



Te Angiangi Marine Reserve – A Generational Review



Department of
Conservation
Te Papa Atawhai



Te Mana o Ngāti Kere
Ngāti Kere Hapū Authority

Contents

Executive Summary	7
Introduction	10
Ngāti Kere and TAMR Establishment.....	18
The Review Process	24
Analysis.....	27
Recommendations.....	54
Next Steps.....	55

Preface

Te Angiangi Marine Reserve and the mana moana of Ngāti Kere

The foreshore and seabed, and activities like gathering, diving and fishing hold deep cultural significance for coastal Māori communities and are intrinsically linked to identity, tradition and livelihoods. Ngāti Kere holds the mana whenua (traditional authority) of the Pōrangahau district from Ōuepoto Stream in the north to Ākitio River in the south.¹ The exercise of such mana involves allocating rights for others to use the associated resources. Both mana and use rights could be inherited, won or lost in battle, exchanged, or gifted - and in that vein it was Ngāti Kere who granted assent to the Te Angiangi Marine Reserve area 25 years ago on the condition of a generational review. This report is of that review.

The Ngāti Kere occupation history

The 850 year Ngāti Kere link to this Te Angiangi site and the wider coastline story begins with a rangatira in the mid 1100s named Mahu who was chasing his brother-in-law Taewha after the disappearance of some valued kumara. On reaching this district he climbed a cliff looking for his quarry and that story was remembered by the local *Te Tini-o-Awa* people in the name Te Pari-o-Mahu (Mahu's cliff). Our own story is taken up when a chiefly *Te Tini-o-Awa* woman, Te Rangipākihi, married an immigrant from Te Tairāwhiti, called Pōrangahau. Their daughter Te Whē grew up to marry a *Ngāti Ira/Ngāi Tahu* visitor from Te Tairāwhiti, called Ueroa. They started a new family line with mana from Pōrangahau to the East Coast and, living alongside the *Rangitāne* and *Ngāi Tara* occupant-owners of the land, they and their descendants traversed the coastal pathways 'keeping their fires alight'. Their great-grandson Te Aomatarahi migrated permanently to Hawke's Bay and by conquest and marriage held coastal mana south of the Tukituki River. His great-grandson, Te Angiangi, after losing a competition of feast exchanges, gifted the lands between Pōrangahau and Ākitio to *Te Hika a Pāpāuma* rangatira Te Whatuiāpiti who passed the mana straight on to the sisters Huingaiwaho and Taurito (the wives of his son Te Rangiwāwāhia), their brother Kaitahi and their hapū(s) who had collected the food. They in turn settled their children on the lands - Kere and Kiore in the north and Te Rangihiraweā in the south.

Local control from Ōuepoto to Ākitio by this Te Rangiwāwāhia rangatira family was secured by marriages into an ariki line, the conquests of two chiefly tīpuna of that line called Ngārangiwhakaūpoko (whose name flies on the Rongomaraeroa marae flag) and Tamanoho, and by a peaceful cohabitation with the descendants of Manuhiri who was gifted the lands from Aramoana (Ōuepoto Stream) to Pōrangahau by Te Angiangi. The 700 years hegemony by present mana whenua is an essentially uninterrupted 25 generation line – as the

¹ Ngāti Kere, Ngāti Manuhiri, Ngāti Pihere and Ngāti Hine-te-wai hapū are the modern hapū of Pōrangahau. Although they are distinguishable by whakapapa, the people most often live and act as one community and Ngāti Kere is our collective label. There are another 10 older hapū and also Ngāti Parakiore who also belong to this Ngāti Kere community.

daughter of Ngārangiwhakaūpoko, marries the scion of the Te Angiangi line that has maintained chieftainship on the coast under Tuanui – the widely recognised rangatira who met with Cook in 1773. Eventually the people of this district were united under one mana. Henare Matua, a descendant of that marriage, exercised that same mana in 1865 when he forbade Hauhau fighters from crossing his Te Pootiririkore (‘let no blood be shed’) district between Pōrangahau and Ākitio Rivers. That mana was upheld then and it has not been interrupted since.

New landowners

Others now live here as well. The land north of the Pōrangahau River including the Te Angiangi Marine Reserve site has been owned and farmed by non-Māori since the 1858 Pōrangahau Block sale. Mostly, local Māori have had relationships with farming families and have had free access to the coast to fish and collect seafood. More recently at Blackhead there is a community of three generations or so, and a bach community of two generations, and at the Aramoana end of the Marine Reserve there is a new settlement of permanent occupants. They all have vested interests in this coastal area. These people own land – they do not hold mana. The two sit happily side by side – one does not negate the other.

More latterly, the land directly adjacent to the Te Angiangi Marine Reserve has been acquired by the Hawke’s Bay Regional Council for a Regional Park. This park sits atop a huge pā site called Te Ikatiere in which Ngāti Kere (and Rangitāne before them) have vested interests. It is currently (and competently) run by the Aramoana Community and Educational Trust.

Ongoing Ngāti Kere coastal activity

Ngāti Kere and its ancestors once had complete control of this coast. James Cook observed miles-long nets along the Pōrangahau seacoast in 1773 and present day Māori fishers have stories of their forebears exploiting deep sea traditional fishing grounds found by using markers on the land. In more recent days some have participated in commercial activity but most have fished and gathered seafood to feed the family and for guests at the marae. The *Fisheries Act 1983* made provision for Māori input into fishing regulations and the local hapū contribution started when the Taiāpure Management Committee was established in 1990. In August 1992, it was officially legislated - from Cape Turnagain (Poroporo) to Blackhead Point (Parimahu). Notably, Ngāti Kere chose the inclusive taiāpure over the mātaitai model because it allows for input from across the wider community.

It was in those times when Ngāti Kere became an important player in the August 1997 establishment of Te Angiangi Marine Reserve. The intention to establish and maintain pristine eco-environments, to support local fish stocks and to provide educational and recreational opportunities was supported after much discussion by Ngāti Kere who asked for a 25 year review clause.

In 2003 the Tangata Kaitiaki o Ngāti Kere were authorised to manage customary fishing activities between Ōuepoto Stream and Ākitio River out to the North and South Madden Banks. In the mid-2000s local people did research projects with DOC and the Ministry for the Environment and the *Māori Methods and Indicators for Marine Protection* research project identified species of importance, Māori visions and values around coastal systems and mātauranga Māori-based progress indicators. During the Heretaunga Tamatea Treaty of Waitangi claims (settled in September 2015) Ngāti Kere had insisted on return of the Blackhead Village sections and a number of small marginal strips at Parimahu. Renewed ownership of these isolated and relatively small areas were insisted upon to cement the hapū presence at the important Parimahu fishing ground, an area whose land has been completely alienated into Pākehā ownership. Recently, in December 2022, a rāhui was placed by Ngāti Kere Tangata Kaitiaki and Te Taiāpure o Pōrangahau on the taking of pāua from immediately below Te Angiangi Marine Reserve to the outlet of Waikaraka Stream.

Ngāti Kere: what should we do now?

So, we have evidence of widespread historic domination of the coastal area and significant contributing activity to this coastline by Ngāti Kere since colonisation. But these days control of sea-based resources involves a complex web of overlapping jurisdictions including the coastal environment, the foreshore and seabed, the territorial sea, the exclusive economic zone and international waters managed by six governmental bodies under 17 pieces of legislation. The wide and overlapping span of governmental authority seems to leave very little room for coastal hapū to influence management.

Before the 1980s neo-liberal economic changes, the Pōrangahau Māori community thrived off the farming economy and living off the seas. And we have had significant Māori commercial fishers on our coast. But the possibility of foreshore and seabed ownership, Māori fishing rights as a local economic venture or any robust form of control over seacoast affairs have been whittled away as Crown agencies have reinterpreted, superseded, or undermined Māori control. There are very few opportunities presenting themselves at the moment for a robust presence on the coast. I propose that the Te Angiangi Marine Reserve is one.

At the time of its creation there must have seemed little to be gained in supporting a marine reserve – after all, this is a great fishing ground. But hapū members accepted the arguments that there were benefits to be had from a pristine seacoast environment, opportunities for recreational visitors and the replenishment of fishing stocks - and the conditions to that assent were this 25 year review. Marine reserves generally do meet their objectives – this one is no exception despite being confounded by the 2011 landslide and some slips in management along the way. Support of an ongoing marine reserve with robust Ngāti Kere partnership prospects will secure our Ngāti Kere presence at this beach community, will contribute to our wider presence along our coastline and will maintain the mana we have all

fought to uphold. And by working together in this venture, we can begin the creation of a future where the foreshore, seabed, and fisheries resources are managed in a way that honours local Māori knowledge, promotes cultural inclusion, and protects the natural heritage of this coastline of ours for generations to come.

David Tipene-Leach
Chair, Ngāti Kere Hapū Authority
October 2024

Te Angiangi Marine Reserve – A Generational Review

Executive Summary

Te Angiangi Marine Reserve (TAMR or the reserve) was established in 1997 to protect underwater scenery, natural features and marine life that are typical of the intertidal and shallow subtidal marine habitats of Central Hawke’s Bay. The Crown committed to a “generational” review at the time at the request of Ngāti Kere, the hapū holding mana whenua over the area. In 2022, Ngāti Kere requested that this generational review should proceed.

The Department of Conservation (DOC) and Ngāti Kere partnered in 2023-2024 to form a working group to conduct the review, focusing on whether the reserve had met the objectives for which it was established. The working group identified key questions to explore through the review and relied on subject matter experts, key stakeholders, and targeted public feedback, to evaluate a dozen indicators. Based on this assessment, the working group has made recommendations designed to:

- better achieve TAMR objectives,
- promote the role of Ngāti Kere in guiding management at the reserve,
- foster the connection between the community and TAMR, and
- explicitly measure effects caused by climate change.

DOC Regional Operations in Ahuriri/Napier will lead development of an implementation plan to ensure recommendations are considered and adopted, as feasible. Several of the recommendations would require increased capital and operational expenditures.

Key Questions

1. Does TAMR preserve and protect marine ecosystems?
2. Does TAMR provide educational and recreational opportunities?
3. Does management of TAMR maintain a connection with the public?
4. Does management of TAMR promote Ngāti Kere mana moana on the coast and the connection between Ngāti Kere and TAMR?
5. Do the original management objectives reflect contemporary conservation priorities?

Key Findings

Preserving and Protecting Marine Ecosystems

- Surveys for the first ten years after the reserve was established showed the number and size of kōura in shallow water were generally greater inside the reserve than outside. Surveys were discontinued after 2007.
- Surveys of key species have not occurred regularly at the reserve and there are very few recent data sets. Further sampling is needed to determine whether any trends have continued. Mapping of subtidal reef habitats is coarse and intertidal habitats have not been mapped.

- The 2011 severe storm and earthquake changed the habitat directly adjacent to the slip that occurred on the cliffs at the north end of the reserve.
- A June 2023 NIWA survey found no evidence of sediment impacts inside the reserve from the mid-February 2023 Cyclone Gabrielle.
- It is unclear whether compliance rates have changed over time due to, until recently, inconsistent record-keeping and resourcing constraints within DOC.

Providing Educational and Recreational Opportunities

- The reserve provides opportunities for recreation, educational programmes, and scientific studies.

Maintaining a Connection with the Public

- Neither Ngāti Kere nor local community members have been significantly involved in management of the reserve.

Promoting Ngāti Kere Mana Moana

- New signage at the reserve acknowledges the connection to Ngāti Kere.

Reflecting Contemporary Conservation Priorities

- There is no data to assess whether the reserve is resilient to the effects of climate change.
- Results analysing the presence of invasive species inside the reserve are inconclusive and need to be analysed by an outside expert because DOC staff do not have the expertise to do so.

Key Recommendations

Promote Ngāti Kere mana moana on the coast and the connection between Ngāti Kere and TAMR:

- DOC and tangata whenua, Ngāti Kere, partner to form a strategic oversight group setting strategic vision for the reserve and guiding its operational management. The strategic oversight group liaises with the East Coast Hawke's Bay Conservation Board (ECHBCB) in developing strategic vision and guidance.
- ECHBCB reviews and endorses any TAMR strategic vision or operational management plan.
- DOC works with Ngāti Kere and the local community to ensure strategic vision and operational management plan are embedded in a Māori framework, incorporating mātauranga Māori.
- DOC works with tangata whenua, Ngāti Kere, to help expand knowledge from TAMR across their rohe moana.

Foster the connection between the community and TAMR:

- DOC leads establishment of a community-based management committee. Committee terms of reference should clearly describe the membership and roles each member-group plays in reserve management.
- DOC, with input from management committee, updates operational management plan outlining objectives for management, monitoring, and compliance for review by strategic oversight group. DOC measures data collection against plan every two to five years to ensure the data collected will facilitate ten-yearly review.
- DOC, Ngāti Kere, and community hold regular event celebrating TAMR, Ngāti Kere, and local connections to the area.

Do better in the achievement of TAMR objectives, especially preserving and protecting marine ecosystems:

- DOC implements proposed monitoring plan for TAMR, incorporating mātauranga Māori.
- DOC works with Ngāti Kere to include oral histories as baseline for monitoring.
- DOC installs surveillance camera at reserve to ensure round-the-clock monitoring for compliance.
- DOC facilitates training to increase local patrols at reserve.
- DOC commits to a review of the reserve every 10 years.

Measure the effects of climate change:

- DOC includes climate indicators in monitoring plan for TAMR.

1 Introduction

In 2023, DOC and Ngāti Kere formed a working group to undertake the review. This report describes the process and results of the review.

1.1 Purpose

The purpose of the review was to determine whether DOC's management of the reserve has produced the desired results. More specifically, the aim was to:

- determine whether TAMR is meeting the objectives for which it was established, i.e., to preserve and protect marine ecosystems and provide educational and recreational opportunities;
- evaluate whether objectives in the reserve's operational plan reflect community priorities and maintain the connection with the public;
- evaluate whether objectives in the reserve's operational plan promote the mana moana of Ngāti Kere;
- evaluate whether objectives in the reserve's operational plan reflect contemporary conservation priorities; and
- make management recommendations for TAMR.

DOC has managed the reserve since establishment and seeks to evaluate whether the reserve is contributing to the conservation and protection of Aotearoa's coastal and marine environments, consistent with the Marine Reserves Act 1971 and in such a way as to give effect to the principles of the Treaty of Waitangi (S. 4 Conservation Act 1987).

Ngāti Kere hold mana whenua and mana moana over the reserve area and supported establishment of the reserve in 1997 conditional on a 'generational' review. Ngāti Kere wanted this review because of the centrality of kaimoana to local custom, the important contribution the reserve might have for sustainable kaimoana stocks, and to allow the next generation to have input into decision-making.

1.2 Background

The Marine Reserves Act provides for the establishment of reserves to preserve and protect marine life and habitat for scientific study. The Act does not require or describe a process for review. The Crown committed to a 'generational review' when TAMR was established in 1997. This term was understood at the time to mean a review would occur after 25 years.

