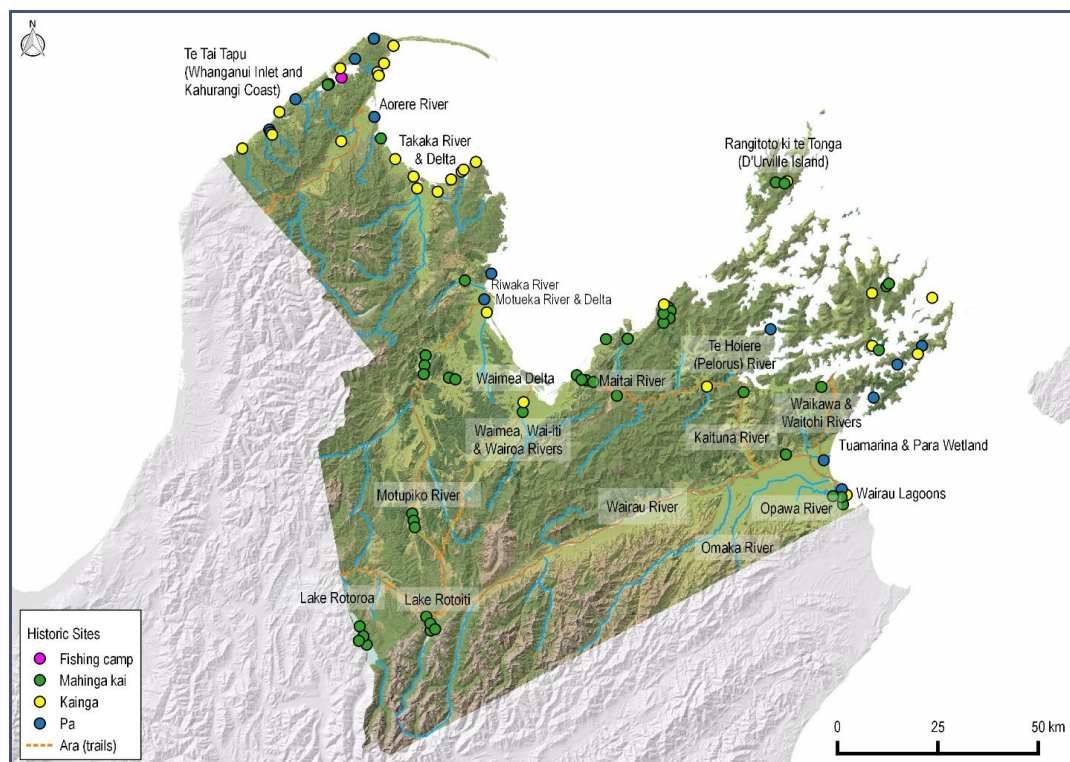


Figure 4: Historic freshwater sites of significance in Te Tau Ihu. Information sourced from Te Tau Ihu Statutory Acknowledgements (2014).

Freshwater species of importance are also identified in Te Tau Ihu Statutory Acknowledgements, and their whereabouts mapped to provide analysis of current and historical data and therefore changes to the species distribution over time. Notable freshwater species of Te Tau Ihu, are outlined in Table 1.

Māori name	Common name	Latin name
Tuna	Longfin eel	<i>Anguilla dieffenbachia</i>
Tuna	Shortfin eel	<i>Anguilla australis</i>
Kōaro	Whitebait	<i>Galaxias brevipinnis</i>
Kōkopu	Giant kōkopu	<i>Galaxias argenteus</i>
Pōrohe and paraki	Common smelt	<i>Retropinna retropinna</i>
Piharau, kanakana and korokoro	Lamprey	<i>Geotria australis</i>
īnanga	Whitebait	<i>Galaxias maculatus</i>

Kākahi, kāeo and torewai	Freshwater mussel	<i>Echyridella menziesi</i>
Kōura and kēwai	Freshwater crayfish or crawlies	<i>Paranephrops planifrons</i> and <i>P. zealandicus</i>
Upokororo, pokororo and paneroro	Grayling or native trout (extinct)	<i>Prototroctes oxyrhynchus</i>

Table 1: Notable freshwater species in Te Tau Ihu.

3.5 PROTECTED MANAGEMENT AREAS

Currently only one freshwater system in Te Tau Ihu has been formally protected using customary protection tools under the Fisheries Act. This is Te Oranga Tuna Mātaītai (Ngāti Kuia Eel Reserve) on the Pelorus River. Wetlands, rivers and streams managed by Department of Conservation (DOC) have varying degrees of protection, with waterways, wetlands and lakes in national parks having a high level of protection. Freshwater fisheries regulations and customary protection mechanisms are further discussed Section 4.2 of this paper. A small amount of the Te Tau Ihu coastal marine area, including estuaries and inlets, has been protected as marine reserve and marine mammal sanctuaries (no customary fishing is allowed in these areas). Customary fishing areas (mātaītai and taiāpure) have also been established in a few places

Figure 5 shows the locations of various management areas in Te Tau Ihu including customary fishing management areas (maitaitai and taiapure), that are managed by iwi and legislated by MPI, and also other protected areas such as marine reserves managed by DOC. Protection of habitat and species, either limits or does not allow fishing or harvest in protected coastal areas.

