

Places and species traditionally important to Ngati Konohi in the rohe moana

Like the whenua (land) behind it and the seashore and foreshore linking land and sea, the rohe moana has always been regarded as a taonga by Maori people. Features within the rohe moana all have names, many associated with ancestral tupuna, and they and the god of the sea, Tangaroa, are accorded the utmost respect.

Tangaroa can be angry at times, and generous and accommodating at other times, but always requires respect, understanding and care if his well-being is to be sustained and enhanced.

Traditionally, the rohe moana has been regarded as a source of food ‘kapata kai’, a source of taonga, wood for fires and occasionally for carving, an opportunity for some mahi (work), and a place for recreation and whanau gatherings.

Within the rohe moana of Whangara, some areas are accorded more importance than others. The following list shows in order (highest to lowest) the areas that the interviewed participants went to in order to gather/collect shellfish or to fish. It must be noted, however, that because the group interviewed live or have lived mainly in and around the settlement of Whangara, there is probably a bias toward areas closest to the Whangara settlement.



Te Ana o Paikea Island



Turihaua Point

MOST IMPORTANT PLACES

Most popular areas
Pakarae
Te toka a Tahatu-o-te rangi (Whangara Island)
Kaiora (now in the Marine Reserve Te Tapuwae o Rongokako)
Puatai
Waengatu
Waitotara
Moukawa
Pokatakino
Pouawa
Less important
Turihaua
Tatapouri
Hinematikotai
Waihau

Other areas visited by a few include Makorori, Sponge Bay, Tuaheni Point, and Kaiti beach.

OVERNIGHT CAMPING AT THE BEACH

This was a common practice for many, which invariably evoked fond memories and was usually regarded as an 'adventure' that participants would like to see their mokopuna experience. It was a practice that occurred in summer months, and frequently utilised an evening and a morning low tide (6 pm–8 pm and 6.30 am–8.30 am) that coincided with favourable weather and the maramataka.

MOST IMPORTANT SPECIES

The vast majority of participants rated kina, koura, paua, papu, parengo and ika as the most important species. These are the species that are 'put on the table' for manuhiri and are important in reflecting the mana and manaakitanga of Ngati Konohi. These are the 'big six', with probably kina as number 1, especially as it is now more difficult to procure and is a seasonal commodity.

Highly regarded by a significant group is the bubu/pupu (toitoi, ataata, maehe). Most very young tamariki began their association with gathering kaimoana by collecting these shellfish.

The ika (fish) that are frequently caught by line and by net, some seasonally, were/are: kahawai, snapper, mullet, shark (including dogfish/lemonfish, rig), maomao and spottys.

The mouths of the rivers Pakarae and Waiomoko are favoured areas for netting, line fishing and more recently surfcasting. Channels on the south side of Taha tu o te Rangi, Kaiora and Pakarae were important for maomao and spottys. In Whangara Bay, fishing off the beach was favoured in areas where 'ps'³ were found. In the more isolated areas such as Waitotara, particular rocks were favoured for fish such as snapper.

Eeling, often in winter, in the creeks and rivers, was a pastime enjoyed by several participants. Patiki (flounder) caught in river mouths by net or spearing was also enjoyed by several. Nets also frequently caught moki, especially the blue.

Recreational use of the rohe moana was highest on the list of positive experiences that participants would like for their mokopuna. Most spoke of camping out overnight as an 'adventure', with learning and educational experiences that were really enjoyable and where tikanga and kawa were passed on through varying roles. 'Whanau together', 'healthy outdoor experiences' and 'very special' were often mentioned. Other popular experiences hapu members described included night fishing, toitoi koura ('bobbing crayfish'), cooking on an open fire (riwai in the sand under the fire), using tunutunu koura for bait (tie with cotton), throwing fishing lines off hand, using a horseshoe attached by flax as the sinker, using a bamboo or lancewood sapling as a rod for channel fishing, and bringing horses back off the rocks when the incoming tide was up to the girth.



Paua



Red moki

³ A 'p' is similar to a rip; waves breaking on opposing angles rather than parallel to the shore. The backwash rushes out and stirs up sediment.



Butterfly perch



Scarlet wrasse



Crayfish

Stories included:

- Crayfish ‘walking’ in the sand at night in the water’s edge
- Paua on top of each other out of the water on a good spring low tide
- Crayfish antenna waving out of the water by Hinekorito
- ‘Leave those small ones, these are big enough’
- Collecting and preserving kaimoana for soldiers overseas in WWII
- Rowing ‘whale’ boat to Monowai rock
- Ritual for warehou
- Overnight camping to catch two tides



Large crayfish in shallow water are a tohu/sign of a healthy marine ecosystem

In earlier times especially, kaimoana was often more than a supplementary food source for several families; it was a major source of food. Processed meat such as sausages and minced beef were a special, infrequent ‘treat’. Other whanau whose men-folk worked on the Whangara Blocks farms were partially ‘found’⁴, so seafood was more a ‘supplementary’ food for them. All, however, appreciated kaimoana from a young age. Accessibility and abundance of kaimoana in shallow water was important. Collecting/gathering was usually entrusted to women-folk or older children (who sometimes collected after school).

