

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

Indicator example: Bacteria concentrations

Logan Hill Quality Standard

Monitoring locations

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

Tohu example: The percentage of people who think the kaimoana in the Ngati Konohi Rohe Moana is improving?

Category	Declining (%)	Stable (%)	Improving (%)	Don't know/not sure (%)
Crayfish	35	15	10	40
Pakau	45	15	10	30
Kura	35	15	10	40
Hapuka	35	15	10	40
Overall Seafood	45	15	10	30
Health	35	15	10	40

Legend: Don't know/not sure, Improving, Stable, Declining

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

Monitoring tohu shows if Ngati Konohi is achieving its vision

How do tohu and monitoring fit in with Ngati Konohi's vision statement

Ngati Konohi have developed a statement that describes the vision for the Rohe Moana. The vision includes five goals. Using tohu to monitor the environment, we have information to tell us whether:

- The prime responsibility for management of the rohe moana is held in the hands of Ngati Konohi
- People are informed of Ngati Konohi's maatuaunga moan and tika
- The mana of Ngati Konohi is reflected in tohu in awa tanga a Auaue o te Ika moana
- Maori fisheries rohe moana is enhanced and sustainably managed for the benefit of present and future generations of all New Zealanders
- Ngati Konohi rangahiri are engaged in work opportunities in the rohe moana

Goal	Monitoring & Reporting	Monitoring criteria
Responsibility for management of the rohe moana is held in the hands of Ngati Konohi	Participatory management	Participatory management
People are informed of Ngati Konohi's maatuaunga moan and tika	Information sharing	Information sharing
The mana of Ngati Konohi is reflected in tohu in awa tanga a Auaue o te Ika moana	Monitoring of tohu	Monitoring of tohu
Maori fisheries rohe moana is enhanced and sustainably managed for the benefit of present and future generations of all New Zealanders	Monitoring of fisheries	Monitoring of fisheries
Ngati Konohi rangahiri are engaged in work opportunities in the rohe moana	Monitoring of employment	Monitoring of employment

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Hone's tohu for Koura

Tohu can include any measurements that tell us about the rohe moana.

To develop and use a tohu for Koura, Hone must:

- Design a tohu
- Decide how it is going to be measured
- Carry out monitoring
- Report





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

Using tohu and reporting results improves our ability to manage the environment



NGATI KONOHU | Results (Ngati Konohi Reports) | Monitoring (Ngati Konohi Tohu) | Department of Conservation (for Aotearoa)

APPENDIX 4: INTELLECTUAL PROPERTY PROTOCOL

The Department of Conservation (DOC) and the Ministry for the Environment (MfE) consider that ownership of customary and traditional knowledge that will be used in this project remains the property of Ngati Konohi.

With this in mind, we wish to ensure that Ngati Konohi's interests and ownership of information are protected.

The Crown has certain responsibilities when it comes to information. All information that is held by the Crown is considered official information and is managed under the requirements of the Official Information Act 1982.

The Official Information Act is an Act that makes information held by government agencies available to the public on request unless the information is, for example, deemed confidential or privileged, in which case it may be withheld.

The Act identifies reasons for a government agency to withhold information from the public. A number of the reasons identified in the Act for not making information available to the public are relevant to this project. For example:

- Protecting the privacy of people
- Where releasing the information would prevent the supply of similar information, or information from the same source, where it is in the public interest that work in that area continue

