

NEW ZEALAND MARINE SCIENCES SOCIETY

TE HUNGA MĀTAI MOANA O AOTEAROA



28/10/2022

Minister of Oceans and Fisheries, Hon. David Parker
Minister of Conservation, Hon. Poto Williams
c/- Te Papa Atawhai Department of Conservation
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Submission: Revitalising the Gulf Marine protection proposals

This submission is made on behalf of the membership of the New Zealand Marine Sciences Society (NZMSS). It is made in good faith in my role as President of the NZMSS and in accordance with the Code of Ethics and Rules of the Royal Society of New Zealand.

NZMSS supports the “Revitalising the Gulf Marine protection proposals” resulting from the Sea Change – Tai Timu Tai Pari – Hauraki Gulf Marine Spatial Plan stakeholder-driven process. In summary, NZMSS:

- ***Strongly supports the extension of the two marine reserves under the Marine Reserves Act 1971.***
- ***Strongly supports the establishment of the 12 proposed High Protection Areas (HPAs).*** As outlined in our submission below we see this as a crucial first step towards revitalising the Gulf and developing a comprehensive network of highly protected areas.
- ***Supports the proposed Seafloor Protection Areas (SPAs), but suggests that these areas be considered and incorporated as part of the Fisheries Plan*** in order to protect a much larger proportion of the Gulf from bottom-impact fishing.

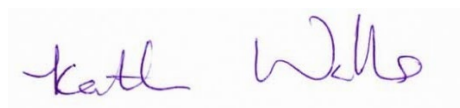
The premise for Sea Change was that the Hauraki Gulf Marine Park (HGMP) is in a degraded state, and that substantial transformative change is required to reverse this trajectory. NZMSS congratulates the Department of Conservation (DOC) and Fisheries New Zealand (FNZ) for advancing these proposals that have resulted from a long and extensive stakeholder-driven process and consultation with mana whenua. While we note that a small increase of ~6% in HPAs and an additional ~5% of SPAs is unlikely to reverse ongoing and widespread decline, it will protect biodiversity and promote recovery in some areas of very high ecological significance including important offshore island ecosystems that are not currently afforded any protection in the HGMP.

Given rapidly changing climatic conditions and increasing human pressures in the HGMP, there is an urgent need to start the process of increasing protection. We

therefore submit that **the proposed protected areas be implemented with urgency, but further steps should be initiated using a more integrated and systematic conservation planning approach** aimed at revitalising the gulf and increasing its resilience in the future.

We are not aware of any current or targeted engagement with the marine science community on these proposals. NZMSS are happy to contribute our expertise on a range of topics including providing guidance and updates on the current state of the Gulf, the ecological effects of proposed MPAs, the potential for displacement impacts, how much take could occur without impacting biodiversity values, and ways to enhance the current and future MPA proposals in the Gulf.

The reasons for our positions on the three types of protected areas are outlined in more detail in our submission below. Please contact the NZMSS President at the email address provided below for any further information regarding this submission.



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The New Zealand Marine Sciences Society

The New Zealand Marine Sciences Society, known as 'NZMSS', was formed in 1960 as a constituent of the Royal Society of New Zealand, to encourage and assist marine science and related research across a wide range of disciplines in New Zealand and to foster communication among those with an interest in marine science.

NZMSS is a professional science body and a non-profit organisation. We identify emerging issues through annual conferences, annual reviews, a listserv and our website <http://nzmss.org/>. NZMSS membership covers all aspects of scientific interest in the marine environment and extends to the uptake of science in marine policy, resource management, conservation and the marine business sector. We speak for members of the Society on matters of interest on marine research in New Zealand and we engage with other scientific societies as appropriate. Our current membership comprises over 250 members.

Our submission is consistent with the Royal Society of New Zealand Code of Ethics and Rules, in particular principles 2.1 Integrity and professionalism, 4.1 Compliance with the law and relevant standards, and 10.1 Protection of the environment (www.royalsociety.org.nz/organisation/about/code).

Submission

1. Extension of existing marine reserves

NZMSS strongly supports the extension of the two marine reserves under the Marine Reserves Act 1971. While NZMSS supports the provision for customary practices to occur in the newly proposed HPAs, in the case of extending existing marine reserves we believe the Marine Reserves Act 1971 provides the simplest and least ambiguous option to extend these existing marine reserves.

The scientific evidence to support the offshore extension of these reserves has been well established as outlined in the Revitalising the Gulf document¹. For example, the offshore boundaries of the existing reserves do not protect offshore feeding aggregations of rock lobster².

In principle, the extension of the reserves into deeper water will have similar ecological benefits regardless of which management mechanisms is used, assuming that limited customary fishing practices will occur in the deep soft sediment habitats in the offshore extensions. However, a major technical consideration is the high degree of ambiguity that would arise from using a different management mechanism for the proposed reserve extensions as to that of the existing marine reserve.