ASSISTING SOLDIERS OVERSEAS IN WORLD WAR II

The whole Whangara village was involved in catching crayfish and gathering paua for the soldiers who were serving overseas in WWII (1939–45).

Crayfish were mainly caught from around Te toka-a-Taha-tu-o-Terangi. The double-ended, clinker-built boat was used. This is the same boat that the men used to row to the Monowai rock. The crayfish were cooked in a hangi, de-tailed, and dried in the sun before storage in sealed cans. One person remembers them as tasting very nice, ‘a bit like dried shrimps’.

Paua were gathered from Whangara Island, but also from Waengatu and Pakarae. They were cooked in fat and left in this to preserve them. They too were sent away in cans/tins such as Anchor milk cans. A local farmer (Peter Murphy) collected the cans/tins and made the lids airtight by soldering them down. It seems that this process was unique to Whangara. The food was a very welcome supplement for soldiers serving in ‘C’ Company—the 28th Maori Battalion.

⁴ A term used for part payment to farm workers. They are paid partly in wages and partly in goods such as meat.

Customs and practices to manage the rohe moana



The return of large crayfish into shallow water is a tohu/sign of a healthy ecosystem

An apt slogan that is appropriate for this section is *'don't catch your limit, limit your catch'*.

Several participants believe that in 'normal' situations the recreational catch limits are more than adequate to provide a feed; e.g. two divers can gather 100 kina legally. If the kina are in good condition, this will feed 40 people, which is generally more than a 'family'.

Tamariki Maori who experienced the beach, observed their elders gathering/collecting kaimoana and were taught associated tikanga practices at an early age. The majority of participants were under 10 years old when they first experienced this, and many were less than 5 years. Tamariki never went to the beach alone, always with elders. Mothers often had a critical role in teaching conservation practices, for they frequently gathered shellfish and koura from shallow waters. Extended family members, particularly uncles and aunts, frequently performed this teaching role too.

Teachings focused on *leaving some for the future*. The most important ideas were 'to turn the rocks back' once any edible kai had been gathered, to gather only 'enough for a feed' and to 'leave the babies for another day'; these ideas all relate to the theme of only taking big or good-sized ones.

Other practices frequently mentioned that also sought to leave some for the future included 'take one or two from one place and look elsewhere for more'—that is 'never take all from one place or clean it out'. A similar response was to 'be selective'. It was also widely practised to go to a variety of places for gathering so that each area had a chance to recover. This is really a self-imposed rahui. For kinas it was usual to check the first one to see if it was 'fat' or not; if not, go elsewhere. The opened kina was left on the rocks for sea birds or taken home in a bag—never eaten while people were still diving.

One practice that hapu members had different opinions about was 'leave the biggest'. One group believed that this practice is important because they are the biggest spawners and therefore have the greatest potential to ensure that there is 'enough for tomorrow', while another group believed that the biggest and closest to shore should be left for pakeke. Size was always important, even though measuring devices per se were infrequently used until recent times. For example, paua and kina should be the size of an adult's palm, and crayfish tails should be at least the length of the longest finger to the wrist or 3 fingers wide. Young children began collecting by gathering bubu and later paua and kina from under rocks and ledges. Elders would inspect their kete and remove any pepi (juvenile fish babies). For the small bubu (maehe), two good-sized handfuls was enough. This would fill a small saucepan. On returning from the beach, several participants said that one of their tasks was to cook and prepare their 'catch' for consumption; a safety pin was used to remove the mollusc from the shell.

Parengo, which is mainly a winter delicacy, has always been highly prized. Women usually collect this, often with young children in attendance. Children were taught to pluck by hand the fibrous plant and to never scrape it from the rocks with a knife. This technique ensured that the plant was not killed and there would always be a 'tomorrow'.

Respect for Tangaroa and associated tupuna was instilled early. Practices included:

- Karakia before fishing.
- No noise while gathering kaimoana. People were taught that it was important to speak quietly and not make a lot of noise because it would disturb the tupuna who were at rest (several stories emphasise the consequences of the non-observance of this, including loss of catch and being bashed on rocks when large waves appeared without apparent reason).
- Mataika (returning the first fish caught to the sea and of course small ones).
- When crossing channels, count seven waves first.
- Do not collect from specific areas that are Kohanga (nursery), as they are 'guarded' by a kaitiaki: frequently a stingray but in two instances a shark.
- The ritual associated with catching warehou, which are regarded as the ika of chiefs. warehou are often associated with ariki/tohunga and are sacred fish. In the late 1930s and early 1940s they were caught around Monowai rocks and at Puatai. With the advent of commercial netting and widespread use of outboard motors, they have not been caught locally in any quantity since.

FISHING FOR WAREHOU

In the late 1930s and early 1940s, at certain times of the year (July–Sept), warehou was caught in the rohe moana. Accounts of this happening at Puatai and Whangara were provided.