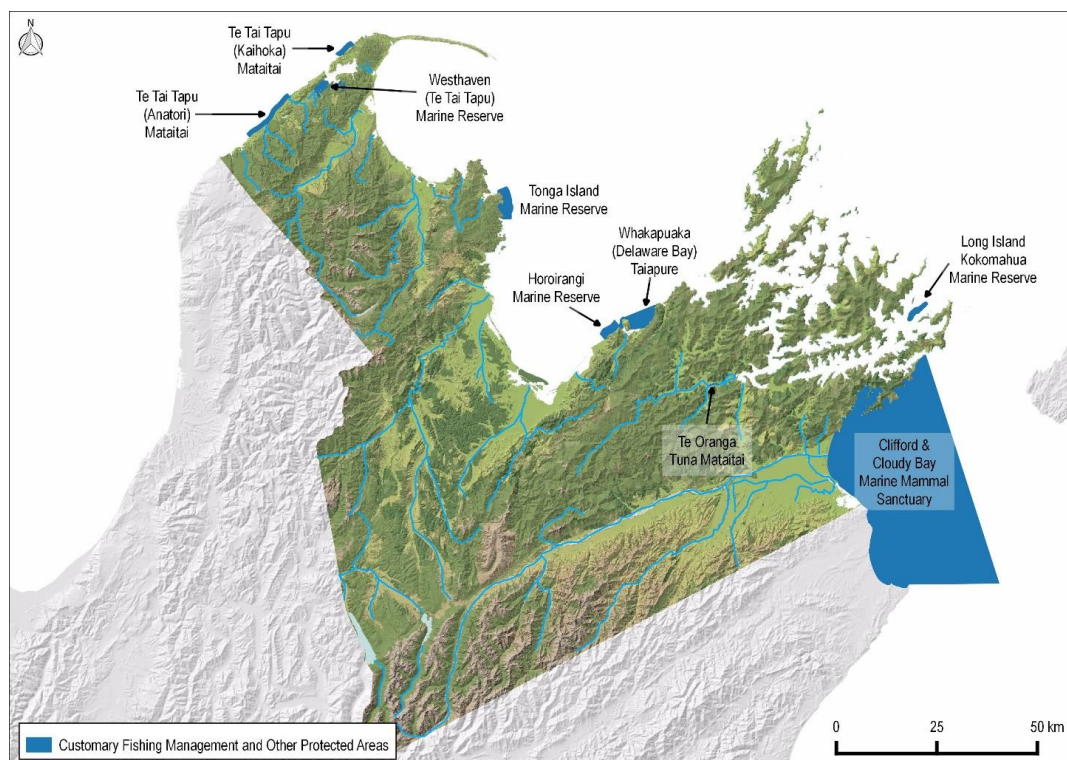


Figure 5: Locations of fishing management areas in Te Tau Ihu, including customary (maitaitai and taiapure), managed by iwi and legislated under MPI and also other

*protected areas such as marine reserves managed by Department of Conservation.
Information sourced from the Ministry for Primary Industries, 2014.*

4 CURRENT STATE AND PRESSURES

At a national level, according to the Conservation Status of NZ freshwater fish (DOC, 2013), of our native freshwater fish 74% are considered to be Threatened or At Risk (this is compared to 65% in the 2009 review). In Te Tau Ihu it is also clear that the freshwater fish resources are in decline.

The effects of development and growth, intensification, and the lack of an integrated approach to managing land and waterways has created environmental pressures on the mahinga kai or freshwater fishery. In addition, harvest levels are not always being managed sustainably, which is further depleting stocks and abundance. Both are key factors that need to be considered in the future sustainability of the freshwater fishery.

4.1 INFORMATION SOURCES

4.1.1 FISH DISTRIBUTION

The New Zealand Freshwater Fish Database, managed by NIWA, is the most comprehensive information source and central repository for fish species present, and their abundance, and size (though this information is not available for all sites). The system relies on volunteers, which include NIWA, Councils, DOC, Fish and Game, consultant ecologists, and members of the public, to enter field observation data. Maps were produced from Fish Database the in the 2014 Study showing native freshwater species records since 1970 to 2014 in Te Tau Ihu rohe. These are shown in Figures 6, 7 and 8 below.