¹ <https://www.doc.govt.nz/globalassets/documents/our-work/sea-change/revitalising-the-gulf.pdf>

² <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/csp2.362>

MPA design guidelines³ call for simple boundaries to aid enforcement and compliance, which ultimately help to maximise biodiversity values of MPAs. Encompassing the existing marine reserves in an HPA would therefore ignore this guideline and likely lead to unnecessary public confusion and compromise compliance and enforcement. We therefore submit that **it is essential a single management regime is applied to the entire area and as a result support the extension of these reserves through the Marine Reserves Act 1971.**

2. High Protection Areas (HPAs)

NZMSS strongly supports the establishment of the 12 proposed High Protection Areas (HPAs) as a first step in increasing the extent of highly protected areas in the Gulf.

NZMSS recognises that the locations of the proposed HPAs were agreed as a result of the stakeholder-lead process of Sea Change. We support the scientific evaluation of the proposals carried out by DOC and FNZ⁴ and support the recommended adjustments to boundaries based on MPA design guidelines and best available information. We note that it was not in the scope of this process to propose increased coverage or new HPAs, but rather to evaluate and where necessary adjust the boundaries, not locations, of the agreed stakeholder proposals.

Individually the proposed MPAs are generally well-designed and consistent with NZ MPA design and planning guidelines⁵. The proposed HPAs are large, with simple boundaries, protect entire ecosystems and provide sufficient buffers around important ecosystems such as rocky reefs. One notable exception is the Alderman Islands HPAs (a and b) which has a complex inshore boundary and excludes shallow reefs, therefore violating principles of ecological connectivity between inshore and offshore habitats.

While a number of significant HPAs have been proposed, the stakeholder-lead process has meant the proposed HPAs will have relatively little impact on recreational and commercial fishers. The proposed HPAs will only prohibit fishing from a further ~6% of the Gulf and overall, only a relatively small proportion of fishing occurs in these areas. For example, 9.1% of recreational snapper catch in 2017/2018 was within the proposed HPAs⁶. The greatest recreational catch was within the proposed HPAs at the Noises, Kawau Bay and Rotoroa Island (all islands located within the inner HGMP), which accounted for 3.6% (80.6 tonnes), 1.6% and 1.1%, respectively, of the recreational snapper catch in the HGMP (in 2017/2018). While a high proportion of local catch has historically occurred within some of the proposed HPAs it cannot be assumed that (1) this effort and catch will simply be spread into

³ <https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/marine-protected-areas/mpa-classification-protection-standard.pdf>

⁴ <https://www.doc.govt.nz/globalassets/documents/our-work/sea-change/marine-protection-technical-document.pdf>

⁵ <https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/marine-protected-areas/mpa-classification-protection-standard.pdf>

⁶ van Dort, R. (2022) Does displacement of fishing effort from marine protected areas impact the wider environment? A review and case study for displacement within the Hauraki Gulf. MSc Thesis, University of Auckland, 112 p.

and taken from surrounding areas, and (2) any resulting increase in effort will have greater negative impacts on biodiversity beyond those already occurring in the area as a result of fishing⁷. The proposed HPAs provide an opportunity to undertake research into the occurrence and impact of displacement, and any potential impacts weigh up against the wider biodiversity values of protection in the HPAs.

Many of the HPAs will protect offshore island ecosystems that are of very high ecological significance and beyond the influence of land-based impacts such as sedimentation. As such, fishing represents the greatest impact to biodiversity in these ecosystems and some of the impacts of fishing have been well documented in these areas⁸. For example, recent studies have documented extensive kina barrens within a number of the proposed HPAs such as at the Noises, Hauturu-o-Toi and Mokohinau Islands⁹. Large reef predators such as snapper and crayfish are rare in these areas and populations are dominated by small individuals. As such, predation pressure on kina is low which promotes their proliferation and establishment of kina barrens. While this is a well understood example of the ecosystem effects of fishing on reefs, wider understanding of fishing impacts on key underwater habitats, species (e.g. coastal seabirds), food-webs (e.g. pelagic), and ecosystem function and connectivity (e.g. land-sea) is limited. The proposed HPAs will provide a number of unique opportunities to better understand the impacts of fishing, particularly around our highly valued island ecosystems, and how these impacts can be reversed through marine protection.

NZMSS recognises that the HPAs were not developed as part of a systematic conservation planning exercise with the aim of developing a comprehensive and functioning network of MPAs. The proposals have therefore not been assessed with respect to MPA network connectivity or representation across geographic/latitudinal ranges. There are many significant gaps where no protection is provided (Firth of Thames, Great Barrier Island, Waiheke) and overall, the total area to be given a high level of protection is well below current draft CBD targets of 30%. Nevertheless, the proposed HPAs provide a strong basis on which to build a more comprehensive network based on more recent information available since the stakeholder process (e.g. new biodiversity models, more point records, new biogenic habitat models etc). This will allow the development of a MPA network that is more effective for the restoration of biodiversity within the HGMP.