The warehou is a fish that is a little larger than a tarakihi (> 30 cm). It is a rarity these days, but was available in good numbers 65–70 years ago. It was a highly prized fish and was sometimes referred to as 'the fish of chiefs'; when cooked it had 'soft' bones, and the roe was 'lovely' (boil, slit, add butter, wrap with bacon rind and bake in oven or smoke).

At intervals along the coastal hills are 'lookout' spots, hollows in the ground. These were locations where fires (beacons) could be lit, manuhiri could be sighted and shoals of fish could be seen. The Warehou is normally a deep-water fish, but it comes to the surface to spawn in late winter-early spring.

When this phenomenon was 'spotted', the double-ended, clinker-built whale boat was used to row to the fishing grounds. The fish were caught using woven flax kete. Much of this took place at night (10 pm–10 am in one account, and 2 am–10 am in another). Preceding the 'expedition' was a karakia, and navigation was by the stars and the moon.

On return to land, the men were greeted with waiata and a ceremony was performed thanking Tangaroa for his bounty. Leaders of the fishing who were mentioned were Pahau Milner, Ruku Hinaki (Whangara) and Stewart Leach (Snr) at Puatai. Two fish were prepared and cooked on a fire on the beach by Ruku Hinaki's wife (TeHei Kingi). Each fisherman received a small portion of one fish; the other was appropriately blessed and returned to Tangaroa. The balance of the catch was distributed to everyone in the village; often it was hung on the fences until collected. A Puatai account mentions 486 fish as the catch from one expedition.

Apart from the physical sighting of the fish coming to the surface in numbers, another tohu that was used for fishing was 'no dew on the grass the morning before' (this does happen, usually with westerly winds and cloudy skies, and often indicates a change in the weather). Those to go fishing were approached using the sign of a fish hook with the fingers, and there was a day to prepare new flax for sinkers and a special hook (the fish has a soft mouth).



Fishing excursions were communal experiences

Photo: P. Gibson

Even when the signs were appropriate for fishing, there are reports of sudden weather changes making fishing in an open row boat several miles offshore a hazardous experience. One account illustrates this. Fishing off the Monowai Rock, there was a change in the weather from sea breezes to calm; 'up anchor', 'time to go' said the leader, for a southerly was on its way. Rowing began, but before they could get to shore the southerly had arrived and it was too dangerous to come through the Kererus. The crew therefore 'ran' with the southerly and finally ended at Parinuitera (Gable end foreland) instead of Whangara as anticipated.

These fishing excursions were communal experiences. Numbers were required to roll the heavy boat to the water and up the beach on its return. The whole village was fed with the bountiful catch.

Fishing for hapuka is also mentioned. These big fish were caught around reefs such as Monowai and the Aerial. Once hooked, a stone with a hole in it was dropped down the line, hitting the fish on the nose, stunning it, and thus making it easier to bring to the surface (a 'fishy' tale—believe it or not!).

Hinematikotai, the reef about 200 m off the mouth of the Waiomoko River, is the fossilised rock form of the chieftainess of that name who is the kaitiaki of the area. Several participants told how this was not a recommended spot to fish even though in earlier days it was prolific with kaimoana. Stories include 'the kina there are sour', 'my dinghy was wrecked' (bashed against rocks after going there), 'my horses nearly drowned in "quick sand" after going there', and 'several women nearly drowned there when collecting kaimoana for the men-folk carving Whitireia Wharenuī'.

TOITOI KOURA (BOBBING FOR CRAYFISH)

This took place at Puatai in the late 1930s and 1940s, and also on other reefs such as Kaiora.

It occurred on appropriate days of the marama taka and when there was a midday and midnight low tide: Hoata⁽³⁾, Tametea-Aio⁽⁷⁾, Rakaunui⁽¹⁵⁾, Rakamatohi⁽¹⁶⁾, Tangaroa A-mua⁽²²⁾, Tangara A-roto⁽²³⁾, Tangaroa kiokio⁽²⁴⁾, Otaane⁽²⁵⁾, and Orangonui⁽²⁷⁾ (Appendix 7 outlines the traditional calendar for fishing by the moon). During the morning, pouraka were constructed from manuka saplings and supplejack wands tied with harakeke (see Best 1977⁵: 60–70 for construction details).

At the midday low tide, bait for the pouraka was caught (mainly paua, but sometimes kina and starfish (patangaroa)). These were placed in a small, netted bag (torehe), which was secured inside the pouraka. Stones with holes in them were used as sinkers to ensure that the pouraka was not moved much by the ebb and flow of the moana.

At midnight or thereabouts, the puraka were 'set' at favoured spots along the reef (up to six pots). The first would be left for about 30 minutes before being brought to the surface using the flax rope attached to the float.

This was not only a great adventure but also a successful practice in luring and catching crayfish. It took place only when conditions were right (weather, tides, season and moon phase).

⁵ Best, E. 1977: Fishing methods and devices of the Maori. Government Printer. 264 p.

