

# NEW ZEALAND MARINE SCIENCES SOCIETY

TE HUNGA MĀTAI MOANA O AOTEAROA



Te Korowai o Te Tai ō Marokura

Submissions

PO Box 303

Nelson 7040

1 December 2011

To whom it may concern,

## **Re. Te Korowai strategy**

The New Zealand Marine Sciences Society (NZMSS) is a scientific society affiliated to the Royal Society of New Zealand. It comprises over 260 scientists, managers, policymakers, and students working in all aspects of marine science in New Zealand and overseas. Society members work for universities, Crown Research Institutes, and other research providers, as well as for various central and local government departments, agencies and non-governmental organizations. Our members, therefore, have a wide range of views and experiences on most issues confronting the management of New Zealand's marine environment. Our elected Council has the task of providing comments on marine science issues in the public realm, including government policy and marine conservation. This submission represents a consensus view of the NZMSS Council concerning the scientific issues relating to the proposed management strategy for the Kaikōura coastal area.

We would like to congratulate the community of Kaikōura and members of Te Korowai for working together to create this strategy and appreciate that given the wide range of interest groups present it must have been a challenging process to form consensus on the key points in the strategy. The main strength of the proposal is the multifaceted approach to the future management of the region. The strategy uses a wide-range of different approaches to manage the coastal environment and to provide protection for marine biodiversity in the region. Examples of the range of management tools proposed include the formation of an integrated land and water management plan, use of different management and protection measures including a marine reserve, multiple taiāpure and mātaimai, a marine mammal sanctuary, lobbying for the area to become a UNESCO World Heritage Site, and changes to the current recreational fisheries regulations for the area. It is also pleasing to see that public education forms an integral part of the strategy. The NZMSS sees excellent opportunities being provided to study sustainable fishing and recovery of fished populations in taiāpure, mātaimai and no-take marine reserves.

Our submission begins with a discussion of what we consider to be major issues with the proposed strategy, followed by specific points in an order that follows the layout of the strategy.

## 1. Role of scientific knowledge and advice

We are concerned with the comments on pg. 107 (Section 7.3.2) that “Te Tai ō Marokura is the subject of considerable research and monitoring by a wide range of organisations and individuals... Only a small portion of this information is available to Te Korowai and even less to the general public. Much information is technical in nature and not readily understood by lay people”. Although there is a large body of scientific knowledge relevant for management purposes, Te Korowai appears to have had difficulty interpreting the information that they have been able to access. We are concerned that as a result, decisions surrounding the design of the proposed marine reserve for example appear to be based more on politics than the underlying understanding of the ecology. There is very little information about habitat types and species assemblages in the areas proposed as marine protected areas (MPAs; including marine reserves, taiāpure and mātaimai), making it difficult for us to assess the likely effectiveness of the areas for protecting and enhancing these marine ecosystems. We would like to draw your attention to the wide range of knowledge and expertise held by marine scientists in New Zealand, which can be drawn upon to assist with further developing the strategy. We would like to offer our assistance in the future, either by providing independent scientific advice, or suggesting one or more scientists to join Te Korowai.

It is pleasing to read that scientific research and monitoring will be incorporated in the management of the MPAs in the future. However, we would like more information about how this research will be conducted and who is going to fund it. We strongly encourage collaboration with marine scientists, as such collaboration would be to the advantage of the Kaikōura community, tangata tiaki, and the scientists involved. The University of Canterbury has a Teaching and Research Laboratory in Kaikōura and has marine expertise as one of its strengths and would be a logical partner in your venture. An excellent model to draw from is the collaboration between members of the East Otago Taiāpure Management Committee and marine scientists from the University of Otago. A representative from the University has been a gazetted member of the Taiāpure committee since 2004 and scientists from the University have been working alongside the Committee since 2007, conducting baseline research of key kai species and mahinga kai sites. The Taiāpure Committee has benefited from this partnership by gaining valuable scientific knowledge of the taiāpure, which has led to a successful request to the Ministry of Fisheries for fisheries closures and reduced bag limits. Scientific support from the University has also been key in supporting the Tāiapure in processes surrounding the Resource Management (e.g. proposed dredging, sewage outfall) and Fisheries Acts (setting quota, new quota species). The collaboration has supported students from the University of Otago to undertake research in the area and they and university staff have shared and gained knowledge from members of the Taiāpure Committee. The two taiāpure proposed for Kaikōura have the potential to significantly enhance the populations of key species if active and appropriate fisheries management is engaged. We support the implementation of the taiāpure given that scientific collaboration is incorporated in future management initiatives and propose that one or more scientific advisors with appropriate skills is an essential component of future management committees.