1.2.1 Reserve Establishment and Ngāti Kere Support

DOC began exploring the possibility for a new marine reserve on the Central Hawke's Bay coastline in 1988. The Director-General of Conservation submitted the application for the reserve in 1994 and TAMR was gazetted in July 1997. The principal objectives of the application were:

- 1) to give effect to the Marine Reserves Act 1971,

- 2) to contribute to DOC's mission to conserve and protect the natural character and quality of New Zealand's coastal and marine environments, and to support establishment of a nationwide network of marine reserves that is representative of these environments, and
- 3) to provide educational and recreational opportunities for non-extractive users of the Hawke's Bay coast.

The purpose of the Marine Reserves Act is to preserve areas for scientific study that contain underwater scenery, natural features, or marine life of such distinctive quality, or so typical, beautiful, or unique that their preservation is in the national interest. DOC proposed the reserve's location on the Central Hawke's Bay coast between Aramoana and Blackhead because of both its biodiversity and accessibility.

DOC consulted widely on the application with tangata whenua, other government agencies, the local community and other affected or interested parties. DOC met regularly with the tangata whenua of Central Hawke's Bay and the Iwi of Ngāti Kahungunu to develop the application for the proposed marine reserve. DOC initially identified several preferred alternatives and asked for stakeholder input. During consultation DOC heard feedback that kaimoana represented an important part of the diet of families within the rohe and that marine reserves created in perpetuity were culturally inappropriate. After a public hui called by Ngāti Whatuiapiti at Mataweka Marae, DOC was asked to form a committee of representatives from Iwi and other affected groups to discuss siting of the reserve. The committee was formed and expressed support for the present location. Ngāti Kere asserts mana whenua over the area of the coast that includes the reserve and expressed opposition to the concept of marine reserves in perpetuity.

Following further discussions with DOC, Ngāti Kere wrote to the Minister of Conservation in June 1993 expressing support for the proposed marine reserve, conditional upon:

- (i) adequate and appropriate representation in management of the reserve,
- (ii) full involvement in scientific and educational programmes undertaken in the reserve, and
- (iii) agreement to an ongoing review of the status of the reserve, referred to as a "generational dialogue between our descendants and the Crown".

On March 11, 1994, Ngāti Kere met with the Minister to discuss these matters. In the Director-General's report to the Minister of Conservation, he stated his belief that the conditions could be satisfied by appropriate representation of tangata whenua on the proposed Hawke's Bay Conservation Board subcommittee, a commitment by DOC to provide opportunities for Ngāti Kere to be involved in all of the reserve's scientific and educational programmes, and by including a condition in the Order in Council that review of the status of the reserve should be undertaken by the Minister of Conservation at set time intervals, for example, every 25 years.² This condition was not included in the Order in Council.

² Te Angiangi Marine Reserve Application, at 381.

1.2.2 Reserve Management

In April 1992, representatives of Te Runanganui o Ngāti Kahungunu met with DOC to discuss Iwi involvement in management of the reserve through establishment of a subcommittee of the Conservation Board. The Rangitikei-Hawke's Bay Conservation Board had oversight at the time, and delegated management authority to the subcommittee (TAMR Committee) in 1997. The TAMR Committee consisted of representatives from Ngāti Kere, Ngāti Whatuiāpiti, Taiwhenua o Tamatea, commercial fishers, campground users, local communities at Aramoana, Pourerere and Blackhead, adjoining landowners, and the Conservation Board. The committee was authorised to advise on any conservation matter relating to TAMR, including a change in status or classification of the reserve.

The reserve's 2003 operational plan³ described the role of the TAMR Committee, stating that the "contribution that the community has to make to the management of Te Angiangi Marine Reserve at a policy level has been recognised and provided for through the establishment of a Ministerial appointed advisory committee. The importance of community contribution to management of the marine reserve has been reflected in the composition of the committee, which includes:

- Tangata whenua representatives from Ngāti Kere, Taiwhenua o Tamatea and Ngāi Te Whatuiapiti
- Commercial Fishers Representative
- Private land owners whose properties adjoin the reserve
- Representatives of the communities living at Pourērere, Aramoana and Blackhead
- An East Coast Hawke's Bay Conservation Board representative."⁴

The committee was formally disbanded on 6 May 2011 because by then TAMR required less oversight.⁵ After that, responsibility reverted to the Conservation Board. Today, the East Coast Hawke's Bay Conservation Board (ECHBCB) has responsibility for TAMR, providing policy direction for DOC's management of the reserve. The ECHBCB liaison for TAMR reports to the Board at each meeting and helped with initiation of this review.

The day-to-day management of the reserve is carried out by DOC's Ahuriri/Napier Office and is guided by the operational plan, consistent with the Hawke's Bay Conservation Management Strategy, which requires DOC to manage the reserve in a way that gives effect to the principles of the Treaty of Waitangi.⁶ The operational plan sets out objectives to promote compatible scientific research, to foster safe recreational use while minimising visitor impact, to develop strong ties with the public, to protect the reserve from activities both outside and inside its boundaries, and to monitor the reserve over time to inform management. The plan calls for regular review and amendment, if necessary, to ensure that it remains consistent with law and policy and is responsive to monitoring data.

³ [Operational Plan](#) (2003) (Operational Plan).

⁴ [Operational Plan](#), at 30.

⁵ [Minutes](#), Wellington Hawke's Bay Conservation Board (6 May 2011).

⁶ [Conservation Act 1987](#) s. 4.

1.2.3 Background to the Review

Marine protected areas, including marine reserves, have reduced pressures compared to the surrounding environment and are therefore important scientific reference areas for study. Marine protected areas provide opportunities to learn about how marine ecosystems recover when some human impacts are removed, and to monitor and study large-scale, long-term patterns or changes in the environment over time (e.g., El Nino or climate change). Learning from these reference areas can increase our ability to understand and effectively manage the pressures on the marine environment. New Zealand has 44 marine reserves established under the Marine Reserves Act 1971. Marine reserves provide the strongest legal protection available to the New Zealand marine environment under current legislation. A range of activities, including all forms of fishing, are generally prohibited. They can be used in conjunction with other management tools such as mātaītai to conserve marine life, including kaimoana stocks.⁷

The Marine Reserves Act 1971 does not provide a process for an assessment or statutory ‘review’ of the protected area’s effectiveness. Sometimes, however, DOC is obligated to conduct an assessment by the Order in Council establishing the area, or by special legislation. In other cases, DOC may have committed to conduct a non-statutory review through an agreement with Treaty partners or stakeholders. DOC also has the discretion to complete a review at any time and may choose to do so even where there is no obligation.

Reviews are good practice for protected areas in general, to test whether they are achieving their objectives and to enable managers to respond to new information and protection needs.

Reviews assess the effectiveness of MPAs by measuring changes to biophysical, socio-economic, and governance conditions. For example, indicators of success for a particular area might include species abundance, level of stakeholder participation in management activities, and regulatory compliance. Reviews may result in management recommendations to improve the conservation and protection of Aotearoa New Zealand’s coastal and marine environments, and to ensure adherence to the principles of the Treaty of Waitangi. They may also raise awareness of areas of concern, suggest solutions, and advocate for funding.

1.2.4 Ngāti Kere request review

In February 2022, Ngāti Kere wrote to DOC to register concerns with DOC’s management of the reserve and to request evidence that the generational review the Crown had committed to in 1997 would be conducted as a Tiriti partnership.⁸ Ngāti Kere wrote to the Minister of Conservation in April 2022 asking the Minister to direct the DOC Napier office to engage “in a mana-enhancing fashion with Ngāti Kere in order to do justice to the marine reserve

⁷ Mātaītai reserves recognise and provide for traditional fishing through local management. They allow customary and recreational fishing but usually do not allow commercial fishing. See MPI, [Managing customary fisheries](#).

⁸ Letter from Jim Hutcheson, Ngāti Kere Tangata Kaitiaki, and David Tipene-Leach, Chair, Ngāti Kere Hapū Authority, to Honourable Kiritapu Allan, Minister of Conservation (15 Feb 2022).

review and perhaps create an ongoing Māori presence at this site”.⁹ The Minister responded on 13 May 2022, acknowledging the kaitiakitanga of Ngāti Kere and its support for establishment of the reserve in 1997.¹⁰ The Minister indicated her understanding that discussions regarding the review were underway, that DOC had committed to rebuilding the relationship with Ngāti Kere, and that a new Marine Reserve Ranger would be focussed on compliance and monitoring within the reserve and maintaining relationships with hapū and whānau at Pōrangahau. DOC met with David Tipene-Leach (as chair of Ngāti Kere Hapū Authority) in late April 2022 and responded to concerns in writing on 20 May 2022.¹¹ DOC apologised for its inconsistent management and committed to rebuild DOC’s work at TAMR through added capacity in the Napier District Office. DOC also committed to meet with Ngāti Kere formally and to engage with the hapū about the review process.

In September 2022, DOC met with Ngāti Kere to initiate a discussion about the generational review. Ngāti Kere identified several issues of concern and asked for:

- Evidence that the TAMR contributes to more plentiful kaimoana on the coast;
- Improved management of the reserve and a true partnership with DOC; and
- More direct benefits flowing from the reserve to the hapū, particularly visibility on the coast and help with other coastal projects such as fish stocks at Parimāhu.

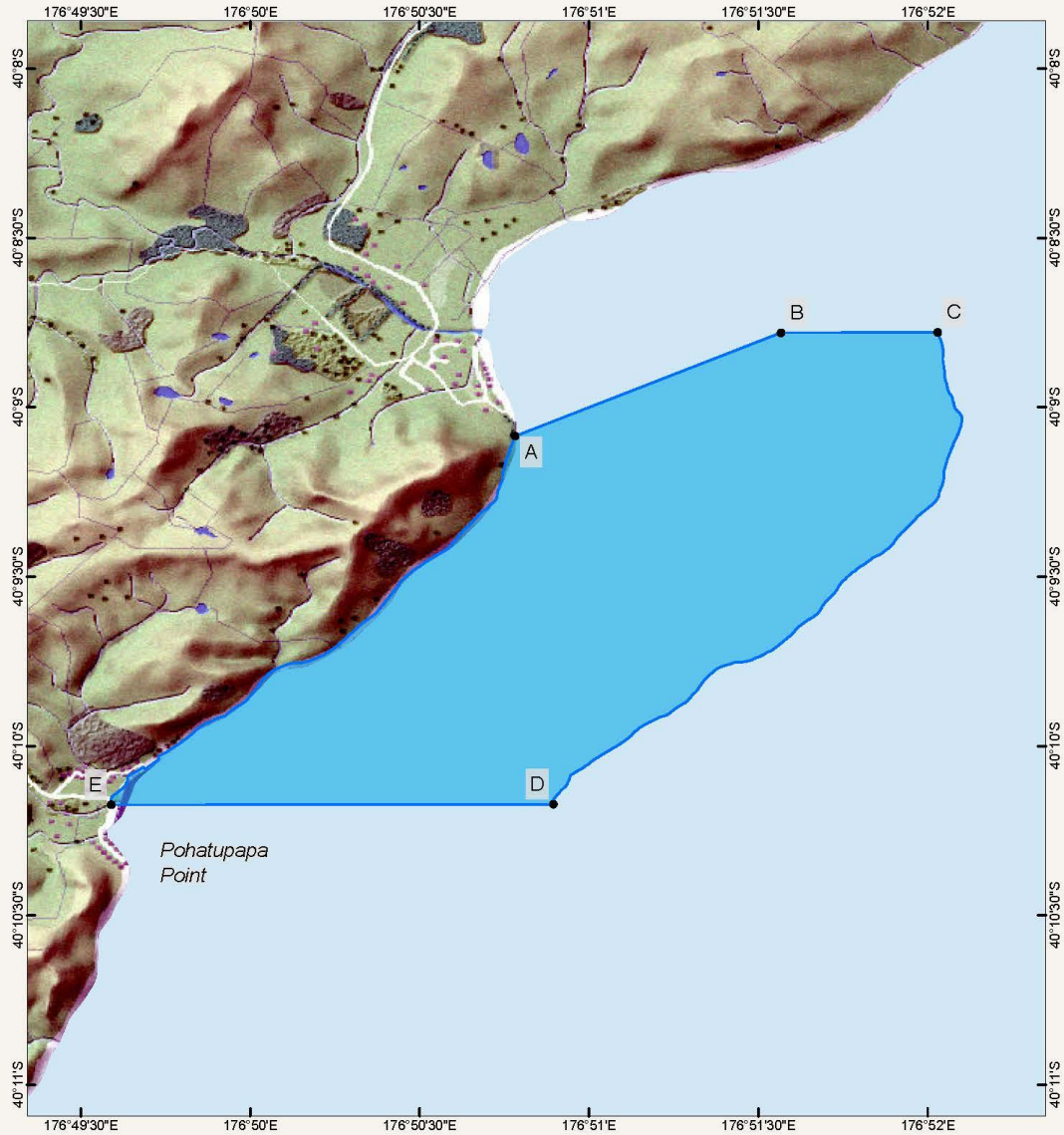
A second meeting on 27 January 2023 provided an opportunity for DOC to continue to address the concerns of the hapū and the hapū raised the possibility of some form of harvest from the TAMR for important occasions. DOC and Ngāti Kere, with oversight provided by ECHBCB, agreed to partner on the review. The joint working group held its first meeting in early February 2023. Cyclone Gabrielle struck the project area in mid-February delaying further meetings, which recommenced in June 2023.

⁹ Letter from David Tipene-Leach, Chair, Ngāti Kere Hapū Authority, to Honourable Kiritapu Allan, Minister of Conservation (28 Apr 2022).

¹⁰ Letter from Honourable Kiritapu Allan, Minister of Conservation, to David-Tipene-Leach, Chair, Ngāti Kere Hapū Authority (13 May 2022).

¹¹ Letter from Jack Mace, DOC Director Operations, Lower North Island, to David Tipene-Leach, Chair, Ngāti Kere Hapū Authority (20 May 2022).

1.3 Overview of Te Angiangi Marine Reserve



Te Angiangi Marine Reserve

Letter Code	Lat (DDM)	Long (DDM)
A	40° 9.085' S	176° 50.782' E
B	40° 8.78' S	176° 51.567' E
C	40° 8.779' S	176° 52.03' E
D	40° 10.172' S	176° 50.895' E
E	40° 10.174' S	176° 49.589' E



GCS WGS 1984 | 6/03/2024
 Not for navigation
 Crown Copyright Reserved



New Zealand Government

Figure 1: TAMR location map

TAMR encompasses an area of approximately 446 hectares and is the only marine reserve located in the Hawke's Bay region. The reserve benefits from the support of the Aramoana Environmental & Education Charitable Trust (AEECT), whose purpose includes raising the profile of and increasing community commitment to the reserve.¹²

At low tide many types of birds take advantage of rich feeding areas on the reserve's intertidal platforms. Kingfishers, gulls, herons, variable oyster catchers, pied stilts and flocks of eastern bar-tailed godwits are common. At high tide small flocks of gulls, white fronted terns and threatened Caspian terns can be seen roosting on the sand at the mouths of small streams. Banded and New Zealand dotterels can also be seen on some of the beaches within the reserve.

