

Fish Forever

Submission on South-East Marine Protected Areas Rōpu Manāki Ki Te Toka

December 2016

PART A: SUBMITTER DETAILS



Fish Forever

MARINE SANCTUARY · BAY OF ISLANDS

Npā itea āke, āke āke, Ipiipi

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Fish Forever is the Marine Committee of The Bay of Islands Maritime Park Inc. which was established in May 2006 to create an integrated approach to target some of the most pressing issues that face our coastal waters.

The vision of the Bay of Islands Maritime Park Inc is healthier seas and healthier communities in the Bay of Islands. The group is actively researching the marine environment and ecosystems in the Bay of Islands. We are also raising awareness about why we need no-take areas and sharing the science with the community in an accessible way so that people can make an informed choice to support the campaign. As well as seeking new means of protection, the group is supporting other initiatives by local groups who are actively preserving special places in the Bay of Islands, such as the Rahui at Deep Water Cove (Maunganui Bay), initiated by the Te Rawhiti community.

We consider that our collective expertise gives us credibility to take part in the present consultation on South-East Marine Protection Forum Marine Protected Area (MPA) proposals. The Fish Forever team comprises people with a variety of skills and personalities, providing a mixture of vision, experience and energy. They represent, or have had experience in marine science, marine conservation, establishment of marine reserves, scientific diving, commercial and recreational diving, recreational snorkeling, game fishing charter boat operation, central government, education, and the local community. Fish Forever works with the Department of Conservation, local hapu, and the other groups or individuals with a stake in the marine environment.

Fish Forever acknowledges the extensive work the South-East Marine Protection Forum (the Forum) has put in to develop the proposals and applauds the decision to enable the public to use SeaSketch to support the consultation process.

Thank you for the opportunity to make a submission on the Forum's MPA proposals.

Karen Field

PART B: SPECIFIC SITES

We recommend the following:

A Tuhawaiki to Pareora (Type 2):

Support, and recommend it is enlarged.

- The proposal states that the designation is likely to have little impact on commercial fishers, as there are legal and voluntary restrictions currently in place. It makes sense to strengthen the current voluntary restrictions, so that everyone is required to adhere to them.
- The proposed area is very small (4.4 km²). We recommend enlarging the MPA both offshore and alongshore so that real benefits are more likely to accrue.
- This area is a hot spot for Hector's dolphins.
- Prohibit all destructive methods that impact the seafloor.

B Waitaki Coastal (Type 1):

Support including the extension and recommend a further extension out to 12 nautical miles (nm).

- Ensure Marine Reserve Act 1971 specific rules and regulations are incorporated at a minimum.
- The proposal states that the designation is likely to have little effect on commercial and recreational fishers, therefore protecting the maximum area possible seems sensible.
- To provide better representation of foraging habitats used by blue penguin, yellow-eyed penguin and Hector's dolphin.
- This area is an internationally recognised 'Important Bird Area' (IBA).

C Waitaki Offshore (Type 2):

Support with a further extension out to 12nm

- Prohibit all destructive methods that impact the seafloor.
- To provide better representation of habitats used by blue penguin, yellow-eyed penguin and Hector's dolphin.
- This area is an internationally recognised IBA.

D Pleasant River to Stony Creek (Type 1):

Support the larger option and recommend further extending to include more deep subtidal reef habitat which is underrepresented in the proposal.

- Ensure Marine Reserve Act 1971 specific rules and regulations are incorporated at a minimum.
- Increased protection for fish communities associated with kelp forests.
- This area is an internationally recognised IBA for yellow-eyed penguins and Otago shags.
- It is an important area for scientific research, particularly by staff and students from Otago University. Protection would facilitate valuable comparisons with similar but unprotected areas.

E Bryozoan Bed (Type 2) – Option 1:

Support.

- The importance of this habitat, and the rarity within NZ's territorial limits warrants the large protected area offered by site E.
- This option also confers some protection for the head of Papanui Canyon, which would complement the marine reserve proposal for Saunderson's Canyon (F).
- These bryozoans provide three-dimensional habitat important as a nursery area for many species, including juveniles of the commercial fish species blue cod, red cod, and southern pigfish (Morrison et al. 2008, Morrison et al. 2014), especially as they recover from bottom trawling (Bradstock & Gordon 1983).
- The impact of mobile fishing gear in several New Zealand bryozoan-dominated communities has been severe (Batson 2000, Wood et al 2013, Wood 2014, Wood 2016).
- This option provides the best representation of the range of bryozoan species and associated faunal communities.
- Prohibit all destructive methods that impact the seafloor.