## 2. New opportunities for science

We commend your emphasis on the need for education of all users of the marine environment around Kaikōura. Understanding customary practices and the need for better knowledge and appreciation of the value of the sea to the well-being of everyone is paramount. We suggest that the Te Korowai Report tends to underestimate the current uses of Peninsula habitats by the University of Canterbury to teach students about marine diversity and ecology. We would also draw your attention to the many publications resulting from scientific research done over more than 50 years since the Marine Laboratory was first established there around 1956. It will be important for you to pay attention to the conditions that will facilitate and

allow Research and Teaching to be undertaken there. There are no doubt many ways in which better management and protection will encourage these activities by making it a better place to work.

### 3. Concerns that compromise may result in ineffective conservation tools

We are concerned that in an effort to maintain consensus among stakeholder groups, decisions regarding the location and boundaries of habitat afforded protection under marine reserve status may lead to the effectiveness of the proposed reserve being compromised. In particular, there appears to be a conscious effort to avoid putting areas that are currently fished under protection (pg. 65 “Avoiding areas of known fishing activity (noting that our information is more complete for set netting than for lining and trawling. New information can be expected to emerge in the submissions process that means revisions to boundary lines may need to be considered)”). We question what “gifts” the fishing industry is offering in this case? Typically, fishing occurs in easy to access productive habitat – habitat that it would often make sense to include in marine reserves. Whilst we believe it is very important to include the Kaikōura Canyon in a marine reserve, it is clear that this area is currently not fished due to its depth and bathymetry. We recommend that Te Korowai increase the area of the proposed marine reserve to incorporate a greater range of habitats, including a greater proportion of shallow habitat.

### 4. Habitats included in protected areas

There is a general lack of information in the strategy regarding the habitat in each proposed marine protected area. In order for us to assess the merits of the proposed marine protected areas we require a breakdown of the specific habitats and species assemblages (if known). We have been unable to locate this information in the Strategy or the preceding Characterisation Report. Although there is acknowledgement in both documents about the connections that exist between the land and the sea, little mention is made of the connections that exist among neighbouring habitats in the marine environment (e.g. estuary to beach to sandy bottoms to reefs to continental slopes to canyons). Connectivity can occur among these habitats by movement of animals and organic matter, meaning that processes occurring in one habitat can have a direct effect on those occurring in another. A good example of this is species that migrate from nursery habitats to other habitats as they mature. Providing protection for a number of habitats (“representative areas”) is therefore one way of adding to the ecological robustness of a marine protected area. Whilst it appears that this has occurred to some extent in the proposed MPAs, shallow soft sediment and hard seabed are underrepresented compared to deep habitat.

### 5. Design of the proposed marine reserve

We are pleased to see a marine reserve proposed for the Kaikōura region, and it is excellent that the reserve includes the Kaikōura Canyon, where the biomass of benthic fauna is exceptional for the deep sea on a world scale. To offer this ecosystem protection from fishing and destructive fishing practices such as gillnetting and bottom trawling is a big step forward. In order to ensure that the marine reserve is effective, careful consideration needs to be given to the location and design of the marine reserve. We offer the following recommendations for the position of the boundaries for what has the potential to be a spectacular marine reserve.

On page 63 it is stated that “The goal of Te Korowai is to protect the most biologically rich and unusual areas of the Kaikōura coast...”. We agree with this statement, but also believe that the goal should include the protection of representative areas of the coastline including a variety of habitat types. We cannot find any detail of the approach used to select the site for the marine reserve and would like to know if it was based upon sound scientific knowledge comprising biological and habitat surveys. If not, the question should then be asked if there are other sites that would provide for similar conservation value? We are

aware of the recent study by De Leo et al. (2010) detailing the assemblages in the Kaikōura Canyon, but cannot find reference to studies of shallower environments in the Strategy. We understand that the selection of sites for the taiāpure and mātaītai is based on historic and current customary use, yet recommend incorporating existing ecological knowledge in site selection.