At low tide a broad mudstone platform is exposed, revealing beds of Neptune's necklace, pink coralline seaweeds, and patches of eel grass (sea grass) mixed with a diverse rockpool community of fish and shellfish, including golden limpets (classified as "at risk" in the New Zealand Threat Classification System), crabs, juvenile pāua and kina.

Stingray Bay is almost completely cut off from the open sea at low tides, forming a sheltered lagoon perfect for snorkelling.

Beyond the edge of the intertidal rock platform there are about 138 hectares of reef. Common reef animals include pāua, opal shells, rock lobsters, and reef fish such as red and blue moki, butterflyfish, banded wrasse, marblefish and sweep. In deeper water, nudibranchs, butterfly perch and tarakihi are found, along with sea perch, scarlet wrasse, blue cod and common roughy.

Offshore, the mix of the warm East Cape current and the colder South Wairarapa current means many typically "northern" and "southern" marine species occur in the reserve. In summer, pods of common and bottlenose dolphins are often observed.

In April 2011 a heavy rainfall event, more than 500 mm of rain in 48 hours, followed by a shallow magnitude 4.5 earthquake, caused the inundation of the rock platform. More than 14 landslides covered the entire width of the platform (more than 100 metres), completely burying or sweeping away the biological communities living there (see images below). Within months, however, wave action had begun to uncover parts of the platform.

¹² <https://www.aramoana.co.nz/>. Additional purposes of the organisation are "to facilitate the creation of visitor and education facilities at the [reserve], to promote the continued protection and restoration of the [reserve], to provide education to schools and the general public about the need to conserve and protect marine environments and also to provide schools and the general public with early coastal farming and Iwi history, to assist and work in conjunction with [DOC] or any successor to it with the protection of the [reserve], to assist people of all ages and all walks of life in gaining access to the [reserve] so they can experience the variety of marine species, habitats and ecosystems, and to facilitate the planting of native species along the Hawke's Bay Coast with an emphasis on the Ouepoto Reserve and the land surrounding [TAMR]."





Figures 2-4: Photos depicting 2011 landslips.

2 Ngāti Kere and TAMR Establishment

This section summarises the collective views, values and experiences of those from the Ngāti Kere hapū that have been involved in the establishment of TAMR since initial discussions began in 1988. It in no way represents the views of the hapū of Ngāti Kere, but rather, draws on the conversations, stories and materials available at the time of writing this review.¹³

1987 – 1988 DOC Head Office held internal discussions to increase New Zealand’s marine reserve national coastline percentage to ten percent.

Coastlines and regional options in preliminary mapping were spread into areas not currently occupied. Most New Zealand marine reserve areas are clustered and close to one another and at the time were heavily concentrated in the northern region of the north island. Recognition of the need to reduce the concentration of existing areas in the north led to new regions being explored and proposed. At the time of the proposals in 1988, there were no marine reserves in the Hawke’s Bay Conservancy and only one had been fully established.

1988 Piri Sciascia (Ngāti Kere) worked for DOC. He presented DOC discussions for feedback from whānau and hapū. At his first hui with my parents, Marina Sciascia and Hoko Ropiha, at Wanstead where my mother exclaimed, “You are nuts if you think our hapū will give up our coast and kai in perpetuity to the

¹³ An account by Keri Ropiha, Ngāti Kere. Sources available upon request.

government.” She ended up assisting with the process and was an advocate for the marine reserve from the time of inception until her passing in 2022.

Garth Cassidy was a local community member and held discussions for Blackhead and Aramoana. He saw the value in the same vein that Piri Sciascia envisaged and assisted him in engaging the local community.

Dennis Marshall was DOC Leader for the project with the first hui held in Palmerston North to address multiple hapū and Iwi and the proposed increase of marine reserves around the country.

Many hui-a-iwi were taking place around the motu and Ngāti Kere sent representatives to attend hui all over the North Island to observe the hapū and Iwi reactions to DOC’s proposals for new marine reserves in their rohe. Our kaumatua wanted to gauge if our hapū questions and hesitations were the same as other coastal hapū, and learn what actions they were taking.

It was a difficult time for Māori to engage at every hui for each individual legal change that was on the table as a result of the Fisheries Settlement negotiations from 1988 until the full and final settlement was signed in 1992. Multiple laws affecting Māori were being negotiated and rewritten simultaneously to align settlement agreements with Te Tiriti o Waitangi, honouring our rights to tinorangatiratanga (self-determination), and requiring reviews of relevant government policy and legal accountability.

The issues of the time were compounding the difficulty in making well-informed decision. These included:

- New Zealand Māori Council had shut down the entire New Zealand fishing industry and took the New Zealand government to the Privy Council.
- Quota Management System adopted in the Fisheries Amendment Act 1986, stating the government owned New Zealand fisheries and quietly removing Sec 88(2) of the Fisheries Act which had stated "Nothing in this Act shall affect any Māori fishing rights."
- Commercial fisheries were settled in the Sealord Deal of 1992, taking 5 years to negotiate. It was given effect by The Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and saw the creation of the Treaty of Waitangi Fisheries Commission. The settlement was for commercial, not customary fishing.
- Treaty Tribes Coalition (TTC) was set up with four members including a Ngāti Kere appointee. TTC was set up to represent the interests of Iwi seeking to secure allocation of fisheries assets held by the Treaty of Waitangi Fisheries Commission.
- State Owned Enterprises Act 1987 led by Sir Graham Latimer (as per recordings of the Privy Council judgement).
- Crown Forestry Rental Trust 1989 established after New Zealand Māori Council and Federation of Māori Authorities took court action

to protect Māori interests in the Crown's commercial forests. The Act allowed the Crown to sell licences for forestry but prevented it from selling the land itself until the Waitangi Tribunal recommends who has ownership of the land – Māori or the Crown.

- Māori Affairs \$286m annual budget was reduced to \$100m – the government were throwing crumbs at Māori rights and Te Tiriti.

Māori were being overwhelmed by the amount of legislative changes and time-consuming travel, at their own cost. The magnitude of the issues and poor communication from the government led to uninformed decisions.

DOC started marine reserve discussions right after fisheries settlements were initiated. Māori lost 90% of their fishery with the government claiming they own it. The introduction of the QMS in 1986 removed statutory recognition of Māori customary rights to fishing and fisheries. In 1989, Māori and Crown negotiators settled on an interim settlement resulting in the Fisheries Act 1989.

The Māori Fisheries Commission (Commission) was born and settlement was agreed that the Commission received 10 percent of all fish species that were in the QMS and approximately \$10 million to hold and manage on behalf of all Māori.¹⁴ Commercial fishing claims were settled with the signing of a Deed of Settlement (the Sealord Deal) in September 1992.

Many comments around the motu were about the value lost by Māori given the recent settlement negotiations with government.

1989-1992 A series of hui and surveys took place around the motu. A public questionnaire was circulated by the ECHB Conservancy that identified seven general areas in Hawkes Bay warranting further investigation as marine reserves.¹⁵

1. Waipatiki/Aropaoanui
2. Pania Reef
3. Cape Kidnappers
4. Waimarama
5. Karamea
6. Kairakau
7. Pourerere

Sites were further refined by preliminary assessments of Mangakuri, Paoanui Point and Tuingara Point. All were strongly opposed by local commercial crayfish/lobster fishermen because the area represented 30-35% of their

¹⁴ Te Ohu Kaimoana, Te hī ika: [How Māori fishing rights were saved – but only just](#).

¹⁵ Conservation Management Strategy 1994-2004, App. 2, at 90.

catch. A pamphlet for marine reserves was produced with four alternatives for Southern Hawke's Bay for public feedback.

A trip to Goat Island showed different customary values for having a marine reserve as it was set up and supported by a tourism industry.

Extensive consultation and surveys followed which showed an area of intertidal platforms and associated subtidal reef systems between Aramoana and Blackhead beaches. The area was proposed for a marine reserve.

Two liaisons were appointed, John Black and Toro Waaka, who were supported by John Mackie on behalf of the Iwi.

Te Taiwhenua o Heretaunga and Ngāti Kahungunu Iwi were against marine reserves due to the fisheries settlements and all of the ongoing issues forcing Māori to make quick and uninformed major decisions.

Ngāti Kere initially objected to the plan but agreed to support the discussion and sought to identify DOC roles and capacity available to provide administrative support to manage the reserve. The hapū lent their authority to establish Te Angiangi Marine Reserve.

The Director-General of Conservation formally applied for a marine reserve in this area.

1996 Minister of Conservation and MFish (Fisheries New Zealand) approve establishment of Te Angiangi Marine Reserve.

1997 Te Angiangi Marine Reserve formally established in August.

The boundary extends 1 nautical mile offshore from mean high water springs mark between Blackhead and Aramoana.

At same time an advisory committee was created to provide advice to DOC on a range of matters including identifying issues to be addressed in the operational plan.

2003 Operational Plan

Excerpts from DOC's Operational Plan demonstrate the level of engagement Ngāti Kere expected to have in management when they agreed to the marine reserve.

"The operational plan is a non-statutory document; however, the Department will adhere to the provisions in good faith. . . . [The operational plan]:

- provides an effective mechanism for the advice provided by Te Angiangi Marine Reserve Committee to influence the management of the reserve;

- contains specific policy to guide the Department in the management of the reserve and would provide more detailed guidance, clarity and certainty than is currently contained in the Conservation Management Strategy.
- is an efficient use of the Department’s resources through expedient and cost-effective development of the operational plan.
- may be used as the basis for policy development for the Conservation Management Strategy or Plan in future and provide interim guidance to the Department prior to statutory policy development;
- . . . reflects a diverse range of community views through the involvement of the committee.¹⁶

The Operational Plan sets out the TAMR Vision Statement:

“Mauri of marine habitats restored, the marine reserve treasured by the community, providing opportunities for scientific study and for the public enjoyment of a natural marine environment.”¹⁷

It goes on to cover a range of measures and outcomes that would be provided for in the establishment of the marine reserve. The examples below have caused continued concern due to a lack of administration:

School visits

One objective of the operational plan is “to encourage coordination of school field trips to the marine reserve with the Department.”¹⁸

The marine reserve was heavily utilised by schools with day trips as part of science and conservation studies. This duty has not been carried out. Currently an AEECT board member arranges school visits, managed and arranged through their website.

Signage

Another objective calls for DOC to promote “an environmental care code and ‘pack in, pack out’ policy. This will be included on signage associated with the reserve and promoted through Department staff liaising with users of the reserve.”¹⁹

Public awareness and facilities

Under the operational plan, “[p]ublic awareness has been focused on the development of pamphlets, signage and releasing news items of the gazettal of the new reserve including type of restrictions that the public must adhere to when recreating at the reserve.”²⁰

¹⁶ [Operational Plan](#), at 1.

¹⁷ [Operational Plan](#), at 2.

¹⁸ [Operational Plan](#), at 20.

¹⁹ [Operational Plan](#), at 21.

²⁰ [Operational Plan](#), at 27.

The strategies outlined went no further as they relied on the review and development of a national strategy for public awareness. It was never carried through and so lack of resources and information have thwarted hapū efforts to receive monitoring and survey information.

Interpretation kiosk

An interpretation kiosk was to be “located at Stingray Bay and it is important that the facility provides relevant and accurate information.”²¹

Results and monitoring information were to be available at this site. It has never been established and information was not shared with hapū or the local community.

Public involvement in management

“The Department welcomes offers of assistance with operational management of the reserve and may include assistance with monitoring, use of vessels for example when deploying boundary markers, compliance work, or being available for honorary ranger positions.”²²

Policy contributions of the community to the management of the reserve were recognised and provided for through “the establishment of a Ministerial appointed advisory committee which includes:

- Tangata Whenua representatives from Ngāti Kere, Te Taiwhenua o Tamatea and Te Whatuiapiti;
- Commercial Fishers Representative
- Private land owners whose properties adjoin the reserve
- Representatives of the communities living at Pourerere, Aramoana and Blackhead
- And East Coast Hawkes Bay Board representative.”²³

The Operational Plan also recognised the importance of honorary rangers and, because of their significant responsibilities, explained that “suitable volunteers will only be appointed where necessary and where the Department is in a position to adequately train and support rangers. . . . In addition to considering the advice of the Marine Reserves Committee, the opinion of tangata whenua will be considered when appointing honorary rangers.”²⁴

Only one honorary ranger has been appointed since 1997 – Selina Wakefield (appointed 2023).

Management issues identified in the 2003 Operational Plan need to be reconsidered as they are just as relevant today as they were when Ngāti Kere agreed to give the coastline in perpetuity. Over the years, these issues have been discussed and pointed out, including through the Marine Reserve Committee, which unfortunately was disestablished in 2011 without warning or consultation. The importance of these issues gives support to the notion

²¹ [Operational Plan](#), at 28.

²² [Operational Plan](#), at 30.

²³ [Operational Plan](#), at 30.

²⁴ [Operational Plan](#), at 38.

of re-establishing a Marine Reserve Committee. The committee needs to be skills based as it was in the initial set up processes in 1997.

Although these issues should be reconsidered now, the reserve itself should not be. It has been mistaken over time that when the review was due, Ngāti Kere could decide whether to keep the marine reserve or not. The decision available to hapū is to determine the value of seeking co-management for the continuation of the marine reserve. We have no rights to ownership.

3 The Review Process

The review process is drawn largely from the guidebook, *How is your MPA doing?* (the Guidebook).²⁵ The Guidebook was informed by field-testing its methodology across 18 pilot sites around the world. Since then, more than 200 sites have used the Guidebook to measure MPA performance, although wide variability exists across the indicators²⁶ that have been examined and the methods used to measure them.²⁷ The working group has adapted the process to include seven basic steps: 1) Plan for a Review, 2) Select Indicators for Review, 3) Conduct the Review, 4) Finalise the Review Report, 5) Share Review Results, 6) Recommend Management Actions, and 7) Capture Learnings.

DOC's Marine Monitoring and Reporting Framework (MMRF)²⁸ helps ensure DOC achieves and measures the objectives of Te Mana o Te Taiao – the Aotearoa New Zealand Biodiversity Strategy 2020.²⁹ The MMRF provides for nationally consistent monitoring of marine reserves and species in the ocean to determine whether management is effective.

There is some overlap between the indicators described by the Guidebook and those described by the MMRF (e.g., focal species abundance). Where the working group has chosen to evaluate one or more of those overlapping indicators, data collection and analysis has followed the MMRF methodology.³⁰

²⁵ Pomeroy, R.S., Parks, J.E. and Watson, L.M. (2004). [How is your MPA doing? A Guidebook of Natural and Social Indicators for Evaluating Marine Protected Area Management Effectiveness](#). IUCN, Gland, Switzerland and Cambridge, UK.