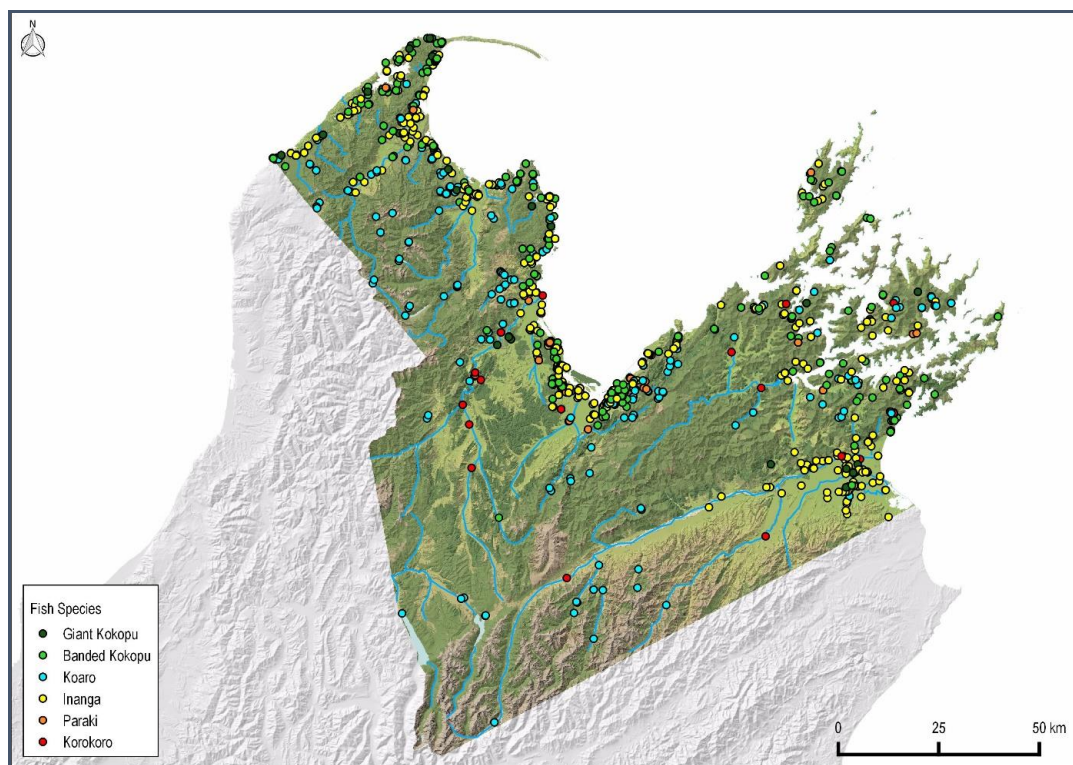


Figure 6: Native Freshwater species records since 1970 to 2014 in Te Tau Ihu (galaxias species).

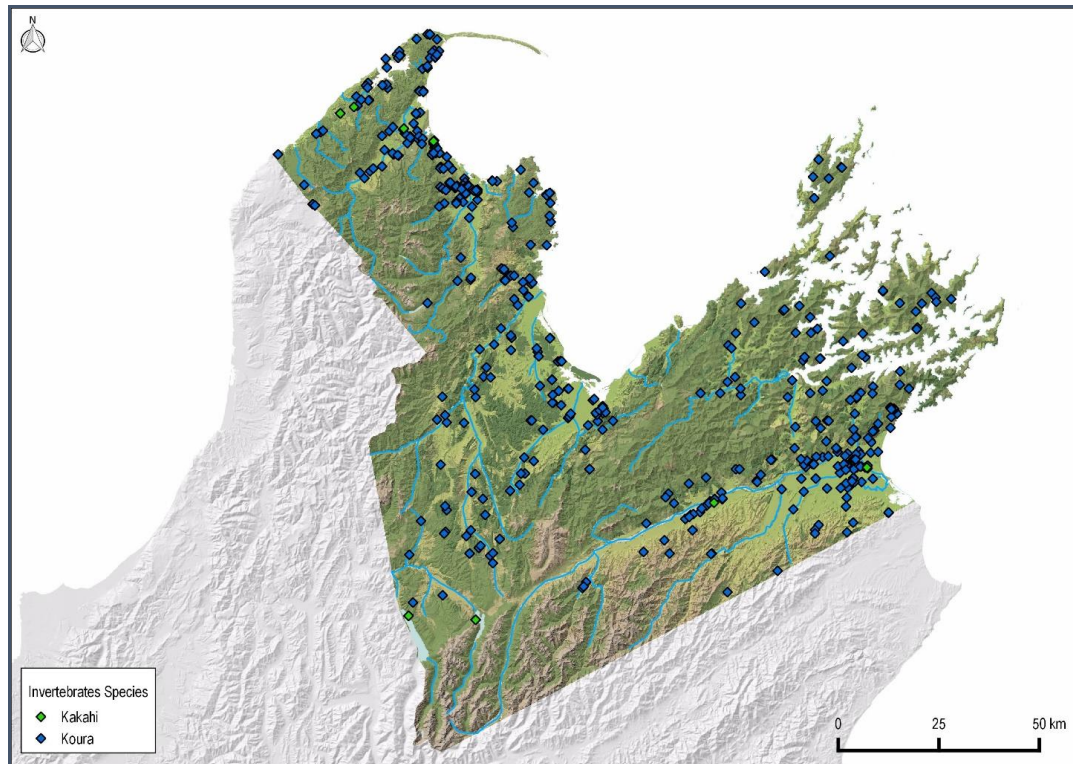


Figure 7: Native Freshwater species records since 1970 to 2014 in Te Tau Ihu (Invertebrates – Kakahi and Koura)).