F Saunderson Canyon (Type 1) – Option 1:

Support, but recommend that it be reconfigured to extend to the coast to include Hooper's Inlet and link to

Harakeke Point (Site I).

- Saunders Canyon is larger, deeper and more complex than the Papanui Canyon, and so provides better more comprehensive representation for this habitat type.
- This is also the only proposal to contain representation of a deep water highly productive plateau, with its special bryozoan species.
- The extension to shore would take in an example of an Otago Peninsula inlet, which have not been represented in the proposed network. Hooper's Inlet is a nationally and locally significant saltmarsh and nursery area for flat fish.
- The connection to Harakeke point would allow for the inclusion of the Chasm, a high current headland and biologically productive area. Such areas are poorly represented in the proposal.
- Ensure Marine Reserve Act 1971 specific rules and regulations are incorporated at a minimum.

G Bryozoan Bed (Type 2) – Option 2:

Don't support.

- This option does not represent the full range of habitats associated with the Bryozoan communities.

H Papanui Canyon (Type 1) – Option 2:

Don't support.

- This option does not represent the full range of deep water biodiversity.

I Harakeke Point to White Island (Type 1) – Option 2:

Support, and recommend inclusion of Tow Rock.

- Tow Rock is one of the few examples of deep reef habitat proposed for protection. Therefore, option 2, including Tow Rock is preferred.
- This marine reserve will likely be most effective if the highly productive area of Tow Rock is included.
- Ensure Marine Reserve Act 1971 specific rules and regulations are incorporated at a minimum.
- The proposed area includes excellent examples of exposed rocky reef and beach habitats, home to a range of macroalgae, reef fish and invertebrates. It would protect the nearshore habitat of endangered, endemic species such as New Zealand sea lions.
- The proximity to Dunedin means that this will be a significant marine reserve for education, research and public enjoyment.
- This reserve would be world class if connected to site F.
- Although some recreational and commercial fishing will be displaced, similar coastal sites will still be accessible to the east and west of the proposed reserve.

J White Island to Waldronville (Type 2):

Support.

- While this Type 2 protection does not in itself achieve much in the way of biodiversity protection it may provide a buffer, through fisheries restrictions on the adjacent proposed reserves of Green Island (K) and Harakeke point (I).
- Together with proposed marine reserve sites I and K, it will effectively allow a significant stretch of urban coastline to be managed.
- Support proposed fishing regulations.
- In time recreational fishers will probably benefit from enhanced "boundary fishing" (reported by recreational fishers close to other no-take marine reserves) adjacent to the proposed marine reserve sites I and K,
- Prohibit all destructive methods that impact the seafloor.

K Green Island (Type 1):

Support.

- This has a high diversity of life in a small area and will be valuable for research, public enjoyment and education.
- The proposed area contains valuable rocky reef habitats and the island itself is an important nesting site for seabirds, including yellow-eyed penguins.
- At 5km², the proposed area is very small. We recommend that the proposed reserve area be increased to improve the likelihood that benefits will accrue. To avoid impinging on the wahi tapu of Kai Tahu, the reserve should be extended westwards and offshore.

- Ensure Marine Reserve Act 1971 specific rules and regulations are incorporated at a minimum.

L Akatore Estuary (Type 2):

Support.

- Estuaries are significant nursery areas for flat fish, and habitat for shore and sea birds.
- Area contains estuarine values such as a nationally significant wildlife area for waterfowl, waders and fern birds, and whitebait (Otago Regional Council 2012).
- Support the proposed fishing restrictions for this estuary.
- The protection of habitat surrounding the estuary means it is less likely to be impacted than other estuaries, and offers a good opportunity to link terrestrial and marine management.
- The proposal to also protect coastal and offshore habitat adjacent to the estuary means that benefits will be more likely to accrue.
- Prohibit all destructive methods that impact the seafloor.

M Akatore Coastal (Type 1):

Support, but recommend that it be extended to include site N Akatore Offshore to ensure that the offshore deep reef habitat is protected in a marine reserve.

- It is wonderful that the proposed reserve contains a reasonable length of coastline. However, because it only extends 1km offshore its area is very small (6.3km²), and its effectiveness is likely to be compromised by significant edge effects seen in other small marine reserves.
- A reserve at this location will provide an important connection in the regions network between sites I and O.
- Recommend straightening the boundary to make it a rectangle, as simple shapes make for easier reserve management.
- Ensure Marine Reserve Act 1971 specific rules and regulations are incorporated at a minimum.

N Akatore Offshore (Type 2):

Support, but as a Type 1 marine reserve linked to Site M as above.