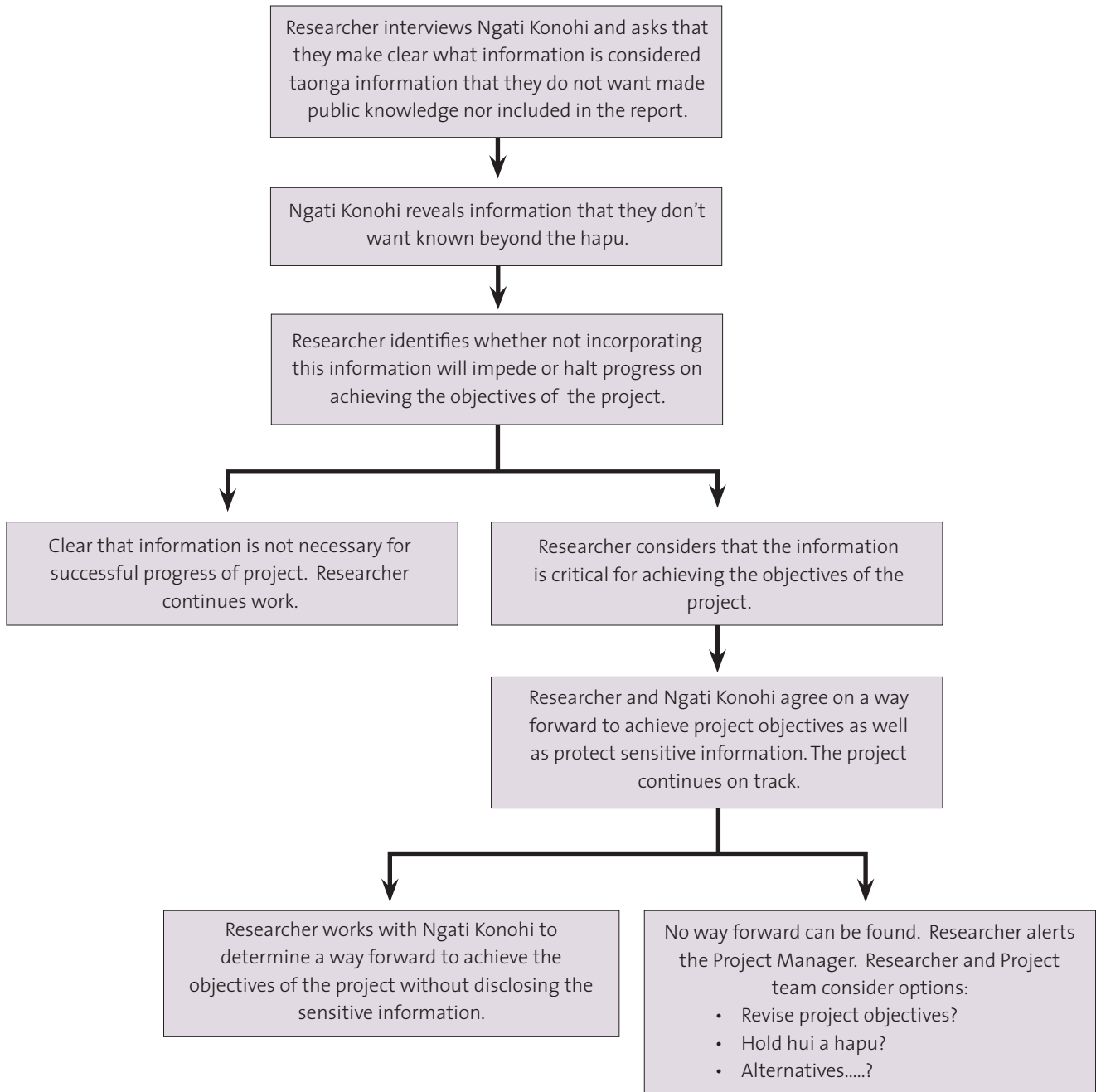
If anyone requested information relating to the project that had been identified by Ngati Konohi as being sensitive and not for public release, then DOC or MfE would give consideration to the provisions of S.9 of the Act relating to declining the release of the information.

However, the Ombudsman (a parliamentary officer) makes the final recommendation about whether information that a government agency or Minister of the Crown has declined to release to the public should actually be made available. If a complaint was made to the Ombudsman that DOC and MfE were refusing to release information, and the Ombudsman decided that this information should be released, then DOC and MfE would have little choice but to make the information available.

Because DOC and MfE are bound by the Act, we would like to ensure that appropriate processes are in place to protect sensitive information that Ngati Konohi do not want made public. The system outlined below is based on appointing a qualified researcher who is tangata whenua and has the confidence of the hapu to identify and appropriately manage sensitive information.

Ngati Konohi, DOC and MfE will have joint copyright over the final reports, and each will have the right to use the reports without prior consultation with the others.

NGATI KONOHI—INTELLECTUAL PROPERTY DECISION TREE



APPENDIX 5: SUMMARY OF INTERVIEW FINDINGS

At 7th April 2002

Number interviewed:

Total	30
Male	19
Female	11

Age:

Under 30	5
30-40	2
40-50	6
50-60	5
60-70	4
70-80	6
Over 80	2

Personal:

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

Collect shellfish	29
Go fishing	23
Play	14
Swim	15
Other	4

How old were you then?

Under 5	12
5-10	13
11-16	3
Over 16	2

Who did you go with?

Parents	20
Friends	1
Grandparents	12
Whanau	17

When did you go?

Time of day	0
Day	1
Weekend	5
Month	0
Tide movement	23
Season	19
Other	0

How often did you go?