Traditional tohu (indicators) to identify the health of the rohe moana

Tohu are environmental signs/indicators used by Maori that indicate when and where to fish and gather kaimoana, and the health of the marine environment. Tohu may also be used to:

- Measure change in an environment
- Lead the hapu in sustaining their vision for the environment
- Promote better relationships between Maori and non-Maori by developing a greater understanding of what is important to Maori when it comes to managing their environment
- Gauge the success of environmental management systems by Maori

Tohu also allow people to ‘place a line in the sand’, to compare what they have now with what they had in the past and to compare one area with another.

INFORMATION FROM INTERVIEWS

The dominant tohu was abundance of species sought and biodiversity, i.e. both plant and animal life is abundant and varied. Closely related to the above was the ease of obtaining kaimoana, particularly shallow-water accessibility. The majority of those interviewed also believed that a range of sizes is important, as the presence of juveniles and mature adults indicates species regeneration/reproduction. Close to the shore, plentiful marine life in rock pools was considered to be an important tohu (i.e. many seaworms, small fish, larval forms and a range of seaweeds). Significant numbers also said that sea birds were a good indicator—both ‘diving’ birds at sea, such as gannets, gulls and shags, and waders, such as oystercatchers, pied stilts and land dotterels on the rocks and shore platforms at low tide. These birds are believed to indicate the presence of fish and other marine forms such as shellfish (the beginning of the food chain).

From the earlier survey (Ngati Konohi et al. 2005¹), another tohu that was frequently mentioned was the quality or condition of species collected. Criteria used to ascertain this were:

Taste	<ul style="list-style-type: none"> • If the kaimoana tasted foul you knew there was something wrong with the environment’ • ‘The kai didn’t taste as delicious as it usually is’
Touch	<ul style="list-style-type: none"> • Kina shells are soft and brittle
Size	<ul style="list-style-type: none"> • ‘When the kina tongue was fat it was healthy, if “skinny” it was unhealthy’ • ‘If the tongue of the kina is big it’s a good channel’ • Fish species were smaller than normal, e.g. pupu, koura
Sight	<ul style="list-style-type: none"> • Looks dirty: rubbish such as plastic bottles, cans, bottles on the foreshore • Dirty water in the moana and the awa • Film on the water like oil, but not oil • Pollution of waterways following rain and through the actions of human beings • Rocks not returned to original position

Smell	<ul style="list-style-type: none"> • The marine environment has its own natural smell; this differs from place to place • Loss of this smell • ‘Shouldn’t stink’
Colour	<ul style="list-style-type: none"> • ‘I could tell if a marine environment was clean/healthy by looking at the colour of the kina’
Abundance	<ul style="list-style-type: none"> • More or less kaimoana • Kai isn’t where it usually is • Easily/readily accessible; gather by touch or sight as opposed to the use of scuba gear • Abundance of bird life • Loss of abundant natural state of fish species and aquatic life • Kaimoana is getting harder to source • Abundance of seaweed growth
Variety	<ul style="list-style-type: none"> • Loss of species variety

Other signs noted in the interviews for this report were:

- The presence of a range of seaweeds on the shore, not just after stormy weather (agar, Neptune’s necklace, seawrack, kelp, and sea lettuce)
- Small fish in the shallows on fine days
- Dolphins
- Pink rocks
- Plentiful seaweed means paua is likely to be present
- Being able to see mullet and kahawai when standing on the hills above the rivers



Pohutukawa in flower is a tohu/sign for harvesting ripe kina

There are several land-based signs that were often referred to:

- When the kowhai tree blooms (late October–November) the kina are beginning to ‘ripen’
- When the pohutukawa flowers (late November–December) kina are ripe
- Karaka berries orange (January–February) equals kina are ripe
- When the ti kouka tree berries (February–March) kina are beginning to go off (sour)
- If farm animals (cattle/sheep) are eating vigorously, not just browsing, the fish too will be feeding; all animals, including fish, have periods of big eating

Fishing by the moon using the Maori calendar (Maramataka) was also a significant tohu for best days and tides (see Appendix 7 for details). Several people interviewed also stressed the need to get in the water to assess the state of the environment.

There was a range of views expressed on tohu, and these possibly reflect the opinions of different generations and to a lesser extent the favoured area for collecting/gathering and fishing. For example, older people usually stressed the importance of shark/dogfish, as it could be ‘preserved’ for months (important in days before refrigeration), and kaimoana in abundance in shallow water. Diving, in reality for them, was often feeling (whawha) with bare feet/hands and catching by a hand enclosed in a sock, tea towel, jersey, etc. Only for a hui would taruke (supplejack cray pot) be used.

Kaimoana was an important source of food and it was very important to look after the 'Kapata Kai'! All were taught and practised conservation techniques. Fishing off the beach, rocks, in channels and from a boat was often a communal experience with the 'catch' being shared amongst the whole community.

From the hui-a-hapu (early March 2005) several issues were raised concerning tohu:

- Concept of ira (life-force of the sea) requires emphasis.
- What is the point of identifying tohu if the area under consideration is barren?
- What could/should happen next?

