

# NEW ZEALAND MARINE SCIENCES SOCIETY

TE HUNGA MĀTAI MOANA O AOTEAROA



Freshwater Reform  
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## NZMSS Email submission on the proposed amendments to the National Policy Statement for Freshwater Management 2011

This submission is made on behalf of the membership of the New Zealand Marine Sciences Society (NZMSS).

The submission has been prepared in good faith by members of the NZMSS Council and in my role as President of NZMSS I have checked that it is in accordance with the Code of Ethics and Rules of the Royal Society of New Zealand. NZMSS wishes to speak to our submission.

Please contact me for any further information regarding this submission.

Handwritten signature of Mary Livingston.

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# **NZMSS Submission on Proposed amendments to the National Policy Statement for Freshwater Management 2011**

## **1. The New Zealand Marine Sciences Society**

The New Zealand Marine Sciences Society, known as “NZMSS”, was formed in 1960 as a constituent the Royal Society of New Zealand, to encourage and assist marine science and related research across a wide range of disciplines in New Zealand and to foster communication among those with an interest in marine science

NZMSS is a professional science body and a non-profit organization that provides access to and within the marine science community. We identify emerging issues through annual conferences, annual reviews, a listserv and our website [www.nzmss.org](http://www.nzmss.org). 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 on matters of interest on marine research in New Zealand and we engage with other scientific societies as appropriate.

Our submission is consistent with the Royal Society of New Zealand Code of Ethics and Rules, in particular principals 2.1 Integrity and professionalism, 4.1 Compliance with the law and relevant standards, and 10.1 Protection of the environment ([www.royalsociety.org.nz/organisation/about/code](http://www.royalsociety.org.nz/organisation/about/code)).

## **2. NZMSS Submission: Response to discussion document questions**

This submission focuses on the freshwater/coastal connections and in particular the integration of freshwater management systems with that of the coastal environment. NZMSS congratulates you on the strengthening of the freshwater coastal linkages in the proposed amendments but consider this could be further refined. Below, NZMSS responses are given after each of the questions posed in the draft discussion document below.

### **Problems**

*1. Have we correctly identified the problems currently associated with implementing the NPS-FM?*

No. See 2 below.

*2. If not, what problems, if any, have you faced with implementation?*

The NPS-FM states “consideration of the connections between freshwater bodies and coastal water and identifies that the management of coastal water and fresh water requires an integrated and consistent approach”.

NZMSS considers that significant improvements need to be made to achieve alignment of the National Policy Statement for Freshwater Management (NPS-FM) to the New Zealand Coastal Policy Statement (NZCPS). To further improve the integration of freshwater and coastal water management NZMSS recommends that a summary of the connections between the two be included in the NPS-FM.

Along many parts of the New Zealand coastline the quality of freshwater flowing into estuaries, hapua, lagoons, bays, harbours and the open coast has a significant influence on coastal water quality. NZMSS recommends that the text discussing the influence of freshwater quality and quantity on the coastal environment be expanded to fully identify the extent that the receiving environment needs to be considered (NPS-FM in Annex 3).

For example (our amendments in italics), “when setting limits for freshwater it will be necessary to also consider the sensitivity *of the receiving environments and limits set for those water bodies.*”

The additional guidance material should provide information on the extent to which the receiving environment needs to be considered, including specific considerations for sensitive or vulnerable coastal water bodies and how to achieve appropriate coastal water quality outcomes.

### **Options**

*3. Do you agree that amending the NPS-FM would solve the problems identified in section 2?*

NZMSS agrees that amending the existing NPS-FM would solve most of the problems identified. However, by also providing guidelines for implementation the problems identified in section 2 would be substantially improved.

Without additional guidelines, there is a risk that the significant investment already made to identify science-based environmental bottom lines will be wasted, and that interpretation of how to apply the NPS-FM will become a significant issue.

*4. If not, would additional guidance be sufficient to solve the problems identified?*

Additional guidance would address the problems, as long as sufficient detail and scope is provided in the guidelines.

NZMSS recommends that any addition or revision of the NPS-FM guidance material accompanies a review of the NZCPS material, with the aim to provide clear guidance on how these two policy documents can be applied in an integrative and consistent manner to address the connections between freshwater and coastal waters.

