STET Limited
Shaun Lee, Director
shaun@stet.co.nz
021 555 425

# Stet support the Hauraki Gulf / Tīkapa Moana Marine Protection Bill

Stet is a social enterprise that supports restoration and conservation projects in New Zealand much of the paid, discounted and volunteer work is focused on improving the health of the Gulf. Clients for this work include the Department of Conservation, Auckland Council, the Hauraki Gulf Forum, and many community groups. We worked on the last four State of the Gulf reports.

Shaun Lee is one of the company directors, he is diver and citizen scientist who works on active and passive restoration initiatives in the Gulf. He is also a trustee of the Mussel Reef Restoration Trust involved in the Revive Our Gulf project. Shaun was not involved in the 2013-2017 Sea Change mahi and welcomes this opportunity to give feedback on the Government's response. He was a member of the Hauraki Gulf – Benthic Spatial Planning Advisory Group (HG-BSPAG).

## Analysis of support for Marine Protection in the Hauraki Gulf

We spent a few days going through the submissions on protections proposed by Revitalising the Gulf. Here is how they added up:

1,774 Submissions via Forest & Bird, all pro protection

538 Submissions via Revive Our Gulf, all pro protection

3,222 Submissions via Gulf Users, all pro protection and opposed to customary take

There were 1,684 Submissions via Legasea. There seemed to be a problem with the Legasea form and we can't tell for sure if their submissions were pro or against the proposal. We randomly read 100 of the comments to estimate that 272 were supportive and 473 were opposed but most comments were not about protection and were just concerned about bottom impact fishing. (Note that Unique submissions Part 4 were mislabeled and actually about 250 submissions from the Legasea form). We're estimating 90% of submissions were positive about the protection proposals. This level of public support can be expected and can be seen in Polling from the Hauraki Gulf Form[1], Submissions on the recent Waiheke Marine Reserve Proposal[2] and the Live Ocean Barometer 2023[3].

Thousands of submitters objected to the continuation of bottom impact fishing outside the protected areas and cultural take inside them. **Nearly all submitters want more protection**. In response DOC did not increase the protection area or restrictions. Instead, it reduced the area of protection at Hahei and dramatically dropped the level of protection afforded by the SPAs (to the point the at the Tiritiri Matangi Seafloor Protection Area is now quite meaningless). The department should have expanded the proposed protection areas and restrictions.

[1] https://gulfjournal.org.nz/2021/11/results-of-hauraki-gulf-poll/
[2] https://friendsofhaurakigulf.nz/wp-content/uploads/2022/05/Overview@2x-1.jpg
[3] https://liveocean.com/foundation/live-ocean-barometer-23/

Most of the names were redacted from the submissions but the organisation names were left public. Here are the names of the organisations opposed to the protection measures.

| OPPOSED | PARTIALLY SUPPORT | SUPPORT |
|---|---|---|
| Legasea | Aldermen Islands Marine Reserve Group | Forest & Bird |
| 2xs Charters / Balmain Boating Services | Friends of the Hauraki Gulf | Revive Our Gulf |
| Alan Seasprite Charters | Mama Fish | Auckland City Centre Residents Group |
| CRA 2 Rock Lobster Management Co | Sanford Limited | Auckland Conservation Board |
| Dr Hook Charters | | Auckland Council |
| Fisheries Inshore NZ | | Auckland Sea Kayaks |
| Kina Industry Council | | Auckland Sea Shuttles |
| Mercury Bay Game Fishing Club | | Coromandel Marine Farmers Association |
| NZ Rock Lobster Industry Council | | Devonport Yacht Club |
| New Zealand Charter Boat Association | | Environmental Defence Society |
| New Zealand Sport Fishing Council | | Foundation North |
| Paua Industry Council | | Friends of Taputeranga Marine Reserve Trust |
| Princess Carol Charters | | Goat Island Dive and Snorkel |
| Provider Adventures Ltd | | Good Fishing |
| Sea Urchin NZ Ltd | | Hahei Residents and Ratepayers Association |
| Seahawk Fishing Charters | | Leigh Penguin Project |
| Slipper Island Residents Association | | Live Ocean Foundation |
| Snap Attack | | Meadowbank School Marine team |
| Specialty & Emerging Fisheries Group | | Motuora Restoration Society |
| Tairua Adventures Ltd / Artisan Fishing Co | | Mountains to Sea Conservation Trust |
| Te Ohu Kaimoana | | New Zealand Conservation Authority |
| Te Ra Charters | | New Zealand Geographic |
| The New Zealand Angling & Casting Association | | New Zealand Marine Sciences Society |
| Whitianga / Coromandel Peninsula Commercial Fisherman's Association | | Ngāti Hei |
| | | Ngāti Manuhiri Settlement Trust |
| | | Ocean Voyages Inc |
| | | Pakiri Community Landcare Group |
| | | Pest Free Kaipātiki |
| | | Ports of Auckland Limited |
| | | Shakespear Open Sanctuary Society Inc |
| | | Sir Peter Blake MERC |
| | | Stet |
| | | Supporters of Tiritiri Matangi |
| | | Te Whanau o Pākiri |
| | | The Friends of Te Whanganui-A-Hei Marine Reserve Trust |
| | | The Glass Bottom Boat Whitianga |
| | | The Hauraki Gulf Conservation Trust |
| | | The Hauturu Supporters Trust |
| | | Tāmaki Estuary Protection Society |

| | | |
|---|---|---|
| | | Tāwharanui Open Sanctuary Society Inc<br>Waiheke Marine Project<br>Waikato Regional Council<br>Wakatere Boating Club<br>Yachting New Zealand |
| Most of these submitters were upset about continued bottom impact fishing in the Gulf. Most of the Charter fishers all sent in the same submission. | These submitters indicated support for marine protection but did not express that much support for the proposed protection measures. | These organisations expressed a lot of support. Most wanted more protection than what was proposed and also wanted bottom impact fishing banned. |

We could not find a submission from the Gulf Users Group. Concern over customary take was bought up by thousands of submitters. We could not find a submission from the Hauraki Gulf Forum.

We have not included the names of many organisations who used the LegaSea form as those submissions contained dramatically less information than those from the above organisations. They were mostly small owner operator companies who are also keen fishers.

These two organisations made significant submissions that did not speak to the protection proposal.

UNSURE

Pelco NZ Ltd (Purse seiners)

Te Ahu wai o Tangaroa sustainable ecological aquaculture

## LegaSea's displacement argument

LegaSea are asking their supporters to object to the Hauraki Gulf Marine Protection Bill due to concerns about displacement.

*"We do not believe the proposed protection measures go far enough to restore fish abundance and biodiversity in the Hauraki Gulf. Marine protection and fisheries management controls need to go hand-in-hand, otherwise all we will do is shift current fishing effort into our neighbour's waters. We want 100% of the Hauraki Gulf seafloor protected from destructive, mobile fishing methods including bottom trawling, Danish seining and dredging. And, we want Ahu Moana, a joint iwi/hapū and community driven solution to resolve local depletion issues."*

If we forget about the many non-fishing benefits of marine protection, then also forget about the fisheries benefits of marine protection (nursery and spillover) then forget about the Fisheries Plan which aims to rebuild stocks including through Ahu Moana initiatives, we are left with LegaSea's naïve argument over there being a limited amount of fish. Does it stand up?

No, the recreational losses for all species fished in the HPAs total 293 tonnes, the proposed commercial reductions from the corridors will total between 632-1017 tonnes. It's most likely that LegaSea know this and are intentionally misleading their supporters.

## Math + references:

**Calculating the weight of recreational catch lost to HPAs**

Recreational fishers harvested 2,068[4] tonnes of snapper from the HGMP in 2017/18 fishing year. 9.58% of the recreational fishing effort is in the proposed High Protection Areas. The HPAs will reduce recreational fisheries catch of snapper by 198 tonnes.

Recreational fishers harvested 517 tonnes of kahawai from the HGMP in 2017/18 fishing year. 9.58% of the recreational fishing effort is in the proposed High Protection Areas. The HPAs will reduce recreational fisheries catch of kahawai by 50 tonnes.

These two species represent 82% of the fish (by weight) caught in the Gulf in the 2017/18 fishing year.[5]

Recreational catch in the HPAs for the 2017/18 fishing year = 248 + 18% (45) = 293 tonnes.