²⁶ An indicator is a unit of information measured over time that allows you to document changes in specific attributes of an MPA. It helps you to understand where you are, where you are going and how far you are from the goal. *Id.* at 214.

²⁷ [Helen E. Fox, Jed L. Holtzman, Kelly M. Haisfield, Catherine G. McNally, Gonzalo A. Cid, Michael B. Mascia, John E. Parks & Robert S. Pomeroy \(2014\) How Are Our MPAs Doing? Challenges in Assessing Global Patterns in Marine Protected Area Performance, Coastal Management, 42:3, 207-226, DOI: 10.1080/08920753.2014.904178.](#)

²⁸ DOC, [Marine Monitoring and Reporting Framework](#).

²⁹ DOC, [Te Mana o Te Taiao – Aotearoa New Zealand Biodiversity Strategy \(2020\)](#).

³⁰ See DOC, Te Angiangi Marine Reserve: A summary of the studies and monitoring 1996-2023 (available upon request).

3.1 Methodology

3.1.1 *Planning for the review*

Planning included scoping the review with Treaty partners and other stakeholders, establishing a working group, drafting a project plan, terms of reference, communications plan, and report outline.

In this case, Ngāti Kere approached DOC to request the promised review. DOC met with the hapū and heard a request for a focussed and timebound review. DOC considered the request and agreed to proceed with a timebound review after concluding this approach would be consistent with the Act and would allow a thorough evaluation of whether TAMR is meeting the objectives for which it was established. The working group agreed that the review would be limited to a report examining the reserve's benefits and recommending ongoing management actions, as appropriate, and that implementation of any recommendations, while outside the scope of the review itself, would follow completion of the report.

The working group included members of DOC's National Marine Protection Programme team and Hawke's Bay District Operations team, and two Ngāti Kere members nominated as representatives at the 2022 September hui, David Tipene-Leach, and Keri Ropiha. For the duration of the review, the working group held meetings every three weeks to review progress and assign tasks.

Ngāti Kere representatives sought and incorporated feedback from the hapū into the review.

The working group initially limited input to DOC, Ngāti Kere, the AEECT as a key community stakeholder, and the ECHBCB.

3.1.2 *Identifying TAMR Objectives and Selecting Indicators*

Indicators measure how well management is meeting the reserve's objectives. The selection of indicators, or measurements, is critical to meaningful review. Indicators assess how well management has achieved biological and ecological, social, and governance objectives.

The first step in selecting indicators was to identify TAMR goals and objectives. These are set out in the Marine Reserves Act, the TAMR application, and in the reserve's 2003 operational plan.³¹ The purpose of the Marine Reserves Act is to preserve, "as marine reserves for the scientific study of marine life, areas of New Zealand that contain underwater scenery, natural features, or marine life, of such distinctive quality, or so typical, or beautiful, or unique, that their continued preservation is in the national interest."³² The objectives of the TAMR application were:

- 1) to give effect to the purposes and principles of the Marine Reserves Act;
- 2) to contribute to DOC's function to conserve and protect the natural character and quality of New Zealand's coastal and marine environments, and the establishment of a nationwide network of marine reserves that is representative of these; and

³¹ [Operational Plan](#).

³² [Marine Reserves Act 1971](#), s 3.

- 3) to provide educational and recreational opportunities for non-extractive users of the Hawke's Bay coast.³³

The operational plan set out objectives to promote compatible scientific research, to foster safe recreational use while minimising visitor impact, to develop strong ties with the public, to protect the reserve from activities both outside and inside its boundaries, and to monitor the reserve over time to inform management. The operational plan explained the connection between Ngāti Kere and the reserve, and that the area covered by its mana now includes the reserve.

The working group then identified additional objectives specific to TAMR including increased visibility of Ngāti Kere mana moana on the coast and the continued connection between Ngāti Kere and TAMR, including increased involvement in decision-making for the reserve. The working group also concluded that the original objectives did not address climate change – a contemporary conservation priority – and chose indicators to assess whether the reserve is resilient to climate change.

The working group thus summarised TAMR's current management objectives as:

- 1) preserving and protecting marine ecosystems;
- 2) providing educational and recreational opportunities;
- 3) maintaining a connection with the public,
- 4) promoting Ngāti Kere mana moana and their connection to TAMR, and
- 5) reflecting contemporary conservation priorities (i.e., climate change resiliency).

After identifying the reserve's goals and objectives, the working group matched them with indicators. The working group then selected several indicators for each objective, twelve in total, to assess whether the reserve's objectives have been met.³⁴

- Preserving and protecting marine ecosystems: the working group chose to evaluate three indicators: **focal species abundance** (section 4.1.1), **habitat type and condition**

³³ Te Angiangi Marine Reserve Application, at 27.

³⁴ The working group selected the 12 indicators from a list of 60 developed to evaluate a broad range of marine protected areas. The working group also considered indicators Ngāti Kere previously developed that are specific to monitoring the health of their rohe moana/coastal and marine area. Two of those indicators – the level of hapū involvement in marine management (tohu tuawha) and the number of prosecutions for illegal catches and takes (tohu tuawaru) overlap with the level of rangatira and kaitiaki participation in biodiversity activities and the level of compliance and are evaluated at sections 4.1.8 and 4.1.3, respectively. See [A process to identify tohu \(marine indicators to measure the health of the rohe moana of Ngāti Kere](#) (2007). The kete tohu consists of the following:

Tohu tuatahi – number and size of kōura/crayfish/rock lobster in shallow water

Tohu tuarua – number and size of hapuka/groper close to the coast

Tohu tuatoru – level of Ohinemuhu rock above sand and abundance of pipi

Tohu tuawha – level of hapū involvement in marine management

Tohu tuarima – availability of native plant resources

Tohu tuaono – number and type of customary take permits issued

Tohu tuawhitu – number, size, and distribution of no-take areas

Tohu tuawaru – number of prosecutions for illegal catches and takes

Tohu tuaiwa – level of rohe moana knowledge within the hapū and community

(section 4.1.2), and **the level of compliance/number of prosecutions for illegal catches and takes** (section 4.1.3).

- Providing educational and recreational opportunities: the working group chose to consider two indicators: **existence and activity level of community organisations** (section 4.1.4) and **local marine resource use patterns** (section 4.1.5).
- Maintaining a connection with the public: the working group chose two indicators: **whether there is a decision-making and management body with an adopted management plan** (section 4.1.6) and **level of stakeholder participation and satisfaction in management of resources at the reserve** (section 4.1.7).
- Promoting Ngāti Kere mana moana on the coast and their connection to TAMR: the working group chose two indicators: **the level of rangatira and kaitiaki participation in biodiversity activities/level of hapū involvement in marine management** (section 4.1.8), and **hapū/local community perceptions of kaimoana availability on the coast** (section 4.1.9).
- Reflecting contemporary conservation priorities (i.e., climate change resiliency): the working group chose three indicators: **ocean acidity and sea surface temperature** (section 4.1.10), the **effect of extreme events on marine ecosystems** (section 4.1.11) and the **prevalence and location of invasive species** (section 4.1.12).

4 Analysis

Each objective and its corresponding indicators are addressed separately below. The working group developed questions for each of the twelve indicators to determine whether each of the five objectives have been met. These questions were answered by subject matter experts, key stakeholders, and the public. Solicitation of public feedback was targeted.

For example, “Preserving Marine Ecosystems: Focal Species Abundance,” measures species abundance to determine how well the reserve has preserved marine ecosystems. To measure species abundance, the working group asked four questions and considered responses to each of them. Based on the answers, the working group has made management recommendations relevant to each indicator. These recommendations are meant to guide implementation of the 13 key recommendations derived from this report (section 5).

4.1 Results: Evaluating the Indicators

4.1.1. Preserving Marine Ecosystems: Focal Species Abundance

To evaluate focal species abundance, the working group relied on the expertise of DOC’s Marine Ecosystems Team, which considered four questions related to the abundance and size of key species.

1) Has the abundance of key species³⁵ changed within the protected site?

Answer: There is not enough data for the monitored species (reef fish, pāua, kina and rock lobster) to make an assessment. Further monitoring would aid understanding.

DOC's analysis of the evidence found that "[b]oth pāua and kina are important grazer species, feeding on algae. Kina are capable of large-scale habitat change, as they feed on kelp, and can completely replace kelp forests with a habitat referred to as 'urchin barrens.' Pāua are a taonga species and their presence and size are an indicator of ecosystem health. Pāua and kina were surveyed in shallow channels inside and outside the reserve from 1999-2003, and again in 2023. . . . Pāua numbers were greater inside the reserve (Figure 5) and pāua were, on average, 15 mm larger in the marine reserve. While numbers of kina were low within the marine reserve and high outside the reserve (Figure 6), large kina were more common in the marine reserve than in nearby non-reserve areas."³⁶ Numbers of pāua were lower in 2023 than 2003 and were approximately the same as in 1999. It is unclear to what extent the 2011 landslips affected the pāua population. Continued monitoring is necessary to observe trends.

Kina numbers may be low within the reserve because ocean currents may make settlement of young kina on reefs outside the reserve more likely.³⁷ Or the higher numbers of rock lobsters in the reserve may be the cause. Rock lobsters are predators of kina and can consume all sizes. In other marine reserves the recovery of predators like lobsters has led to lower kina numbers and an increase in kelp cover.³⁸

³⁵ See [Māori methods and indicators for marine protection: a process to identify tohu \(marine indicators\) to measure the health of the rohe moana of Ngāti Kere / on behalf of Ngāti Kere](#) (2007).

³⁶ Department of Conservation, Te Angiangi Marine Reserve: A summary of the studies and monitoring 1996-2023 (available upon request).

³⁷ *Id.* at 10.

³⁸ *Id.* at 9.

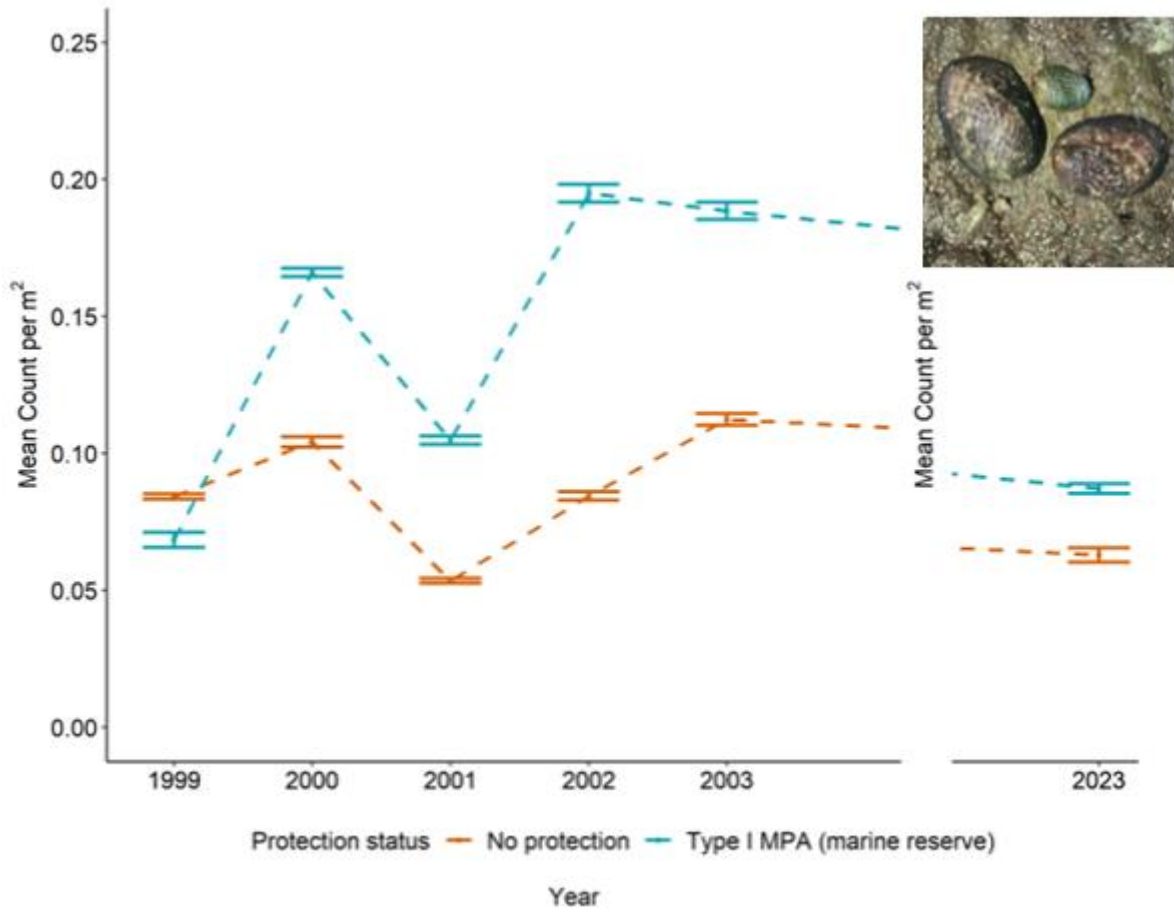


Figure 5: Mean count per square meter of pāua in the marine reserve and two non-reserve areas (Blackhead and Aramoana). Error bars represent the standard error.