*5. Is there another solution to the problems? Why would that be preferable?*

No. We support the approach of amending the NPS-FM and providing additional guidance.

### **Accounting**

*6. Do you agree with requiring councils to account for all water takes?*

Yes. Water take influences the quantity of water reaching coastal water bodies, particularly estuaries, hapua and lagoons.

*7. Do you agree with requiring councils to account for all sources of contaminants?*

Yes. Contaminants influence the quality of coastal water and seabed fine sediments. These have the potential to have a significant influence on ecosystems functioning, particularly in estuaries.

*8. Do you think that the requirements in policies CC1 and CC2 of the proposed NPS-FM amendments have the right balance between national prescription and regional flexibility?*

Not yet. NZMSS comments are provided below.

*9. Do you think the time period allowed for councils to develop accounting systems is appropriate?*

Yes, but further NZMSS comments are provided below.

### **NOF Values**

*10. Should there be a national set of values as outlined in appendix 1 of the proposed NPS-FM?*

Yes. This is required for national consistency.

*11. Are there any additional values that should be included? Why are these values nationally significant/important (recognising that councils can use other values if they wish)?*

No comment (beyond the scope of this submission).

*12. Are there any values that should be deleted from appendix 1 of the proposed NPS-FM and why?*

No comment (beyond the scope of this submission).

*13. Do you agree with the descriptions of the national values in appendix 1 of the proposed NPS-FM?*

No comment (beyond the scope of this submission).

#### **NOF Attributes**

*14. Do you agree with the attributes associated with the values in appendix 2 of the proposed NPS-FM?*

Partially, NZMSS recommends that appendix 2 incorporate further attributes, as follows:

Section 4.2 mentions the intention of adding attributes to the NOF. NZMSS recognises that considerable time and effort is required to develop robust attributes and their values, particularly given the varying levels of scientific certainty surrounding the potential additional attributes. Considering the great relevance of sediment load in freshwater outputs on coastal water quality and ecosystem functioning, NZMSS recommends that priority be given to the development of an attribute to monitor the sediment load in freshwater and the consequent delivery of sediment into coastal water. In order to ensure consistent approaches in freshwater and coastal water management, it would be helpful if indicative timeframes for the development of such an attribute could be provided.

*15. Do you agree with the numeric attribute states in appendix 2 of the proposed NPS-FM?*

No comment (beyond the scope of this submission).

*16. Do you agree with the narrative attribute states in appendix 2 of the proposed NPS-FM?*

No comment (beyond the scope of this submission).

#### **Timing**

*17. Do you agree with putting a NOF in the NPS-FM now, including only the attributes for which there is adequate evidence, and updating it as the scientific basis for further attributes and states becomes available?*

Yes. NZMSS considers that it is better to make stepwise progress as information becomes available than to risk making none at all. Also, experience (positive and negative) from the implementation of these attributes can be utilised in the development of further attributes and future guidance material.

*18. Or should the Government delay putting the NOF into place until a more comprehensive set of attributes has been developed?*

Definitely not. There is urgency to provide greater certainty and guidance on freshwater management.

#### **Process for freshwater objective setting**

*19. Do you agree with having the process requirements to link values and freshwater objectives directed in policy CA1 in the proposed amendments? If not, why not?*

Yes.

*20. Do you think the process outlined will work? If not, why not?*

Yes as it ensures that councils consider the links between community values and the relevant accounting/monitoring.

*21. Do you agree with the proposed matters in policy CA1(f) that must be considered when establishing freshwater objectives? If not, why not?*

Yes, but NZMSS recommends that the coastal receiving environment, be given the appropriate weighting and be specified as a consideration. NZMSS also sees an opportunity to improve links between this national policy statement and the New Zealand Coastal Policy Statement (2010), for example through the following amendment: “and such other matters relevant and reasonably necessary to give effect to the objectives in this national policy statement, *or the New Zealand Coastal Policy Statement*” (NZMSS addition in italics)

*22. Is it clear that setting freshwater objectives is an iterative process which involves consideration of the impacts of the limits, management methods, and timeframes required to meet a potential freshwater objective?*

Yes but more guidance on this in practical terms should be provided in the guidelines.