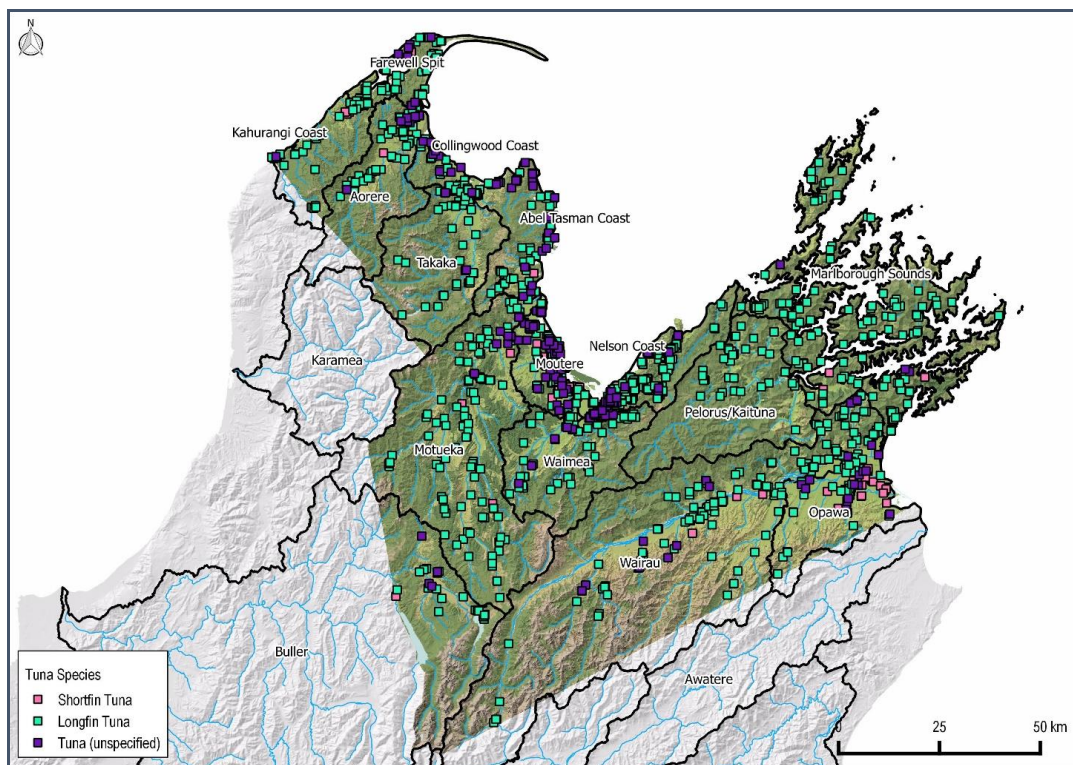


Figure 8: Native Freshwater species records since 1970 to 2014 in Te Tau Ihu (Tuna - Shortfin, longfin and unspecified).

As these static maps are developed from historical data records dating from any time period from 1970 to the present day they are indicative only of where fish are present. In addition these records show distribution but not population size, density or abundance. There may be areas that fish are present that are not shown on these maps simply

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because volunteers providing the information have not looked for them in that particular area. This highlights the importance for practitioners to ensure that the Freshwater Fish Database is used appropriately and in an integrated fashion.

To gain a deeper understanding of fish abundance across the rohe, information was sought on a number of localised monitoring programmes, and one-off surveys or studies that were known to be occurring throughout the rohe. However it was not possible for all of these to be identified and included in the 2014 Study.

There is more information available for tuna as it is a commercially harvested species managed by the Ministry for Primary Industries (MPI). Specific information held includes the number of elvers of each species arriving annually at a number of monitoring sites; catch per unit effort (CPUE) information collected from commercial fishers; and species and weight of tuna received by commercial tuna processors and what catchment they are from. Unfortunately, MPI reported in 2013 that there was insufficient information to generate a CPUE index that could be used as an indirect measure of tuna abundance within Te Tau Ihu (MPI 2013). Information on the customary take of tuna and recreational harvest has not been collected at a national level, although MPI recognize the need to do so. Following an investigation on longfin eel in 2013 by the Parliamentary Commissioner for the Environment (PCE, 2013), a set of management measures were announced to try and improve the information available about the abundance and distribution of longfin eels to help inform more useful management decisions.

Whilst DOC is responsible for managing the whitebait harvest, they do not collect data on catch rates. However, they suggest based on anecdotal evidence, that there has been a significant decline in whitebait numbers. Councils and DOC have been active in recent times in identifying and protecting whitebait spawning areas in the region. A number of spawning sites from Nelson to Motueka, and also in Blenheim, were identified from council information. However, these surveys are incomplete as whitebait spawning areas are likely to be found at all river mouths and tidal creeks. Some of the sites identified are protected and actively managed to improve habitat for whitebait spawning. There is certainly scope for more work to identify and protect further whitebait spawning sites across the region. Whilst undertaking the 2014 Study it was indicated that DOC is currently considering setting up a national programme to monitor selected species of freshwater fish, with a focus on the more threatened species (Jane Goodman, pers. comm).

Commercial take is prohibited for Koura and although the maps show the invertebrates (Kakahi and Koura) are widespread, their population density is not well understood in the rohe. Koura are recorded as being threatened, with a 'gradual decline' listing, however a permit for recreational fishing is not needed to take them.

Overall information on the populations of native taonga species across the rohe is piecemeal and not easily accessible to allow for iwi to determine priority areas. It would be valuable to further understand the state of freshwater fisheries populations in the Te Tau Ihu rohe, such as basic population abundance trends, health of the population and harvest patterns (quantity and location).

The 2014 Study highlighted the gaps in information and further work required to identify them and develop a prioritization framework. This included mapping and developing values for mahinga kai, engineered structures, and fish spawning area.

4.1.2 FRESHWATER HABITAT QUALITY

A good indication of river and stream habitat quality is the health of macro-invertebrate communities. Water quality can also be surveyed, but is not always the best indication of habitat quality for stream life. Some stream invertebrates are sensitive to changes in the quality of the freshwater habitat, and a macro-invertebrate community index (MCI) has been developed to indicate high, moderate or poor quality freshwater habitat. Tasman and Marlborough Councils have multi-year programmes to monitor stream and river health using both MCI and water quality indices as part of their state of the environment monitoring programmes. The most recently available results supplied by both Councils (2012/13) are shown in Figure 9.