- As noted above, connection with the proposed marine reserve site M, would create a large MPA spanning the coast to the territorial limit, thus increasing the probability that benefits would accrue.
- Ensure Marine Reserve Act 1971 specific rules and regulations are incorporated at a minimum.

O Long Point (Type 1):

Support, and recommend extension to 12 nm.

- The proposed reserve is large enough to have significant positive effects on the broad range of biodiversity within it, particularly in conjunction with the proposed offshore MPA (site P).
- The likely benefits of the proposed network would be enhanced by extending the reserve south west along the coast to include the Tahakopa Estuary (site Q).
- It contains the largest breeding colony of yellow- eyed penguins in the Catlins, and the proposed reserve and the area offshore is known to be important foraging habitat for penguins.
- The accessibility of the area, and current biodiversity values, mean the site has the potential to become a significant tourist attraction.
- This area is an internationally recognised inshore and offshore IBA.
- Ensure Marine Reserve Act 1971 specific rules and regulations are incorporated at a minimum.

P Long Point Offshore (Type 2):

Support, and recommend that it be aligned with the current set net prohibition.

- Together with site O, it provides protection from the coast to the territorial limit. This would enhance foraging opportunities for seabirds, including yellow-eyed penguins and protect them from bycatch.
- Prohibit all destructive methods that impact the seafloor.

Q Tahakopa Estuary (Type 1):

Support, and recommend that it be enlarged to cover the whole estuary and extends to join with Long Point (Option O).

- This is the only representation of an estuary in the southern area and needs to represent all the habitats associated with the mouth of the estuary.
- The estuary is considered pristine and has outstanding biological significance (Otago Regional Council 2012).
- The proposed reserve is very small (only 0.3 km²) and the design means that public compliance with and enforcement of the regulations will be extremely challenging.
- The size will also be problematic as there are likely to be changes in the bathymetry and water flow over time.

R Tautuku Estuary (Type 2):

Support, and recommend that the protected area be extended to the estuary mouth and extended to join with Long Point (Option O).

- Considered to be pristine saltmarsh and estuarine communities. It is an important breeding ground for black and yellow-belly flounder. It also provides an important habitat for regionally threatened fern birds (Otago Regional Council 2012).
- The proposed MPA is very small. Enlarging it to encompass the whole estuary will mean that benefits are more likely to accrue.
- Support the specific fishing restrictions that are proposed for this estuary.
- Prohibit all destructive methods that impact the seafloor.

S Haldane (Type 2):

Support.

- Important estuary habitat for birds and fish.
- Support the specific fishing restrictions that are proposed for this estuary.
- Prohibit all destructive methods that impact the seafloor.

T Kelp Forest (Type other):

Support.

- The ecological services of giant kelp forests are extensive. Kelp forests provide habitat for numerous fish and invertebrate species. Kelp forests are very important primary producers in the coastal zone and provide habitat for a diverse range of species (Fyfe 1998, Fyfe et al. 1999, Pirker 2002, Win 2011).
- This habitat needs to be better represented within marine reserves in the proposal.
- Prohibit commercial harvest of kelp.
- Prohibit all destructive methods that impact the seafloor.

PART C: CREATING A NETWORK OF MPAs/GENERAL COMMENTS

Fish Forever acknowledges the extensive work the South-East Marine Protection Forum (the Forum) has put in to develop the proposals.

Fish Forever is disappointed that the opportunity to establish a comprehensive MPA network has been compromised, and therefore that the MPA policy objectives have not been met.

The Forum has developed 18 sites (20 options) for potential protection, with only 5.3% of the marine space proposed for full protection, and 15.3% for type 2 MPAs. In addition not all of the 34 habitat types based on the Government nearshore habitat classification have been included in the proposals. National and international science guidelines indicate that the area proposed as Type 1 MPAs are a fraction of what is required to allow our treasured marine life to recover and thrive.

Our marine and ocean environment is in crisis – facing multiple, and cumulative pressures that have

been building over generations (e.g. Smith 2011, MacDiarmid et al 2016, Ministry for the Environment 2016). Ecosystem services are critical to the functioning of coastal systems and also contribute significantly to human wellbeing, representing a significant portion of the total economic value of the coastal environment. The best available data suggest that substantial positive economic values can be attached to many of the marketed and non-marketed services provided by coastal systems (Agardy et al 2005, MacDiarmid et al. 2013b, Reuchlin-Hughenoltz & McKenzie 2015, Reimer et al. 2015).

The abundance and variety of marine species are only a shadow of what they were a generation or two ago (MacDiarmid et al. 2016). Marine protection, especially well designed long term fully protected marine reserves help restore and build resilience needed to support the ongoing health and productivity of our oceans (e.g. Costello 2014, Edgar et al. 2014, Halpern 2014, Rudd 2015, Simard et al. 2016, IUCN 2016).