NZMSS encourages urgent implementation of these proposed HPAs to prevent further impacts of fishing and to start the recovery process in these key areas. However, we also urge that the next steps are initiated towards developing a more comprehensive network of MPAs in the HGMP that at least meets the CBD target of 30% protection.

⁷ Ballantine (2014) Fifty years on: Lessons from marine reserves in New Zealand and principles for a worldwide network. *Biological Conservation* 176: 297-307.

⁸ <https://www.aucklandcouncil.govt.nz/about-auckland-council/how-auckland-council-works/harbour-forums/docsstateofgulf/state-gulf-full-report.pdf>

⁹ Lawrence, K. R. (2019) Mapping long-term changes in reef ecosystems using satellite imagery. MSc Thesis, University of Auckland, 62 p.

Dartnall, L. (2022) The extent of kina barrens over time at Hauturu-o-Toi and the Noises Islands. MSc Thesis, University of Auckland, 61 p.

3. Seafloor protection areas

NZMSS supports the proposed Seafloor Protection Areas (SPAs), but suggests that these areas be further considered and incorporated into the Hauraki Gulf Fisheries Plan in order to protect a much larger proportion of the Gulf from bottom-impact fishing.

The impacts of bottom contact methods on the biodiversity of soft sediment habitats have been well documented globally and within the Hauraki Gulf¹⁰.

Our understanding from the “Technical analysis of the plan’s marine protection proposals”¹¹ is that all of the proposed SPAs will prohibit dredging, bottom trawling and Danish seining, but the Mokohinau Is SPA will also prohibit other fishing methods that interact substantially with the seafloor including potting, set netting and bottom longlining.

We therefore note that in the case of the proposed Mokohinau Is SPA, the bulk of commercial fishing methods will be prohibited in this area of high ecological significance¹¹. This will not only protect benthic biodiversity in this area from bottom impact fishing, it will also benefit exploited species that are the targets of these methods, e.g. snapper and rock lobster. This therefore has the potential to also enhance recreational fisheries for such species in this SPA.

The primary purpose of the SPAs is to “protect marine benthic habitats from the adverse effects of bottom-contact fishing”, but our understanding is the Fisheries Plan for the Hauraki Gulf will provide further restrictions on bottom impact fishing methods over much larger areas of the Gulf, e.g. through prohibition of recreational scallop dredges and development of “trawl corridors”. As outlined below, this process is expected to provide seafloor protection over much larger areas of the Gulf, which has the potential to make some of the SPAs unnecessary and obsolete.

The main methods of bottom-impact fishing in the Hauraki Gulf are bottom trawling, Danish seining, and recreational and commercial scallop dredging. These methods are currently spatially limited by existing legislation (e.g. trawl ban in inner Gulf and scallop rahui/fishery closure) and also the discrete nature of some of the stocks (e.g. scallop beds). The Fisheries Plan is expected to further reduce the footprint of these activities.

To our knowledge the only fishing occurring in the inner Gulf (approximately south of Kawau Is) with benthic impacts is recreational scallop dredging. There is however wide public support and initiatives underway to ban recreational scallop dredging¹². Consequently, if recreational scallop dredging is banned, the entire inner Gulf would not be impacted by bottom fishing.

¹⁰ Turner et al (1999) Fishing impacts and the degradation or loss of habitat structure. Fisheries Management and Ecology <https://doi.org/10.1046/j.1365-2400.1999.00167.x>

Thrush et al (1998) Disturbance of the marine benthic habitat by commercial fishing: impacts at the scale of the fishery. Ecological Applications [https://doi.org/10.1890/1051-0761\(1998\)008\[0866:DOTMBH\]2.0.CO;2](https://doi.org/10.1890/1051-0761(1998)008[0866:DOTMBH]2.0.CO;2)

¹¹ <https://www.doc.govt.nz/globalassets/documents/our-work/sea-change/marine-protection-technical-document.pdf>

¹² <https://legasea.co.nz/2021/03/26/its-time-to-ditch-the-dredge/>

More generally, under the Fisheries Plan, trawling and bottom trawling will be restricted to trawl corridors. If recreational scallop dredging is prohibited across the Gulf and commercial scallop dredging is restricted to predefined fishery areas, the remaining area of the Gulf outside trawl corridors would ultimately be protected from benthic fishing impacts.

While we support the proposed SPA's, we submit that a much larger proportion of the HGMP be protected from bottom impact fishing. This can easily be achieved through greater alignment between SPA implementation and other processes underway in the HGMP, such as scallop rahui, trawl corridor development, ahu moana etc. Without this alignment, there is a substantial risk of multiple independent spatial interventions occurring with little consideration of their relevance to other spatial planning processes, resulting in a confusing spatial design that is difficult for stakeholders, the public and mana whenua to interpret.