Few times a month	11
Weekly	8
Few times a year	5
Daily	2

What did you find?

Hapuka	1	Butterfish	1
Koura	27	Cockles	1
Paua	28	Stingray	2
Pipi	8	Shark	8
Kina	27	Ngakihi	2
Parengo	26	Moki	3
Other:		Maomao	7
Pupu	14	Spottys	7
Patiki	3		
Kutai	4		
Cod	2		
Kahawai	8		
Snapper	7		
Mullet	6		
Eels	5		

On the table at home/marae:

Koura	26
Paua	25
Pipi	7
Kina	26
Parengo	22
Dried Shark	3
Mussels (kutai)	5
Octopus (wheke)	1
Pupu	9
Mullet	3
Flounder	1
Kahawai	2
Butterfish	1

Where did you go to fish/gather/collect?

Pakarae	23
Waengatu	16
Te toka a taha tu o te rangi	23
Kaiora	20
Puatai	19
Pokatakino	15
Waitotara	16
Moukawa	15
Pouawa	14
Turihaua	5
Tatapouri	3
Hinematikotai	2
Makarori	3
Waihau	2

Were you taught to leave some for future?

Yes 30 No 0

How were you taught?

- By elders, etc., especially mums in many cases, e.g. 'don't catch your limit, limit your catch'
- Turn rocks back (19)
- Leave the babies (11)
- Only take the big ones (2)
- Only take enough for a feed (15)
- Take one or two from one place look elsewhere for more (4)
- Never take all or 'clean it out' (4)
- Be selective (2)
- Mataika—first one back to Tangaroa
- Leave the biggest/greatest spawners—easiest access for pakeke (4)
- Check kinas first for condition—if 'skinny' go elsewhere (3)
- Go to a variety of places so giving the area a chance to recover (3)
- Measure kina, paua by handsize (palm) (2)
- Cray's tail at least finger tip to wrist long (2)
- Small ones removed from kete by elders
- Think of next year
- Maehe—two handfuls enough to fill a small saucepan

Stories/whakatauki taught to explain why you did things this way:

- Te Kupenga a te Huke Paikea (people links Uawa to Wairarapa).
- Catch crays by feeling (antennae) then dive—use jersey, etc. for big ones.
- No noise, talk quietly (sea will become rough); five people told of three waves from nowhere—companion lost his catch, another bashed by waves.

- Kina 'sour' at Hinematikotai—part of 'curse' by chieftainness? One collected kina there—told two mates, same day/place got nought.
- Tangaroa selective—rough before some hui—hard to obtain kaimoana.
- Kina: do not consume until home, otherwise divers will get spines under fingernails. (2)
- Possibility that kelp forest 'shade' a cause of lack of kina especially and paua in some areas—only crays there as they are much more mobile.
- Mimi on catch bag—ammonia will keep sharks away.
- Kaitiaki in many areas = stingray; at Muriwai = shark.
- By Hinekorito—cray feelers waving in sunlight—leave as not big enough yet.
- Hinematikotai reef—several stories that illustrate not a good place to go.
- Story (ritual about warehouse).
- World War II support troops.
- Depression—support marae 2 days/week.
- Respect Tangaroa-tupuna at all times: Matatika give first catch back; Karakia before fishing.
- Leave large easily accessible kai for pakeke.
- Turn rocks back so smooth side down—others (paua) could attach to them.
- Parapara often murky; bang water to move kaitiaki (stingray).
- Eat shark liver with bread = medicine.
- Conger eel (end of Turihaua reef); if tail out okay—otherwise get out.
- Count seven waves and then cross channel.
- Never use knife for parengo; pluck it, otherwise the plant is killed—none for next year.

Tohu (signs) that moana is healthy:

- Plentiful supply (13)
- Easy to obtain kaimoana (8)
- Variety of species sizes including juveniles and mature ones (5)
- Quantity of seaweed at times not following a storm indicates kina (4)
- Rocks bared means 'smiling' shells available
- Small fish in shallows on a fine day (beginning of food chain) (2)
- Plentiful marine life in rock pools (i.e. lots of seaworms, small fish, larval forms and plant life) (4)
- Few stagnant pools—sea is cleansing
- Birds in number both diving at sea (gannets, gulls and shags) and waders on shore (oystercatchers and pied stilts); also droppings on rocks (shells and tutae) (5)
- Dolphins also = kahawai (2): fishing lines to Pakarae
- Paua near fresh water source
- Have a look in the sea—good = plentiful, range of sizes
- Type of seaweed on rocks indicates paua (treelike) and pink rocks
- From hilltops can see kahawai, kanae (mullet) in rivers
- Agar on seashore
- Biodiversity—both plants and animals are abundant