**Calculating the weight of commercial catch lost to trawl corridors**

Fisheries New Zealand is currently consulting on four options for bottom fishing access zones in the Hauraki Gulf. Option 1 would result in an estimated reduction in landings of approximately 632 tonnes of fish per year. Option 4 would result in an estimated reduction in landings of approximately 1017 tonnes of fish per year.[6]

## Disinformation

On social media LegaSea kept up their disinformation campaign. Their template for submitters was much more sedate however nearly every claim is wrong. We provide here an examination of the inaccuracies made by LegaSea, to ensure that this assessment is on the record for decision makers.

| Claim in submission template or the linked talking points | Reality |
|---|---|
| The root causes of these issues are not being addressed a. The ongoing use of destructive, mobile fishing techniques. b. Overharvesting (both commercial and non-commercial); and c. Land based runoff. | All addressed in the Fisheries Management Plan (FMP). |
| We/I support the alternative iwi/hapū-community based solution of Ahu Moana. | Ahau Moana is included in the FMP, it is complimentary to the protection areas not an alternative. Ahu Moana will not have the biodiversity outcomes as the proposed MPAs, it |

[4] https://www.doc.govt.nz/globalassets/documents/getting-involved/consultations/2022/revitalising-the-gulf-2223/stage2-revit-gulf-economic-impact-assessment.pdf
[5] https://gulfjournal.org.nz/wp-content/uploads/2020/02/State-of-our-Gulf-2020.pdf
[6] https://www.mpi.govt.nz/dmsdocument/58729-Discussion-document-Bottom-Fishing-Access-Zones-in-the-Hauraki-Gulf-Marine-Park

| | |
|---|---|
| | is also unlikely to meet international standards for marine protection. |
| Creating marine protected areas without applying meaningful management, such as quota or amateur daily bag limit reductions, will not resolve the main causes of depletion and biodiversity loss. In fact, they will only serve to increase pressure in other areas of the Gulf or on the boundary of the proposed protected area. | Meaningful management addressed in FMP. See Appendix 4 of this submission on the fisheries benefits of MPAs. |
| The current proposals again reflect the bureaucrats ignoring the collaborative work and agreements reached during the Sea Change Stakeholder Working Group and Ministerial Advisory Committee. | The MPAs are broadly consistent with Sea Change. |
| Furthermore, by removing all these mobile bottom contact fishing techniques from the Hauraki Gulf the country would have achieved the establishment of a large Type 2 Marine Protected Area (MPA). The Hauraki Gulf Marine Park is 1.2 million hectares, and this Type 2 MPA would contribute more to achieving our commitments to the United Nations to protect 30% of our marine waters by 2030, compared to what is currently being proposed. | As defined here the Type 2 MPA would not meet the protection standard required to contribute to the 30% target. |
| Island communities dependent on the sea as their main source of food will be denied reasonable access to gather food for the table, a serious issue when there is no alternative or local supermarket. | If any island communities are affected, they should be addressed on a case-by-case basis. We read all the submissions and did not find this to be a concern. The borders of the HPAs will be fishing hot spots. The HPAs will provide many non-fishing benefits. |
| The proposed High Protection Areas do not address the fundamental causes of declining biodiversity and abundance - overallocation and destructive fishing practices. | Allocation of fish stocks is the job of the FMP. The MPAs do address some of the known causes of declining biodiversity and abundance, being over harvest and the prohibition of destructive fishing practices. MPAs are designed and intended to protect biodiversity and support biodiversity resilience. |
| Two consultation processes affecting the Hauraki Gulf are underway, this is confusing the public. It is inappropriate, and unacceptable that officials have chosen to conduct two major consultations simultaneously. | This is contradictory to requests from LegaSea for integrated management. The proposed MPAs, FMP and Trawl Corridor consultation should be considered together. LegaSea have been confusing the issues from the start with nearly all of the LegaSea submissions in the last round of consultation requesting a ban on bottom impact fishing and saying nothing about MPAs. |

The LegaSea campaign against the Hauraki Gulf / Tīkapa Moana Marine Protection Bill does not align with the broader goals of restoring the Gulf. It's essential to make decisions rooted in verified facts rather than misleading narratives.

# Recommendations

We support all the points made by the Environmental Defence Society particularly that:

1. The HPA biodiversity objectives need to be mandatory and have purpose
2. There is public input on the biodiversity objectives
3. There is no take in the protection areas until the biodiversity objectives are agreed
4. Bivalves like kūtai / mussels and tipa / scallops should be protected in SPAs

We wish to make additional recommendations:

## Seafloor Protection Areas (SPAs)

We support the proposed SPAS. We also support the Hauraki Gulf Forum's policy to remove all industrial bottom trawling and scallop dredging harvest techniques from the entire Hauraki Gulf Marine Park. We also support petitions by the Hauraki Gulf Alliance (36,589 signatures) for the same change because bottom impact fishing:

- Flattens the seafloor reducing complexity that is valuable to benthic life
- Kills plants & animals that build complex habitats
- Injures plants & animals making them vulnerable to predation and disease (Fisheries New Zealand (2022).

Bottom impact fishing also generates massive sediment plumes to (to scare fish into the net) that:

- Prevent the ocean from sinking carbon (Sala et. al. 2021)
- Choke sessile filter feeding animals
- Smother photosynthesising plants (Ferdinand 2016, Pilskaln 1998)

84% of respondents to a poll (Horizon Research 2021) want to ban all bottom impact fishing the Gulf. Please extend the five SPAs to cover the entire seafloor of the marine park. It's important that any legislation used to create the SPAs enables extensions to the five proposed areas.

**Recommendations:**

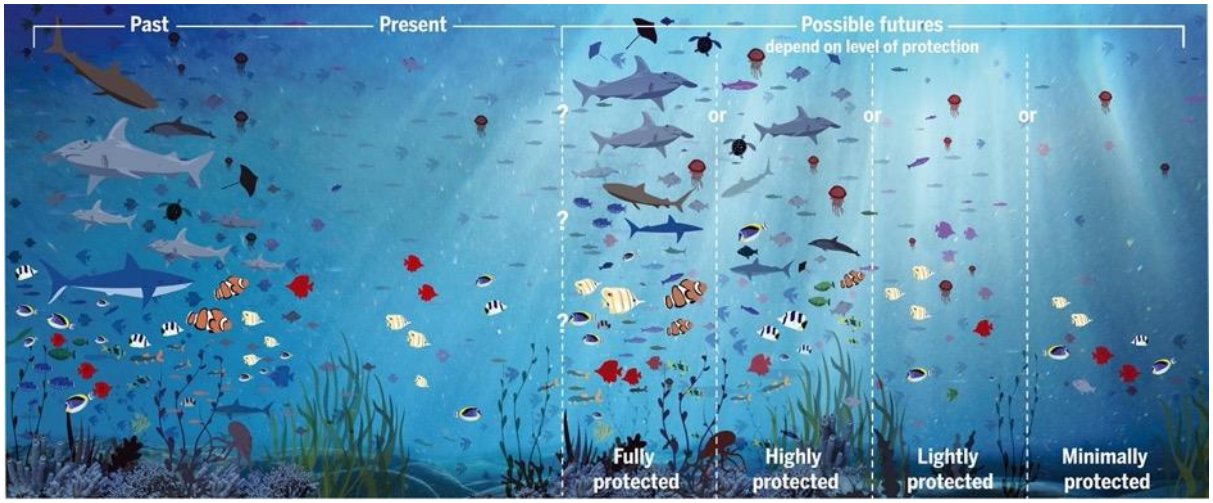
A. Extend the SPAs over the entire Haruaki Gulf Marine Park.

B. Ensure the SPA legislation allows for extensions and new SPAs.

## High Protection Areas (HPAs)

We support all the proposed HPAs. As a company involved in active restoration work we were very pleased to see that *"active habitat restoration initiatives, such as the removal or addition of marine life (translocation) to improve habitats of interest"* has been included in the HPA proposals.

Although the biodiversity benefits of these HPAs will be experimental in that they have not been tried in Aotearoa / New Zealand before, we support their goals / aspirations.




Grorud-Colvert, K., Sullivan-Stack, J., Roberts, C., Constant, V., Horta e Costa, B., Pike, E. P., ... & Lubchenco, J. (2021). The MPA Guide: A framework to achieve global goals for the ocean. Science, 373(6560), eabf0861.

## Addressing fishing lobby rhetoric

We are concerned the fishing lobby will continue to reject the plan based on poor logic, self-interest and disdain for marine protection. Government need to better educate these groups on the value of marine protection. Submissions were similar to what was presented to the Hauraki Gulf Forum in August 2021 (Hauraki Gulf Forum 2021). Shaun Lee addresses many of these concerns in an opinion piece published in the Gulf Journal (Lee S. 2021). We have talked to many fishers about Revitalising the Gulf (RTG) since then. Key issues summarised here:

- The fishing lobby regularly overstate the views they represent, The New Zealand Sports Fishing Council, LegaSea, The New Zealand Angling and Casting Association, The New Zealand Underwater Association etc regularly submit against marine protection but have not asked their members about their views on marine protection. In 2018 only 14.2% (700,000 of 4,900,000) of New Zealanders went fishing (PMCSA 2021). The fishing lobby also understate their impact on the environment. In the Gulf, recreational catches of tāmure / snapper, kahawai and haku / kingfish exceed commercial take (PMCSA 2021). Commercial fishers overstate the financial impact marine protection has on the economy providing no alternative argument to the financial benefits quantified in Qu et al 2021.

- We agree with the fishing lobby that the plan could have been stronger, the government should not have 'cherry picked' aspects of the plan and rejected others without public consultation. The fisheries management plan and protection area proposals should have been consulted on at the same time. However these are not a rationale for rejecting the package. One could use the same logic to say that sediment management proposals (currently being addressed under the National Policy Statement for Freshwater Management 2020 – Te Mana o Te Wai) should have been presented for feedback with the protection area proposals. The reality is this work is spread over multiple agencies and is staggered to fit in with their work programmes. The package is a clear step in the right direction. The protection measures are urgent (Conomos 2022) there is no argument for delay, we must act with haste.

