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**Re. He Pou a Rangi Draft Report for Consultation**

Thank you for this significant body of work. It is so important that Aotearoa New Zealand has established a Climate Change Commission and begun the work towards Carbon Zero. Having applied Te Ao Māori in the [National Aquarium re-envisioning project](#), we are pleased to see the He Ara Waiora framework guiding the analysis.

We are a unique seafood sector and conservation partnership providing sustainability advice to the primary sector and a range of marine management, business analysis and conservation clients as well as international governments seeking advice on marine management approaches and outcomes.

Moana New Zealand (MNZ) Aotearoa Fisheries Ltd one of our major clients has made sustainability “business as usual”. They are members of the Aotearoa Circle, and are finalising their carbon footprint and exploring what their final greenhouse gas reduction targets will be. Their draft next generation sustainability strategy significantly focusses on climate change mitigation and adaptation.

In the Commission report we appreciate the thorough consideration of the questions the Commission was tasked with answering. We understand that this did not include the implications of climate change on the moana and we ask that the Commission urgently establish a marine climate change programme of work. This is important for Aotearoa New Zealand and critical for the seafood sector. By way of example, you will be aware that Te Moana-a-Toi, (Bay of Plenty) has experienced several significant marine heat waves in recent years. We urge close attention to the [Moana Project](#) currently researching this. We are also aware of warmer water finfish species being found further south and that this is a well-documented result of warming waters elsewhere. Tony Craig manages the Pāua2 fishery (Wairarapa coast) and has developed a framework for a “resilience plan” endeavouring to track the impacts of climate change and its implications for the fishery. Also, the [NIWA CARIM](#) (2020) project is an important programme of work to build upon too.

Despite the lack of mention of marine overall, we are pleased to see reference to blue carbon in the Evidence Report Chapter 5, page 4, 5.1.4 Future options:

“There may be future options for ocean process to remove carbon dioxide from the atmosphere, also known as ‘blue carbon’. Seaweed can rapidly sequester carbon and store it indefinitely if it sinks to the deep ocean. Mangroves and seagrasses are also effective at removing carbon dioxide and also provide adaptation benefits. However, robust measurement and accounting frameworks are required to include this option in emissions budgets. This has not been considered in this first round of advice.”

Whilst we acknowledge that this is an important placeholder we urge and recommend that it be amended to state: .....”and should be in an urgently established new marine programme of work

assessing the role of the Oceans and New Zealand's Exclusive Economic Zone in addressing climate change."

We are well aware of the important role of marine habitats, including seaweeds in healthy marine ecosystem climate change. These habitats underpin seafood production and it is essential that the Climate Commission considers the role of healthy and better-managed oceans in building resilience to, and mitigating, climate change as well as its impacts on them. With a vast marine area, Aotearoa New Zealand has a significant opportunity to better enable our oceans to help us, and marine life, to adapt – if we act with pace.

We note that blue carbon accounting rules are still being worked through in the UNFCCC. To maximise improving ocean management for building climate change resilience, we must invest to resolve ocean carbon accounting. We draw your attention to the Global Ocean Accounting Partnership [Technical Guidance](#) currently being developed and recommend New Zealand's meaningful involvement. Aotearoa New Zealand could provide leadership by establishing a global indigenous working group for marine based climate change adaptation and resilience building. This could underpin Māori Fisheries Rights, inform marine protection design for climate change resilience and adaptation and build on the [Te Ahu o Rehua](#) network supporting Māori Marine science.

It is imperative that ocean restoration & protection, including enhancing the Quota Management System with mātauranga informed ecosystem-based management for climate resilience be understood and become one of our National Determined Contributions. There is a [whole nature-based solutions agenda for NDCs](#) that includes marine solutions that we are currently missing as a. We could inform this from an indigenous Te Ao Māori worldview.

To inform the Commission's marine climate change work programme, we draw your attention to the following further important resources: the recent PMCSA Report, [The future of commercial fishing in Aotearoa New Zealand, Ocean NDCs](#), the Global Ocean Accounting Partnership [Technical Guidance](#), the [Special Report on the Ocean and Cryosphere in a Changing Climate](#) (2016, IPCC), and [The Ocean as a Solution to Climate Change by the High Level Panel on the Oceans](#) (2019) and the [FAO Impacts of Climate Change on Fisheries and Aquaculture](#) (2018).

Thank you again for this important body of work. We ask that the need for an Ocean Climate Change Programme of Work be made more explicit in the Commission Report. Terra Moana will continue to support our clients to do what they can to minimise their climate change footprint and to contribute to better marine management to ensure the resilience of Aotearoa New Zealand's valuable fisheries assets for future generations. We welcome the Commission's advice being updated to reflect these important matters and would be pleased to contribute where we can.

Kind regards,



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