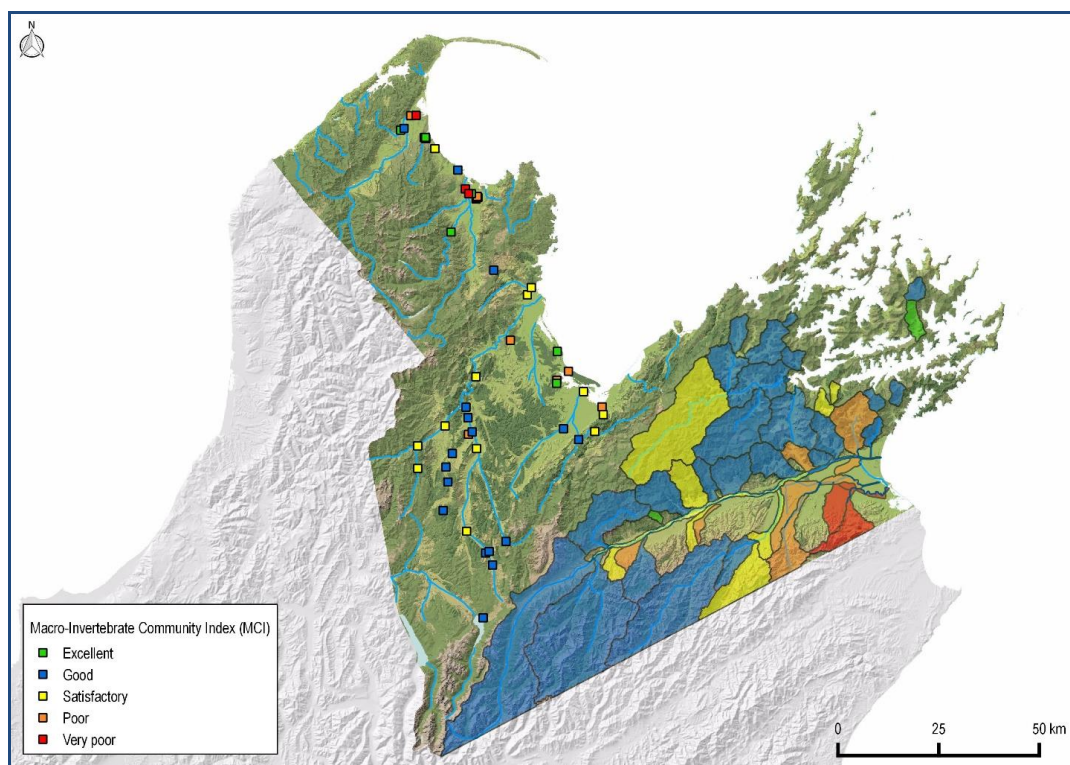


Figure 9: River and stream health monitoring results for Tasman and Marlborough Councils in 2012/13. Health is assessed using the macro-invertebrate community index. Information was supplied by Tasman and Marlborough District Councils, 2014.

As can be seen in Figure 9, Tasman and Marlborough District Councils use different methods for reporting on stream and river health. Although councils have regular monitoring programmes for water quality and river flows, there is no region-wide programme to monitor changes in the health of fish populations.

4.2 REGULATORY AND POLICY FRAMEWORKS

The management of freshwater and freshwater fisheries in New Zealand is achieved through a series of overlapping pieces of legislation managed by a number of different government departments and councils. To provide context to the challenges faced by iwi in managing the freshwater fishery a brief summary of how the legislation fits together is provided below.

4.2.1 FRESHWATER MANAGEMENT

The Resource Management Act (RMA) is the key piece of legislation governing the management of New Zealand's freshwater resources.

The Ministry for the Environment provides advice to central government on freshwater management, and advises and assists the Minister with their responsibilities under the RMA, such as developing National Policy Statements, applications for water conservation orders, and requests for ministerial intervention. The Minister can refer matters of national significance to a board of inquiry which is managed by the Environmental Protection Authority.

For example the government recently released The National Policy Statement for Freshwater Management, (NPS-FM), effective as of the 1 August 2014, which requires councils to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits. By 2030 councils are required to have set freshwater objectives that reflect national and local values. They will need to set flow, allocation and water quality limits to ensure freshwater objectives are achieved. Councils must also include iwi and hapū in freshwater decision making. The NPS-FM will establish two compulsory national values:

- Ecosystem health and human health for secondary contact; and
- Bottom lines that provide the minimum level of what is acceptable for freshwater objectives.

DOC has a particular role under the RMA of managing coastal marine areas through the National Coastal Policy Statement, and for managing conservation land. The National Policy Statement for Freshwater Management (NPS-FM) requires a consistent approach to managing coastal and freshwater habitats.

The Parliamentary Commissioner for the Environment is an independent officer of Parliament with wide-ranging powers to investigate environmental concerns. The Commissioner's job is to hold the Government accountable for its environmental policies and actions. The Commissioner has reviewed many water-related matters.

Local government is in charge of freshwater planning at a regional and community level. Regional councils are responsible for managing water quality and quantity through their plans. They may permit some activities and require consents for others such as taking water and the discharge of contaminants. Territorial authorities are responsible for managing land uses through their plans, and generally provide drinking water, storm water and sewage services, all of which directly affect the state of freshwater and the associated fishery. The three Councils within the Rohe perform the duties of both the Regional and Territorial authority.

Councils will be required to undertake the necessary work to address the requirements of the NPS-FM, and update their policy and planning documents accordingly. This will be statutory driven programme of work requiring public consultation, notification of plan changes with requests for submissions, and appeal rights. The level of iwi engagement required to achieve this is extremely high.

Importantly, Statutory Acknowledgements (refer section 3.3) must be attached to regional policy statements, and regional and district plans. Planning decisions need to avoid adverse effects on the values of Statutory Areas.

In addition, various standards and guidelines have been produced to assist with assessing water quality, protection of aquatic life and human health, including (but not limited to):

- Australia and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000);

- New Zealand Drinking Water Standards (MoH, 2005, revised 2008);
- Guidelines for Drinking Water Quality Management (MoH, 2005); and
- Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas (MfE, 2002).