- Like the fishing lobby we also wish there was more detail in the plan, however this is not a logical reason to reject it. Its more sensible to ask questions before rejecting the plan, some environmentalists have similar logic for different reasons. My advice to them is similar to that of the fishing lobby. State your position based on speculation like: *"I support this plan if the HPAs hit international marine protection standards for high protection." Or "I reject this plan if it doesn't address effort displacement".* Rejecting the plan without condition shows a lack of consideration / engagement and should be weighted accordingly.

- The fishing lobby will likely argue that the suggested areas are not big enough to protect fish which is ridiculous given the higher abundance of mobile keystone species within no-take marine reserves compared to fished areas. It's hypocritical to make such statements and also oppose extending MPAs. Any critique on the function of the MPA network should be saved until the Department of Conservation has been resourced to address the gaps. We will need new MPAs to complete the network.

- MPAs are the simplest solution to balance fishers "rights to fish" with other peoples "rights to experience unfished ecosystems".

- Although the HPAs were not designed with the best science available today, they roughly cover the right kind of habitats, predominantly rocky reefs. Assertions that marine reserves do not protect animals are obviously untrue, as experienced by anyone who has visited one. Snapper may move outside the reserves and their populations are impacted by the surrounding fishery but they respond strongly to protection (Allard H. 2020). We agree the network is not complete and needs more design work but that has been foreseen in the work programme. We share concerns on monitoring, enforcement and education, these are easily addressed with budget.

- The recreational fishing lobby will argue that commercial interests extract too many fish and vice versa. Both groups need to reduce their take in order for us to create HPAs and do ecosystem based management (EBFM). Rescue Fish (LegaSea 2020) is nuanced enough to ensure EBFM but we agree it's a step in the right direction.

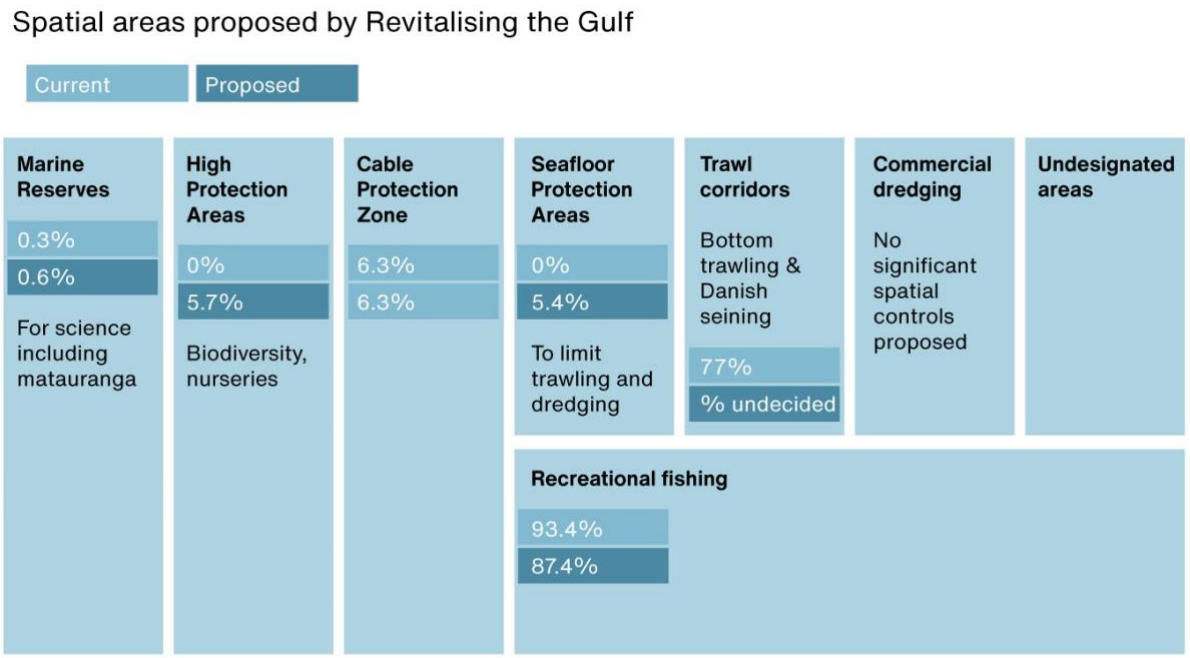
- At the 2022 Hauraki Gulf Forum Conference representatives for recreational, charter and commercial fishers took the stage to argue against marine protection. They had two core arguments which did not stack up.

  *1. Tāmure / snapper numbers are increasing, the QMS works.* We agree that numbers of some fish are increasing, we disagree that the QMS is working as evidenced by Rāhui and fisheries closures. MPAs have fisheries benefits see Appendix 4 (The fisheries benefits of Marine Protected Areas) but that is not their primary function. MPAs are insurance against future impacts and are our best effort at creating intact / natural ecosystems.

  *2. Marine protection won't stop sediment impacts.* We agree that sediment is a problem and we need to do more. We are excited for changes being introduced through the National Policy Statement for Freshwater (Cross-government water taskforce 2020). The government understands that there are multiple impacts on ocean health and is working on a suite of measures to address them. Shaun Lee dived the Motu Manawa-Pollen Island Marine Reserve in August 2022 and was impressed with the density of tio / oysters and tuangi / cockles filtering the water. Closing sediment impacted areas to fishing can aid in their natural recovery.

*Tuangi / cockles with sea-anemones and whelk trails in the Motu Manawa-Pollen Island Marine Reserve. Photo by Shaun Lee.*

- The fishing lobby should not be concerned about displaced fishing effort: see Appendix 2 (Concerns about displacement are ill-informed). Please also note the fisheries benefits of marine protection when considering submissions from the fishing lobby: see Appendix 4 (The fisheries benefits of Marine Protected Areas). Note that 87.4% of the HGMP will remain open for recreational fishing. Any suggestion from recreational fishing lobby groups that they need more than this is abhorrently selfish.




*Note that the 77% bottom impact fishing area calculation is an estimate.*

- Recreational fishing lobby groups will likely reject the HPAs due to their experimental nature and hypocritically suggest their own experiments like their new Ahu Moana Policy. The policy seems to have been developed without input from marine scientists and has significant problems if proposed as an alternative for HPAs that meet IUCN guidelines as MPAs (Day J. 2019).

  1. Declines in lobster populations at small no-take marines reserves that only extend c1km off-shore do not protect the keystone species from the effects of fishing the boundary (LaScala-Gruenewald 2021). The 1km limit of the experimental policy has already been scientifically proven to fail.

  2. A lack of understanding of marine ecosystems (see previous point) shows that communities are not resourced to conserve marine ecosystems alone. Citizen science has a huge contribution to make, there are many advancements in this area including 10 minute kina counts, Marine Metre Squared, iNaturalist.nz and more. A very successful citizen conservation programme for one species (the Dotterel Management Course) requires two days training.

  There is a place for Ahu Moana, its intention to build relationships between local fishing clubs, communities and mana whenua is particularly applaudable, however it is clearly not a conservation tool. Rāhui are a better way to finely manage populations for fisheries purposes. The work recreational fishing groups have put in to with mana whenua on rāhui to date is equally applaudable. The governments recent investment in this area (Waikato Herald 2022) will help strengthen this tool. Rāhui are not a conservation management tool due to the short-term nature of the 186a closures which is inconsistent with the time it takes to passively restore marine abundance. This is evidenced by continual renewal of most 186a applications. We hope this evolves.

- In their bulk submission Legasea have rejected the SPAs which are effectively recreational fishing parks. This is disappointing as although similar restrictions have failed to produce biodiversity outcomes in the Poor Knights (Denny et. al. 2003) and the Mimiwhangata Marine Park (Denny et. al. 2004) we can see some value in the SPAs especially in the Mokohinau Islands where the potting restrictions will dramatically increase the lobster population. We were very disappointed to see DOC fold to this lobbing pressure but pleased DOC kept some protections in the Mokohinau Islands.
- The submission form which Legasea advertised on Facebook pits Type 2 seabed protection against Type 1 marine protection. They did this knowing that was not what was being consulted on (the Hauraki Gulf Fisheries Management Plan is due to come out for consultation in a month). We think would be fair enough to count most of the bulk submissions from the form as opinions on the upcoming fisheries management plan, not submissions on the marine protection proposals.

### Real concerns for the HPAs

It's critical that the HPAs continue to be framed as conservation tools. We have some concerns about achieving biodiversity goals: see Appendix 6 (Speculative concerns on customary take). However there doesn't seem to have been any significant progress on defining the customary practices since they were proposed in 2017. Without this definition our concerns are speculative. We note that in the latest consultation document the HPAs are no longer referred to as Type 1 Marine Protection Areas (MPAs). If commercial customary take is allowed in the HPAs, the government should clearly articulate that to the public during the consultation process, this has not happened to-date. The new HPA legislation should not prevent the implementation of stricter no-take rules via Motiti protection areas or existing / future Marine Reserves Act legislation in the HPA areas. No-take areas are the gold standard for marine protection.

