

The current New Zealand Biodiversity Strategy is nearly 20 years old and expires in 2020. The Department of Conservation gave individuals the opportunity to have their say on the development of a new strategy, through eight online questions. NZMSS submitted the following answers to these questions on the 28th February 2019.

<https://www.doc.govt.nz/get-involved/have-your-say/all-consultations/2018/new-zealand-biodiversity-strategy/>

Why does biodiversity matter to you and your community?

The New Zealand Marine Sciences Society (NZMSS) is a professional society affiliated to the Royal Society of New Zealand (www.nzmss.org.nz). Our 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. In effect, we represent a community of scientists, resource managers, educators and students.

Without a healthy functioning marine ecosystem, there will not only be reduced opportunities for all New Zealanders to enjoy and benefit from the services it provides, there will be significantly reduced opportunities to study and understand how a healthy marine ecosystem functions and contributes to our well-being.

We are of the view that development of a new biodiversity strategy and action plan will provide an opportunity to incorporate more marine biodiversity national targets that better reflect the wide range of marine species, habitats and biogeographic regions that make up this massive marine area and the ecosystem services it provides to New Zealanders and the global community.

As a community, we do not want to find ourselves in the unenviable position of only being able to study the impacts of severely disturbed marine ecosystems.

What does biodiversity mean to you? What other words would you use to describe biodiversity?

NZMSS uses the CBD definition of biological diversity:

“Biological diversity means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”.

But we also recognize that the definition of biological diversity has taken on a more general meaning. Broadly speaking, marine biodiversity comprises healthy marine ecosystems and seas that contain thriving ecological communities which are not impacted by pollution, unsustainable fishing and alien invasive species.

What are your aspirations for biodiversity in New Zealand?

NZMSS would like to see numerous opportunities available to study healthy, thriving marine ecosystems and species. For this to happen, it is important that endangered species and their

habitats and ecosystems are protected and allowed to recover, with endemic species being the top priority.

We do not know about the biodiversity in many of our marine habitats, including canyons and the deep sea. Many of these habitats have been impacted by some types of destructive fishing gear and important knowledge about their function and contribution to the wider marine environment has been lost forever. Even if the full range of marine habitats were to be comprehensively sampled, there may not be enough New Zealand scientists with the necessary expertise to identify and document the species living there.

As well as providing the opportunities to comprehensively study New Zealand's marine environment, NZMSS would like to see significantly more opportunities provided for a new generation of marine scientists to study and understand New Zealand's amazingly rich marine biodiversity.

What kind of goals or objectives should a strategy aim to achieve?

Goals and objectives need to be specific, measurable and have a timeline.

1. For endangered and critically endangered species to achieve non-endangered status as soon as possible requires a zero-impact approach. Recovery from non-endangered to non-threatened at a rate no more than 10% slower than would be achievable under zero human impact. For example, if it would take a species, biological community or ecosystem 10 years to recover from endangered to a non-endangered category (e.g. vulnerable) then impacts should be reduced to zero to achieve recovery within 10 years. If it would take a further 50 years to recover from vulnerable to non-threatened, under zero-impact conditions, then human impacts should be low enough that recovery will take no more than 55 years.
2. Networks of fully functioning, fully protected marine reserves should be established throughout New Zealand's coastal marine area (i.e. Territorial Sea, EEZ and extended continental shelf area) to help safeguard our biodiversity. NZMSS noted in our submission on the CBD Aichi targets and national reporting that the current Aichi target of 10% of the coastal marine area protected in MPAs has not been reached by New Zealand within the current strategy's timeline: *"NZMSS agrees with the report's assessment that "progress has been made towards this target, but at an insufficient rate"*.

NZMSS considers that a minimum goal of 20% of protecting all habitat types, with unique and vulnerable habitats/assemblages additional to the marine reserve network, is appropriate for the new strategy. Given the impacts from extractive activities and likely future impacts of climate change, the 20% goal will enable NZ's marine biodiversity to build resilience and recover from the impacts of resource extraction. These networks should be completed within 10 years from the start of the new strategy to enable an assessment of their efficacy to be undertaken within the new biodiversity strategy's timeframe.

What are the key challenges facing biodiversity that you think a new strategy needs to address?