4.2.2 FISHERIES REGULATION

NZ's freshwater fisheries management system regime is complex, with the regulatory environment managed by a number of government agencies. The key pieces of legislation relating to freshwater fisheries are:

- Fisheries Act 1996; and
- Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

The Resource Management Act and Biosecurity Act also effect management of the freshwater fishery through controls on the use of freshwater habitat and aquatic pests.

Two government departments are principally responsible for freshwater fishery regulation:

- Ministry for Primary Industries (MPI) – is responsible for the management of most freshwater species under the Fisheries Act, excluding sports fish, whitebait and some unwanted aquatic life.
- Department of Conservation (DOC) – is responsible for managing “whitebait” harvest and controlling access to waterways in DOC administered public lands. DOC administers the Freshwater Fisheries Regulations 1983, which include provisions relating to both indigenous fish and pest fish. DOC also has an advocacy role to protect native species and habitats, and implements programmes to protect and restore freshwater fish habitat and populations. DOC has the mandate to prepare freshwater fishery management plans (under sections 17J and 17K of the Conservation Act 1987), but to date have not prepared any such plans.

In addition to the primary roles performed by MPI and DOC:

- Fish & Game New Zealand (FGNZ) - has a statutory mandate to manage New Zealand's freshwater “sports fish” fisheries including salmon and trout.
- Ministry for the Environment (MfE) - has a role in the freshwater fishery by regulating the use of water and land through its national policy statement and guidance documents. The recently released NPS-FM is the most relevant to the freshwater fisheries. It requires local government through regional plans to meet minimum standards for aquatic ecosystems and recreational use of waterways, and to involve communities (including iwi) in setting bottom line limits for water quality and quantity in catchments.
- Councils – also have responsibilities for regional pest management strategies which include aquatic pests. They implement non-regulatory programmes to protect and restore significant natural and physical resources. For instance both Tasman and Marlborough Councils have projects to restore whitebait spawning habitat.

4.2.3 HOW FRESHWATER FISHERY REGULATIONS WORK

Of those freshwater species managed under the Fisheries Act, tuna are the only native species managed under the quota management system (QMS) set by MPI. South Island tuna stocks were introduced into the QMS in 2000 and North Island tuna stocks in 2004. Commercial take is prohibited for kōura. There are also regulations on fishing methods and area restrictions for commercial and non-commercial freshwater fishing.

DOC manages the whitebait fishery by setting regulations on when and how whitebait can be caught, and undertakes enforcement activities to ensure compliance with the regulations. There are no limits on how many whitebait are harvested or how the catch is used – the focus is on regulating the fishing method.

4.2.4 HOW CUSTOMARY FISHERY REGULATIONS WORK

The Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 gives effect to the settlement of claims relating to Māori fishing rights.

The Kaimoana Customary Fishing Regulations 1998 and the Fisheries (South Island Customary Fishing) Regulations 1999 provide iwi with methods to manage their non-commercial fishing in a way that best fits their local practices. When MPI sets the total catch limits for fisheries, it allows for this customary use of fisheries.

To use the customary fishing regulations, iwi decide who has mana whenua status over a fishery. This party then chooses individuals to act as guardians for the area (tangata tiaki), who are then appointed by the Minister for Primary Industries. Tangata tiaki can issue a customary authorisation to catch fish in their rohe for customary use, these catches must be reported to MPI.

Iwi can request MPI to set aside special management areas for fisheries within traditional fishing grounds – ‘mātaitai reserves’ and ‘taiāpure-local fisheries’. Only one freshwater way in Te Tau Ihu has so far been formally protected using customary protection tools under the Fisheries Act by Ngāti Kuia, Te Oranga tuna mātaitai (tuna reserve) on the Pelorus River (Figure 5).

4.2.5 CUSTOMARY MANAGEMENT TOOLS

Tools available to iwi for freshwater fisheries management are:

- Fisheries Act 1996 (Section 186) – provides for the making of regulations that recognise and provide for customary food gathering by Māori and the special relationship between tangata whenua, and places of importance for customary food gathering (including tauranga ika and mahinga mātaitai).
- South Island Customary Fishing Regulations, 1999 (established under Section 186 of the Fisheries Act 1996) - provides for mātaitai in both freshwater and marine waters where commercial fishing is generally not allowed, and iwi can set the management regime for the take of tuna, kōura and kākahi, including for individuals. Within mātaitai reserves, guardians can bring in changes to the rules for customary and recreational fishing. They can also say whether some types of commercial fishing should continue in the reserve. This would assist iwi in replenishing tuna stocks, and allow a limited commercial take within the reserve to complement an adjoining fishery.
- Fisheries Act, 1996 (Section 186B) - to restrict or temporarily close an area in the South Island to fishing. The specific purpose is to provide for the use and

management practices of tangata whenua in the exercise of their customary rights. Temporary closures or rahui are designed to respond to localised depletion of fisheries resources.

- Fisheries Amateur Fishing Regulations 50 & 51, 1986 (replaced regulation 27a in 2013) (established under Section 272 of the Fisheries Act 1996) – these regulations allows for customary fishing by iwi for hui or tangi only and are currently used in the South Island where the South Island customary fishing regulations are not being implemented. It is expected that the more comprehensive South Island customary fishing regulations will eventually apply to all customary fishing in the South Island.
- Fisheries Act (Section 174) – provides for the establishment of taiāpure. A taiāpure is a local management tool established in an area of estuarine or coastal waters. Taiāpure make provision for a management committee to be established. All fishing (including commercial fishing) can continue in a taiāpure and this tool offers a way for tangata whenua to become involved in the management of both commercial and non-commercial fishing in their area. Not many taiāpure have been set up to date. Taiāpure cannot be used in freshwater, however could be a complementary tool to a mātaimai in marine waters. A taiāpure could provide a way of allowing commercial fisheries, and iwi to be involved in decisions.