Customary take should be excluded until regulations are issued.

## Recommendations to improve the HPA network

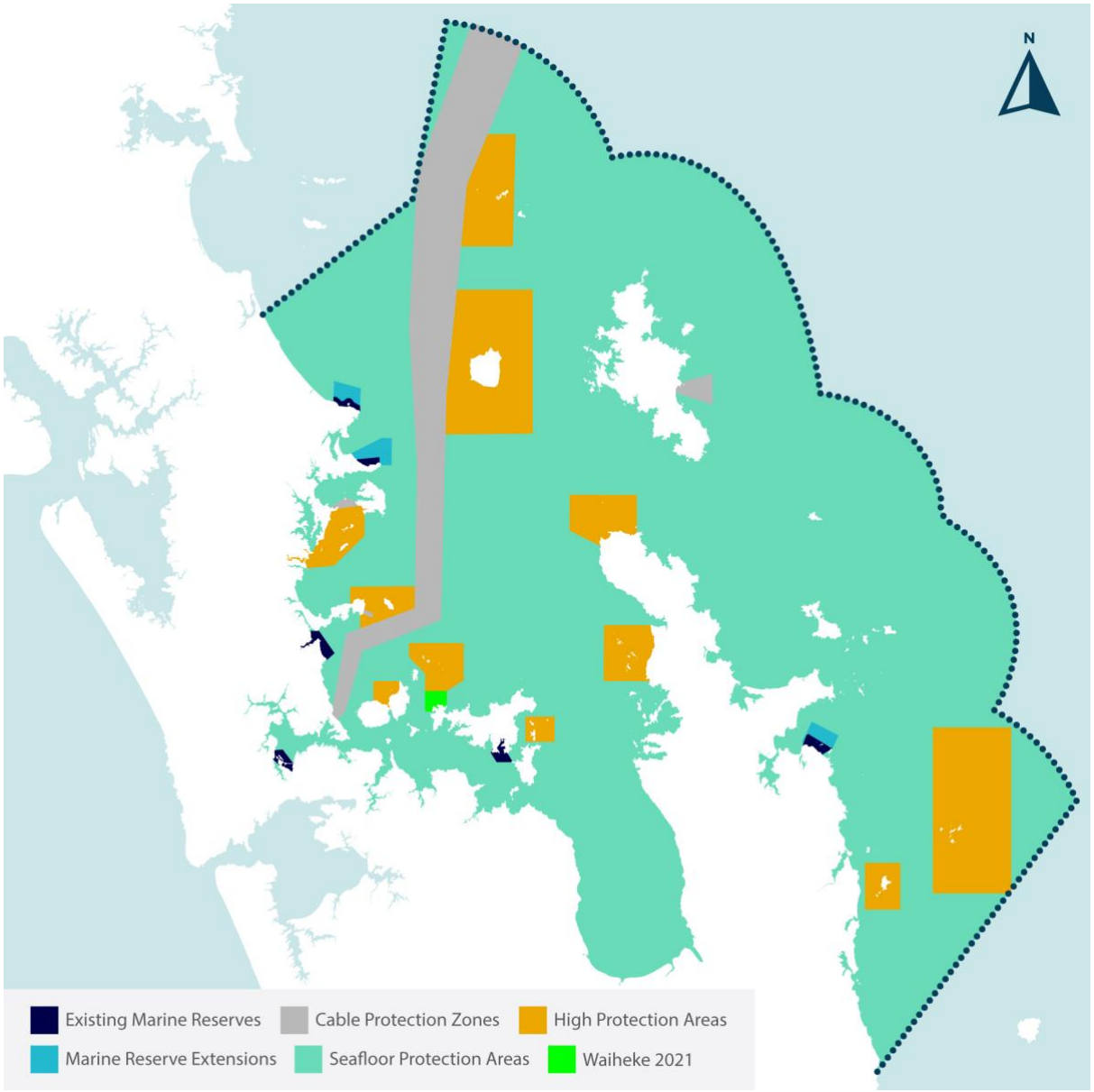
The absence of provisions for future marine protection measures in this draft Bill is a significant concern, as it does not provide a path for establishing further marine protection in the Hauraki Gulf.

We have some concerns about the design of the HPAs. Mostly that they are nowhere near big enough to fill full the 30% protection target sought by the Hauraki Gulf Forum and the United Nations Convention on Biological Diversity (30x30). The Gulf MPA network needs to be much more ambitious (and work hand in hand with the Fisheries Management Plan) to restore abundance at the bottom of the food chain and stop declines in species that are going extinct at the top of the food chain.

11 years ago a Colman Brunton poll found that New Zealanders thought that 30% of their ocean was protected from fishing. Only 3% of our EEZ is protected and little has changed since then. The poll showed 96% of New Zealanders thought that 30% of New Zealand's marine environment should be protected (Colmar Brunton 2011).

77% of respondents to a more local and recent poll (Horizon Research 2021) want 30% of the Gulf in marine protected areas. The public understanding of MPAs at that time was that they would be no-take. 72% of the recreational fishers polled also supported the 30% target.

We have suggested some extensions to the HPAs. We explain the proposed extensions and their rationale in the sections below.




*Our proposed extensions to the government's proposal*

## Please extend the Mokohīnau Islands HPA

The recreational fishing lobby have rejected the commercial restrictions in the huge Mokohīnau SPA which would provide considerable protection for lobster. If you change the proposed SPA then the proposed HPA should extend further north and south down past Simpson Rock. Although the kina barrens recorded over the last decade are growing this is one of the least impacted areas of the Gulf. The high naturalness values mean it's likely to recover faster than other areas. Its distance from the mainland also protects it from land based impacts. Once protected from fishing it will likely weather many anthropogenic impacts (including climate change) better than other parts of the Gulf. Together with its high levels of terrestrial biodiversity it's an excellent candidate for marine conservation but I'm concerned it's too small to restore large species like hāpuku, and provide safe places for natural behaviours like workups. See Appendix 3 (Terrestrial benefits of marine protection).

## Please extend the Te Hauturu-O-Toi / Little Barrier Island HPA

Te Hauturu-o-Toi / Little Barrier Island was declared a wildlife sanctuary in 1897 by the New Zealand government. Over the last four decades predators have been removed from the island and terrestrial wildlife is recovering fast. The same can not be said about the marine environment where human predators have knocked marine wildlife numbers down to the lowest numbers in recorded history. Extensive kina barrens can be seen in aerial imagery due to declines in urchin predators. See Appendix 3 (Terrestrial benefits of marine protection). Extending the area will benefit endemic reptiles and seabirds including: Suter's skink, Hauraki skink, Takahikare-raro / New Zealand storm petrel, Tākoketai / Black petrel and others.

Under the water many local extinctions are likely to have already occurred and many of them are likely to need bigger home ranges than what has been proposed in RTG e.g. hāpuku. Tīpa / scallop habitat was excluded from the *'Agency analysis and advice on selection of MPAs towards development of the Hauraki Gulf Marine Park network.'* The tīpa bed off the southern end of the motu is an important biogenic habitat and one of the few remaining beds with numbers Fisheries New Zealand deem commercially harvestable. *"It would be logical to close some scallop beds and create passive restoration (broodstock areas) to increase the fishery yield*" – Pers Comms Dr Mark Morrison December 2021.

In *Hauturu – The history, flora and fauna of Te Hauturu-o-Toi Little Barrier Island* esteemed marine biologist and Sea Change stakeholder Dr Roger Grace authors a chapter on declines in the marine environment around the motu. The proposed HPA was an important hope for the future, and I'm sure he would have loved to see it increase in size. As one of our oldest and most critical wildlife sanctuaries the motu deserves complete maunga-to-moana no-harm protection around the entire island.

## Please extend the Kawau Bay HPA

Despite having high ecological values no estuaries are included in the protection package. At only 2-4% these habits (*Estuarine Intertidal Soft Sediment, Estuarine Intertidal Rocky Reef, Estuarine Shallow Mud, Estuarine Shallow Sand, Estuarine Shallow Rocky Reef*) are not adequality represented. Please extend this HPA further south. My understanding is that this is aligns with:

- A planting programme being undertaken by local iwi and community to protect the moana from sediment impacts.
- The restoration ethos of bordering local regional parks.
- Terrestrial and seabird restoration projects on Motuora Island.
- A 2014 proposal by esteemed marine biologist Roger Grace at the start of the Sea Change – Tai Timu Tai Pari process.
- Nearby mussel reef restoration mahi.

It would also provide amenity value missing from the proposed network.