When to fish:

- No dew on grass day before going out in long boat (westerly, cloudy, change coming)
- Seaweed abundant for paua and kina
- On incoming tide at dawn/dusk (3)
- Maori calendar for best days (7)
- Dawn and dusk not middle of day (2)
- North West winds (sea flat) and clear (4)
- Season—winter: parengo; Feb–Easter: maomao; spring–summer: (kowhai, flax, pohutukawa in flower, i.e. land-based signs): kina, mullet spawning in river (8)
- Low tide ('spring' tide) 2x per month—after new and full moon, Hinekorito right out of the water (6)
- Ti kouka (cabbage tree) when edible stems ready, mussels fat
- Water colder—moki at best condition
- For fishing, best when current and wind are in opposite directions: burley will drift onto line
- Half (neap) tides best for diving—not so much water movement
- Karaka berries ripe means kina are also ripe
- If sheep/cattle eating vigorously (not just browsing) it is time to fish because all animals have eating times
N.B. seasons are awry—pukeko, swans, seagulls, turkey paradise ducks all breeding now. They have chicks or are sitting—used to be September not the end of January.

Where to fish:

- If time limited, close to home; further afield if time no problem and quantity required
- Channels for spotty and maomao (back of Island, Pakarae)
- Signs of fish: 'birds working'; GPS/fish finder now elsewhere
- 'Dirty' (silty) water good for mullet
- Snapper north end of Pakarae and north side of Waiomoko River mouth; time to go when water up to horse's girth (took spare horseshoes attached with flax; wound line to hand)
- 'P' (currents crossing—turbulence, food) near Waengatu for fishing off the beach (3)
- Move according to success

Signs we are moving towards a good or sustainable resource:

- Catching some snapper off the beach.
- Fragile environment at present but Marine Reserve a move in the right direction. Much needs to be done a.s.a.p. (6)
- Number of commercial are 'picking resource off', 'smoking it' (not all commercial—most supportive of controls, etc.).
- Still developing.
- Some change in people's attitudes apparent: more aware of conservation and belief that 'narking is okay'. (3)
- Long way to go; need to re-educate those in authority so they do not think commercial first. (2)

- No. Total Allowable Catch not reduced even though a big area (Marine Reserve) now out. Too many undersized fish being taken by individuals. (Collectively it adds up; customary, recreational, commercial all responsible.)
- Kaitiaki in place and systems of control being developed. (2)
- Kaumatua pushing for mataitai.
- Very sad in places, even Waitotara (too much access). Advantages of Marine Reserve not apparent yet.
- Must try to educate all. Poachers are often our own!
- Change essential and quickly—resource is in dire straits (commercial not recreational the problem).
- More signs/boards, etc. needed of marine regulations, i.e. information needed now!
- Marine Reserve great but more policing/kaitiaki needed.
- Quota Management System having an impact—more snapper about for instance. Should reduce the quota for crays too. (3)
- Marine Reserve by itself not enough—needs more support. Establishment was a bit late but ‘better late than never’.
- Lot of work to be done yet but hopeful signs we are on the right track. Rahui for sections of rohe moana needed.
- Endeavour to get Kaitiaki to ‘specialise’ in knowledge of a particular sector and be responsible for strategies to maintain it.
- Not positive except Marine Reserve. (2)

Signs from general environment indicating appropriate to fish and marine life abundant:

- Easy to get what you are after. Seafood on the menu.
- Kowhai flowers (November)—kina beginning to ripen. (5)
- Ti kouka tree flowers—kina sour, going off.
- Water warming (January)—sand sharks: valued resource by older people in days before refrigeration.
- Pohutukawa flowering—kina fat. If part of tree flowers, kinas in that direction will be good. (7)
- Seaweed thick—kina remain fat longer.
- Ease of obtaining quota indicates abundance.
- Importance of moon phase for tides.
- If land animals (cattle/sheep) are grazing vigorously (not just browsing), fish too will be actively feeding, i.e. all animals, including fish, have periods of big feeding.
- Clarity of water a good sign.
- Many sea birds. (4)
- Many small fish in shallows.
- Onepaua (when live paua beached)—allowed to take all, size not an issue should a ranger check your catch.
- Seaweed—rocks that were bare, now covered means kina and paua likely. (3)
- Presence of seals, dolphins and porpoises = fish. (2)

Do you think that overall the marine resource is increasing/decreasing/stable? Why do you believe this?