To date, in Te Tau Ihu two marine mātaimai, one taiāpure, and one freshwater mātaimai (Te Oranga tuna mātaimai) have been established using customary protection tools under the Fisheries Act, as shown in Figure 5 along with marine reserves and marine mammal sanctuaries.

It should be noted that whitebait are managed under the Conservation Act 1987 and fall outside all of the above provisions, i.e. there is no special provision for iwi to manage whitebait or restrict take for marae purposes such as under the Fisheries Act. Through establishment of the Whitebait Fishing Regulations 1994, seasonal restrictions and methods are the main management tools administered by DOC.

4.2.6 IWI FISHERY MANAGEMENT PLANS

Section 11 of the Fisheries Act 1996 provides for the preparation and review of fishery management plans. MPI has established a framework for developing iwi fisheries plans to reflect the aspirations of iwi, including the regard for kaitiakitanga. It is intended that iwi fishery plans will be used when developing national fishery management plans.

4.3 PRESSURES ON THE FRESHWATER FISHERY

4.3.1 HARVEST – MANAGEMENT OF TUNA STOCKS AND WHITEBAIT

There is growing concern among scientists that present day harvest levels, especially of whitebait and longfin eel, are not sustainable, with some freshwater fish experts predicting a collapse of whitebait fisheries in some locations in New Zealand.

MPI collates records on tuna catch from quota permit holders and customary permits, but no records are kept by DOC on the whitebait harvest, nor by MPI on the recreational harvest of tuna. Unlike the West Coast where much of the whitebait fishing is done from established licensed 'stands' along the river banks, whitebait fishing within Te Tau Ihu is a lot more informal.

Up to date customary information on commonly fished sites by iwi for whitebait and tuna within Te Tau Ihu can be difficult to obtain and is in some cases considered 'closely-guarded' personal information.

The commercial agenda in the whitebait industry is around short term profits. Whitebait fishing methods are becoming highly efficient (with large scoop nets) and the whitebait resource is becoming increasingly valuable from a commercial perspective. Currently there are seasonal restrictions and limits on fishing methods but no limits on harvest levels. There are also no limits on how the whitebait take is used; it can be sold, or consumed privately. Tackling these issues for iwi alone, is not simple or without potential hostility within the commercial environment as well as within the community.

4.3.2 LAND USE

Native forest clearance and conversion of this land to pastoral, cropping and exotic forestry land uses has had a major impact on the freshwater fish habitat. New Zealand freshwater fish evolved in streams shaded by overhanging vegetation that maintained low water temperatures and provided a slow release of nutrients to the water via deposition of vegetative matter. Rocky bottomed streams with clear water are likely to have been the dominant stream habitat in most of Te Tau Ihu, whilst soft bottomed streams with 'muddy' water would have been confined to the lower reaches of some streams or rivers.

Most land use change has occurred over the past century, and there would likely have been significant sediment runoff to waterways degrading water quality. Poor forestry practices (e.g. road construction and tree harvest), land cultivation practices (e.g. tilling of soil near waterways, tilling during wet conditions) and to a lesser extent earthworks for infrastructure construction and subdivision would have also contributed to sediment runoff. Regulatory controls on earthworks and disturbance to soils means sediment runoff is less of an issue today.

Degradation of fish habitat, while less than in the past is still occurring with the intensification of land use (i.e. vineyard and dairying conversion). Runoff of nutrients, particularly nitrogen and phosphorus, and other agri-chemicals to surface and ground water degrades water quality. While councils have controls to limit direct discharges to waterways, controls on non-point or diffuse discharges are often less well understood leading to inadequate controls. Industry and council currently have programmes in place to address the harm from non-point discharges from rural land uses (such as excluding stock from riparian margins and developing nutrient budgets where there is intensive land use). These programmes have not been in place long enough to assess their long-term effectiveness in improving region-wide fish habitat. However, according to the Marlborough District Council diffuse sources of pollution are the biggest threats to maintaining high water quality in the rivers and streams.

Poor water quality can become a barrier to fish migration. This is often referred to as a chemical barrier, and migrating whitebait species have been known to avoid moving up streams with poor water quality.

A further issue is the extraction of water from waterways and ground water to an extent where it effects the hydrology of rivers and streams, and ultimately fish habitat. Low water flows can lead to poor water quality that degrades fish habitat, as well as impeding fish migration.

While the headwaters of most catchments in Te Tau Ihu have native vegetation cover, often on protected land, pastoral and cropping land use dominate downstream.

4.3.3 LOSS OF RIPARIAN AREAS

Many of the streamside or riparian areas in the study area now have a vegetation cover of introduced grass species, which is often grazed by livestock who also have access the stream.

Councils seek to control activities to limit disturbance of vegetation in riparian areas, and encourage stock exclusion and revegetation. Information on the extent of riparian areas with native vegetation cover or where they have been revegetated with native (or woody) vegetation was not assessed. In the lowlands the proportion of woody vegetation is likely to be very small, and there remains a large potential to restore native vegetation to shade streams.

4.3.4 DISCHARGES, ABSTRACTION, ALTERATION

Many awa of Te Tau Ihu are affected by direct discharges, indirect discharges, and/or abstraction activities. Both individually and cumulatively these activities can greatly affect the ecology and mauri of the waterways.

Throughout the rohe, agriculture (dairy farming) and horticulture (viticulture) are the two most significant industries associated with discharges and high water use. In the Marlborough/Wairau catchment (near Big Lagoon, Mataora), the discharging of industrial trade wastes into waterways appeared anecdotally to be a significant issue.

