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1 December 2023

Submission on Bottom Fishing Access Zones in the Hauraki Gulf Marine Park

Introduction

As one of the leading environmental Non-Governmental Organisations (eNGOs) in Aotearoa New Zealand, World Wide Fund for Nature – New Zealand (WWF-New Zealand) supports science-based, pragmatic solutions that can deliver a future in which humanity lives in harmony with nature. We consider that achieving the protection of at least 30% of our ocean territory and halting human-induced extinctions, in line with New Zealand's international commitments (Targets 3 and 4 of the Kunming-Montreal Global Biodiversity Framework particularly), must be an immediate priority for the New Zealand Government.

WWF-New Zealand appreciates the opportunity to provide input on the proposed Bottom Fishing Access Zones in the Hauraki Gulf Marine Park. WWF-New Zealand has a special interest in the Hauraki Gulf, having supported the development of the 2017 *Sea Change – Tai Timu Tai Pari: Hauraki Gulf Marine Spatial Plan*[1] (*Sea Change Plan*) since the inception of the Sea Change process in 2013. WWF-New Zealand significantly enhanced public engagement in the Sea Change process through our "Love our Gulf" campaign, which highlighted the urgent need to improve the integrity and efficacy of the management of the Hauraki Gulf marine ecosystem.

The national significance of the Gulf and its life sustaining capacity are recognised under the Hauraki Gulf Marine Park Act 2000 (HGMPA)[2] and it is due to long-term degradation of the Hauraki Gulf from decades of fishing activity, increasing agricultural run-off, urbanisation and industrialisation that have led to the development of Sea Change and subsequent 2021 *Revitalising the Gulf: Government Action on the Sea Change Plan*[3] (*Revitalising the Gulf*). It proposed a suite of actions, including the establishment of seafloor marine protection areas.

WWF-New Zealand understands that the consultation document and supplementary materials establish the following options on trawl corridor or Bottom Fishing Access Zone proposals in the Hauraki Gulf:

[1] https://gulfjournal.org.nz/wp-content/uploads/2022/01/5086-SCTTTP-Marine-Spatial-Plan-WR.pdf
[2] https://www.legislation.govt.nz/act/public/2000/0001/latest/DLM52566.html
[3] https://www.doc.govt.nz/globalassets/documents/our-work/sea-change/revitalising-the-gulf.pdf

- **Option 1:** Danish seine fishing banned from 74.1 % and trawl fishing banned from 77.1 % of the Gulf shallower than 200m, with these fishing methods limited to 6 defined zones.
- **Option 2:** Trawl and Danish seine fishing banned from 79.4 % and trawl fishing banned from 82.4 % of the Gulf shallower than 200m, and limit these fishing methods to 5 defined zones.
- **Option 3:** Trawl and Danish seine fishing banned from 86.6 % and trawl fishing banned from 88.5 % of the Gulf shallower than 200m, and limit these fishing methods to 4 defined zones.
- **Option 4:** Danish seine fishing banned from 87.3 % and trawl fishing banned from 89 % of the Gulf shallower than 200m, and limit these fishing methods to 4 defined zones.

We also understand that the future of bottom-fishing methods in the 3.4% of the Gulf that is deeper than 200 metres will be assessed in a different process.

The Hauraki Gulf/Tīkapa Moana is incredibly valuable to New Zealanders, but in a state of dramatic ecological decline

Marine biodiversity in the Hauraki Gulf/Tīkapa Moana is critically important to Aotearoa New Zealand but is in a state of sustained and dramatic decline. The Hauraki Gulf/Tīkapa Moana is a taonga for Aotearoa, distinguished by its unique features and values. It is one of the most heavily utilised coastal areas in New Zealand. The Gulf has significant historical and cultural importance for tangata whenua, and a long history of commercial and recreational use. A 2023 New Zealand Institute of Economic Research (NZIER) report estimates the fiscal value of the Hauraki Gulf at more than $5b a year, with an asset valuation between $40b to $100b.[4] It underscores the centrality of the Gulf to the Auckland/Hauraki region and to New Zealand's national economy more broadly.