The direct impacts of some extractive activities, such as fishing, marine mining and mineral extraction are threatening the marine biodiversity of New Zealand's seas. For example, the use of fishing methods that kill protected species and/or degrade habitats and pollute marine systems.

There is a lack of awareness and understanding amongst the NZ public of the impacts of these extractive activities on biodiversity, particularly in the offshore marine area. For example, the effects of continual removal of larger fish from populations; or, population densities being significantly fished down over time are not immediately obvious and are known as the "sliding baseline effect".

There is inadequate investment in researching marine ecosystems, native biodiversity including dependent species and the threats/impacts of alien invasive species. For example, the NZ Biological Heritage National Science Challenge does not include marine biodiversity.

The current paradigm for managing the marine environment is focused on extraction of marine resources and a major challenge is to change that paradigm to one of fully documenting and understanding all of our marine biodiversity before consideration is given to utilizing it as a resource. An in depth and thorough assessment of the ecosystem services and non-market values of New Zealand's marine environment (including the extended continental shelf beyond the EEZ) is required to inform the new paradigm.

Do you have examples of successful biodiversity management in your area?

Reducing the overlap between dolphins and fishing methods that kill dolphins has reduced the number of dolphin deaths at Banks Peninsula. A population that was declining at about 6% per year is now almost stable (still declining slowly).

The existing marine reserves demonstrate that protecting areas of the sea from all harvesting results in habitats and species returning to near natural levels. Marine reserves provide marine science opportunities to study marine habitats, species and ecosystems in near-natural conditions in the absence of resource extraction. However, marine reserves that are subject to intense fishing pressure around the boundaries are unable to adequately "top up" the surrounding population densities. The no-take marine reserve model needs to be expanded to include more, larger areas that represent the full range of biodiversity.

What would it take to make a strategy meaningful to you? What is the best format for it - a document, website etc?

The full NZBS as a document should be available for anyone wishing to understand the context and structure of the strategy and New Zealand's obligations to the Convention on Biological Diversity. As well, an overview of the work programmes underway by the contributing agencies and research providers would be useful. This should be available through a dedicated NZ Biodiversity website, which is regularly updated and populated with useful information. Where

relevant, there would be links to other agencies carrying out key initiatives. Reports to the CBD Aichi Targets should also be included in the website.

In addition, information about endangered species and the human activities that threaten them should be available on the website.

Can you help to develop a title / analogy for the New Zealand Biodiversity Strategy?

The marine component of the NZBS comprises:

Healthy oceans and ecosystems, where species are thriving in what is approaching a near-natural state, where the human footprint is substantially reduced and New Zealanders embrace understanding what the marine environment means to them.

Other

The New Zealand Marine Sciences Society (NZMSS) is a professional society affiliated to the Royal Society of New Zealand with approximately 200 members. We are a non-profit organisation that provides access to, and within, the marine science community, and we identify emerging issues through annual conferences, annual reviews, a list serve and a website www.nzmss.org.nz. 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 and we engage with other scientific societies as appropriate.

We are of the view that this new strategy provides an opportunity to incorporate more marine biodiversity national targets that better reflect the wide range of marine species, habitats and biogeographic regions that make up this massive marine area (e.g. one of the largest EEZs in the world) and the ecosystem services that it provides to New Zealanders and others globally.

In our recent submission on the report on national and Aichi targets we stated:

“We note that national and Aichi targets incorporating marine biodiversity are few and relatively narrow in scope. Further, where some targets could include marine, these have not been reported.”

NZMSS notes that reference groups are also being developed/have been set up to help inform the new NZBS. In particular, the Minister of Conservation’s TOR refers to a science and technical reference group:

“Science and Technical reference group

32) A science and technical reference group shall be formed to provide scientific or technical advice to ensure the Strategy has a sound scientific base; to identify priorities for the Strategy, advise the cross-agency group, and provide scientific and technical advice as required by the stakeholder and mana whenua groups. For example, approaches to monitoring or classification systems, or mātauranga Māori.”

Accordingly, we request to be involved in this reference group and any other relevant reference group/s to ensure the new NZBS adequately incorporates and recognizes the marine environment, its biodiversity and the important role of marine science.

Please contact me at this email address : president@nzms.org for any further information regarding this submission.