Research consistently shows MPAs and especially fully protected MPAs are capable of delivering broad ranging and significant benefits for marine life (Edgar 2014, Costello & Ballantine 2015).

There has been wide public support for marine protection in this region in the past. The Department of Conservation received significant input when it began developing proposals for marine reserves at a conservancy level in the early 1990s. In Otago and Southland, for example, initial queries requesting feedback and site proposals received a high level of community interest and 270 sites were suggested (Forlong 1990, Forlong 1992, Fyfe, J. 1992, Gorter 1992, Forlong and Kirkland 1993, Department of Conservation 1994, Smith 1994a&b, Department of Conservation. 1996).

The region hosts a variety of significant marine species and habitats such as:

- taonga species including yellow-eyed penguins, albatross and petrels, Hector's dolphins and New Zealand sea lions and a newly identified species of endemic shag - the Otago shag, *Leucocarbo chalconotus* (Rawlence et al 2016);
- significant communities of wading birds; large areas of seagrasses which are highly productive coastal habitats that provide a range of key ecosystem functions and services (Miller 1998, Morrison et al. 2014, Jones et al. 2016);
- ecologically significant bryozoan thickets, abundant beds of New Zealand queen scallops and sponge gardens that provide essential nursery; and community habitat (Bradstock & Gordon 1983, Batson & Probert 2000, Wood 2016); and
- rocky shores and highly productive kelp forests; and beautiful long sandy beaches.

This is New Zealand's chance to create a world class network of marine reserves and protected areas in the region and protect the rich natural heritage for the people of Canterbury, Otago, Southland and all New Zealanders.

Below are recommendations and further information supporting Fish Forever's submission

Fish Forever acknowledge the work put into making the SEMPA Forum (the Forum). All of the participants are to be commended for their willingness to seek to resolve difficulties and approach consensus.

However, Fish Forever considers that the Forum process thus far has fallen short of presenting a comprehensive MPA network proposal for the South-East bioregion because:

NZ MPA Policy

- The Planning Principle 5 of the MPA Policy and Implementation Plan is not a blanket commitment “to minimise the adverse impacts of marine reserves on existing users of the marine environment and on Treaty obligations” as stated in the Forums report. Principle 5 states that “Where there is a choice of several sites, which if protected would add a similar ecosystem or habitat to the MPA network, the site(s) chosen should minimise adverse impacts...”, i.e. it is to be used as a criteria for choosing between possible MPA sites in a proposed network, not as a reason to not have an MPA.
- New Zealand’s Biodiversity Strategy includes an action (3.6b) to achieve a target of protecting 10% of New Zealand’s marine environment by 2010 and further, the NZ MPA Policy states that New Zealand will establish a fully comprehensive network of marine protected areas based on core ‘no-take’ reserves (Department of Conservation and Ministry of Fisheries 2005, Ministry of Fisheries and Department of Conservation 2008, Department of Conservation and Ministry of Fisheries 2011). The proposed network of MPAs for the south east region includes, at most, only 5.3% of the area in non-extractive marine reserves..
- New Zealand’s MPA policy states that “a marine reserve will be established to protect at least one sample of each habitat or ecosystem type in the network” (Marine Protected Areas Policy & Implementation Plan, paragraph 93). Several habitats in the regions have been left out of any marine reserve proposals, meaning that the current proposals will not meet the Biodiversity Protection Strategy objectives and our international obligations. If there is no replication of a particular habitat within the proposed network, then each proposed reserve must be accepted at at least the size proposed.
- The SEMPA process should therefore consider proposals that add to the proposed network, or enlarge existing proposed sites

Larger MPA Areas Required

- Fish Forever considers that some of the reserves are too small to be viable for habitat and biodiversity protection and should be extended. Many of the proposed boundaries will be difficult to enforce.
- The conservation benefits of marine reserves generally increase with size (Halpern 2003; Edgar et al. 2014). A recent review of literature concluded that conservation benefits were greatest for marine reserves larger than 100 km² (Edgar et al. 2014). Only the proposed sites F (and the alternative site H), and B (with the extension), meet or exceed this threshold.
- The decision makers should heed these design guidelines when considering proposed modifications to the existing proposals.