- Decreasing—commercialism, black market (poaching), eating habits (kaimoana healthy food), and the influence of immigrants, many of whom are not conservation conscious.
- Decreasing, especially kina, koura—greed, money, more people using farming practices (run-off carrying some pollution), and weather patterns (El Niño, etc.).
- Decreasing—over-fishing (both commercial and customary), poaching, greed, dollars, technology (positive and negative), and seals (Gable end—Pokatakino).
- Decreasing—commercial, poaching, fertilisers (top-dressing), overfishing, and eating habits.
- Stable—main ‘raider’ commercial out of the water at present, but over-fishing, greed, and money are all factors. Does not like European regulations being forced on us because we had controls that worked. [For a different era; PRG.]
- Decreasing—black-market, poaching, greed. Like going to the beach for a feed; go again when needed. Idea: could marae have a quota? Get someone to fish it—profit to marae.
- Decreasing, but ‘plateauing’ at present; hopefully will improve. Commercialised. International market is a free commodity. Wheeling and dealing kaimoana for dope, motorbike, etc. Eating habits.
- Decreasing in some species, e.g. kina; stable overall. Snapper increasing again (Quota Management System): pair trawling forbidden in breeding grounds, but electronic fish finders mean greater access, as do aqua lungs and increasing number of diving courses.
- Decreasing—lack of respect for place: rocks left unturned, inadequate policing, technology (vehicles, deep freezes, diving tanks).
- Decreasing—over-fishing, greed, black market sales, vehicles (access).
- Stable as long as you know where to go, but more difficult generally, e.g. kina.
- Decreasing—over-fishing, greed, money, more population fishing (often non-Maori).
- Probably decreasing—kaimoana not seen as a food source but as a commodity to make money from (something free or almost for nothing); new technology (lungs, nets); customary, recreational fishers transgressing because legal sizes often unavailable; poachers decreasing except for Marine Reserve; more people fishing including recreational; money; greed; poaching; dive courses—not always the ‘right’ people do them.
- Decreasing—over-fished, especially some species, e.g. kina. Collect in deeper water or further afield. Bottles used in too shallow water; sometimes many cars, many people; greed; poaching; too many taken.
- Decreasing—especially kina, cray and paua. Technology allows numbers to be caught. Possibly stable overall. Overseas a number of fisheries have collapsed. Sees aquaculture as a possible solution.
- Over-fishing—numbers fishing have increased. El Niño and associated diseases. Recreational fishermen are a problem too.
- Decreasing—more people in the world and the sea. Demand exceeds supply. Changing weather patterns (El Niño/La Niña). Food (phytoplankton—beginning of food chain) upset. People are generally more aware of healthy eating (global)—kaimoana is a source of protein as opposed to red meat. Clean green image. Sedimentation and natural weathering/erosion especially in our area (of Waiomoko area channels to Pakarae area—latter area not ‘sanded up’). Delicate balance of ecosystem destroyed if too much of one species is removed, e.g. kina.

- Varies—some places same as 50 years ago, others ‘skinned’. Caused by greed, money, poachers, ‘wheeling and dealing’, more cosmopolitan population. Respect needed. People working on incorporated blocks are mainly outsiders. Shareholders need to teach their children/mokos to respect their land and seafront—farming/fishing cadetships (blocks need to support). Inconsistency—gate locked but manager’s friends drive down through station to Pakarae. N.B. Maori people are ‘seasonal browsers’—one or two feeds of koura enough—as for puha, watercress, corn, etc.
- Decreasing—especially in kina/bubu. Other nationalities do not understand Maori tikanga (‘sweep up the bubus’ (maehe)). Diving suits and aqua lung courses: wrong people often taught how to use gear. Over-fishing. Natural phenomena, e.g. slip at Stewart’s Bay, Bola at Waengatu (6 years to recover).
- Decreasing—commercial, poaching, dive suits and bottles (wrong people sometimes), diet/food, lack of respect (some).
- Decreasing—especially kinas and bubus. More people on beach.
- Increasing in Marine Reserve; decreasing elsewhere. Over-fishing. Greater access to beach. More people fishing—significant numbers unaware of Maori tikanga.

Marine protection: what is required for Ngati Konohi to achieve their goal of a sustainable resource for the future?