The Hauraki Gulf Marine Park encompasses 1.2 million hectares of sea and more than 50 islands. The HGMPA[2] requires the Hauraki Gulf Forum to prepare and publish reports on the state of the environment in the Hauraki Gulf, including information on progress toward its integrated management and responses to strategic and prioritised issues.

The seven consecutive *State of the Gulf* reports produced by the Hauraki Gulf Forum illustrate decades-long decline in biodiversity in Tīkapa Moana, with the latest report released this year. According to the most recent report, the Gulf is more vulnerable than ever to increases in water pollution and the impacts of climate change, such as increased acidity. Mass mortalities of fish, shellfish and seabirds are likely to increase due to these climate change impacts.

Kina barrens are widespread, resident native species are in decline, and exotic invasive pest species such as caulerpa seaweed are spreading rapidly. Since 1970, our commercial fish stocks have declined by more than 80%. Local collapses of key species like snapper, scallop, and rock lobster have been observed in the Hauraki Gulf. Dredging has eliminated huge amounts of biogenic (living) habitats, such as green-lipped mussel beds, resulting in declines of fish productivity.[5] Kina barrens surrounding Te Hauturu-o-toi/Little Barrier Island have increased from 0.4% of the rocky reef system in 1953, to 11.6% in 1979, and 32.73% in 2019.[6]

Healthy marine biodiversity is crucial for ecosystem function, and due to the sustained and dramatic decline in marine biodiversity, the Hauraki Gulf is now on the brink of ecological collapse. As outlined both in the *Sea Change Plan* and consecutive *State of the Gulf* reports, human activity –

[4] https://gulfjournal.org.nz/2023/07/natural-capital-valuation/
[5] Morrison M A et al, 2014, 'Linking marine fisheries species to biogenic habitats in New Zealand: A review and synthesis of knowledge', New Zealand Aquatic Environment and Biodiversity Report No. 130, at 46-47
[6] Dartnell L, 2022, The extent of kina barrens over time at Hauturu-o-Toi and the Noises Islands, Masters of Marine Studies Masters thesis, University of Auckland

both on land and at sea – has taken an incredible toll on the health and mauri of the Gulf. Rebuilding the fish stocks, including several 'foundation species' such as green-lipped mussels, will not be possible without restoring our benthic environments. Any further deterioration would have a catastrophic impact on the ecosystem function of the Hauraki Gulf/Tīkapa Moana – and on the communities that rely on it for their livelihoods and wider wellbeing.

Mobile bottom-contact fishing methods are incredibly destructive to marine environments

Mobile bottom-contact fishing methods, such as bottom trawling, Danish seining and dredging have significantly degraded the benthic habitats that are crucial to the health and productivity of the Gulf. These indiscriminate fishing methods bulldoze everything in their path. The effects include a reduction in benthic biodiversity, resuspension of fine sediments, removal of important nursery areas, and removal of fragile sedentary species, such as corals.[7,8,9,10] These corals take hundreds of years to grow back once they are destroyed, making recovery an extremely long process. Ecosystems that are damaged by bottom trawling are not only less resilient to stressors, such as pollution and climate change, but also causing a shift from kelp forests to kina/urchin barrens.[11]

Soft-sediment ecosystems are also sensitive and vulnerable to these fishing methods as inshore bottom trawl doors plough trenches that are about 30cm deep, disturbing the benthos within.[12] The sediment plumes that are created by trawlers choke filter feeders, smother photosynthesising plants and release carbon stored in the sediments.[13,14] This increases ocean acidification and atmospheric carbon dioxide, further contributing to climate change.

The need to protect the Gulf from bottom impact fishing is especially vital given the recent identification of exotic caulerpa in the region. This invasive species is potentially the most significant marine biodiversity threat to ever face the Hauraki Gulf and it can be extensively spread through mobile bottom-contact fishing. The result of a widespread caulerpa infestation would be drastic reductions in native species that hold special social, cultural, and economic significance, rendering many commercial activities based in and around the Gulf unviable.