*23. Do you agree that regions should have discretion to determine timeframes for meeting freshwater objectives?*

Yes, as long as timeframes are reasonable and not perceived as a cover for inaction. Justification for a given timeframe should be provided wherever possible. NZMSS recommends that shorter timeframes be considered– in our view, the suggested timeframes are too long.

*24. Are there any aspects of the process that are not clear?*

The NPS-FM provides a clear overview of the process but NZMSS submits that this question can only be answered once the additional guidance is available.

### **Compulsory values in the NPS-FM**

*25. Do you agree that ecosystem health should be a compulsory value?*

Yes, in coastal ecosystems as well as freshwater.

*26. Do you agree that human health for secondary contact recreation (such as boating and wading) should be a compulsory value?*

Yes, in coastal ecosystems as well as freshwater.

*27. Do you think there should be more compulsory values? If so, what should they be, and why? What attributes should be associated with them?*

No other compulsory values suggested.

### **National bottom lines**

*28. Should there be numeric bottom lines for attributes of the compulsory values?*

Yes. However, there must be clear guidance on how these values are to be measured in a robust manner, and to ensure a standardised approach is taken across the country.

For example, values will differ if sampling has occurred after heavy rainfall. The guidelines must specify how such results are treated to prevent some regions from including them while others might purposely avoid sampling times during which high values are anticipated.

Work is currently being conducted by the Ministry for the Environment to develop a national environmental reporting system based in part on Statistics New Zealand’s Environmental Domain Plan 2013. This work comprises the development of national indicators for the states of the environmental domains, including freshwater and marine. NZMSS requests that the NPS-FM guidelines refers to this work and provides for consistency between these two initiatives.

NZMSS recommends that the term “bottom lines” either be defined or revised. As given, it is unclear if these are limits or standards, and what the range might be over different temporal and spatial scales.

*29. Do you agree with the proposed level at which bottom lines would be set for each attribute of ecosystem health? If not, at what level should they be set?*

No comment (beyond the scope of this submission)

*30. Do you agree with the proposed level at which bottom lines would be set for each attribute of human health for secondary contact recreation? If not, at what level should they be set?*

No comment (beyond the scope of this submission)

*31. Do you agree that transitional arrangements should be provided to allow councils and communities to set objectives below a national bottom line for a short time?*

This seems reasonable in principle; however, the process envisaged for transitional arrangements is not clearly described in the proposed amendments to the NPS-FM. NZMSS requests that the NPS-FM includes a clearer description of the application and approval process for transitional arrangements, including some guidance on what criteria/conditions would likely be considered appropriate reasons for granting approval of the objectives.

### **Exceptions to bottom lines**

*32. Do you agree that there could be exceptions where the natural state of the freshwater management unit breaches bottom lines? Where in your region do you think this type of exception might apply?*

No comment (beyond the scope of this submission)

*33. Do you agree that there could be exceptions where historical activities have created impacts on water quality and the reversal of those impacts is not reasonably practicable, either physically or ecologically, even in the long term? Where in your region do you think this type of exception might apply?*

No comment (beyond the scope of this submission)

*34. Do you agree that there could be exceptions for significant existing infrastructure (eg, dams), where a choice is made to manage a freshwater management unit below bottom lines? Where in your region do you think this type of exception might apply?*

No comment (beyond the scope of this submission)

*35. Do you agree that freshwater management units eligible under the first two exceptions above should be decided by regional councils?*

Yes as long as there is a public process so that matters of concern can be raised.

*36. Do you agree that those freshwater management units eligible for an exception due to the effects of significant existing infrastructure should be decided at a national level and included in appendix 3 of the NPS-FM?*

Yes. The units listed should indicate specific objectives exceptions rather than exceptions to all bottom lines.