- Marine Reserve only beginning. Ban all commercial activity unless it is 1 mile out from end of Whangara Island. Neighbourhood watch concept applied by all. Educate all first. Work together: communal in the past; need to reinstate. (10)
- All people are Kaitiaki—be observant of malpractice. Integrated approach with a raft of strategies needed. Difficult with some whanau who do not comply. (10)
- Integrated approach needed for some, especially fragile areas. (5)
- Big Rahui! Shut down for a while. Most important that all persons in authority are trustworthy. ‘Too much talk not enough action.’ Difficult to obtain consensus or general agreement.
- Local hapu management is the most important goal. More kaitiaki who are ahikaa, mataitai—stewards forever; restock with juveniles (speed up natural process by aquaculture). Accurate data so decisions can be based on factual information. Establish rights of Ngati Konohi but also our obligations—fair, honest, sustainable, fair to all quotas, rahui.
- Neighbourhood watch: ‘produce a flyer’ of how to report malpractice. Marine reserve by itself not enough. A number of complementary strategies required. (5)
- Kaitiaki properly trained (paid an honorarium!) to ensure regulations are being adhered to. Very important to have our ‘own’ involved, as they are more likely to be accepted. Need to be observant, vigilant, work as a team. (3)
- Whole environment important—if one area neglected it will affect (adversely) others. Education needed for all so they understand what the goal is (sustainable resource). Select ‘leaders’ carefully to ensure quality. (3)
- Matatai a.s.a.p. Work together.
- Basic research on life cycles needed (varies from area to area). This needs to be understood if management tools are to be effective.
- If malpractice seen, system in place to report (signs, flyers).
- All will work provided there is unity and people agree to support. At present internal politics a problem: more than one leader, not like earlier times.

- Need detailed database of different areas—close areas in rotation (rahui).
- If mataitai introduced, be careful that 'bylaws' we can live with are introduced—after all it is our beach!
- Respect the environment.
- On-going education for all—integrated approach needed. Mataitai essential and it will achieve most important goal (Konohi self-managing).

APPENDIX 6: HUI-A-HAPU LETTER OF INVITATION AND MINUTES

21 February 2005

Kia ora

Thank you again for allowing me to spend time with you to 'chat' about Whangara's rohe moana.

I found the experience extremely interesting and informative. Individual responses, although frequently considered trivial by participants, collectively have provided a pretty comprehensive view of traditional practices (tohu) regarding the state of the marine environment, and your thoughts on the effectiveness of the protective strategies that have been or are to be established to manage the ecosystem.

I have now prepared a draft report of the results and would like to share these with you and Ngati Konohi hapu in general, at a hui at the marae on Wednesday 2nd March 2005 commencing at 7 pm.

I hope you are able to attend this hui and I look forward to meeting you again.

Naku noa

Peter Gibson

MINUTES OF HUI-A-HAPU

Whangara Marae

2nd March 2005

7 pm

Present: 18 Ngati Konohi: Tatai Kutia, Amohau Maxwell, Mere Ferris, Paul Matete, Wayne Matete, James Farr, Joseph Ferris, Nikki Searancke, Tui Marino, Harry Matete, David Kutia, W. Matete, Hemi *, Ingrid Searancke, Jean Weke, Hone Taumaunu, Tautau Nikora and Peter Gibson.

Apologies: Rangi Paenga

Mihi – Hone Taumaunu

Karakia – Hone Taumaunu

After Hone's mihi and karakia, Peter Gibson addressed the gathering. Main points covered were:

- Vision Statement Te Oko o Tangaroa.
- Tohu-general information only (details displayed on Marae kitchen wall).
- One section of draft report (tohu) presented, linked to earlier survey, especially for goals (Fiona TeMomo's work).
- Monitoring of customary fishing-a suggested approach.
- Draft report issued (to be read at leisure over the next 10 days and comments sought (omissions, inaccuracies, suggested additions) by March 13th.
- Discussions followed (main points in 'methods' section of report).

Meeting closed with karakia, followed by cup of tea.

APPENDIX 7: FISHING BY THE MOON

FISHING BY THE MOON

Na Moni Taumaunu na Turanga

M.Taumaunu [1962] Te Ao Hou September Issue

Nga Marama

Piriri	Hakihea	June	December
Hono-noi	Kohi-ta-tea	July	January
Here-turi-koka	Hue-ta-nguru	August	February
Mahuru	Poutu-te-rangi	September	March
Whiringa-nuku	Paenga-whawha	October	April
Whiringa-rangi	Haratau	November	May

Hei Whakamaori I tenei e mau aka nei;
No 1 [Whiro] Ko t era I muri iho o ta
te pakeha new moon

To read this calendar

No 1 [Whiro] falls on the day after a new
moon on a pakeha calendar.