We hold serious concerns about the design of the marine reserve with respect to its shape (Pg 64). The boundaries are overly complicated, and the reserve is therefore likely to be impractical from a surveillance and enforcement perspective and also for fishers to comply with. From an ecological perspective, the proposed reserve has a very high edge to area ratio that increases the likelihood of “edge effects” – a characteristic that is undesirable in terms of an effective conservation tool. A solution to this issue would be to include straight boundaries extending from the shoreline to the offshore boundary.

Finally, we urge Te Korowai to increase the amount of shallow habitat included in the marine reserve, such as coastal reefs and soft sediment areas. Just as the land is linked to the sea, so are different marine habitats connected in terms of flow of energy and organic matter, flora and fauna. To protect only the bottom of the canyon (flat slope) will not be as advantageous to the marine ecosystem as incorporating protection for adjacent habitats (e.g. shallower habitat and canyon walls).

#### 6. Marine Mammal Sanctuary

We agree that the establishment of a Marine Mammal Sanctuary is entirely appropriate for an area with such an abundance and diversity of mammals, but are concerned about the lack of information provided on the protection measures inside the sanctuary. From the information given in the Strategy it appears that the sanctuary would protect mammals only from the effects of seismic surveying. To avoid this being a ‘paper park’ the sanctuary needs to target the most serious risks to marine mammals in the area. For example, the Threat Management Plan for Hector’s dolphins (by DoC and MFish) lists fisheries mortality (in particular entanglement in gillnets and trawl nets) as the most serious impact. Other species at risk of entanglement in fishing gear in the Kaikōura area include dusky dolphins, sperm whales, humpback whales, other marine mammals and seabirds. At a minimum, the Marine Mammal Sanctuary should require that no fishing methods be used that may cause marine mammal mortality. Other appropriate protection measures in a Marine Mammal Sanctuary include regulations to avoid tidal turbines and pollution. We agree that seismic exploration for minerals is a risk to marine mammals. However, it is not clear if the size of the area is based on appropriate scientific knowledge such as the distance over which sonic booms can be detrimental to marine mammals? We encourage the committee to seek further information from scientists regarding the other threats to marine mammals (e.g. entanglement in fishing gear, food limitation, ship strike), and to revise the design of the proposed marine mammal sanctuary accordingly.

#### 7. World Heritage Area

We are very supportive of the proposal to apply for World Heritage Status for the coastal area of Kaikōura (Pg. 57) and agree that the spectacular environment, abundant wildlife and proximity of mountain tops to deep-sea make the area an obvious candidate for such status. We recommend that the boundaries of the nominated area are large enough to capture all of the biological and physical processes that characterise the Kaikōura area. The nomination will benefit from a strong scientific basis to justify how the area meets the World Heritage criteria.

## 8. Minor comments

Pg 28, Figure 8: A potential threat to the health of coastal marine environments includes impacts from land-based activities such as agricultural runoff, forest clearance (sedimentation), and sewage discharge. This should be incorporated into the diagram under “future habitat degradation”.

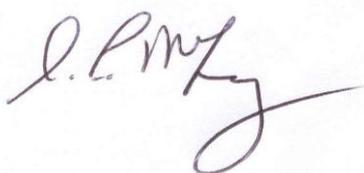
Pg 36-40: The NZMSS is supportive of the reduced recreational daily bag limits as outlined here, and also of the proposal to limit the accumulation of catch over successive days. Whilst enforcing the latter regulation may be impractical, we believe it sends a strong message to recreational fishers to practice environmental responsibility.

Pg 67: It appears that there is a pocket of forest on the land adjacent to the coastal boundary of the proposed marine reserve. Is this forest protected? Given the known connectivity between habitats on land and in the sea, it would be valuable to situate any future marine protected areas adjacent to conservation land (e.g. Pg. 73. DoC Conservation Land in Waipapa).

Pgs 70/86: The NZMSS wholeheartedly supports the proposal to create an integrated land and water management plan for the region. We believe that such an approach makes absolute sense given the increasing scientific understanding of connectivity between the land and the sea, in terms of the movement of flora, fauna and detritus, and the affect that activities in one habitat can have on the other. It is excellent to see initiatives being proposed to link Te Korowai with organizations such as Land Transport, Biosecurity NZ, and councils.

Thank you for the opportunity to comment on the Te Korowai Strategy. We trust that you will find our comments helpful.

Yours sincerely,



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