## Please extend the Tiritiri Matangi HPA

The proposed tiny HPA is welcome, but it is not aligned with the community-led conservation values that have made the island what it is today. When volunteers began to restore the motu in the 1980's they didn't just try and restore half the island. While the forest on the island has grown over the last few decades the underwater forest has declined due to overfishing. In 2004 David Bellamy thought

the Island was worthy of World Heritage Status. If he were alive today and peered under the water he might have a different opinion. Without marine protection the motu's terrestrial conservation values are compromised See Appendix 3 (Terrestrial benefits of marine protection). With more marine protection we hope visits to Tiritiri Matangi could include observations of species that Māori once ate on the island (sea lions, bottle-nosed dolphins, sharks, rays, and fish eating birds like king shag (Rimmer A. 2004) which are now locally extinct). Spotted shags breed on the motu in 1910 (Rawlence 2019), more recent memory (1992) 60 spotted shags roosted on the island. Its likely that declines in prey availability impacted their decline. Recent research by the Northern New Zealand Seabird Trust has found that the kuaka / common diving petrel colony on Tiritiri Matangi is highly vulnerable to any decreases in fish numbers (Gaskin 2021). A significant increase in the size of the HPA would:

- Support volunteer efforts to actively restore seabird colonies on the motu
- Increase ecotourism and education opportunities
- Provide more food and habitat for At Risk – Declining shore skinks and other species
- Dramatically increase abundance in the HPA which will likely leak on its northern boundaries because there is no natural break in habitat type.
- Better fit with the no-take conservation ethos that has flourished on the island
- Reduce ecotourism pressure on scientific no-take marine reserves like the one at Leigh

## Please extend the Rangitoto and Motutapu HPA further west

The proposed HPA does not allow enough protection for the seasonal movements of kōura / crayfish which often travel 1-2 km beyond the reef edge. This buffer is well explained in the Noises proposal (The Noises 2022). This would greatly increase the reef biodiversity which is particularly important for enhancing the natural wildlife experience for the Motutapu Outdoor Education Camp and the recovery of translocated Tuturuatu / Shore plover, see Appendix 3 (Terrestrial benefits of marine protection).

## Please extend the HPA around the Noises further south

We are particularly pleased to see the Noises proposal included. The boundaries are sensible and well designed. However its proximity to the proposed Hākaimangō-Matiatia (Northwest Waiheke) Marine reserve provides two significant opportunities. 1 - An excellent resource for study (both under the scientific purpose of the Marine Reserves Act and the guidance of Auckland Museum who are heavily invested in the Noises restoration project) and 2 - A nursery function, right in the middle of the inner Gulf. Both of these opportunities would be greatly enhanced by closing the gap between the MPAs.

Shaun Lee and other divers have witnessed great declines in biodiversity and changes in habitat structure due to overfishing in the Noises over the last decade. Please act urgently to preserve remaining marine wildlife here before it's too late.

*Kina barrens at David Rocks (the Noises). Photo by Shaun Lee.*

## Please extend the Rotoroa Island HPA

The name of this HPA is currently incorrect as the proposal was shifted north to encompass the area around and between Pakatoa and Tarahiki Island as reflected in the maps supplied and RTG. The rationale for this was that the Sea Change 2017 proposal was not of viable size to meaningfully afford protection to associated species and ecological processes. Rather than correct the name I suggest you extend the area south to re-encompass Rotoroa Island. This would:

- Address the original concerns on size of the proposal
- Protect a greater diversity of habitats
- Support and encourage historic marine restoration efforts by Revive Our Gulf
- Extend Rotoroa Islands restoration ethos to the ocean for a maunga-to-moana outcome. See Appendix 3 (Terrestrial benefits of marine protection). This ethos is not found on Pakatoa Island.

Note Shaun Lee has done a lot of diving in the area and agrees that there is far more diversity of biogenic habitat around Pakatoa Island.

*Tubeworms mounds around Pakatoa Island. Photo by Shaun Lee.*

*Actively restored kūtai / green-lipped mussel bed. Photo by Shaun Lee.*

## Please extend the Motukawao Islands HPA further south

We are concerned the proposed small HPA will not meaningfully afford protection to associated species and ecological processes due to fishing pressure on its northern, westerns and southern boundaries. The best known example of a scarlet tubeworm colony (*Galeolaria hystrix*) in the HGMP was discovered in south of Moturua / Rabbit Island in early 2021. Please extend the HPA to encompass this valuable biogenic habitat which is not represented in the proposed network of MPAs (the Pakatoa Island mounds are a different species assemblage). This extension is strongly supported by analysis of the HPAs: see Appendix 5 (Tablada et al 2022).

*Scarlet tubeworm mounds. Photo by Shaun Lee.*

## Please extend the Cape Colville HPA

We are concerned the proposed small HPA will not meaningfully afford protection to associated species and ecological processes due to fishing pressure on its unusual boundaries. The boundaries of the SPA make much more sense and are easier to read. The unique incline and currents here support a unique diversity of habitats. Much more of the area should be protected. This extension is strongly supported by analysis of the HPAs: see Appendix 5 (Tablada et al 2022).

## Please close the gap between the two Aldermen Islands / Te Ruamāhua HPAs

The gap between the two HPAs makes little sense. Closing the gap creates the largest and most meaningful HPA in the Gulf. This extension is strongly supported by analysis of the HPAs: see Appendix 5 (Tablada et al 2022). This would:

- Enhance the mana of the local iwi who are passionate about marine conservation (Ngāti Hei 2020).
- Protect the a huge range of marine habitats as the proposed areas are some of the deepest parts of the HGMP.
- Keep bottom impact fishing methods away from sensitive habitats (this HPA is not connected to an SPA and is vulnerable to bulk and bottom fishing methods).

- Align with a community led marine protection initiative for the area. See https://www.facebook.com/aldermanislandsgroup/
- Align with the high conservation value of the island group See Appendix 3 (Terrestrial benefits of marine protection.
- Protect unique geological features which support unique marine biodiversity.
- Deliver an ecotourism experience similar to that of the Poor Knights Marine Reserve which is known as one of the best dive sites in the world.

### Please extend the Slipper Island / Whakahau HPA

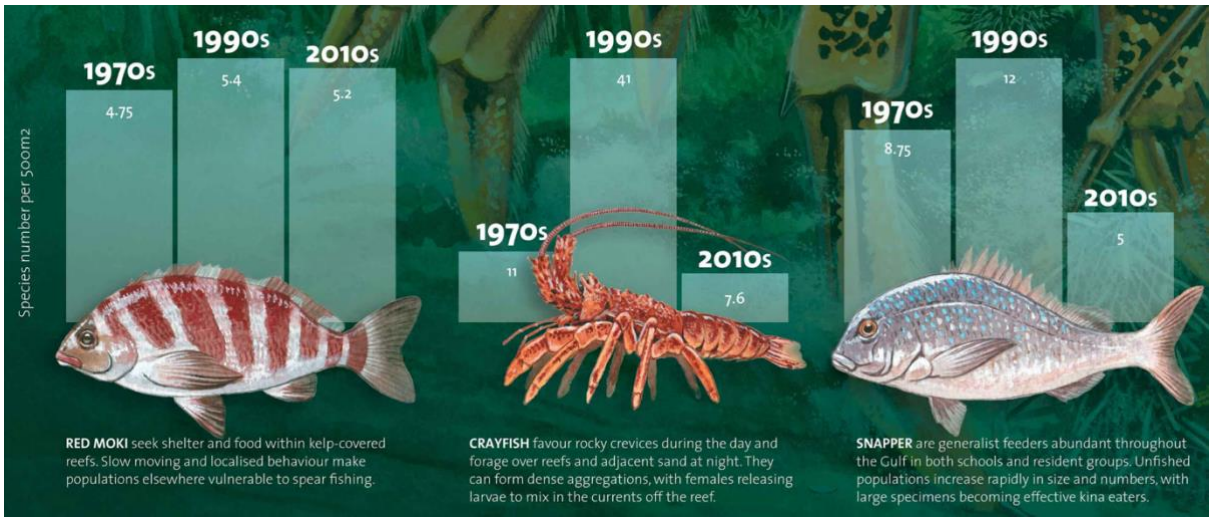
We are concerned the proposed small HPA will not meaningfully afford protection to associated species and ecological processes due to fishing pressure on its boundaries. Please extend the area inline with the design principles used for the Noises proposal. This extension is strongly supported by analysis of the HPAs: see Appendix 5 (Tablada et al 2022).

*Tāmure / snapper at the Whanganui-a-Hei (Cathedral Cove) Marine Reserve. Photo by Shaun Lee.*

## Stet supports the extensions to the Whanganui-a-Hei (Cathedral Cove) and Cape Rodney – Okakari Point marine reserves using the Marine Reserve Act 1971

We understand DOC received mixed feedback from mana whenua on which protection tool to use. Our preference is to extend the Marine Reserves using the Marine Reserves Act as proposed in Sea Change – Tai Timu Tai Pari 2017. This was not an easy decision to make, see logic here: see '1. Extensions decision' in the appendix.

Extending the boundaries will help create an example of an unimpacted marine ecosystem. However biodiversity in the reserve will always reflect that outside the reserve due to population source / sink dynamics. It's important the proposed Hauraki Gulf Fisheries Management Plan reduces fishing pressure in unprotected areas.




*Changes in numbers of three species at the Cape Rodney – Okakari Point Marine Reserve over time.*
https://gulfjournal.org.nz/poster/goat-island/

Small marine reserves do not provide a safeguard against overfishing (LaScala-Gruenewald 2021).

The extensions will enable better reef biodiversity benchmarking for HPA biodiversity goals. The extension also offers a opportunity to better understand the recovery of soft-sediment ecosystems in the Gulf.