The public is also increasingly recognising the destructiveness of mobile bottom-contact fishing methods. A poll published by the Hauraki Gulf Forum in 2022 revealed that 84% of those living in the Hauraki Gulf Marine Park vicinity want destructive mobile bottom-contact fishing methods banned from the Hauraki Gulf.[15] On 22 June 2023, WWF-New Zealand along with some other member organisations of the Hauraki Gulf Alliance presented Parliament with a 36,589 signature petition urging the Government to prohibit mobile bottom contact fishing in the Gulf. It is obvious that these destructive fishing methods have lost their social licence with New Zealanders.

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[7] Baird S.J., Hewitt J., Wood B.A. (2015). Benthic habitat classes and trawl fishing disturbance in New Zealand waters shallower than 250 m. New Zealand Aquatic Environment and Biodiversity Report No.144.

[8] Cook R., Farin as-Franco J.M., Gell F.R., Holt R.H.F., Holt T., et al. (2013) The Substantial First Impact of Bottom Fishing on Rare Biodiversity Hotspots: A Dilemma for Evidence-Based Conservation. PLoS ONE 8(8): e69904.

[9] Paul L.J. (2012). A history of the Firth of Thames dredge fishery for mussels: use and abuse of a coastal resource. New Zealand Aquatic Environment and Biodiversity Report No.94 2012. NIWA.

[10] https://www.mpi.govt.nz/dmsdocument/51682-Chapter-11-Benthic-seabed-impacts

[11] https://gulfjournal.org.nz/state-of-the-gulf/

[12] Mormede, S.; Sharp, B.; Roux, M.J.; Parker, S. (2017). Methods development for spatially-explicit bottom fishing impact evaluation within SPRFMO: 1. Fishery footprint estimation. SC5-DW06. 5th Meeting of the Scientific Committee Shanghai, China, 23 – 28 September 2017.

[13] Pilskaln, C. H., Churchill, J. H., & Mayer, L. M. (1998). Resuspension of Sediment by Bottom Trawling in the Gulf of Maine and Potential Geochemical Consequences. Conservation Biology, 12(6), 1223–1229

[14] Sala, E., Mayorga, J., Bradley, D. et al. Protecting the global ocean for biodiversity, food and climate. Nature 592, 397–402 (2021)

[15] https://gulfjournal.org.nz/wp-content/uploads/2021/11/Hauraki-Gulf-poll-final.pdf

To continue to allow mobile bottom-contact fishing methods in the Gulf would prevent its ecological recovery and undermine the intent of the Sea Change process

WWF-New Zealand considers the proposed options to limit these mobile bottom-contact fishing methods in the Hauraki Gulf/Tīkapa Moana represent an important and positive step forward in the implementation of the *Sea Change Plan.* However, our view remains that any proposal to continue bottom trawling and Danish seining in the Hauraki Gulf is untenable given its current state of decline.

We note the four corridor options proposed were identified using scientific information. Yet it is plain that when assessing their costs and benefits, not all factors were included in the modelling. There are large gaps in data, and by extension there is also a great deal of uncertainty surrounding the modelled outputs. The modelling considers where biogenic habitats and certain species are predicted to occur, or where their recovery may occur in the absence of fishing, but beyond that it doesn't incorporate the wider environmental impacts of each scenario. This needs to be taken into account when evaluating potential options.

Fundamentally, WWF-New Zealand considers the science clear that mobile bottom-contact fishing is detrimental to biodiversity, benthic habitats and the environment. Continuing use of these methods in designated areas will not allow the Gulf to sufficiently recover.

The Sea Change process was a collaborative exercise which involved the surfacing and negotiation of complex and overlapping interests in the Hauraki Gulf/Tīkapa Moana. Its aim was to identify a suite of integrated actions to restore the health and mauri of Tīkapa Moana. By virtue of being a collaborative process, the *Sea Change Plan* recommendations, and latterly the marine protected areas proposals in *Revitalising the Gulf*, are a product of compromise and cross-community consensus.