*37. What should the criteria be for allowing exceptions due to the effects of significant existing infrastructure?*

No comment (beyond the scope of this submission)

### **Tāngata whenua values**

*38. Do you think the proposed NPS-FM adequately provides for Te Mana o te Wai?*

No comment (beyond the scope of this submission)

*39. Do you agree with the way tāngata whenua values are described in proposed appendix 1 of the NPS-FM?*

No comment (beyond the scope of this submission)

*40. Do you support adding Te Mana o te Wai to objective A1 of the amended NPS-FM as a matter that must be safeguarded? What would be the implications of adding this to objective A1 in the NPS-FM?*

No comment (beyond the scope of this submission)

## Monitoring

41. Do you agree with the new section in the NPS-FM requiring monitoring plans? If not, why not?

Yes, monitoring is a fundamental component of the process otherwise it will not be possible to assess if the objectives are being met. NZMSS stresses the importance of having practical monitoring plans that track long term trends in data.

Also refer to our response to question 28.

## Other

42. Is there anything else you would like to tell us about the issues and proposals in this document?

### 1. Cost-benefit analysis

Where consideration of economic benefits is outlined in the amendments, NZMSS recommends that Councils factor in the economic benefits of, and losses incurred to, ecosystem services and natural capital. Further, indirect impacts should be accounted for. For example, an assessment of the economic cost should be made where freshwater quality reduces the quality of estuarine receiving environments and the health of coastal ecosystems and shellfish or finfish fisheries. NZMSS recommends that guidelines for a fuller economic cost and benefits analysis should be included and that wording to this effect should be added to the amendments.

### 2. Strengthening emphasis on links to coastal environment and catchment based approach

NZMSS supports the addition of coastal water Policies A1(a)(iii) and C2(b) but suggest this connection be further strengthened and that the consistency of the document be improved.

- NZMSS asks that text recognising the potential impacts of freshwater quality on coastal water quality be added to the preamble of the NPS-FM. NZMSS asks that this section be expanded by adding *the following text* “*Linkages between these systems are therefore made in this Policy*” to “The New Zealand Coastal Policy Statement 2010 addresses issues ...integrated and consistent approach” and that at relevant places in the document these connections are reinforced.
- NZMSS notes that the concept of catchment is crucial for coastal management and is currently only mentioned in the preamble. “Freshwater management units” in the interpretation should favour a catchment based approach to integrate the limit setting and accounting processes with those in the coastal receiving environments.

### 3. Adding ocean acidification to the list in addition to other impacts of climate change that can be exacerbated by nutrient enrichment or declining dissolved oxygen levels.

NZMSS is pleased to see the impacts of climate change identified in the National Policy Statement for Freshwater Management 2011 as these impacts are also of great importance in the coastal environment. The commentary of the current Implementation Guide for the NPS-FM 2011 for Policy A1 (*Reasonably foreseeable impacts of climate change*, p.17) lists a number of matters that need to be considered when rules are set to manage reasonably foreseeable impacts of climate change.

NZMSS suggests that ocean acidification and dissolved oxygen levels in the receiving marine environment be added to the list of examples for the following reasons:

- Nutrient enrichment contributes to low pH in coastal environments. By understanding the link between nutrient enrichment and the effects of ocean acidification a more informed approach to integrative catchment management can be taken.

- Ocean acidification in association with other climate change effects on the sea is an emerging issue that has been identified as a threat to New Zealand’s coastal water quality and biodiversity<sup>1</sup>. Furthermore, ocean acidification is of concern to the seafood industry particularly aquaculture due to the adverse effects on shellfish development and survival.
- Ocean acidification and directly related processes lead to a general increase of oxygen consumption throughout the water column, which can have profound impacts on ecosystem functioning and health.
- Considering the level of detail listed for other impacts of climate change (changes to droughts; rainfall, snow and evaporation rates; temperatures; sea level; flows in freshwater bodies) NZMSS recommends that ocean acidification and dissolved oxygen levels in the receiving marine environment be added to this list in order to assign it the appropriate status and ensure it is considered.

#### 4. Decision-making process on exceptions

- NZMSS acknowledges that exceptions to bottom lines may be necessary. NZMSS requests that all decision-making processes for exceptions are open to discussion through a public process.
- NZMSS requests that the decision-making process consider downstream effects on the marine receiving environment for all exception applications.

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<sup>1</sup> For example, see the 2013 report from the Prime Minister’s Chief Science Advisor, Professor Sir Peter Gluckman: “New Zealand’s changing climate and oceans: The impact of human activity and implications for the future”