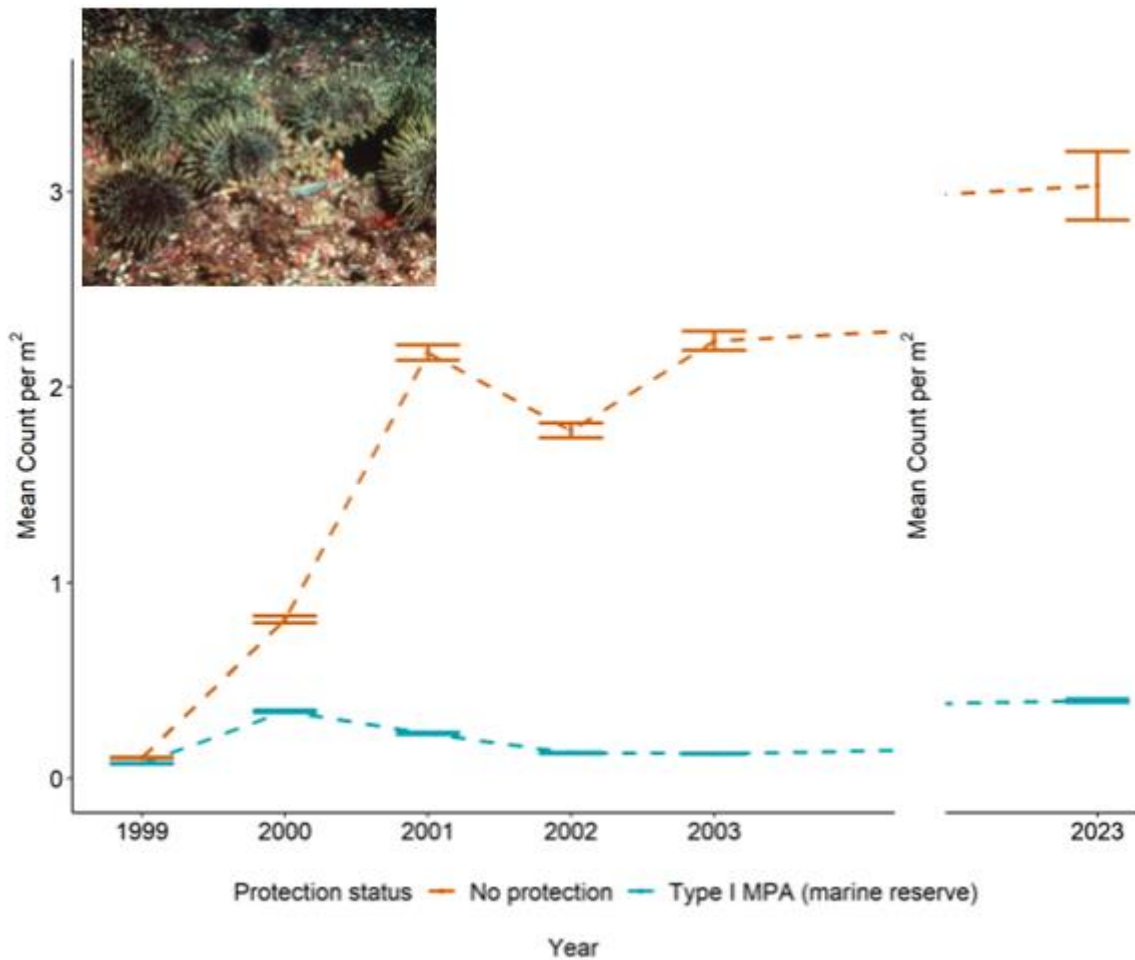


Figure 6: Mean count per square meter of kina in the marine reserve and two non-reserve areas (Blackhead and Aramoana). Error bars represent the standard error.

Surveys done between 1995 and 2007 show the number (Figure 7) and size of lobsters in shallow water were generally greater inside the reserve than outside.³⁹ Within “two years after establishment of the marine reserve, lobsters were consistently larger inside the reserve compared to outside.”⁴⁰ “[L]obster surveys in 2007 found that on average, males were 24.4 mm and females were 6.4 mm bigger in the marine reserve (measured as carapace length).”⁴¹ It is not known whether this trend has continued, as there was no monitoring between 2007 and 2024. In January 2024, DOC undertook additional sampling, inside and outside the reserve using lobster potting, and currently is processing the data.

³⁹ *Id.* at 8.

⁴⁰ *Id.* at 7.

⁴¹ *Id.* at 9.

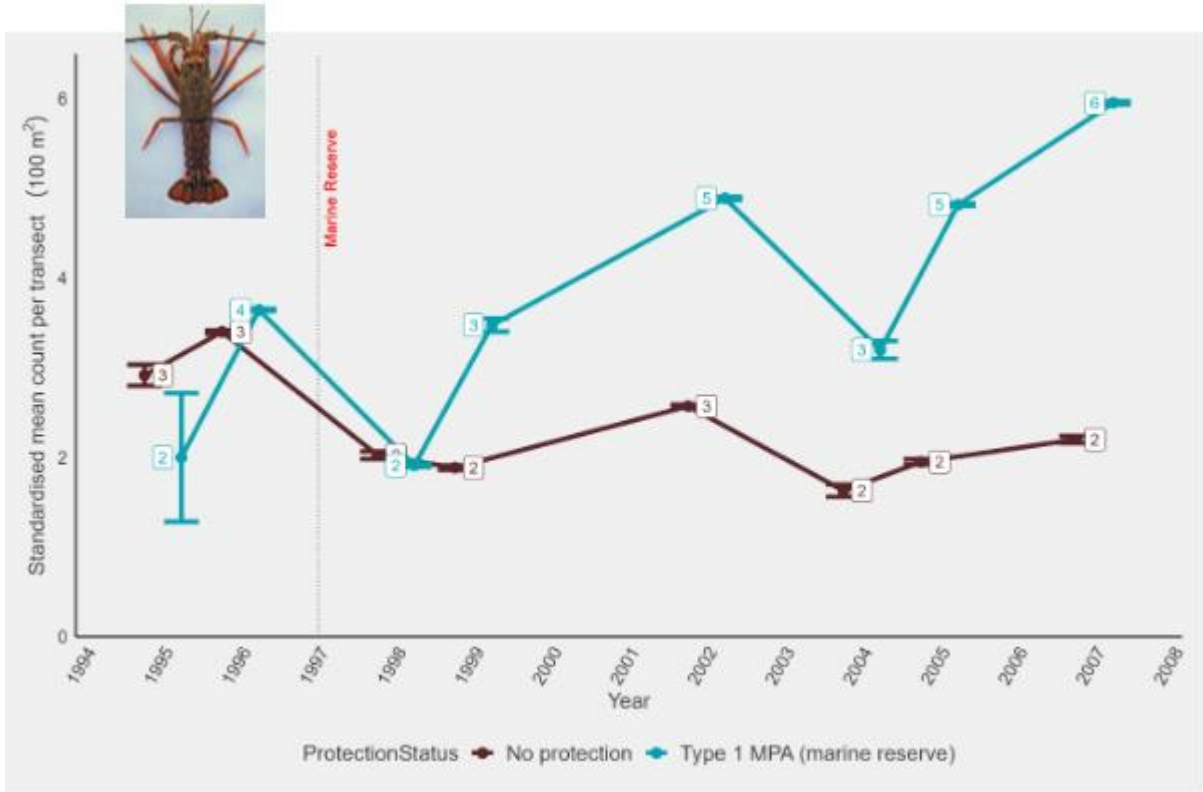


Figure 7: Standardised mean count of lobster per 100 m² from 1995-2007. Error bars represent the standard error.

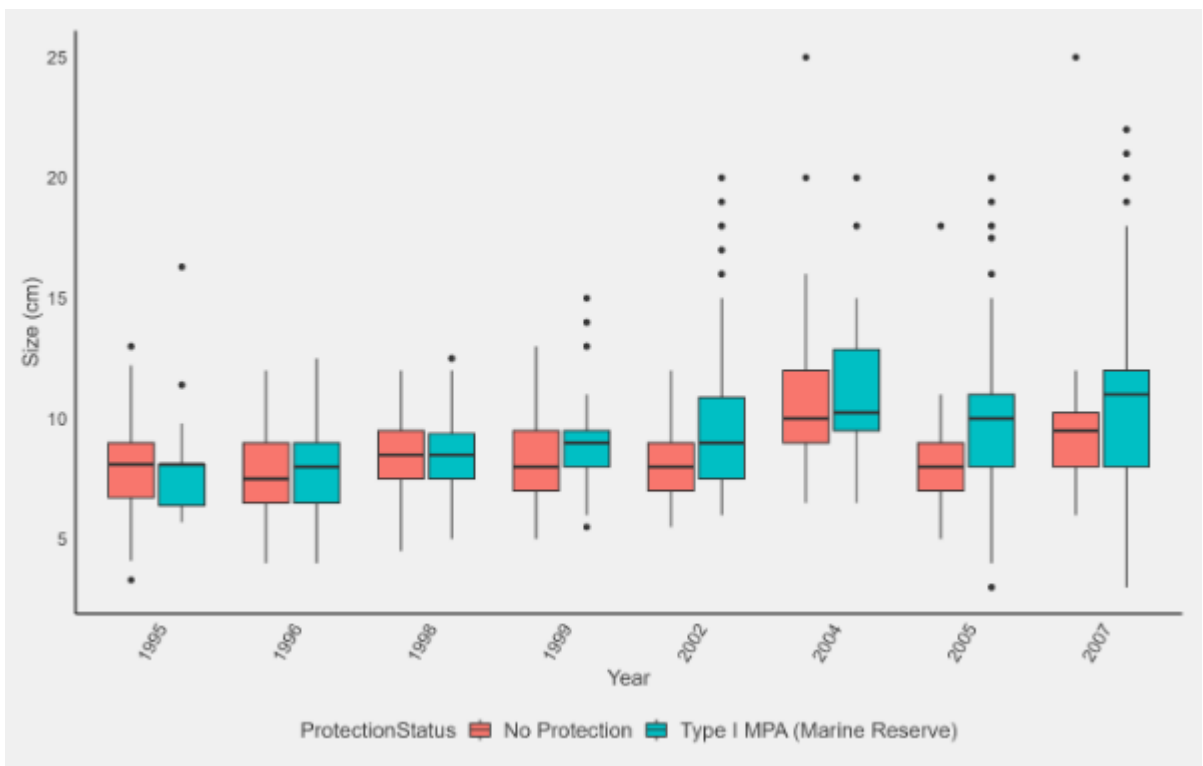


Figure 8: Boxplot of lobster sizes inside and outside TAMR.

Prior to the reserve’s establishment, fishing in the area consisted of a wide range of methods targeting a variety of finfish species. From 1995-2005, divers conducted reef fish surveys both inside and outside the reserve. No trend was observed for butterflyfish, *Odax pullus*. For the first five years of protection, numbers for banded wrasse, *Notolabrus fucicola*, spotty wrasse, *Notolabrus celidotus*, and scarlet wrasse, *Pseudolabrus miles*, seem to have remained stable, while after five years, the scarlet wrasse seemed to be increasing both inside and outside the marine reserve. “In multiple marine reserves around the country, protection has resulted in higher numbers and larger individuals for blue cod, snapper, and other key species after longer periods of reserve establishment (seven years+). Reef fish have not been monitored at TAMR for almost 20 years. Further monitoring is needed to understand how protection has changed the number and size of fish within Te Angiangi marine reserve.”⁴²

2) Has the size of key species changed within the protected site?

Answer: Data collected for some species (reef fish, pāua, kina and lobster) showed no clear trend. Further monitoring would aid understanding. See discussion above.

3) Has the number of key species changed over time within the protected site?

Answer: There were insufficient data to determine whether the establishment of the TAMR has changed the number of key species over time.

eDNA sampling in 2021 and 2023 was insufficient to determine whether key species are located inside the reserve. The kete tohu for the rohe moana of Ngāti Kere includes two key species that have not been studied in the area – hāpuku and pipi.

4) Has the size of key species changed over time within the protected site?

Answer: Data collected for some species (reef fish, pāua, kina and lobster) showed no clear trend. Further monitoring would aid understanding. See discussion above.

No data were collected on fish sizes for the surveys between 1999 and 2007. Results from lobster surveys from 1995 to 2007 show that lobster size increased slightly over time, both inside and outside the reserve (Figure 8). As discussed above, pāua were, on average, 15 mm larger inside the reserve in 2023. Although kina numbers were lower inside the reserve than outside, large kina were more common in the reserve than in nearby non-reserve areas. Additional monitoring is necessary to conclude if kina are larger in the reserve.

Recommendations:

- Next round of intertidal (kina/pāua) surveys should use the rāhui space at Parimāhu to compare areas with different types of protection.
- Lobster monitoring needs to be reestablished to understand if numbers have continued to recover since 2007 and to determine whether average size has

⁴² *Id.* at 6.

continued to increase. DOC and Ngāti Kere have started this monitoring (via potting) in 2024.

- The kete tohu Ngāti Kere published in 2007 includes hāpuku and pipi that have not been studied in the area. If Ngāti Kere continues to consider these species a priority, discussions should be had as to how to monitor these species.
- Baited underwater video is the recommended method for monitoring fish given the conditions at TAMR. This method would allow the quantification of the size and density of carnivorous fish species inside and outside the reserve. This is a good method for the hapū to be involved with.

4.1.2. Preserving Marine Ecosystems: Habitat Type and Condition

To determine habitat type and condition, DOC's Marine Ecosystem Team explored several questions.

1) What habitats are present within TAMR?

Answer: The intertidal area is dominated by rocky reef platform with a small amount of seagrass. There are five major reef habitat types in the subtidal area – encrusting invertebrates, sponge flat, mixed algae, *Ecklonia* forest and a very small amount of shallow *Carpophyllum*, a brown algae (Figure 9).

In 2005 the reserve and surrounding areas were mapped using side-scan sonar and remote video imagery which revealed the five major reef habitat types. Much of the very shallow habitat was not surveyed due to sea conditions and no diving was undertaken to collect species for accurate identification. Although the remote survey technique involved a lack of certainty, it did allow for broad habitat classifications.

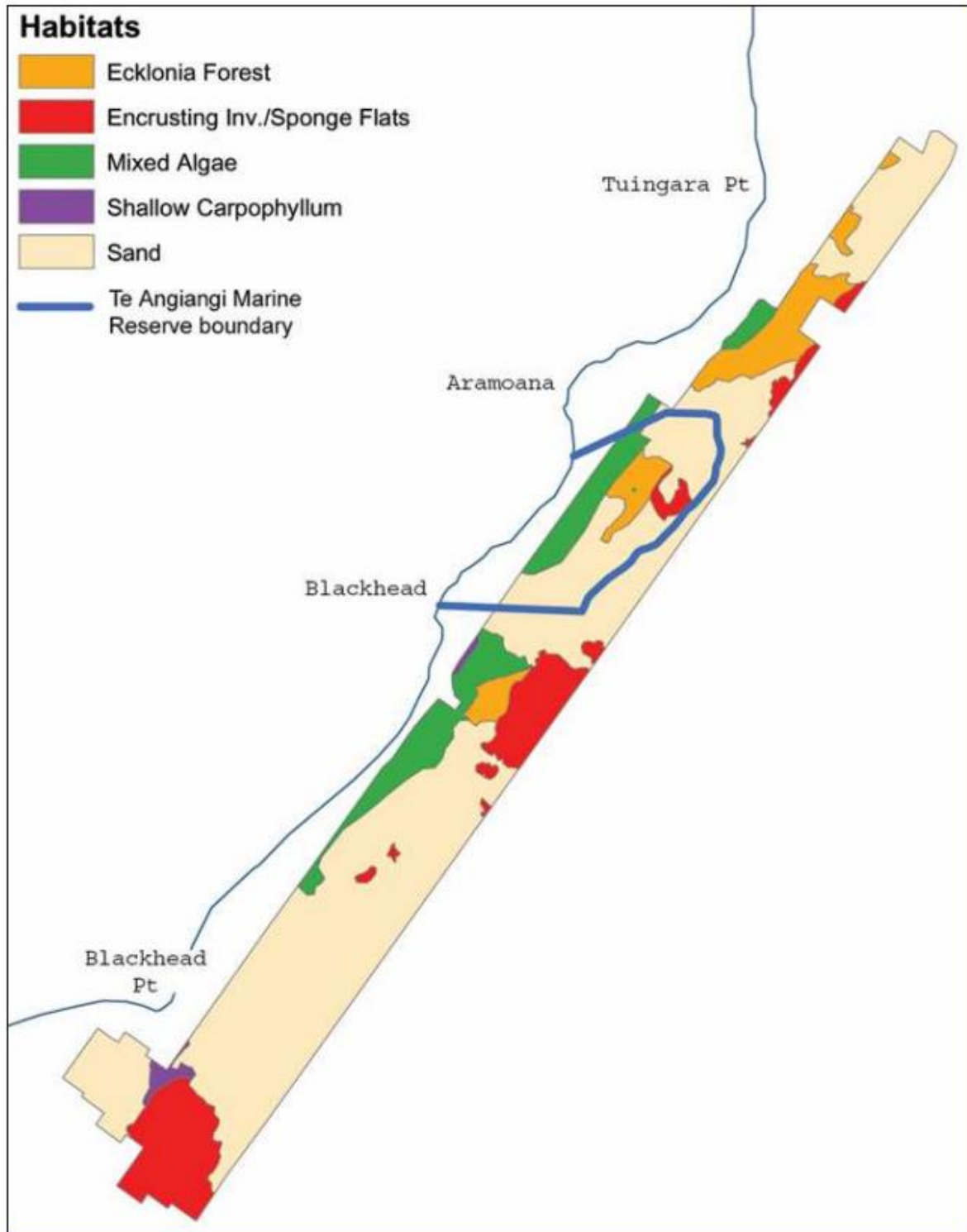


Figure 9: Subtidal reef habitats based on side-scan sonar and video information in 2005.