No 15 [Rakaunui] Ko te ra I muir iho o
Ta te pakeha full moon

No 15 [Rakaunui] is the day after a full
moon on a pakeha calendar

1	Whiro	He ra kino tenei mo te ono kai me te hi ka hoki.	A bad day for fishing or planting.
2	Tuiea	He po ahua pai tenei mo te hi koura, tuna, mo te on kai.	A good day for planting, crayfishing, torching eels.
3	Hoata	He ra tino pai tenei mo te hi, tuna, koura, ono kumara, ono hoki I etahi kakano.	A very good day for planting kumara, any seeds, also for crayfishing or torching eels.
4	Oue	He ra pai mo te ono kai, he ra pai mo te hi ika.	A good day for planting and fishing, etc.
5	Okoro	He ra pai ano tenei mo te ono kai, hi ika hoki.	A good day for planting etc., also fishing.
6	Tamatea-Angana	He ra ahua pai mo te ono kai mo te hi ika, he ra hau, he kaha. e ia tera pea e marangai.	Fair for planting and fishing, Windy, currents strong, expect change of weather.
7	Tamatea-Aio	He ra pai mo te hi ika, kia tupato ki te hi ika I nga ngaru. Pua I nga kohu. He ra pai ki te ono kai.	A very good day for fishing, watch out for the weather. It's either a big heave or a misty day. A good cropping day.
8	Tamatea	He rauriki te tuna, te ika me te kumara I tenei ra engari he Nui. Kai tupato te hunga E hi moana.	Eels, fish and kumara are numerous but small in size. When boating keep eye to the weather.
9	Tamatea-Whakapau	He pai mo te ono kai I te ata kit e ra-tu. Kaore I tino pai mo Te hi. Ka pau nga tamatea.	Fair for planting from morning to midday only. Fair for fishing.
10	Ari	He ra kino tenei.	A bad day.
11	Huna	E hara I te ra pai ki te ono kai Ki tehi ranei he noho mohoa te noho a te tuna a te koura.	Not a good day for planting or fishing; eels and crayfish get very timid.

12	Mawharu	He ra tino pai tenei mo te ono kai, he nunui te kumara e ngari kaore e roa ka pirau.	A very good day for planting, but it does not keep very long, also good for fishing, etc.
13	Atua	E hara I te ra pai mo te ono kai, mo te hi ika ranei.	It's not a very good day for planting or fishing.
14	Turei	He pai tonu mo te hi ika mo te ono kai I muri I te ra tu ki te ra to.	A fair day for fishing and planting from midday to sunset.
15	Rakaunui	He ra tino pai mo te ono kai, ahakoa he aha taua kai ra pai mo te hi ika. Kaore e Tino pai mo te hi tuna.	A very good day for planting, etc., also for fishing and not so good for eeling.
16	Rakau-Matohi	He ra tino pai mo te ono kai, mo te hi ika kaore mo te tuna.	A very good day for planting and fishing and not so for eeling.
17	Takirau	Takirau-maheahea, kau. Makoha te marama he ririki te kumara, te koura, te tuna.	The moon is losing its brightness. Kumaras planted on this are small, also crayfish and eels.
18	Oike	Ehara I te tino ra pai mo te ono kai mo te hi ranei.	It's only another day. It's not the best for planting or fishing.
19	Korekore-Te-whiwhia	E hara I t era pai mo te ono. Kai mo te hi ika ranei.	It's only a fair day for either planting or fishing.
20	Korekore-Te-Rawea	Ehara I te po pai tenei.	It's not a good day at all.
21	Korekore-Piri-ki-nga Tangaroa	He pai tenei ra atu I t era-tu kit e ra-to. Koia nei etahi ra pai ki te patu tuna, koura ika me nga momo kai katoa.	A very good day from midday to sunset; for planting, fishing, etc. Anything planted in the Tangaroas produces size and number.
22	Tangaroa A-mua	He ra pai kit e ono kai kit e hi ika, koura, tuna.	A very good day for planting and fishing, crayfish and eels.
23	Tangaroa-a-roto	He ra pai tenei ki te ono kai ki nga mahi hi ika, koura.	A very good day for planting and fishing, crayfish and eels.
24	Tangaroa-Kiokio	He ra pai tenei ki te ono kai ki nga mahi hi ika koura.	A very good day for planting cropping and fishing crayfish and eels.
25	Tangaroa-Whakapau	He ra pai tenei ki te ono kai ki te hi ika, koura tuna.	A very good day for planting and fishing crayfish and eels.
26	Otaane	He ra pai tenei mo te ono kai mo te hi ika, koura, tuna.	A very good day for planting, fishing, crayfishing and eeling.
27	Orongonui	He ra tino pai tenei mo te ono kai hi ika, koura, tuna. He pai mo te waihanga Whakaaio.	A very good day for planting, fishing, crayfishing and eeling. Also a good day for business.
28	Mauri	E hara I te ra pai tenei he oho mauri te kai ka oma.	Not a very good day for planting or fishing; fish, eels and crayfish are elusive.
29	Omutu	E hara I te ra pai tenei.	It's not a good day.
30	Mutuwhenua	E hara I t era pai tenei. Kua hina pouri tea o e ai. Ki nga korero o nehe ra.	It's not a good day at all. The world is in darkness according to Maori belief.