There was some debate about focusing just on Te Toka a Taha tu o Te Rangi (Whangara Island; see Fig. 1) or whether sampling should occur over the whole Ngati Konohi rohe moana. It was also noted that this monitoring was only of 'customary fishing' and that a fuller picture would be achieved if there was also some method of monitoring recreational fishing. Although possibly desirable, consensus suggested that it would be difficult to manage the collection of information on recreational fishing and was not realistically achievable without significant cost. The draft report was then issued and all present were encouraged to read it carefully and to suggest alterations or additions.

Large sponge in the foreground and koura/rock lobster behind



Potential environmental tohu (indicators) and monitoring methods

PRIMARY TOHU

1. The mana of Ngati Konohi is reflected in its manaakitanga:
Te huhua o te kaimoana—the abundance of seafood.

Species tohu monitor the availability, accessibility, abundance and quality of key species identified by Ngati Konohi as underpinning manaakitanga-koura, kina, pupu, paua, parengo and ika, these being the species that are ‘put on the table’ for the Manuhiri.

SPECIES-FOCUSED TOHU	MONITORING METHOD
Availability: Can kaimoana be readily harvested, in season, to provide for customary needs?	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and the Ministry of Fisheries (MFish) by Kaitiaki twice per year
Accessibility: Can kaimoana be harvested easily (in shallow water) in season?	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and MFish by Kaitiaki twice per year
Abundance: Can sufficient quantities of kaimoana be harvested, in season, to meet reasonable customary needs?	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and MFish by Kaitiaki twice per year
Quality: Is the appearance, size, colour, smell and taste of kaimoana ‘right’ in season?	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and MFish by Kaitiaki twice per year

2. Marine life in the rohe moana is enhanced and sustainably managed for the benefit of present and future generations of all New Zealanders.

Process tohu monitor the condition and presence of processes that are indicative of a healthy marine environment and reflect Ngati Konohi’s holistic view of the moana.

PROCESS-FOCUSED TOHU	MONITORING METHOD
A series of land-based signs (kowhai bloom, pohutukawa flowering, karaka berry colour, and ti kouka flowering) can be used to indicate kina ripeness and readiness for harvesting	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and MFish by Kaitiaki twice per year
The presence of a natural and diverse range of marine species	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and MFish by Kaitiaki twice per year
The presence of a natural diversity of marine species in intertidal areas including seashore birdlife	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and MFish by Kaitiaki twice per year
The seasonal observation of feeding aggregations of ‘bait fish’ (kahawai, trevally and tarakihi) together with predators, such as tuna, marine mammals, and sea birds	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and MFish by Kaitiaki twice per year

Harvesting success is positively linked to lunar phases, as identified in the Maori fishing calendar (Maramataka)	Information collected from customary fishing permit holders is collected and reported back to tangata whenua and MFish by Kaitiaki twice per year
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SECONDARY TOHU

Primary tohu are observations of the state of health of the kaimoana and of the natural processes that denote the state of health of the marine environment.

Secondary tohu are scientific measurements of the kaimoana present and of other things that denote the state of health of the marine environment.

Baseline measurements for secondary tohu are established and re-measured as and when required over time.

SECONDARY TOHU	MONITORING METHOD
A series of plots are established at various locations in the rohe moana to quantify the quantity, size and location of key indicator species: koura, kina, paua, pupu, parengo and ika	A baseline survey and database is established by hapu members or other agencies, and future measurements are completed when necessary
Gisborne District Council marine environmental monitoring data is utilised to monitor water quality, shellfish health, beach bathing standards, etc.	Data obtained from the council as required

Implementing environmental tohu

For sound decision-making, information is required.

In the context of managing the marine environment by giving importance to both environmental tohu as well as scientific data, the key personnel will be the Tangata Kaitiaki. The more detailed, specific information they have access to, the more appropriate their decisions are likely to be.

It is important to note that the Kaitiaki are getting organised as a team with differing roles to ensure smooth functioning. A template is being developed to record information that will make reporting easier and more consistent. All the Kaitiaki have discussed the fishing regulations and are suggesting modifications to the quantity and size of take and the inclusion of tohu information. This has been forwarded to the group preparing the mataitai application, which is also endeavouring to control beach access by vehicle, so that checking take is made easier for the Kaitiaki.

The previous section identified the environmental tohu that could be used by Ngati Konohi in marine management, and outlined how information from the issue of customary fishing permits can be utilised. At the time of writing, only a small number of permits had been issued, so the quantity of feed-back information was limited. To provide a detailed 'picture' of the quality of the marine resource, especially the abundance of the most sought-after species, their accessibility and the quality or condition of the resource gathered, more information is needed. That is, there may be a need to augment the above information collected from customary users by the Tangata Kaitikai with information from other sources.

Some of the sources suggested by the project team and Ngati Konohi participants include:

SECONDARY TOHU

Throughout New Zealand, environmental monitoring of both the land and sea is the responsibility of the local regional authority. At the start of the project, MfE Environmental Indicators Programme was in place. This programme supported the development of indicators relevant to Maori.