## Please also extend the Tāwharanui Marine Reserve

The same logic used to extend the Whanganui-a-Hei (Cathedral Cove) and Cape Rodney – Okakari Point marine reserves applies to the Tāwharanui Marine Reserve where fishing on the boundary is having a huge impact on biodiversity in the reserve. The regional park hosts regionally significant community led shorebird and seabird restoration efforts. See Appendix 3 (Terrestrial benefits of marine protection). The reserve is an important replicate (control) for the Cape Rodney – Okakari Point Marine Reserve. The MPA has fantastic amenity values and restoration potential. The existing protections is also note adequate because it leaks on the eastern boundary. It is logical to extend the reserve around the peninsular to Jones Bay where there is a natural change in habitat and an adjacent no-take marine area created by Auckland Council. This is supported by Tablada et. al.

*Kōura / Crayfish / Spiny rock lobster at the Tāwharanui Marine Reserve. Photo by Shaun Lee.*

### Please talk to the community on Aotea / Great Barrier island about HPAs

A science informed community meeting would help get the conversation going on the island. We helped make the island a Dark Sky Sanctuary which has been a huge success. We believe the community will be ready for change after the *Caulpera* biosecurity restrictions are eased.

### Please approve the Proposed Hākaimangō-Matiatia (Northwest Waiheke) Marine Reserve

We know this proposal is outside the scope of the current consultation, but it is very relevant when considering the network of MPAs in the Gulf. The reserve application was instigated due to missing Government support requested in Sea Change "*By 2018, identify any gaps in the MPA network with specific attention to Waiheke Island and Aotea – Great Barrier Island. Establish further MPAs if required."* The reserve application was submitted to DOC in January 2022, under the Marine Reserves Act. Public consultation showed overwhelming (93%) public support, including (73%) support from those submitters identifying as Māori. Shaun Lee has published the reasons why the reserve should be approved in his supporting submission (Lee S 2022).

## Suggestions for future mahi

We desperately need a new Marine Reserves Act. It's embarrassing that the government of Aotearoa / New Zealand has not actioned this work (DOC 2001) published 21 years ago. There are many more reasons to create MPAs that are not provided for in the act.

Please increase resourcing on this mahi, especially iwi consultation. It must be terribly underfunded as the results from the last 14 months of work are at best, minimal. MPAs are incredible popular

(Horizon Research 2021) and successive State of the Gulf reports clearly explain the need for them (Hauraki Gulf Forum 2022) . The entire work programme is too slow and small in scope.

*"Urgent action is needed to repair damage to the Gulf and to stop it degrading further. We do not think the draft strategy conveys sufficient urgency or ambition"* – Report from the Sea Change – Tai Timu Tai Pari Ministerial Advisory Committee, September 2020.

Please ensure the gap analysis that RTG plans to begin in 2024 *"Assess gaps in the protected area network for the Gulf, to inform ongoing evaluation"* has a smooth legislative pathway. Please also ensure it uses a the systematic approach to conservation planning that produces better conservation outcomes (Tablada et. al. 2022). It should also use the biogenic habitat modelling work developed to inform the design of the trawling corridors and new data sets developed for mobile species.

Please better consider public access to future HPAs. Only three of the twelve proposed HPAs (1/4) are connected to the mainland. MPAs are incredibly popular with the public. Despite the marine reserve's historically poor condition (the abundance of Tāmure / Snapper and Kōura / Crayfish has never been lower – even before it was a marine reserve (Hauraki Gulf Forum 2016)) the carparks at the Cape Rodney-Okakari Point (Leigh) Marine Reserve still overflow in summer. The Kawau Bay HPA will only reduce a small amount of this pressure. The Motukawao Island HPA and Cape Colville HPA were not designed with access for Aucklanders in mind.

# Appendix

## 1. MPA vs. HPA for extensions to existing marine reserves

Advantages of using the High Protection Area (HPA) legislation or the existing Marine Reserves Act to extend the Cape Rodney-Okakari Point (Leigh) Marine Reserve and the Whanganui-a-Hei (Cathedral Cove) Marine Reserve.

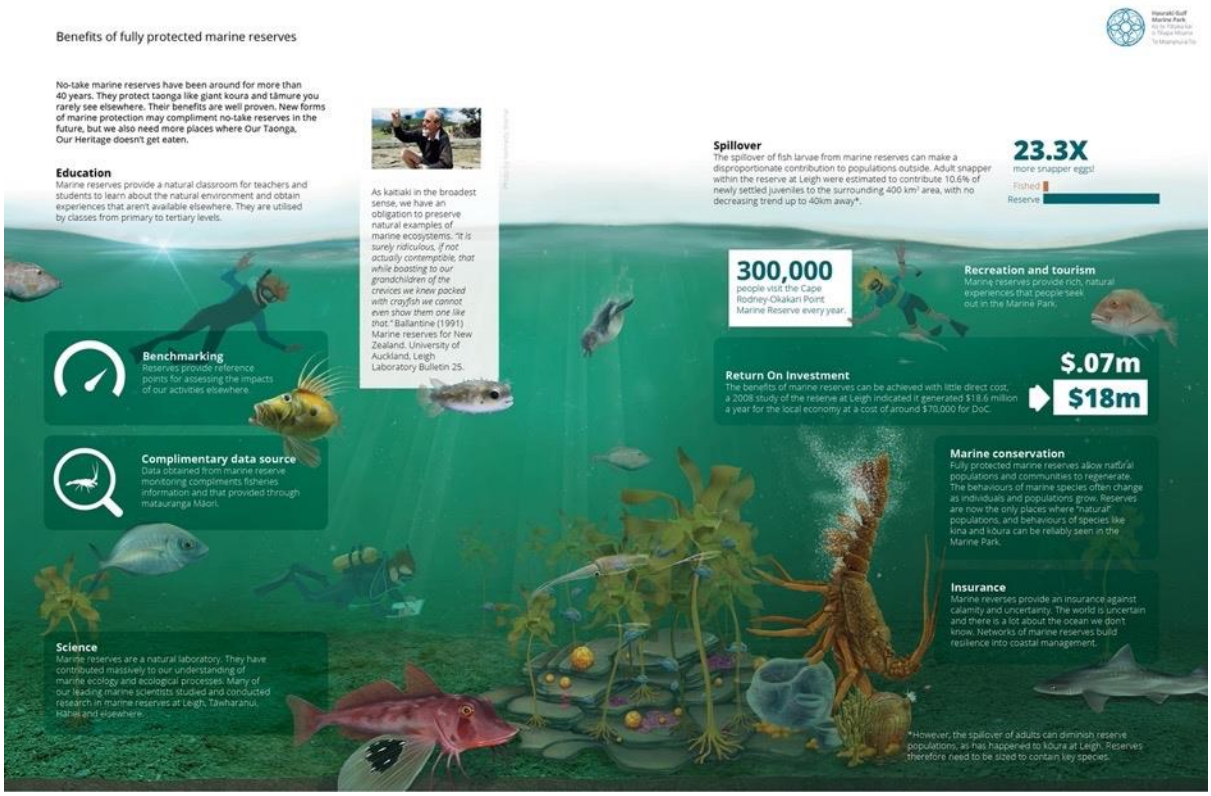
| Advantages of existing Act | Advantages of new legislation |
|---|---|
| Highest possible abundance and biodiversity guaranteed. The HPAs are experimental. | Allows for cultural practices for Māori in extended areas, increasing the mana of the local iwi. |
| Easier for the public to understand. | Less paperwork for policy makers. |
| Enables the biodiversity values of marine reserves to be more accurately compared with those of the new larger HPAs. This better enables the scientific purposes of the marine reserves (benchmarking) and will help mana whenua decide on their biodiversity objectives. | Allows for active restoration. Kina removal and mussel reef restoration. We asked around and no one in the Revive Our Gulf team (or anyone they have talked to) has expressed an interest in doing mussel reef restoration in these areas. The areas are not known to have any kina barrens due to their depth. |
| | Increases the no-take status / importance of HPAs. |

People for and against marine reserves argue that the Marine Reserves Act is no longer fit for purpose (Ministry for the Environment 2016). An update to the Marine Reserves Act (1971) is long overdue. Using the existing act may or may not aid this development.

The Gulf needs big permanent no-take areas for benchmarking purposes. The decision to allow cultural practices in HPAs puts faith in iwi as the best possible kaitiaki. You have to have faith that iwi will be 100% selfless. Thought experiments:

1. *Can you imagine a future where an iwi group decides its ok to harvest an extension? This would undermine the scientific value of the areas as benchmarks. If you can imagine it, then it would be better to use the existing Act.*
2. *Can you imagine that by using the HPA legislation for the extensions, no cultural take ever happens in any of the HPAs? If so you're better off taking a chance with iwi, because the extensions are very small (0.3% of the HGMP) and the wider HPA benefits are huge (5.6% of the HGMP).*

We could imagine an iwi harvesting an extension. We could not imagine no cultural take ever happening in the HPAs. We just don't think any group of humans can be that selfless.



*Graphic from the State of Our Gulf 2020 (Hauraki Gulf Forum 2020).*

## 2. Concerns about displacement are ill-informed

Here are some counter arguments to concerns you will hear from fishers who are worried about displacement.