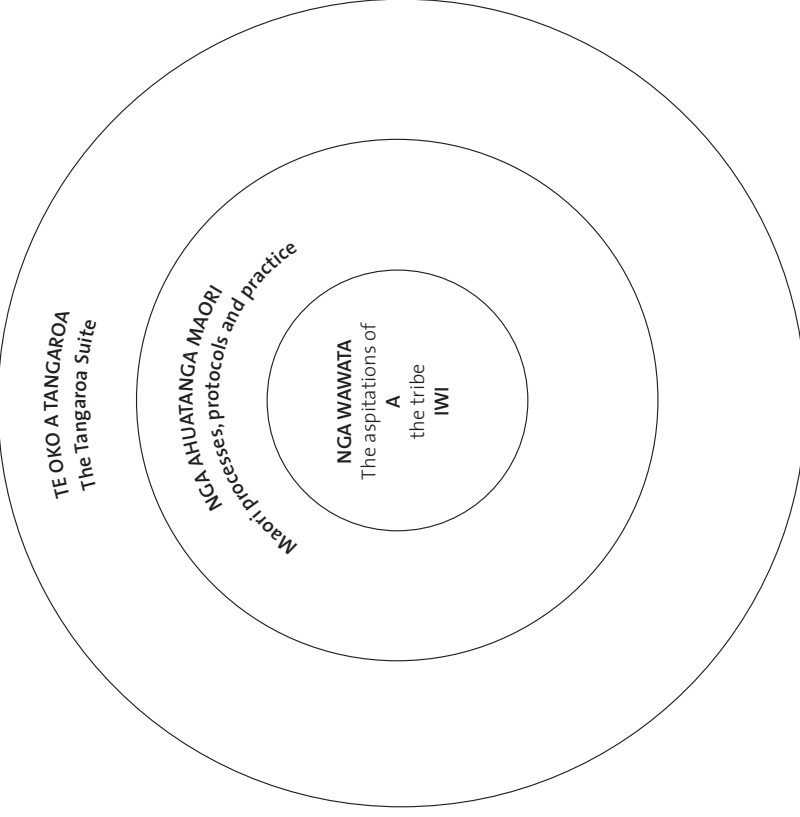
APPENDIX 9: TE AO MAORI —THE MAORI WORLD

TE OKO A TANGAROA

ROHE MOANA—Territorial boundaries:
Waihou Bay to Tapatouri Heads

IDENTIFICATION/DESCRIPTION

- Capacity of fish stock pre-1940
- Capacity today
- Perceived impact of marine reserve, mataitai ?? taiapure for future
- Sources of fish stock and edible seaweed (mahinga kai), reefs, rocks and areas
- Description of species harvested by Ngati Konohi: when/frequency?
- Use of Maori calendar for fishing and agriculture



NGA AHUATANGA MAORI

Cultural aspect

Tikanga (processes, protocol)

Deference to elder eliciting appropriate information: formal/informal/anecdotal

Ture (rules, regulations, the law of Tangaroa)

Acquiring information sensitivities—wahi tapu. Maori conservation ethic—enough to feed community. Right/obligations.

Concept of TAPU/NOA

Tohu signs

Times to fish, to harvest, to prohibit (rahui), and environmental tohu: flax, pohutukawa season. Times to impose rahui.

Traditional knowledge re tohu

*Traditional practices

KEY CONCEPTS RE TOHU MAORI (Maori perceptions: traditional, contemporary, life experiences, anecdotal commentary)

- That all aspirations of Ngati Konohi are realised
- That communication links between Ngati Konohi and Crown agencies are robust
- That the integrity and mana of Ngati Konohi be maintained

TANGAROA SUITE (impact of the three systems):

- That a management regime sustains the aspirations of Ngati Konohi