During the Sea Change process, the impacts of bottom-contact fishing methods were carefully assessed, including the science on the impacts of these fishing methods. The consensus reached was that if the Gulf was to be returned to a healthy state, these methods needed to be phased out of the Hauraki Gulf Marine Park entirely. Not only did the Sea Change process seek to phase out these fishing methods from the Marine Park, but additionally, the Hauraki Gulf Forum also recommends that these fishing methods are removed from the Marine Park.[13]

WWF-New Zealand is of the firm view that the Hauraki Gulf Forum is correct and recommends that the Sea Change recommendations to phase out mobile bottom-contact methods be upheld.

Alternative approach: "Option Zero"

Option Zero is an alternative option to implement a *complete ban* on bottom trawling and other mobile bottom-impact fishing methods in the Hauraki Gulf. This is the alternative option that WWF-New Zealand is proposing, alongside other groups.

The industry is risking its social licence by continuing to undertake bottom trawling in the Gulf and this has been acknowledged by political leaders in various fora. Despite this, an option where mobile bottom-contact fishing methods are banned throughout the entire marine park is not included in the consultation. WWF-New Zealand supports a fifth option, Option Zero, which would support 100% recovery potential for all benthic habitats. A complete ban on mobile bottom-contact fishing would

produce long-term positive outcomes for climate, biodiversity and commercial and recreational fishers.

Mobile bottom contact fishing threatens the capacity for the Hauraki Gulf to sustain life. The functional extinction of many species, and complete collapse of scallops are testament to the need for urgent action to ban bottom impact fishing from the Hauraki Gulf/Tīkapa Moana in its entirety. The crisis that the Hauraki Gulf/ Tīkapa Moana faces is evident, and we must ambitiously act to improve biodiversity and climate outcomes in the Gulf.

Marine ecosystems provide a wide range of resources and services that contribute to human wellbeing. In order to safeguard the Gulf for future generations and prevent its wholesale ecological collapse, we must allow its marine ecosystems and resident native biodiversity to recover and build resilience. With climate change impacts looming, we can not afford to let these methods continue. We acknowledge the economic benefits that relate to bottom-impact fishing, but it is crucial that we safeguard the marine environment if we want to continue receiving any economic, social and cultural benefits from the Gulf in years to come.

WWF-New Zealand will address the specific questions posed in the consultation document below:

Question 1: Which option do you support for proposed Bottom Fishing Access Zones? Why?
WWF-New Zealand does not support any of the options for proposed Bottom Fishing Access Zones. WWF-New Zealand instead proposes a total ban on mobile bottom-contact fishing methods in the Hauraki Gulf. Due to the destructive nature of these fishing methods and the current state of biodiversity and environmental decline in the Hauraki Gulf, we believe these methods should be discontinued to allow the Gulf to recover. We also view the continuation of these fishing methods as fundamentally undermining the intent and the integrity of the Sea Change process.

Question 2: If you do not support any of the options listed, what alternative(s) should be considered? Why?
WWF-New Zealand supports an "Option Zero", a complete ban of bottom trawling and mobile bottom-impact fishing within Hauraki Gulf / Tikapa Moana for the reasons stated above and in line with the recommendations in the *Sea Change Plan*. There should also be alternatives used or technology utilised to transition trawling vessels to more sustainable and less environmentally damaging fishing methods in order to address any displacement issues.

Question 3: Do you have any ideas or alternative approaches to the management of bottom fishing impacts, apart from the proposed Bottom Fishing Access Zones?
WWF-New Zealand believes that in order to allow for the Gulf to recover, mobile bottom-contact fishing methods should be banned from the Gulf entirely.

Question 4: Is there any literature or research that is relevant and has been omitted in this paper?
WWF-New Zealand acknowledges the research that has been referenced in this consultation paper and considers there is additional literature available that hasn't been captured, including some referenced in our submission that underscores the merit in alternative "Option Zero" as detailed below.