Changes in land use also results in other pressures, such as discharges of various types of waste to land and water, the taking of water to support land based activities, and the draining of floodplains, wetlands and waterways. Often these activities are authorised by rules in Regional or District Plans, or by way of resource consents (making it difficult to manage cumulative effects, resulting a death by a thousand cuts). However, these activities can also occur illegally.

4.3.5 WORKS IN WATERWAYS (STREAM STRUCTURES AND MAINTENANCE)

Physical barriers to fish migration such as dams, weirs and culverts have also long been recognised as a threat to the health of fish populations. Planning regulations now require any in-stream structures to be designed to allow for fish passage, some councils also have programmes to remove or modify existing structures. In-stream structures that could be barriers to fish migration were able to be identified and mapped by Tasman Council but not Marlborough Council.

5 ORAL HISTORIES

In the 2014 Te Tau Ihu study face-to-face interviews were carried out with 14 Kaumātua from the eight tribes throughout the rohe and professionally filmed by writer and film director Wiremu Grace as part of the historical record.

A range of interview materials were designed to capture and understand:

- Traditional fishing histories, tikanga and kawa specific to hapū or iwi;
- Mahinga kai sites, and taonga species – how they were and how they are now,
- Individual perspectives on current issues and solutions, and
- Iwi aspirations for the future.

Oral records and histories play an important part in providing information to learn more about the historical and current state of the native freshwater fishery. However, they are also a powerful and compelling tool to share and give a voice to iwi and hapū aspirations. Capturing these stories requires establishing relationships through correct protocol, acknowledging mana, and taking the time to talk and listen.

The kaumatua interviewed all had a good understanding of the freshwater environment, and provided additional context to many of the issues and challenges identified through research and scientific data.

Historical records and stories from the past (only generations ago) painted a picture of a once richly abundant, plentiful and accessible freshwater fishery that has been depleted and degraded, even lost. "Where you could choose to harvest almost anything you wanted, wherever you wanted to".

These kaumatua have experienced the effects of development, growth, and intensification, and how the prevalence of the western way of managing land and waterways have adversely affected the awa of Te Tau Ihu, mahinga kai (freshwater fisheries) and caused the subsequent loss of access to the resource affecting their cultural connection to the resource.

Māori traditional knowledge (tikanga and kawa specific to hapū or iwi) provided guidance on how to view waterways, protect and heal the waters, and sustain the resources within it, and the people themselves, through the principle of kaitiakitanga. Over time, and with less reliance on the freshwater resource for survival, the importance of the freshwater fisheries and associated customary practices and ways, and protection of these, have taken a back seat to other modern priorities. In some cases traditional use and management of the resource has not been, and is no longer, possible.

Today, in a post settlement environment there is an appetite to tackle these issues. Legislation and policy looks to incorporate customary practices and cultural perspective, mechanisms are available for iwi as kaitiaki, tangata tiaki to manage the freshwater fishery resource so that Te Tau Ihu can move forward and participate fully in the economic, social and cultural life of their region.

Overall management is challenging, as there are many layers of control through government agencies, local government, and iwi, though the fish all share the same habitat. Tackling these issues requires a new collaborative management model.

6 MOVING FORWARD

Te Tau Ihu Forum is mandated to determine the best way forward and act in the interests of the iwi of the rohe to manage the freshwater fishery resource. The 2014 Study findings allowed for a number of recommendations to be developed for Te Tau Ihu Forum's consideration based on:

- A consolidated information review of scientific, regulatory and cultural information from as many sources as possible in order to identify the current state of the native freshwater fishery and the issues challenges, pressures that are faced.
- The statutory acknowledgements (and the interviews) that provided a basis to identify management areas that are of particular cultural, spiritual, historical and traditional associations of the eight Iwi.

- Interviews with 14 Kaumatua across the eight tribes to learn more and help provide solutions to known problems and issues and to further assess the best direction toward achieving sustainable management.

However, to thoroughly understand the current state of the freshwater fisheries in the Te Tau Ihu rohe, more work is required in some areas. This includes basic population abundance trends, the health of the population, and harvest patterns (quantity and location). There is some in depth freshwater management and water quality data that has already been collected and some good site-specific information on the state of freshwater fish populations (particularly tuna) held by agencies and individuals, but no overall rohe-wide 'picture'. This is required before iwi can set sustainable harvest limits.

6.1 CONCLUSIONS

Despite the obligations imposed on resource management agencies by the Treaty of Waitangi and New Zealand's laws, the issue of incorporating Māori values into management practices remains problematic.

Te Tau Ihu Forum undertook a study to not only gain a better understanding of the current state of the native freshwater fishery but also to share and incorporate cultural values, meaningfully express views about the health of freshwater, to work towards participating more completely in management of the freshwater fishery resource.

There is undoubtedly a complex web of legislation and policies governing freshwater fishery management in NZ. However, a sustainable native freshwater fishery benefits all.

In Te Tau Ihu there is a multitude of overlapping interests across rohe, water catchments, legislation, statutory areas, regulations and policies that the eight tangata whenua iwi must negotiate. Iwi can play (and are playing) a part in revitalising the freshwater fisheries resource, for example replenishing tuna stocks through customary fishery management tools such as mātaimai, however threats to the fishery are much boarder and cannot be tackled alone. Issues involving land use change, urbanization, agricultural and horticultural intensification, discharges, abstractions, pollution and engineered structures within the freshwater environments require working within existing legislation and getting all agencies, stakeholders and the community to work together, this means practitioners must develop collaborative structures to find solutions that benefit all.

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