1. The abundance of marine life in our oceans is not homogeneous. Different habitats exist in different places supporting different numbers of species. Variation in fishing pressure driven

by catch effort reduces the diversity of abundance. Fishers who argue against displacement want abundance evenly distributed in the ocean, this is unnatural.

2. All fisheries controls displace fishing effort including those sought by groups who argue that short-term displacement caused by marine protection areas negatively impacts unprotected areas. For example banning bottom impact fishing in the Hauraki Gulf will increase use of the method outside the area. The displacement argument is usually hypocritical.
3. Over time no-take marine reserves have proven to offset short-term losses with increased productivity from an abundance of large animals. These large animals make a disproportionate contribution to populations. For example it takes thirty six 30cm Tāmure / Snapper to make the same amount of eggs as one 70cm fish (Willis 2003).
4. The Hauraki Gulf Fisheries Management Plan should address concerns about overfishing in unprotected areas.

## 3. Terrestrial benefits of marine protection

There is no hard line between the ecology of the ocean and land. The narrow strip between the two worlds is a small but incredibly diverse, scientists continue to find new connections between these environments.

Extensive kina barrens caused by overfishing and coastal darkening is reducing kelp in the Gulf. Thirteen percent of our assessed macroalgae are threatened with or at risk of becoming threatened with extinction (Nelson 2019). The lack of kelp washing up on the beaches combined with increasing take of beach-cast kelp by the public and commercial businesses is reducing kelp available for terrestrial food chains. Beach-cast kelp supports a diverse ecology of organisms through its nutrient cycling and decomposition including bacteria, yeasts, and fungi in the microflora, nematodes, invertebrate larvae and mites in the meiofauna, and numerous species of macrofaunal invertebrates of marine and terrestrial origin (Lindsey White 2005). These are important food for shorebird species, 82% of indigenous shorebirds are classified as threatened with extinction or at risk of becoming threatened with extinction (Ministry for the Environment and Stats NZ 2022).

*Tuturuatu / Shore plover. Photo by Shaun Lee.*

Terrestrial reptiles that are threatened with extinction like *Cyclodina oliveri* (Hauraki skink) which are endemic to the region also depend on beach-cast kelp. Protected areas are more likely to have a constant supply of beach-cast kelp.

Many seabirds that are Threatened or At-Risk of extinction breed on predator free islands in the Gulf. These birds depend on the ocean as a food source. Large fish chase smaller fish and invertebrates to the surface where they become available to seabirds. Fishing reduces the number of large fish, making the prey items and discards unavailable to seabirds. Fishing in workups disrupts natural behaviours and causes bycatch and injury to seabirds that are threatened with extinction. This reduces nutrient supply to terrestrial ecosystems. 40% of the diet of At Risk Tuatara that live on island sanctuaries is derived from seabirds (Lamar 2022). To my knowledge Aotearoa / New Zealand has never implemented an MPA big enough to measurably benefit seabirds. The proposed HPAs will better provide for seabirds with shorter foraging ranges (E.g. shags, terns, penguins and gulls). If the HPAs are extended we are likely to see food abundance increase and fisheries threat decrease. This should increase threatened seabird populations with larger foraging ranges, especially during the breeding months (Campos et. al. 2018). This is an important part of the experimental nature of the HPAs. Please ensure sure this research is funded.

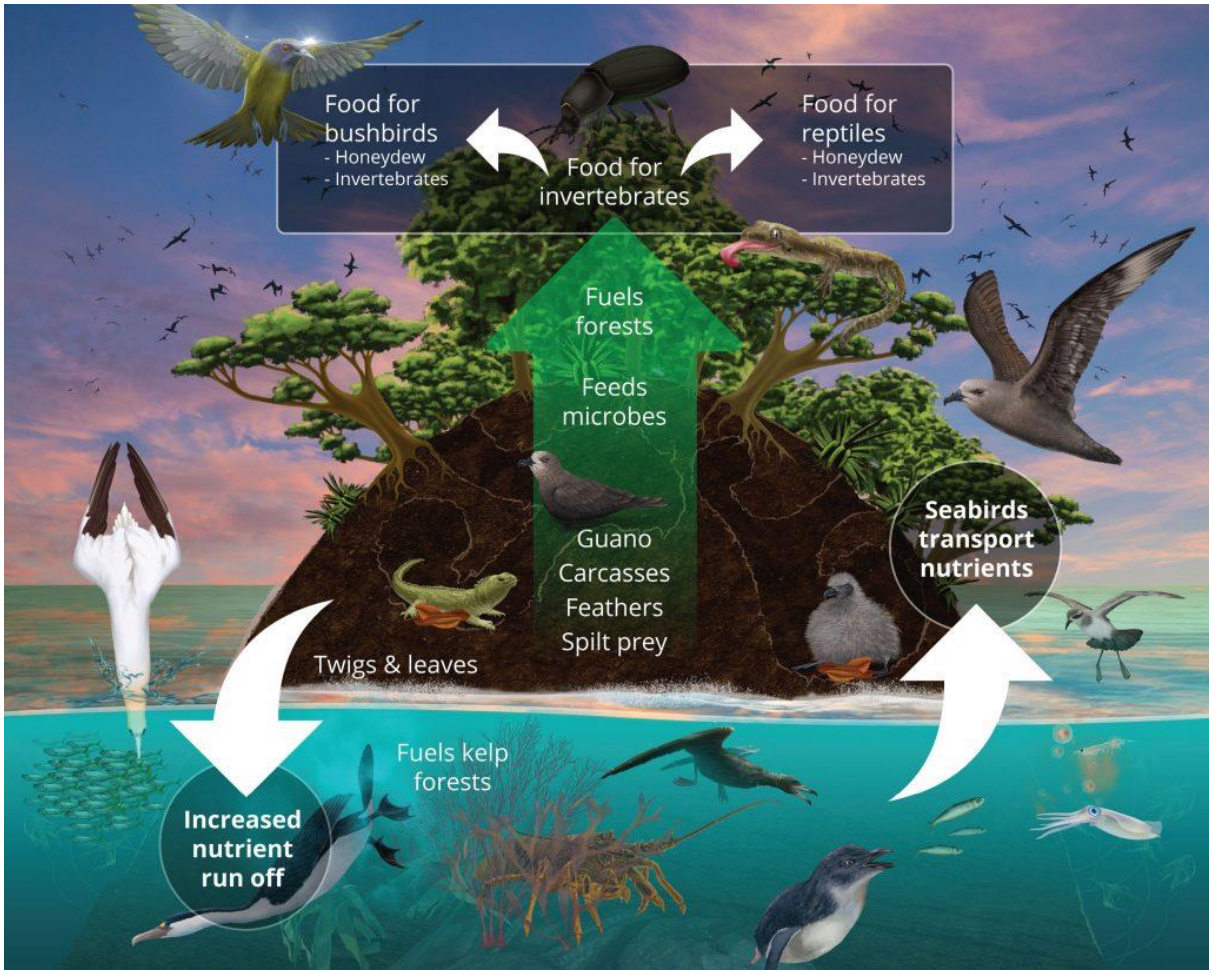
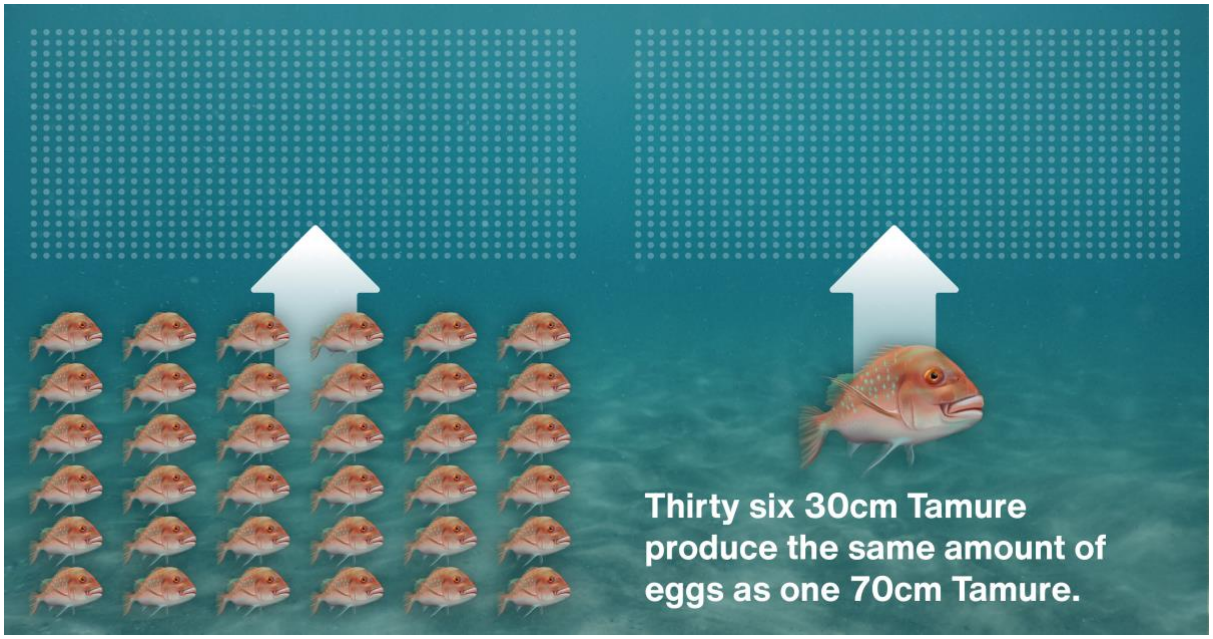



*Diagram from the State of Our Seabirds (Gaskin 2021).*

Protecting areas from fishing helps conserve many terrestrial species, ecosystems and behaviours.