The local government agency is the Gisborne District Council, a Unitary Authority that manages a large region with a comparatively small population and hence a small rates base. In the Gisborne region, collecting environmental monitoring data is a challenging task, as the area involved is large and no resources are provided by national government for this purpose. Discussions with staff from Gisborne District Council identified that the collection of such environmental information in the marine environment was not a priority for the Council.

The Gisborne District Council does, however, collect the following data that are useful as secondary tohu:

- Bathing/swimming water standards in the marine environment
- Monitoring shellfish health as a measure of water quality
- Measuring the chemical composition of freshwater entering the marine environment

This information, while not directly focusing on environmental tohu, does give some insight into the quality of the water in the marine environment and entering the marine environment via local waterways.

RECREATIONAL FISHING (SURVEY)

Surveys of recreational fishers' activities could be augmented to include information on tohu.

BIOLOGICAL MONITORING

A base-line survey identifying the extent and distribution of the key marine species adjacent to Whangara Island could be developed and implemented by Ngati Konohi or other agencies. This would involve ecological and biological monitoring and would be achieved through such processes as inter-tidal and sub-tidal surveys of species distribution and abundance. For example:

- Rocky-shore surveys consisting of a number of transects
- Surveys of reef fish diversity, size and abundance
- Surveys of paua and kina size and abundance
- Surveys of crayfish size and abundance

This survey could be repeated at a series of sites throughout the rohe moana of Ngati Konohi.

The information from such surveys could be used to identify and quantify changes in the marine environment that have been signalled by the primary tohu.

COMMERCIAL MONITORING

Catches of crayfish and other marine species such as fish are carefully and regularly monitored by the Ministry of Fisheries. This provides information about quantities and the location of fish taken. The Department of Conservation's monitoring of changes within the Marine Reserve is a further source of information, especially about crayfish, but also to a lesser extent about a wider range of species.

The information is available from both agencies on request.

NIWA SAMPLING

Within the Whangara rohe moana, regular shore sampling of the juvenile (puerulus) red rock lobster is taking place at Whangara Island and Tatapouri. This information could be useful for assessing recruitment of rock lobster into the fishery and has a bearing on assessing appropriate catch levels for customary, commercial and recreational fishing.

CONCLUSIONS

To conclude this section and the report, several questions should be asked:

- Where to from here?
- Will the environmental tohu identified in this project be used in the implementation of marine resource management?
- What are some of the challenges in implementation?
- How will these challenges be dealt with?

Whether the environmental *tohu* are utilised fully to realise this potential will be determined by a number of variables. As mentioned elsewhere in the report, the *Tangata Kaitiaki* is a group critical to the successful implementation of marine management. In Whangara, those appointed to the position of *Kaitiaki* are committed, talented people with a real passion for caring for the marine environment, not only for their generation, but also for future generations—the *mokopuna*. They are all volunteers at present, but they live in a material world and they have to balance work, time and *whanau* commitments with very professional responsibilities if they are to be successful *Kaitiaki*. It is felt that in the long term they need to be remunerated for their efforts as *Kaitiaki*. This will ensure that a quality group is maintained and would indicate that their role and its responsibilities are valued.

The identification of marine environmental *tohu* linked with *Ngati Konohi* goals for marine management has proved to be a catalyst for heightened interest and awareness of the other measures that need to be established if the full benefits of the Marine Reserve are to be felt throughout the *rohe moana* of Whangara. All of these elements (marine reserve, fishing regulations, marine environmental *tohu*, *mataitai* reserve and *taiapure* reserve) are seen as parts of a total package for better management of our marine environment—*Te Oko a Tangaroa* (see Appendices 8 & 9 for further information).

The establishment of a *mataitai* reserve and ultimately a *taiapure* reserve are the final stages in the development of a fully ‘integrated package’ for marine management for *Ngati Konohi*. The elements are like pieces of a jigsaw: unless they are all in place there is no total picture. To achieve this, much work will be required, particularly in negotiation with all of the stakeholders who are interested in our marine environments. The struggle, for no one believes it will be straightforward, will, however, be worth it, for ultimately all will benefit from a well-managed, sustainable resource. The *tohu*, such as abundance and accessibility, will then once again be a reality in the *rohe moana*.

Looking at Te Ana o Piakea and Whengara village from the north



Appendices

APPENDIX 1: PROJECT PLAN SUMMARY

Overall objective: to develop and document a process that identifies and monitors the environmental tohu that Ngati Konohi could use to measure the health of the marine environment and the outcomes of their environmental management systems.