- https://gulfjournal.org.nz/2023/07/natural-capital-valuation/
- Morrison M A et al, 2014, 'Linking marine fisheries species to biogenic habitats in New Zealand: A review and synthesis of knowledge', New Zealand Aquatic Environment and Biodiversity Report No. 130, at 46-47
- Dartnell L, 2022, The extent of kina barrens over time at Hauturu-o-Toi and the Noises Islands, Masters of Marine Studies Masters thesis, University of Auckland
- Baird S.J., Hewitt J., Wood B.A. (2015). Benthic habitat classes and trawl fishing disturbance in New Zealand waters shallower than 250 m. New Zealand Aquatic Environment and Biodiversity Report No.144

- Cook R., Farin as-Franco J.M., Gell F.R., Holt R.H.F., Holt T., et al. (2013) The Substantial First Impact of Bottom Fishing on Rare Biodiversity Hotspots: A Dilemma for Evidence-Based Conservation. PLoS ONE 8(8): e69904
- Paul L.J. (2012). A history of the Firth of Thames dredge fishery for mussels: use and abuse of a coastal resource. New Zealand Aquatic Environment and Biodiversity Report No.94 2012. NIWA
- https://www.mpi.govt.nz/dmsdocument/51682-Chapter-11-Benthic-seabed-impacts
- Mormede, S.; Sharp, B.; Roux, M.J.; Parker, S. (2017). Methods development for spatially-explicit bottom fishing impact evaluation within SPRFMO: 1. Fishery footprint estimation. SC5-DW06. 5th Meeting of the Scientific Committee Shanghai, China, 23 – 28 September 2017
- Pilskaln, C. H., Churchill, J. H., & Mayer, L. M. (1998). Resuspension of Sediment by Bottom Trawling in the Gulf of Maine and Potential Geochemical Consequences. Conservation Biology, 12(6), 1223–1229
- Sala, E., Mayorga, J., Bradley, D. et al. Protecting the global ocean for biodiversity, food and climate. Nature 592, 397–402 (2021)
- https://gulfjournal.org.nz/wp-content/uploads/2021/11/Hauraki-Gulf-poll-final.pdf

Question 5: Do these proposed options adequately provide for Treaty of Waitangi obligations and customary access to fishing? Why?

WWF-New Zealand believes that we cannot uphold Te Tiriti o Waitangi obligations with the continuous use of destructive mobile bottom-contact fishing methods. The severe decline in biodiversity and loss of mauri in the Hauraki Gulf threatens the future of commercial and non-commercial customary fishing rights, and other Māori rights and interests.

Question 6: Do you think these options adequately provide for social, economic, and cultural wellbeing?

WWF-New Zealand believes that the social, economic and cultural wellbeing of Aotearoa New Zealand would be better preserved for future generations if we allowed the Hauraki Gulf / Tikapa Moana to recover and implement Option Zero. A healthy, productive Gulf would boost all of these benefits.

Question 7: Do you think the proposed options appropriately consider the sustainability obligations under the Act?

WWF-New Zealand believes that the options do not appropriately consider the sustainability obligations of the Act. In order to ensure intergenerational sustainability, the options should include options to "avoid, remedy or mitigate" adverse effects of fishing on the environment. Limiting mobile bottom-contact fishing methods to designated areas is not sufficient to meet these obligations and will still have significant and ongoing negative impacts on the marine environment, due to their indiscriminate and destructive nature.

Question 8: Do you think the criteria outlined in section 5 will provide a suitable basis to assess the options and their impacts?

WWF-New Zealand believes that the criteria are a good start in developing a basis to assess the options and impacts; however, we consider additional criteria are needed to account for the ecosystem impacts to surrounding areas when it comes to sediment plumes and other spill-over side effects of bottom impact fishing. Because of the gaps in data and high uncertainty, it is important to take a precautionary approach when assessing the options and providing advice to the Minister.

Question 9: Do these proposed options adequately provide for Treaty of Waitangi obligations and customary access to fishing? Why?

See answer to Question 5

Question 10: Do you think these options adequately provide for social, economic, and cultural wellbeing?

See answer to Question 6

Question 11: Do you think the proposed options appropriately consider the sustainability obligations under the Act?
See answer to Question 7

Question 12: Do you think the proposed options appropriately consider the effects on the benthic environment?
WWF-New Zealand does not believe that the effects on the benthic environment were appropriately considered when forming the options.

Question 13: Do you think the proposed options adequately mitigate the adverse effects of mobile bottom contact fishing methods on the benthic environment?
WWF-New Zealand does not believe that these options adequately mitigate the adverse effects of mobile bottom contact fishing methods, as detailed above.