## 4. The fisheries benefits of Marine Protected Areas




1. It takes thirty six 30cm Tāmure / Snapper to make the same amount of eggs as one 70cm fish (Willis et. al., 2003). The proposed HPAs will dramatically increase egg production in the HGMP by increasing the number of large animals.
2. Marine reserves make a disproportionate (2,330% Tāmure / Snapper in the reserve at Leigh) larvae spillover. Adult Tāmure / Snapper within the reserve at Leigh were estimated to contribute 10.6% of newly settled juveniles to the surrounding 400km2 area, with no decreasing trend up to 40km away (Le Port et. al. 2017).
3. With my proposed edits the proposed HPAs are big enough for people to fish the borders with a clear conscience. Fishing in these areas will be popular with many big fish leaving the area (See Lester et. al. 2009). Although MPAs were not initially conceived to help catch more fish outside their boundaries, well-enforced marine reserves can increase adjacent fishery catches, aiding in sustainability and increasing the long-term profitability of local fisheries.
4. Juvenile Tāmure / Snapper leaving the Cape Rodney to Okakari Point (Goat Island/Leigh) Marine Reserve boosted the commercial fishery by $NZ 1.49 million per annum (Qu et. al. 2021). The researchers found economic benefits to the recreational fishery are even more substantial.

## 5. Tablada et al 2022.

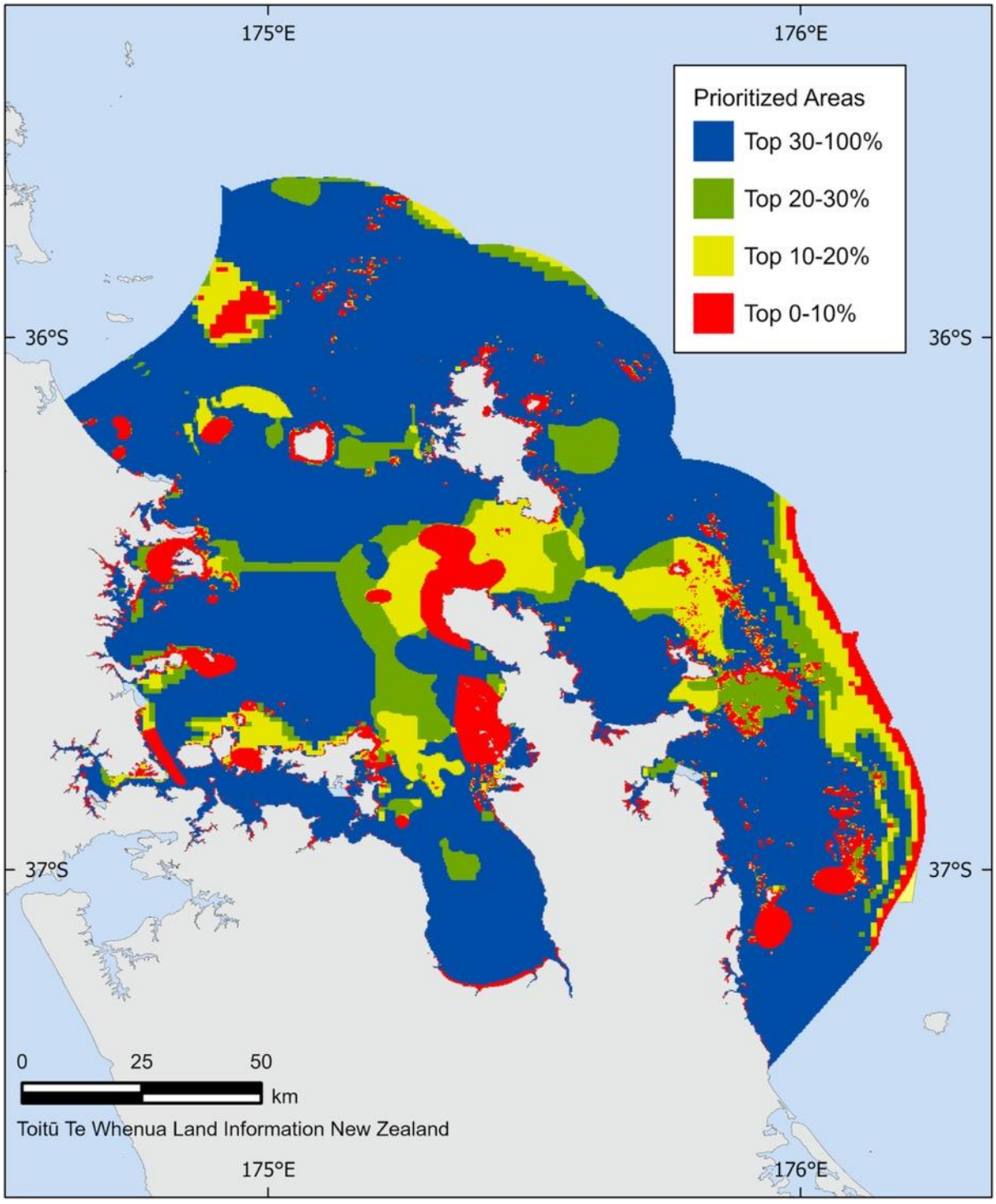



Figure 2. From Tablada, J., Geange, S., & Lundquist, C. J. (2022). Evaluation of biodiversity benefits of proposed marine protected areas from the Sea Change—Tai Timu Tai Pari Hauraki Gulf Marine Spatial Plan. *Conservation Science and Practice*, e12803. https://doi.org/10.1111/csp2.12803

## 6. Speculative concerns on customary take

Marine Reserves created under the Marine Reserves Act 1971 are 'no take'. This means local Māori might get locked out of their traditional hunting and gathering areas. A solution to this is to allow customary take in proposed High Protected Areas (HPAs). Sea Change 2017 suggests this customary

take is done on a case-by-case basis with a special permit. In highly populated areas like the Hauraki Gulf / Tīkapa Moana / Te Moananui-ā-Toi providing for customary practices within protected areas the Government should consider the following factors that may lead to negative outcomes.

1. Most people agree the pre-European population estimate of 100,000 (Chapple 2017) Māori is the most likely. In 2021 this has grown to 875,300 (Stats NZ 2021) people in New Zealand that identify as Māori. Traditional harvesting management might not be able to cope with a more than 800% increase in fishing pressure. Although Māori have more options now, the ecosystems are not what they were and face other pressures (like sediment run off and pollution). Modern Māori also have much better tools for killing (like nylon nets). This means the HPA experiment may well fail, especially compared to 'no take' marine reserves or Motiti protections areas created under the RMA. Previous attempts at partial take MPAs have failed at the Poor Knights (Denny et. al. 2003) and the Mimiwhangata Marine Park (Denny et. al. 2004). Failure will damage Māori rights, beliefs, and perceptions as kaitiakitanga or good guardians.

2. If the model is successful the area will be home to large animals that live for decades. Anyone who visits the area regularly will build relationships with the animals. You can see this in Maunganui Bay (Deep Water Cove) where Ngāti Kuta and Patukeha have had a rolling no-take Rāhui / section 186 closure since 2010. Here regular visitors have names for many individual animals. Humans really like to do this and there are hundreds of famous individual birds in New Zealand. The most famous fish is probably Monkey Face from the Cape Rodney-Okakari Point Marine Reserve. So what happens when a diver entering the water sees someone from the local iwi hauling out a one of those animals she has formed a relationship with? The cultural variance in rules creates conflict. A great example is the Gulf Harbour Marina where fishing is not allowed. Here fish grow large and are sometimes even fed. When two local Māori killed a fish it upset locals who posted the video on social media. The men identified themselves as tangata whenua, asserting their rights to take the fish, the video attracted violent and racist comments (Marriner 2021).

We understand and respect that Māori have the right as partners (under the Treaty of Waitangi) to maintain access to their local hunting and gathering areas. We think it's important they get to assert those rights early on in Marine Spatial Planning processes as is hopefully occurring with the proposed MPA's, HPA's and SPA's. However the customary take policy within HPA's is going to need to be carefully thought out, managed and monitored if this concept is going to minimise the risks outlined above. One solution could be that the mana whenua within the region are compensated for their loss by having their catch limits in fished areas increased or some other way that iwi might suggest.

Additionally we would like to know if there is interest in customary feeding? Feeding fish is not allowed in Marine Reserves because it alters their natural behaviour. Some dislike the activity as it makes scavengers aggressive towards them. However the public really like doing it. It would be interesting to know if this is something mana moana are interested in. It makes it possible for the HPAs to have higher than 100% biomass targets.

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