Steps/key tasks and recording requirements	Date
1. Scope project and develop and sign contract.	19 Nov 04
2. Prepare project plan, including description of process adopted. Use Resource Kit material so that interviewees have some understanding of the 'Big Picture': <ul style="list-style-type: none">• Conduct interviews with a range of age groups (individual):<ul style="list-style-type: none">– Pakeke– Middle age (matua/koka)– Youth (tamariki/tauirā)• Presentation to a range of groups and invite contributions/comment:<ul style="list-style-type: none">– Kaitiaki– Ngati Konohi Authority– Paikea Whitireia Trust Trustees– Whangara Incorporated Blocks Committees• Organise a hui-a-hapu:<ul style="list-style-type: none">– Describe environmental tohu project– Report back on interviews– Invite comment, participation, contribution, etc.• Analyse findings and information, and prepare draft stage 1 report on the process used and outcomes of interviews and presentations• Sign off by tohu support group (research team)	1 Dec 04
3. Prepare resource kit for interviews and hui, and obtain support from iwi advisor on tohu and from technical advisor.	
4. Interview and write up notes from individuals (30) and groups (Kaitiaki, Marae trustees, Ngati Konohi Authority, and Whangara Incorporated Blocks Committees).	
5. Organise a hui-a-hapu to: <ul style="list-style-type: none">• Describe environmental tohu project• Report back on interview process• Invite comment, participation, contributions, etc.	30 Feb 05
6. Analyse and report on information and draft stage 1 on the process and outcomes of interviews, presentations and hui: <ul style="list-style-type: none">• Clearly identify process• Findings• Identify tohu	30 Mar 05

7. Prepare an environmental tohu monitoring implementations plan (methods of monitoring in the field and assessment criteria for measuring).
N.B. Liaise with DOC, Gisborne District Council and Ministry of Fisheries (MFish). Monitoring Implementation Plan and assessment criteria yet to be decided.
8. Support field work to trial tohu, organise people, sample, collate data and assess against criteria. Determine method of presentation to Ngati Konohi and external agencies such as Gisborne District Council.
9. Prepare final report, which will incorporate Stage 1 and the results of sampling. Comment on to what extent the trials were successful, i.e. which methods worked and which did not.
10. Hui-a-hapu (Ngati Konohi Authority).

30 May 05

APPENDIX 2: INTERVIEW INFORMATION SHEET, CONSENT FORM AND QUESTIONS

NGATI KONOHI ROHE MOANA PROJECT

Interview information sheet and consent form

Interview information, terms and conditions:

- An introduction to Peter Gibson (who he is, how he is connected to Ngati Konohi and contact details)—Peter to complete.
- How Peter will carry out interviews with Ngati Konohi to answer the interview questions —Peter to complete.
- Interviews will take up to 1–2 hours and participants will be provided with a koha to acknowledge their time and knowledge.
- The interviews may be recorded directly onto paper and/or onto a tape recorder.
- Each participant has the right to refuse discussion on any particular issue or to refuse the recording of any part of or the whole of the interview. The participant has the right to request the removal of any information with which they are uncomfortable.
- Peter will act as a ‘gatekeeper’ for Ngati Konohi and will ensure that any information that is particularly sensitive for Ngati Konohi is not recorded as part of the interview.
- All information collected as part of the interviews will remain anonymous. Participants will not be identified by name in the interview notes or final report.
- All participants will be given the opportunity to comment on a draft report before it is made more widely available. All participants will be given a copy of the final report.
- Ngati Konohi, DOC and MfE will have joint copyright of the final report.
- Please contact Peter if you would like a copy of the project’s intellectual property protocol.

Consent form:

I have read and understood the information, terms and conditions of the interview and I give consent for Peter Gibson (representing Ngati Konohi, Department of Conservation and the Ministry for the Environment) to record and use the information that I provide during this interview. I understand that I have the right to withhold and/or remove any information during the interview process.

Name:

INTERVIEW QUESTIONS

Nga Ahuatanga Maori (Maori protocols, processes, practices)

Personal Background

Record useful demographic information

- Age
- Sex
- Gender
- Home location, including when young relating to opening questions
- Hapu if different from Ngati Konohi
- Other

Personal Experiences

1. When you went to the beach as a child/teenager what did you do?

- Collect shellfish
- Go fishing
- Play
- Swim
- Other (specify)

2. How old were you then?

- Under 5
- 5-10
- 11-16
- Over 16

3. Who did you go with?

- Parent
- Friends
- Grandparents
- Whanau

4. When did you go?

- Specify time of day
- Day
- Weekend
- Month
- Tide movement
- Season
- Other (specify)

5. How often did you go?

- Daily
- Every couple of days
- Weekly
- A few times a month
- Monthly
- A few times a year

6. What did you find? Give species list (see below – add more) and record others

- Hapuka
- Koura
- Paua
- Pipi
- Kina
- Parengo
- Other

7. When you had manuhiri at home or at the marae what kaimoana was on the table? List below

8. What memories do you have about collecting kaimoana at the beach that you would want for your children and mokopuna?

Record individual responses below

9. Where did/do you fish/gather kaimoana from? Show map

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> Pakarae | <input type="checkbox"/> Puatai |
| <input type="checkbox"/> Waengatu | <input type="checkbox"/> Pokatakino |
| <input type="checkbox"/> Te Toka a Tahatuoterangi | <input type="checkbox"/> Waitotara |
| <input type="checkbox"/> Kaiora | <input type="checkbox"/> Moukawa |
| <input type="checkbox"/> Turihaua | <input type="checkbox"/> Pouawa |
| <input type="checkbox"/> Other | |

10. Were you taught to 'leave some for the future' Yes No
If yes how were you taught?

11. Were there any wahi tapu? Yes No
If yes where? Show map (sensitivity/confidentiality issues)

12. Are there any stories/whakatauki you were taught to explain why things were done in certain ways?
 Yes No
What are they?

