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Julie Hall
Director
Sustainable Seas Science Challenge

Email: Julie.Hall@niwa.co.nz;
sustainableseasNC@niwa.co.nz

Feedback on Draft Strategy for Phase II (2019 – 2024)

Introduction

1. Thank you for providing an opportunity for Te Ohu Kaimoana to comment on the Draft Strategy for Phase II of the Sustainable Seas Science Challenge (the Challenge). We have taken an active interest in Phase I through membership on the Stakeholder Panel. Our comments are informed not only by our involvement so far but by our commitment to ensuring sustainable utilization of fisheries resources.

General response

2. Science, including mātauranga Māori, makes an essential contribution to the management of fisheries and the marine environment. The Sustainable Seas Science Challenge presents a golden opportunity to obtain much needed information to improve environmental and fisheries management and ultimately enhance the sustainable utilisation of fisheries in New Zealand. However, we consider this opportunity is being missed by the Challenge. Instead it is attempting to forge a new path to ecosystem-based management (EBM). We strongly recommend that the Challenge reorient its approach and build on the path New Zealand has already created to evolve a management system that explicitly takes the role of ecosystems into account.
3. While we understand it is not the intention of the Challenge to undermine Treaty rights, including Maori fishing rights, the proposal in Phase II to investigate governance, institutional and regulatory changes to enable widespread uptake of EBM risks undermining the basis on which those rights have been recognized. In our view, the Challenge should stay focused on the science.

Who are we?

4. Te Ohu Kaimoana was established to implement and protect the Fisheries Settlement. Its purpose, included in section 32 of the Maori Fisheries Act, is to “advance the interests of iwi, individually and collectively, primarily in the development of fisheries, fishing and fisheries-related activities, in order to-
 - Ultimately benefit the members of iwi and Maori generally; and
 - Further the agreements make in the Deed of Settlement; and
 - Assist the Crown to discharge its obligations under the Deed of Settlement and the Treaty of Waitangi; and

- Contribute to the achievement of an enduring settlement of the claims and grievances referred to in the Deed of Settlement.
5. You may be aware that an independent review of the governance arrangements for Te Ohu Kaimoana was carried out in 2014 and changes were recommended to iwi. In June 2015 mandated iwi organisations (MIOs) affirmed they wished to restructure Te Ohu Kaimoana to protect and enhance the fisheries and aquaculture settlements including undertaking advocacy and policy advice.
 6. Since then, MIOs have approved a Maori Fisheries Strategy and three-year strategic plan for Te Ohu Kaimoana, which has as its goal “that MIOs collectively lead the development of Aotearoa’s marine and environmental policy affecting fisheries management through Te Ohu Kaimoana as their mandated agent”.

The Challenge – what is it aiming to achieve?

7. The Challenge is one of 11 National Science Challenges which “focus science investment on issues that matter to all New Zealanders. The National Science Challenges are cross-disciplinary, mission-led programmes designed to tackle New Zealand’s biggest science-based challenges. They require collaboration between researchers from universities and other academic institutions, Crown Research Institutes, businesses and non-government organisations to achieve their objectives”.¹
8. The objective of the Sustainable Seas Science Challenge is “to enhance the utilization of our marine environment within biological and physical constraints”. The Research and Business Plan for Phase I of the Challenge provides background to the research already underway to achieve this objective. It comments there is significant opportunity to grow New Zealand’s existing marine economy and highlights the cultural value of New Zealand’s seas, and acknowledges the Maori connection with the oceans and their rights as a Treaty of Waitangi partner². The Plan points to several problems including the struggle to incorporate Maori rights and aspirations into our current marine governance and management, and increased difficulty resource developers are facing with challenges to their social license³.
9. Issues that appear to be influencing these societal responses are stated to include:
 - Concern that New Zealand lacks adequate resource management strategies and systems to prevent serious damage to the marine environment
 - Failure to appropriately acknowledge and accommodate Maori and community concerns, views and values
 - A lack of knowledge of, and trust in, science and how it is used in resource management decisions
 - Poor understanding of the value of the marine economy to New Zealand, and the societal value of the use of our marine resources.

¹ <http://www.mbie.govt.nz/info-services/science-innovation/national-science-challenges>

² Sustainable Seas – Ko ngā moana whakauka: National Science Challenge Research and Business Plan. submitted to MBIE for approval on 30 September 2015, p 11