In addition, parts of the marine reserve were mapped using multibeam sonar in June 2023 following Cyclone Gabrielle. NIWA and the *RV Kaharoa* crew sampled 36 sites in Hawke's Bay, including inside the reserve (Paoanui Point) (Fig. 11). Kelp, *Ecklonia radiata*, occurred at four locations, including Paoanui Point, inside the reserve, at sufficiently high densities to

constitute kelp forest.⁴³ Densities outside the reserve at Blackhead Point were too low to constitute kelp forest. 98% of the plants surveyed inside the reserve were healthy and 100% of the plants surveyed at Blackhead Point were healthy.

⁴³ Leduc, D.; Collins C.; Gall M.; Lundquist, C.; Macdonald, H.; Mackay, K.; Mountjoy J.; Morrison, M.; Orpin, A.; Pinkerton, M.; Spain, E.; Barry, F.; Bodie, C.; Carson-Groom, E.; Connell, A.; Fenwick, M.; Frontin-Rollet, G.; Halliday, J.; Leunissen, E.; Madden, B.; Mason, G.; Maurice, A.; Nepia-Su'a, A.; Olsen, G.; Peart, R.; Quinn, W.; Stewart, R.; Toataua, N. (March 2024). [Cyclone impacts on fisheries](#). *New Zealand Aquatic Environment and Biodiversity Report*.

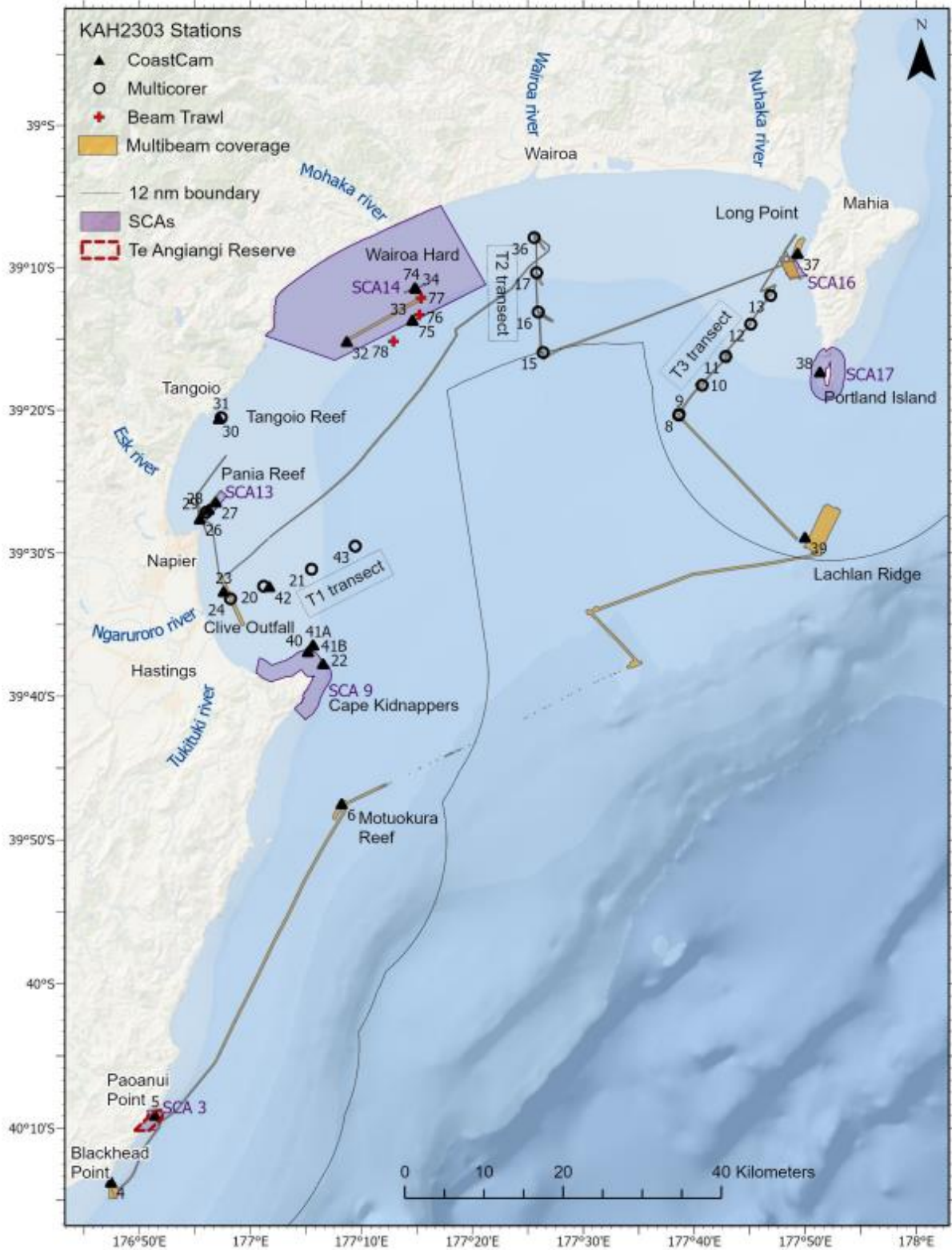


Figure 10. Location of Hawke's Bay sampling sites and multibeam coverage during June 2023 RV Kaharoa survey, including Paoanui Point, Significant Conservation Area (SCA) 3.

With respect to the habitats and ecological assemblages at a site within TAMR and at nearby Blackhead Point, Leduc *et al.* 2024 stated:

“Paoanui Point and Blackhead Point

Water clarity was good at both Paoanui Point and Blackhead Point in the southern Hawke’s Bay coastal region when surveyed in June 2023 [Figure 10]. *Ecklonia radiata* kelp plants were largely healthy, and no evidence of fine sedimentation was seen on the reefs or the adjacent rippled sand. Collectively, the ecological assemblage at these locations were in line with what would be expected for an open coastal reef away from major sediment inputs, and there was no evidence of sediment impacts.

At Paoanui Point within the Te Anghi Reserve, extensive reef extended out from the shore, interspersed with patches of sand An *Ecklonia radiata* kelp forest was present across the main reef area [Figure 11]. This forest occurred as patches, and was not continuous, occurring on both rock outcrops, and on flat bedrock with a thin sand veneer. A small, foliose red alga was common, along with patches of remnant rhizomes of green alga *Caulerpa* sp. without blades (note that this alga was not the invasive exotic species *Caulerpa brachypus* or *Caulerpa parvifolia*). At least five other species of red macroalgae were also present, along with patches of the green alga *Codium* sp. Pink coralline algae were widespread as small patches. The soft bryozoan *Margaretta barbata* was common and widespread, as well as sponges, gastropods, sea cucumbers and fish.”⁴⁴

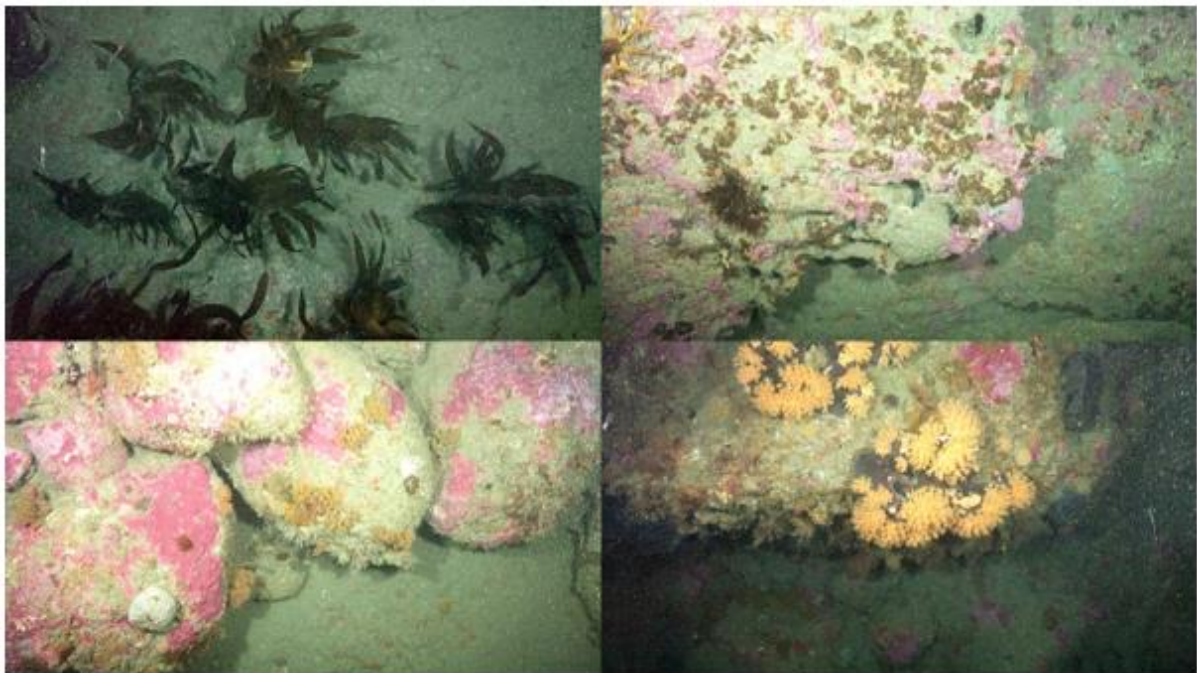


Figure 11: Paoanui Point seafloor imagery (June 2023 survey). Top left: *Ecklonia radiata* kelp forest; top right: green macroalgae *Codium* sp. and coralline algae (pink); bottom left: boulder habitats with coralline algae and soft bryozoans (*Margaretta barbata*); bottom right: deeper reef with the sponge *Ecionemia alata* and the yellow zoanthid anemone *Epizoanthus* sp.

⁴⁴ *Id.* at 73.

2) What is the spatial extent of habitats present within TAMR?

Answer: See Figure 9. Subtidal reef habitats are broadly mapped based on side-scan sonar and video information in 2005. Intertidal habitats have not been mapped.

3) Are the extent and conditions of focal habitats within the reserve changing over time?

Answer: More research is needed to quantify the changes in habitats over time and to more accurately estimate percentage cover of habitat types.

The 2011 severe storm and associated earthquake changed the habitat directly adjacent to the slip that occurred on the cliffs at the north end of the reserve. A survey of the sediment types revealed that largely the change was grain size; where there was previously medium sized sand, there became fine sand.⁴⁵

Recommendation:

- A drop camera survey would allow DOC to validate the results of the multibeam survey, and thereby quantify the changes in habitats over time and more accurately estimate percentage cover of habitat types.

4.1.3. Preserving Marine Ecosystems: Level of Compliance / Number of Prosecutions for Illegal Catches and Takes

DOC's Marine Reserves Ranger is on location at TAMR approximately one day per week. MPI fishery officers patrol TAMR up to three times per week in the summer or when they are made aware of periods of high risk. New Zealand police also patrol through the reserve, however not on a regular basis. The local hapū have trained staff who often patrol the marine reserve and adjacent areas. Local hapū patrols do not have powers of authority under the Marine Reserves Act and are therefore limited to using preventative tools such as intervention and education. When Fisheries New Zealand comes across a marine reserve offence, they put together an evidence file including photographs and interviews with offenders and pass the file to DOC. According to the Senior Compliance Officer for Fisheries New Zealand, there have been no files that have been passed on to DOC for several years.

Since September 2020, DOC has used an application "CLEWorks" to record law enforcement incidents. Prior to that, all incidents were manually recorded. Many interactions are addressed prior to any violation occurring and therefore are not recorded in CLE Works.

Between 2007 and September 2020, DOC reported 33 offences, with 16 court cases/prosecutions. No offences, however, were reported in the years 2009-2015. No incidents were reported in 2020-2022. DOC reported eight incidents in 2023. Details were

⁴⁵ Macpherson (2013), Effects of catastrophic landslides on the Te Angiangi Marine Reserve, Hawke's Bay, New Zealand (unpublished, available upon request).

not available for all incidents prior to 2020, but from the information available, most of the offences involved illegal take of kina and pāua.

The DOC marine reserve ranger programme created in 2020 resourced a dedicated marine reserve ranger for TAMR in 2022. Since this ranger has been onboard and able to focus on the reserve, his presence has provided consistent compliance monitoring of the reserve. The increase in reports from 2023 compared with previous years demonstrates the benefit of having a ranger dedicated to the reserve.

DOC's Regional Operations team answered a number of questions that contextualise the compliance data. Answers to the following questions are based on the experience and opinion of DOC employees.

1) Where and why are people most likely to comply or not comply?

Answer: The presence of law enforcement officers appears to be most effective at reducing illegal activities.

People know that sea life is plentiful within TAMR and have taken advantage of the lack of patrolling officers and non-threatening fines to try to harvest from the reserve. The DOC marine reserve ranger has increased DOC patrols and has increased the effectiveness of interagency compliance monitoring.

Signage works to deter most people from illegal activities. The signage has been updated recently to provide adequate boundary marking and information about the reserve and the rules. Compliance signs have been upgraded with the Ngāti Kere logo to acknowledge their guardianship of the area.

2) What is the extent of advocacy and education efforts?

Answer: DOC made extensive efforts up to 2011 when efforts were reduced due to lack of funding. Recently, the dedicated marine reserve ranger has increased advocacy and education efforts.

The TAMR ranger has been working hard to bring together the community around TAMR. DOC funded a compliance safety course (CERT) with local hapū to train tangata whenua who would like to educate visitors to the coastal area and reserve. As a result, local hapū regularly patrol the reserve and adjacent rāhui, but are not warranted officers (WO) under the Marine Reserves Act.

3) What effect does DOC presence have on compliance?

Answer: The DOC presence appears to be very effective in deterring illegal activities.