Indicators – Tohu

13. What signs (tohu) do you use to know:
- Whether the moana is healthy

 - When and where to fish

 - That we are moving towards achieving our goal of a sustainable resource

- Are there any other signs from the general environment that indicate it is appropriate to fish or that marine life is abundant?

Practices

14. Any practices that ensured there would be a sustainable resource?
(e.g. Did you turn rocks back over again?)

15. How did you fish? (net, pot, line etc.)
 - What were the collecting/catching methods used?
 - Diving depth?

16. What species are important to you (food or other)? Why?

17. Are they increasing/decreasing/stable in quantity? Any thoughts on why the above is happening/has happened?
Give opinions e.g. over fishing, food supply pollution etc.

Marine Protection

18. What do you understand about marine protection?

19. In earlier times, how did you ensure there would be 'enough for another day'? (Traditional)

20. Do you know of any system(s) today that is aimed at preserving/protecting/conserving the marine environment?

Yes No

Describe below

21. How do you think these could work together to meet the Ngati Konohi goal of ensuring a sustainable resource for our mokos?

APPENDIX 3: KETE TOHU

MMIP: Maori Methods and Indicators of Marine Protection
Ngati Konohi
Rohe Moana



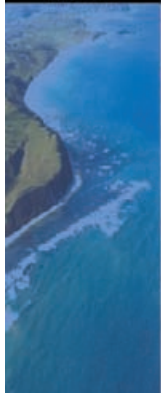
Kete Tohu

A resource kit explaining what Tohu are and how they can be used in the Ngati Konohi Rohe Moana


It's about kaimoana for our mokopuna

NGATI KONOHU  Department of Conservation
Te Papa Atahuri 

MMIP: Maori Methods and Indicators of Marine Protection
Ngati Konohi
Rohe Moana





Contents



1. What the MMIP project is about (p3)
2. What are tohu and why have them? (p5)
3. How do tohu and monitoring fit in with Ngati Konohi's vision statement (p9)
4. Examples of tohu (p5, 7-10)
5. How tohu can be used (p5 -11)

This kete includes maps and pictures of the Ngati Konohi Rohe Moana.

NGATI KONOHU  Department of Conservation
Te Papa Atahuri 

MMIP: Maori Methods and Indicators of Marine Protection
Ngati Konohi
Rohe Moana



This project is about providing kaimoana for our mokopuna



Tena koe

This kete has been put together to provide you with information about the Ngati Konohi Rohe Moana project. Put simply, **the project is about ensuring there is a healthy rohe moana (marine environment) and kaimoana for our mokopuna.**

Ngati Konohi's vision for the rohe moana is described in the vision statement included in this kete – this is what we want to achieve.

NGATI KONOHU  Department of Conservation
Te Papa Atahuri 

MRP: Reef Methods and Indicators of Marine Protection
Ngati Konohi
Rohe Moana



We need your approval to use the information that you provide

We are interviewing people from the hapu to find out more about the rohe moana and to gather information about what could be monitored and how. To do this we need your input and for you to understand what information will be recorded in the project and how it will be used.

We require your consent to use any of the information that you provide. A summary of the information that we gather will be included in a public report. It is important that we do not make public information which you want to remain private. To do this we will show you a record of the information that you provided us and we will require your consent before we can use it.

NGATI KONOHU | Environment | Department of Conservation Te Papa Mātauranga



MRP: Reef Methods and Indicators of Marine Protection
Ngati Konohi
Rohe Moana



Tohu are signs that the environment is changing



There are less Koura in the shallow water off the island than there used to be

What are tohu and why have them?
 Tohu are signs that the environment is changing e.g. the number of Koura (Crayfish) in shallow water. The people using tohu look at how the tohu change over time to judge the health of the environment and to compare against what is trying to be achieved e.g. the goals in Ngati Konohi's vision statement.

Examples of Tohu:

- The average size of Paua in a particular area
- The taste of Kina caught in a particular time and place
- How clear the water is
- The number of Hapuka caught in a fixed period of fishing

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MRP: Reef Methods and Indicators of Marine Protection
Ngati Konohi
Rohe Moana




Tohu tell us what's happening and provide information for the hapu

You can't manage what you don't measure

A well known Pakeha whakatauki says: *You can't manage what you don't measure.* It means that when you have management systems in place, you need to do monitoring to see if they are working.

In this project we are trying to measure whether Ngati Konohi's vision and goals for the rohe moana are being achieved with the range of management systems that have been put in place (refer to the vision statement document).

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Continue to next file: Part 3