³ Ibid., p 12

10. The Phase I plan states “addressing these issues is fundamental to encouraging investment in our marine economy, adding value to our marine resources already in use, and maintaining, protecting and restoring the health of our seas”.
11. While these issues may be real, it is not clear they are priorities, and their underlying causes are not explored in depth. Nevertheless, the Plan concludes that the solutions lie in an urgent need for a “paradigm shift” which will need to “merge policy, planning, regulation, science and mātauranga Maori with societal collaboration, as well as accommodate the plethora of national and international agreements, and relevant legislation and management agencies responsible for our coasts and ocean”⁴. This assessment of the solution – which is not backed up with references or other evidence - fails to grapple with our current legal and policy framework to fully understand where science can best contribute to the objective of the Challenge. As a result, the specific problem the Challenge seeks to resolve has not been clearly identified.
12. The timing constraints of the next funding round for the Challenge means we have yet to see the results of Phase I, the Draft Strategy for Phase II continues down the same path, which is not shaped by our current management and legislative framework and priorities. We are concerned with the Challenge’s fundamental premise that New Zealand does not already have the foundations to implement an ecosystem approach to management and that we need to start from scratch. The resources of the Challenge would be better spent helping to meet the obligations created by New Zealand’s current legislative framework.

We support an ecosystem approach to management but there are different ways of achieving it

13. New Zealand has established a foundation for an ecosystem approach to management in our current laws including the Fisheries Act, and the Resource Management Act. Much of the thinking behind these Acts had its genesis in international initiatives, for example reflected in the Convention on Biological Diversity in 1992, which promotes an ecosystem approach to management.
14. The Parties to the Convention developed principles to applying an ecosystem approach to management.⁵ An important premise of this guidance is that there is no single ecosystem approach - countries should apply it in their own context.
15. The implementation of “ecosystem-based fisheries management” (EBFM) faces the same challenges. A recent paper on EBFM highlights a lack of consensus on what constitutes EBFM. The paper explores the implementation of EBFM in different fisheries around the world by surveying different countries and fisheries. The authors conclude:

There is no all-encompassing definition of what constitutes EBFM and this should be discussed when evaluating the EBFM performance of different fisheries. No two fisheries or ecosystems are

⁴ Ibid.

⁵ Secretariat of the Convention on Biological Diversity ((2004) The Ecosystem Approach, (CBD Guidelines), Montreal: Secretariat of the Convention on Biological Diversity. This document was referenced in MBIE’s Request for Proposals in September 2015.

exactly alike. Consequently, EBFM implementation is and should be context specific, depending on local goals for management and adopting only ecosystem and societal considerations that are motivated from the understanding of the local system. In this way, management agencies selectively adopt and develop their own optimized version of EBFM from a “bundle of sticks”⁶.

16. The authors suggest the results of their survey can “help refocus the discussion on EBFM instead of trying to holistically define concepts and prescribe generic approaches”.⁷ These conclusions can also be applied equally to the implementation of EBM.

The Challenge does not build from where we are now

17. The Challenge defines EBM as “a holistic and inclusive way to manage marine environments, and the competing uses for, demands on, and ways New Zealanders value them”. The principles for EBM developed by the Challenge echo New Zealand specific concerns such as Maori concerns and co-governance, along with more general principles covering:
- sustainability (“marine environments, and their values and uses, are safeguarded for future generations”),
 - collaborative decision-making (“collaborative, co-designed and participatory decision-making involving all interested parties”)
 - human activities (defined as “humans, along with their multiple uses and values for the marine environment, are part of the ecosystem”),
 - adaptive management
 - the need to base decisions on science and mātauranga Māori, and be informed by community values and priorities
 - A tailored approach (“place- and time-specific, recognising all ecological complexities and connectedness, and addressing cumulative and multiple stressors”).
18. However, the Challenge has not taken into account the steps New Zealand has already taken to address these matters. As such, there is no analysis of how our management system:
- takes the role of ecosystems into account
 - provides for public participation
 - weighs different values in decision-making
 - allocates rights, including rights recognised under the Fisheries Settlement.
19. We are not suggesting the system is perfect and we are concerned about the need for better science to inform management. However, without reference to where we are now, the basis for establishing clear priorities for research under the Challenge is lacking.
20. Iwi have a substantial stake in customary non-commercial and commercial fisheries. We acknowledge the Challenge must take a broader view than fisheries however, amongst other things, the research should contribute to better management of fisheries, including management of the effects of other uses on fisheries.

⁶ Trochta, John T; Pons, Maite; Rudd, Merrill B; Krigbaum, Melissa; Tanz, Alexander and Hilborn, Ray: *Ecosystem-based fisheries management: perception on definitions, implementations and aspirations* PLOS ONE/<https://doi.org/10.1371/journal.pone.0190467>, January 30, 2018, p 9.

⁷ Ibid., p9

21. We are aware that the Challenge aims to inform the implementation of EBFM. However, it is not possible to provide meaningful advice to MPI and the fisheries sector without reference to the obligations of the Fisheries Act, including its environmental principles. The Challenge's research should deliver results that support implementation of the Act.
22. The environmental principles in section 9 of the Act are intended to support ecosystem considerations in the management of fisheries.