DOC closely communicates with police for serious incursions and is in contact with Fisheries New Zealand officers who also patrol the area regularly, both openly and covertly.

DOC has also been involved in joint agency patrolling, including check points with Fisheries New Zealand and New Zealand Police. DOC, New Zealand Police, and New Zealand Fisheries communicate regularly and work cohesively to monitor compliance of the reserve.

4) What causes changes in compliance rates over time?

Answer: Factors that influence compliance rates include trained staff, especially a dedicated marine reserve ranger, a Compliance and Law Enforcement (CLE) Plan for TAMR that is executed over busy periods such as summer and long weekends, the availability of law enforcement staff (both DOC and external) locally at TAMR, a constant presence at the reserve, clear signage and marked reserve boundaries communicated to the public.

Prosecutions do not appear to be making any difference in compliance rates over time. Rather, the constant presence of WOs seems to be the most successful deterrent.

5) How much time is spent on patrol/surveillance?

Answer: There are at minimum weekly DOC patrols between October and April.

6) How has the number of offences changed over time?

Answer: We are unable to answer this question because prior to 2020, there appears to have been inconsistent CLE record-keeping.

Prior to 2020, WOs would pass on their compliance files to managers and then the legal team who would decide appropriate outcomes. Different operations managers may have made decisions to elevate compliance files differently.

Current processes: Since 2020 the WO have had decision-making authority (with auditing from national compliance officers) for the recommended enforcement action for an alleged offence. Every WO follows the DOC decision-making matrix to make their recommendations, creating a consistent national and district approach to an offence. This is to ensure that there is no bias or unfairness to those who are alleged to have offended in the reserve. There may be a decrease in marine reserve prosecutions since 2020 and into the future as many of our offences are better suited for infringement notices, which have only been put into legislation since 2020.

The enforcement rates (prosecution/infringements/warning letters/official advocacy) may appear inconsistent due to changes in the consistent presence of rangers in the reserve who are able to either intercept offences or prevent them. DOC WOs are trained to prevent an offence if they can see it may be committed (rather than waiting for it to happen and then apprehending an alleged offender) and DOC is working on a system to better record those numbers in our compliance data nationally.

Since changes were implemented in 2020, WOs may be inconsistent with how they approach alleged offences only if there is a safety or perceived safety issue in the field. If staff feel unsafe, then they must make a judgement call on how best to approach an incident to ensure their safety. This may result in not collecting adequate evidence for an offence. Other non-WO staff may be included in the roster of staff undertaking patrolling or monitoring of the reserve. These individuals may be more likely to be inconsistent in their

approach to alleged offenders as they are not as extensively trained and it may be best for them to educate, verbally warn, or simply record that an alleged offence took place.

Recommendations:

The constant presence of law enforcement officers appears to be most effective at reducing illegal activities. To achieve constant presence, the following may be effective:

- Sustained funding for a dedicated marine reserve ranger and supporting staff, along with continued resources to train locals, community groups, and hapū to patrol the reserve.
- Relationship building between DOC and the local community to encourage residents to report illegal take with the confidence that it will be investigated.
- Establishing a local base or hub for DOC rangers to undertake work and stay overnight to reduce travel time and increase DOC presence at TAMR.
- Ongoing training for staff who are able to undertake law enforcement.
- Increased signage.
- Surveillance camera(s); explore combining cameras with a weather station and/or a video feed of the reserve to interface with the public. TAMR is a good candidate for CCTV because of the long travel time from the DOC base in Napier to the reserve, the fact that gang-related illegal activity poses a high risk for face-to-face interactions, and because most illegal activity is from shore, and cameras would capture cars entering and exiting the reserve and would allow WO to search number plates for identification details remotely.
- Utilise the Automatic Identification System (AIS), which alerts DOC if any commercial vessel enters the reserve.

4.1.4. *Providing Educational and Recreational Opportunities: Existence and Activity Level of Community Organisations*

- 1) Are there community organisations engaged at TAMR? How are they engaged?

Answer: The Aramoana Environmental and Education Charitable Trust (AEECT) is the community organisation most engaged at TAMR.

In drafting the review report, the working group sought the input of the AEECT, the community organisation most engaged at TAMR. According to AEECT, its mission includes raising the profile and increasing the community commitment to TAMR. The AEECT was established in 2010 and looks after the Ouepoto Reserve and Te Ikatiere Reserve, which are adjacent to TAMR. The group coordinates school education camps at TAMR. There are other groups that are engaged at the reserve, as highlighted below.

4.1.5. *Providing Educational and Recreational Opportunities: Local Marine Resource Use Patterns*

DOC evaluated local marine resource use patterns by answering a series of questions.

- 1) What marine related activities are taking place at sea?

Answer: Recreational activities include guided youth snorkel trips to observe sea life, Wahine Divers to teach women how to gather kai safely, and family snorkels.

Recently, The Dive School and the Tangata o te Wai Charitable Trust, founded by Robert Houkamau (Ngāti Kere) and Waimaria Hurinui, have received funding from Water Safety New Zealand to deliver water safety programs to people within Central Hawke’s Bay and the surrounding areas. The Dive School provides knowledge and skill-based classes from beginner to advanced diver. In 2024, The Dive School led one snorkel dive at the reserve and plans to hold up to 30 more classes at TAMR in the coming year.

2) What related activities are taking place on land?

Answer: There are several educational programmes and recreational activities taking place at the reserve.

In the past, DOC has run educational programmes for school-aged children over the summer. This discontinued due to reduced resources. Since then, educational resources have been developed and are available for schoolteachers.

More recently, DOC has worked with interested stakeholders such as the AEECT and the National Aquarium of New Zealand on a variety of projects, including educational programmes and school camps. In addition, Victoria University of Wellington postgraduate students visit the reserve annually to study conservation management.

Since 2011, the Hawke’s Bay Regional Council and AEECT have partnered on a planting and regeneration project on 44 hectares of steep land above the reserve between Aramoana and Blackhead. So far, 15,000 native plants have been planted. The main aim of the project is to protect the reserve from sedimentation caused by significant erosion. The project will create a habitat of rich biodiversity for the whole community to enjoy.

Self-directed recreational uses include diving, swimming, and boat launching. In addition, motor bikes, four-wheel drive vehicles, and light utility vehicles are in use on the beach.

3) What impacts are these activities having on marine resources?

Answer: Most activities appear to have a minimal impact on marine resources.

While there has been no monitoring of the impact of activities within the reserve, it is unlikely that they will be having a significant impact on marine resources within the reserve. Resources that spill over from the reserve (e.g., lobster) are targeted very hard. High demand in the surrounding area increases the risk for illegal activities at TAMR.

4) Who is involved in education and recreational activities?

Answer: Many groups and individuals participate in activities at the reserve, as set out below.

Answer: Most activities appear to have a minimal impact on marine resources.

5) How many people are involved in each activity?

Answer:

- Diver-led youth snorkels – 1 local + 5-10+ kids
- Planting – 40 volunteers, DOC, AEECT, Hawke's Bay Regional Council
- Programmes run by AEECT – 2 Victoria University staff + 20-30 students

6) What are their basic characteristics?

Answer: Many of the programmes on-site are designed for school-age children and university students.

7) How are the uses conducted?

Answer: Educational and volunteer uses vary depending on the objectives of the programmes.

8) How do these methods affect the marine resources?

Answer: Scientific studies, recreational uses, and educational uses appear to have a low impact on marine resources. Effects of research are managed through appropriate conditions on permits granted by DOC.

9) Where do stakeholders live and work?

Answer: Stakeholders include residents of Shoal Bay/Aramoana, Blackhead, and members of the Ngāti Kere hapū, Pōrangahau. Others reside in Hastings, Kereru, Waipukurau, and Waipawa.

10) Where are the marine resources located for comparison?

Answer: Pōrangahau is about 30 kilometres from the reserve. Shoal Bay/Aramoana and Blackhead are geographically adjacent to TAMR. Napier is about 100 kilometres from the reserve.

11) When do the uses take place and what changes occur at particular times (e.g., daily, seasonally)?

Answer: Most uses take place between October and March, with the heaviest use in summer.

12) Why do these changes occur?

Answer: Summer weather conditions and holidays are more conducive to scientific field work and recreational activities.

Changes have also occurred over time. DOC used to lead environmental education programmes at TAMR, by actively running summer programmes (i.e. every Saturday in January 2003) and school talks/walks (329 people total in March 2007). DOC also developed numerous resources for schools. This includes resource kits and a promotional DVD (2002). Since about 2015, this has continuously reduced and currently all educational programmes are run by AEECT. Some of the resource kits and education programmes were modified and offered to various Hawke’s Bay schools as part of the Cape to City programme, but this also ceased at the end of Cape to City funding in 2021.

Recommendation:

- Conduct community outreach to learn how management of the reserve could better support the community’s educational and recreational priorities.

4.1.6. *Developing Strong Ties with the Community: Existence of a Decision-Making and Management Body with an Adopted Management Plan*

As noted above, DOC’s Regional Operations team based in Ahuriri/Napier is charged with managing the reserve. The team explained how management functions by answering a series of questions.

1) Is there a current management plan for TAMR?

Answer: There is a May 2003 Operational Plan that has not been updated since then. There is a more recent species monitoring plan developed by the Marine Ecosystem Team that.⁴⁶

2) Who is responsible for TAMR management?

Answer: DOC is responsible for the administration, management, and control of the reserve (S. 9 Marine Reserves Act).

DOC’s management must be undertaken in accordance with the Hawke’s Bay Conservation Management Strategy, the Conservation General Policy, and in such a way as to give effect to the principles of the Treaty of Waitangi (S. 4 Conservation Act 1987).

In the earlier years of the reserve, DOC also provided administrative and secretarial support to the Marine Reserve Committee, which was a committee of the Wellington Hawke’s Bay Conservation Board (now the ECHBCB). The committee was disestablished following a review in September 2011. The review found that the committee played a major role in the establishment and initial management of the reserve but that the need for the committee

⁴⁶ DOC has prepared a provisional monitoring plan for TAMR that DOC has not fully implemented (plan available upon request).

had lessened to a point where it was no longer required. Safeguards for community involvement from “Friends” groups like the Friends of Taputeranga Marine Reserve, and community initiatives driven by DOC, were proving an efficient and effective model to assist in DOC’s responsibility to maintain the reserves under the Conservation Act.

The Conservation Board agreed to the disestablishment of the TAMR Committee and noted it would resume responsibility for any statutory decisions necessary concerning TAMR. The Conservation Board agreed that its preference for maintaining effective community consultation and relationships relating to the reserve was to hold an annual community meeting or event and to utilise existing iwi and community relationships.⁴⁷

3) Where is the decision-making/management body sited?

Answer: Operational decisions sit with DOC and the ECHBCB is responsible for any statutory decisions necessary concerning TAMR.

4) Which individual is responsible for its operation?

Answer: The Director-General is responsible for TAMR’s operation.

According to the Marine Reserves Act, the Director-General of DOC “shall administer, manage, and control marine reserves in accordance with approved general policies, conservation management strategies, and conservation plans.”⁴⁸ In terms of day-to-day operations, the operational plan does not identify a responsible individual.

5) Where is the authority documented?

Answer: The TAMR Operational Plan, s. 2.3, identifies DOC as responsible for the administration, management, and control of the reserve.

6) How often does the management body meet?

Answer: There are no regularly scheduled meetings for any management body.

The Marine Reserve Committee met every three months until its disestablishment in 2011. Meetings with hapū and other interested parties has been irregular since then and not well documented. The ECHBCB liaison reports TAMR activity and issues from Ngāti Kere contacts to the Conservation Board at least quarterly. From time to time, ECHBCB raises specific issues with DOC. DOC provides updates to the ECHBCB every three or four months.

In 2021, the local operations team established another group to communicate issues relevant to the reserve. That group, which was comprised of the DOC Operations Manager,

⁴⁷ [Minutes](#), Wellington Hawke’s Bay Conservation Board (6 May 2011).

⁴⁸ Marine Reserves Act 1971 s 9.

Ngāti Kere representatives, and the AEECT, is not currently active. The DOC Marine Reserves Ranger is in regular contact with Ngāti Kere and the AEECT and updates them on management of the reserve.

7) Does Ngāti Kere participate in management decisions?

Answer: No, Ngāti Kere does not participate in management decisions.

When the Marine Reserve Committee was active, Ngāti Kere members sat on the committee and were actively involved in management decisions. Since 2011, DOC activities at TAMR have been reduced almost entirely to law enforcement. DOC has made attempts since 2015 to re-engage with stakeholders and establish a working group, including Ngāti Kere representatives, however, this has not been successful. DOC currently informs Ngāti Kere on operations at the reserve.

Recommendations:

- Re-establish management committee with clear terms of reference for the roles each member-group plays in terms of TAMR management.
- Management committee meets regularly (e.g., every six months).
- Review Operations Plan regularly and update as appropriate.

4.1.7. Developing Strong Ties with the Community: Level of Stakeholder Participation and Satisfaction in Management Processes

DOC sought to gauge stakeholder participation and satisfaction by distributing short surveys to trustees of the AEECT. DOC also distributed the surveys to interested public on an ad hoc basis. These were meant to be qualitative, assessing perceptions of reserve management, rather than quantifying data. Participation was very limited with only a handful of responses. Survey questions were:

1) On a scale of 1 to 10, how informed/involved are you with management of Te Angiangi Marine Reserve?

Answer: 5, because information from DOC has been difficult to get and historically there has been a lack of care regarding management of the reserve.

Answer: 4, because DOC has not been good at communicating with those that reside in the local community.

2) On a scale of 1 to 10, how satisfied are you with your level of involvement?

Answer: 5, because until recently it has been difficult to work with DOC.

Answer: 1, because of feeling excluded from discussion about the review and concern that Ngāti Kere may have its own goals, which do not reflect those of the community.

3) Who do you believe should be responsible for management of resources at Te Angiangi Marine Reserve?

Answer: One response listed the Ngāti Kere hapū, DOC, AEECT, and local communities and one listed DOC.

Recommendations:

- Continue community hui amongst Ngāti Kere, DOC, AEECT, and local communities with the ultimate decision-making authority with Ngāti Kere and DOC.
- “[M]ore consultation, more policing of the Reserve. (Just last week there were poachers with a trolley used to take their loot on three weekdays). [The Marine Reserves Ranger] needs more help if he has any chance of succeeding. Also there is a joint responsibility, this includes Ngāti Kere, who have been missing in action also.”
- Additional signage.

4.1.8. Developing Strong Ties with the Community: Level of Rangatira (Leadership) and Kaitiaki (Guardianship) Participation in Biodiversity Activities / Level of Hapū Involvement in Marine Management

To assess the visibility of Ngāti Kere mana moana on the coast and the continued connection between Ngāti Kere and TAMR, the working group evaluated the level of rangatira and kaitiaki participation at the reserve. The working group addressed the following questions:

1) How many hapū members are involved in species monitoring activities?

Answer: Several hapū members are involved in species monitoring. The number has varied over time.