Increase Management & Protection Regulations

- **Prohibit all destructive sea floor activities in Type 2 MPAs**
Bottom-contact fishing methods such as trawling, Danish seining, and dredging; dredge spoil dumping and disposal; mining and oil and gas prospecting, exploration and extraction; sand and gravel mining all have significant and possibly irreversible impacts on benthic biodiversity. These impacts can negatively affect the pelagic species reliant on the sea floor communities and a myriad of ecosystem services provided by the sea floor communities such as shelter, spawning nurse habitat, prey (European Commission 2013, MacDiarmid et al 2013b, Danovaro et al. 2014, Morrison et al 2014, Zeppilli et al. 2016).
- In particular, the Otago Peninsula and shelf area stands out with high values of benthic habitat diversity (Beaumont et al. 2009, Jones et al. 2016, Wood 2016).

- Fish Forever recommends that the Forum propose regulations that prohibit all seafloor destructive activities in Type 2 MPAs, otherwise little or no conservation is actually achieved and inclusion as a type of MPA in the network will be of no value.
- **Prohibit all non-selective bulk fishing methods in Type 2 MPAs.**
The South East region is home to some of New Zealand's most endangered endemic marine species, including yellow-eyed penguins, Hector's dolphin, New Zealand sea lion and a newly identified species of endemic shag - the Otago shag, *Leucocarbo chalconotus*.
- It is likely that marine impacts, including depletion of food resources and bycatch in set nets and trawl fisheries, are factors in their decline (Slooten & Dawson 2010, Robertson & Chilvers 2011, Lalas 1993, Taylor 2000a&b, Rowe 2013, Zydelis et al 2013, Taylor 2000a,b).
- Exclusion of the least selective forms of fishing, i.e. set netting and trawling, from Type 2 MPAs and large areas of the region should therefore be a priority.
- **Prohibit commercial harvest of kelp in site T Kelp forest (Type other).**
Kelp forests provide habitat for numerous fish and invertebrate species and are very important primary producers in the coastal zone (Fyfe 1998, Fyfe et al. 1999, Pirker 2002, Win 2011, Krumhansl et al. 2016).
- Kelp forests are threatened by sedimentation, rising sea temperatures, the indirect effects of fishing and commercial harvesting (Pirker 2002, Krumhansl et al. 2016), in particular *Macrocystis pyrifera* (Brown et al. 1997).
- Fully protected zones for *Macrocystis* forests is especially important because they would preserve a representative ecosystem, available for future studies of the ecosystem as a whole.
- Given the high productivity of *Macrocystis* and its significant role in shallow benthic reefs, priority should ensure that commercial harvest is prohibited in the entire proposed Kelp forest zone.

Additional Reserves Needed

- Fish Forever considers the area of proposed fully protected marine reserves, at just 5.3% of the planning area, is too small and is dismayed that the Forum could not reach consensus to include previously proposed marine reserves sites.
- Fish Forever recommends the Forum attempts to ensure protection of all the identified habitat types within the region in both Type 1 & 2 MPAs.

Wider MPA benefits

- One of the most important purposes of MPAs is their role as control sites for marine ecosystems, thus facilitating scientific understanding of the effects of human impacts on marine environments (e.g. Soto 2001, FAO 2011, Fenberg et al 2012, Ballantine 2014).
- It is accepted that marine reserves can result in recovery of previously exploited species (Halpern 2003; Willis 2013, Edgar et al. 2014).
- MPAs are increasingly becoming used around the world as part of well controlled fisheries management (e.g. Koldewey et al 2010, Wenzel and Brock 2013, Reuchlin-Hughenoltz & McKenzie 2015, Sherley et al 2015).

MPA Monitoring

- A long term monitoring and reporting programme is an essential element required to determine the functioning of an MPA Network.

- The Forum should ensure that a long term monitoring and reporting system to assess the functioning of the MPA Network is included in the recommendation to Government.

Marine Reserves for all users

- We also remind the Forum that as well as protecting biodiversity, no-take marine reserves provide a space where New Zealanders and tourists who love to dive/snorkel can have a meaningful underwater recreational experience. Viewing healthy abundant marine life is the reason why so many people visit marine reserves.
- Currently those who like to fish (commercial and recreational) have access to 99.6% of mainland New Zealand waters. Their chosen activity has depleted marine ecosystems to such an extent that there are now very few places where those whose preferred activity is diving/snorkeling can enjoy their recreational activity of choice.
- Most of the proposed Type 1 reserves have poor or limited access. Divers/snorkelers need and deserve ACCESSIBLE no-take marine reserves.
- Marine reserves are value-enhanced if they have good access by road or walkways, offering opportunities for people to snorkel and dive in abundant and thriving biodiverse waters and explore rock pools.
- Accessible marine reserves also serve an educational role for the marine environment by showing people what *is* natural diversity and abundance – what should be there at their local beach, reef, or estuary. Marine reserves contrast with the shifting baseline of cultural perceptions with regard to marine health.

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