2) In what capacity are hapū members involved in monitoring activities?

Answer: Hapū members are involved as boat operator for kōura/crayfish/rock lobster

3) How many hapū members are involved in leadership positions associated with monitoring activities?

Answer: None.

4) How many hapū members are involved in surveillance and enforcement?

Answer: Hapū members are involved in enforcement as volunteer advocates for the reserve, patrolling the beach.

Further information was gathered at a hui at the Rongomaraeroa Marae on 19 May 2024. The consensus was that the young people of the hapū are the future. The hapū must lead education for its own members and the wider community to grow the community available to look after the reserve and to participate in monitoring. The hapū needs a strategic plan and local leaders to connect young people to TAMR, tīpuna, whenua, and moana.

Recommendations:

- Establish two levels of governance: 1) strategic oversight committee made up of Ngāti Kere and DOC District Operations Manager, and 2) management group made up of various groups involved in activities at the reserve (i.e., DOC, Ngāti Kere (tangata whenua), AEECT, Tangata Kaitiaki, community representatives).
- To incorporate knowledge held by tīpuna, include oral histories as baseline for monitoring.

4.1.9. Developing Strong Ties with the Community: Hapū/Local Community Perceptions of Kaimoana Availability on the Coast.

Two questionnaires from community stakeholders were returned addressing Perceptions of Kaimoana Availability on the Coast. These questions were presented at the 19 May hui with Ngāti Kere but were not directly addressed by the hapū, although there was concern expressed there about how to feed hapū members.

1) What species do you fish/harvest?

Answer: One respondent mainly harvests kōura/crayfish/rock lobster and, to a lesser extent, harvests pāua.

Answer: One respondent harvests both kōura/crayfish/rock lobster and pāua.

2) Compared to 25 years ago, how has the quantity of those species changed along the Hawke's Bay coastline?

Answer: Don't know. It is their opinion that the reserve is beneficial to maintaining the level of biodiversity and fish stocks at healthy levels in the areas surrounding the reserve.

Answer: The quantity of lobster has increased due to the success of the commercial quota system, not the reserve. The quantity of pāua has decreased due to illegal activity.

3) Compared to 10 years ago, how has the quantity of those species changed along the Hawke's Bay coastline?

Answer: Don't know. More scientific work should be done to confirm whether the reserve is beneficial to the abundance and diversity of species.

Answer: The quantity of lobster has increased. The quantity of pāua has stayed the same.

4) What impact do you believe the Te Angiangi Marine Reserve has had on your ability to fish or harvest your desired species?

Answer: The respondent believes the reserve has had a beneficial impact on their ability to fish and harvest in the area because it supports marine biodiversity and fish stocks in the areas surrounding the reserve. In addition, they value the recreational opportunities associated with the reserve including snorkelling, diving and observing marine life in an undisturbed environment.

Answer: The reserve has decreased the ability to fish for lobster although there are still other areas to fish. The reserve has decreased the ability to harvest pāua and pāua stocks have decreased because of illegal activity on the coast. The reserve, and subsequent rahui have placed more pressure on other areas up and down the coast.

Recommendations:

- Conduct more comprehensive research on the benefits of TAMR to achieve a more informed level of consultation across all stakeholders.
- DOC should review its approach to ongoing management, analysis and support of the reserve and partner with local communities or organisations on how this could be better managed.

4.1.10. Managing to Reflect Contemporary Conservation Priorities: Effect of Extreme Events on Marine Ecosystems

The working group reviewed the original objectives and concluded that they did not address climate change – a contemporary conservation priority. The working group decided to select indicators to assess whether the reserve is resilient to climate change. Extreme weather events are predicted to increase in frequency and intensity due to climate change. The working group therefore chose to evaluate the effect of extreme events on TAMR.

- 1) Identify the extreme events, including landslides, earthquakes, and cyclones.

Answer: Two major events have affected TAMR: 1) a severe storm and nearby earthquake in 2011 that caused a slip inside the reserve and 2) Cyclone Gabrielle on 14 February 2023.

Answer: Two major events have struck TAMR: 1) a severe storm and nearby earthquake in 2011 that caused a slip inside the reserve and 2) Cyclone Gabrielle on 14 February 2023.

- 2) For each event, describe the effect, generally, in the marine reserve.

Answer: In April 2011, 650 mm of intense rain fell over a four-day period, which resulted in a significant amount of sediment being delivered to the coast through catastrophic coastal landslides. An accompanying trigger was a M4.5 earthquake centred only 10 km offshore from Pouterere at a depth of 20 km, which exacerbated the impacts at the reserve.

Cyclone Gabrielle hit New Zealand's east coast on Valentine's Day 2023 and devastated coastal regions. Hawke's Bay was severely affected by a category 3 cyclone and unprecedented rainfall.

3) For each event, what were the long-term effects on marine resources?

Answer: The long-term impacts of the landslips have not been evaluated. Cyclone Gabrielle is a recent event, occurring just a year ago.

4) For each event, what were the short-term effects on marine resources?

Answer: The debris from the 2011 coastal landslides inundated the immediate intertidal platform adjacent to the hill side, which posed a serious threat to marine life both within and outside of the reserve. There was evidence of seagrass and marine organism mortality, especially in the upper intertidal zone. Intertidal populations of pāua (*Haliotis* spp.), kina (*Evechinus chloroticus*) and seagrass (*Zostera capricorni*) have generally indicated greater abundance and larger size in protected populations at TAMR and adjacent areas, and a generally healthier reef platform compared with the non-reserve locations.⁴⁹

A 2023, post-cyclone research voyage was undertaken to assess the impact of the cyclone. While the results cannot be directly compared to historical data, they show that similar habitats still exist inside and outside the reserve, suggesting that the underwater impacts of the cyclone were minimal, particularly inside the reserve where large healthy intact *Eckolonia* forests were found.

Recommendations:

- To understand the long-term impacts of the landslides, implement the proposed monitoring plan for TAMR.
- Further research is needed to compare the data from the current (2023) research survey with historical data to understand the impacts.

4.1.11. Managing to Reflect Contemporary Conservation Priorities: Ocean Acidity and Sea Surface Temperature

The Working Group also chose to evaluate ocean acidity and sea surface temperature because an increase in both ocean acidity and sea surface temperature is associated with climate change.

1) How has sea surface temperature changed over the last 25 years?

Answer: No data exist. Sea surface temperature is not measured at TAMR.

2) How has sea surface temperature changed over the last 10 years?

⁴⁹ Macpherson (2013), Effects of catastrophic landslides on the Te Angiangi Marine Reserve, Hawke's Bay, New Zealand (unpublished, available upon request).

Answer: No data exist. Sea surface temperature is not measured at TAMR.

3) How has ocean pH changed over the last 25 years?

Answer: pH monitoring at TAMR just began in 2019/2020 and there are not enough data to look at trends.

4) How has ocean pH changed over the last 10 years?

Answer: pH monitoring at TAMR just began in 2019/2020 and there are not enough data to look at trends.

Recommendations:

- To determine changes in sea surface temperature and ocean acidification, begin measuring SST at the reserve and collect and measure the water samples consistently.
- Explore using marine boundary buoys to measure ocean acidity, SST, and other indicators (e.g., turbidity, tidal fluctuations)

4.1.12. *Managing to Reflect Contemporary Conservation Priorities: Prevalence and Location of Invasive Species*

Invasive alien species (invasive species) are “animals, plants or other organisms that are introduced into places outside their natural range, negatively impacting native biodiversity, ecosystem services or human well-being.”⁵⁰ Climate change facilitates the spread and establishment of many invasive species and reduces the resilience of habitats to biological invasions.⁵¹ Because of the concern for invasive species, the Working Group chose to evaluate whether such species are known to occur in TAMR.

1) Are invasive species present in TAMR?

Answer: Inconclusive.

Summer and winter surveys of Napier Port and Ahuriri Upper Harbour completed by NIWA on behalf of Biosecurity New Zealand occurred from 24-28 April and 25-29 September 2023, respectively. These surveys are part of a national surveillance programme that searches for

⁵⁰ IUCN, [Invasive alien species and climate change](#).

⁵¹ *Id.*

non-native marine organisms that could impact on our marine environment, kai moana, economy and wider values that marine and coastal areas provide for us all. The following non-indigenous species were found:

- Bryozoan *Celleporaria umbonatoidea*
- Colonial ascidians [*Botrylloides diegensis*](#), [*Didemnum vexillum*](#), [*Diplosoma listerianum*](#)
- Solitary ascidians – [*Ciona saviqnyj*](#), [*Ciona intestinalis*](#)
- Seaweeds [*Grateloupia turuturu*](#), [*Undaria pinnatifida*](#)
- Pear crab [*Pyromaia tuberculata*](#)
- Tubeworm [*Ficopomatus enigmaticus*](#)
- Asian Semele [*Theora lubrica*](#)⁵²

None of these species were found using eDNA in either 2021 or 2023 in the reserve. This does not mean they are not there as the ability of eDNA to detect species precisely is still being developed.

2) How abundant are the invasive species present in TAMR?

Answer: There are insufficient data to answer the question. There have been no surveys to estimate the abundance of invasive species in TAMR.

3) How has the abundance of invasive species present in TAMR changed over the last 25 years?

Answer: There are insufficient data to answer the question. There have been no surveys to estimate the abundance of invasive species in TAMR.

4) How has the abundance of invasive species present in TAMR changed over the last 10 years?

Answer: There are insufficient data to answer the question. There have been no surveys to estimate the abundance of invasive species in TAMR.

Recommendations:

- Understanding the presence/absence of species in the marine reserve is more efficient than determining abundance. It is recommended that any effort with

⁵² eDNA results back from TAA Wilderlab job no. 604902 and 601034 (available upon request).

respect to invasive species in TAMR is dedicated to identifying presence and then removing them, rather than trying to quantify how much is there.

- eDNA results are inconclusive and need to be analysed by an expert.

4.2 Are Goals and Objectives for TAMR Clearly Defined, Measurable, and Useful for Future Management Purposes?

The goals for TAMR are defined in the application documents, the operational plan, and through this review. The working group has summarised TAMR goals and objectives as: 1) preserving and protecting marine ecosystems, 2) providing educational and recreational opportunities; 3) maintaining a connection with the public, 4) promoting Ngāti Kere mana moana and their connection to TAMR, and 5) reflecting contemporary conservation priorities.

1) Are these goals measurable?

Most of the goals are qualitative rather than quantitative. By assigning indicators to each objective, the working group was able to evaluate their effectiveness. This report notes where there was insufficient data to make an assessment.

2) Are these goals useful for future management purposes?

The goals are useful as guideposts, but further work is needed to ensure sufficient information is collected and considered so that management may respond to it.

4.3 Are Goals and Objectives Met?

1) Is TAMR meeting the objectives for which it was established?

The review was able to confirm that, in part, TAMR is meeting the goals for which it was established. Where it is not meeting the objectives, recommendations have been made to address shortcomings.

Based on the available information, focal species generally appear to be increasing in abundance and size, habitats appear to be protected and relatively resilient to large-scale weather events like Cyclone Gabrielle, and the reserve is a scientific, educational, and recreational resource. On the other hand, the working group was not able to conclude that DOC has consistently protected the reserve from illegal activities. DOC has not implemented a compliance and law enforcement plan. DOC has not implemented the species monitoring plan for the reserve, so data are almost entirely lacking on fish species and sporadic on other focal species. For many years, DOC did not maintain strong ties with the community and did not promote the visibility of Ngāti Kere mana moana on the coast or the connection between Ngāti Kere and the reserve. The working group was unable to determine whether objectives in the reserve's operational plan continue to reflect community priorities. We recommend that the Strategic Oversight Group and Management Committee seek input from the wider community to help shape an up-to-date operational management plan.

The working group identified climate change as one of the most pressing contemporary conservation priorities. This issue is excluded from TAMR objectives and the working group

was largely unable to assess the impacts of climate change. Although there were data to support the conclusion that habitats inside the reserve are comparably resilient to extreme events, there is not enough information available to evaluate trends in ocean acidity or sea surface temperature, or to determine whether invasive species are present in the reserve.

4.4 How Could Goals and Objectives be Revised to Better Meet Management Needs?

As discussed above, the working group identified additional goals specific to TAMR that were not included at the time of its establishment. These are: 1) increased visibility of Ngāti Kere mana moana on the coast and the continued connection between Ngāti Kere and TAMR; and 2) climate change resilience. As the recommendations below are implemented, we suggest that these two goals and any relevant objectives are included in a revised operational management plan.

5 Recommendations

Based on the findings of the review, the working group makes the following 13 recommendations. These recommendations are designed to better achieve TAMR objectives, to promote the role of Ngāti Kere in guiding management at the reserve, to foster the connection between the community and TAMR, and to explicitly measure effects caused by climate change.

To promote Ngāti Kere mana moana on the coast and the connection between Ngāti Kere and TAMR:

- 1) DOC and tangata whenua, Ngāti Kere, partner to form a strategic oversight group setting strategic vision for the reserve and guiding its operational management. The strategic oversight group liaises with the East Coast Hawke's Bay Conservation Board (ECHBCB) in developing vision and guidance.
- 2) ECHBCB reviews and endorses any TAMR strategic or management plan.
- 3) DOC works with Ngāti Kere and the local community to ensure strategic vision and operational management plan are embedded in a Māori framework, incorporating mātauranga Māori.
- 4) DOC works with tangata whenua, Ngāti Kere, to help expand knowledge from TAMR across their rohe moana.

To foster the connection between the community and TAMR:

- 5) DOC leads establishment of a community-based management committee. Committee terms of reference should clearly describe the membership and roles each member-group plays in reserve management.
- 6) DOC, with input from management committee, updates operational plan outlining objectives for management, monitoring, and compliance for review by strategic

oversight group. DOC measures data collection against plan every two to five years to ensure the data collected will facilitate ten-yearly review.

- 7) DOC, Ngāti Kere, and community hold regular event celebrating TAMR, Ngāti Kere, and local connections to the area.

To better achieve TAMR objectives, especially preserving and protecting marine ecosystems:

- 8) DOC implements proposed monitoring plan for TAMR, incorporating mātauranga Māori.
- 9) DOC works with Ngāti Kere to include oral histories as baseline for monitoring.
- 10) DOC installs surveillance camera at reserve to ensure round-the-clock monitoring for compliance.
- 11) DOC facilitates training to increase local patrols at reserve.
- 12) DOC commits to a review of the reserve every 10 years.

To measure the effects of climate change:

- 13) DOC includes climate indicators in monitoring plan for TAMR.

6 Next Steps

DOC's Regional Operations team will lead development of an implementation plan to ensure DOC considers and adopts recommendations, as feasible.⁵³ DOC will solicit and incorporate public feedback into the implementation plan, which should be completed within six months of the date DOC's Deputy Director-General, Strategy and Policy approves this report.

⁵³ DOC's implementation of recommendations is subject to DOC funding, resourcing constraints and Government priorities, which may change over time.