All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the following environmental principles:

- (a) associated or dependent species should be maintained above a level that ensures their long-term viability:*
- (b) biological diversity of the aquatic environment should be maintained:*
- (c) habitats of particular significance for fisheries management should be protected.*

23. Implementation of the principles is an evolving process, and we understand that better information on the effects of fishing on inshore biodiversity at the ecosystem scale and greater attention to habitats of particular significance for fisheries management are priorities⁸. These habitats are important for fisheries productivity however there is no formal definition for what or where these are, limited research and therefore limited management responses.
24. Incorporating research into these areas would have benefits for many users and enhance utilisation of fisheries resources by better defining environmental constraints and enable suitable management responses to be developed where necessary.

Baseline research

25. In our discussions on the development of the Draft Strategy and in our initial feedback, we proposed that the Challenge include work on fisheries habitats in its programme. This work would benefit regional councils, Fisheries New Zealand, the customary non-commercial sector, the commercial fishing sector, the recreational fishing sector, ENGOs and the public generally. While we have been advised baseline research is out of scope, MBIE's original Request for Proposals (RFP) included a theme on "Characterising our Ocean. The outcome sought was "an integrated temporal and spatial baseline of biological and physical resources, as well as human activities". This would provide "a basis for understanding the dynamics, sensitivities and resilience of ocean and coastal systems". It was clearly envisaged that research into coastal and oceanic habitats could be included.⁹

⁸ Further information can be found in: Ministry for Primary Industries (2016) *Aquatic Environment and Biodiversity Annual Review 2016: A summary of environmental interactions between the seafood sector and the aquatic environment*, Ministry for Primary Industries; Ministry for the Environment & Statistics New Zealand (2016), *Our marine environment 2016*. Available from www.mfe.govt.nz and www.stats.govt.nz.

⁹ <http://www.mbie.govt.nz/info-services/science-innovation/national-science-challenges/documents-image-library/key-documents/nsc-rfp-2nd-tranche-feb-2014.pdf>, p 36

26. We acknowledge the RFP makes clear that quantification of economic resources (for example through fisheries stock assessments) is out of scope. We are not seeking to include stock assessments as part of the Challenge.

Proposed themes and research questions

27. The success of the research approach will hinge on the clear specification of objectives and research questions which deliver tangible results. The Draft Strategy proposes to focus the research for Phase II on four new themes, incorporating Tangaroa and cross-linked with the theme “Vision Mātauranga”. A set of research questions is identified within each theme. The focus of physical and social science is intended to be integrated within each of the themes.

28. Much of the language used obscures what the research is seeking to do, and it is hard to envisage whether the results will be tangible and capable of being applied by end-users and ultimately achieve the Challenge objective.

29. We provide brief comments on the themes and questions, which we summarise as follows.

Theme 1

<p>Degradation and recovery in multi-use systems</p>	<p>What are the knowledge and processes needed to predict and manage the effects of multiple activities on marine ecosystems and the values they provide Aotearoa New Zealand?</p> <ol style="list-style-type: none"> 1. What governs the spatial and temporal dynamics of cumulative effects from multiple activities? 2. How do ecological, social, cultural and economic contexts facilitate or inhibit tipping points and recovery occurring? 3. How do we assess degradation or recovery from cumulative effects on non-monetary values (including mauri, ecosystem services and taonga species)? 4. How do we enhance complementarity between mātauranga Maori, local kaitiakitanga experience and science to halt degradation and promote recovery? 5. What is required to link assessment of cumulative effects on the marine environment to management responses to prevent dramatic change to values?
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30. These questions are very broad and are not applied to identified stressors or priorities for action. It is not clear how the results will enable better management, or who will use them. Greater clarity would be gained from an analysis of key issues and priorities before research gets underway. For example, sedimentation, pollution, fishing and shipping in inshore coastal environments create cumulative effects – what is their relative contribution to these effects and how can they be better managed? What are the social, economic and cultural implications? What is meant by “dramatic change to values” in question 5? Which values?

31. Question three refers to “degradation or recovery from cumulative effects on “non-monetary values...including mauri, ecosystem services and taonga species”. This would be better worded as cumulative effects on the environment rather than “non-monetary values” – as all the examples are aspects of the environment. There are examples of processes already underway to help achieve this objective. For example:
- to understand the biology of particular species, (including taonga species such as New Zealand Sea Lion/Rāpoka and Hector's and Maui Dolphins) and assess the effects on them of multiple stressors. The assessments are the basis of Threat Management Plans which are updated over time
 - to assess the state of mauri using the Mauri Compass¹⁰ (including degradation and recovery).
32. How will the Challenge take these kinds of initiatives into account and build on them? Where are new approaches required?
33. The proposal signals ongoing work on “tipping points”. What is the specific problem to be addressed with this work? Are all tipping points of equal value and what would be the cost of address them? How would economic costs be evaluated, and trade-offs made? What would be the implications for Māori?

Theme 2

<p>Creating value from a blue economy</p>	<p>How do we build a successful blue economy that realises multi-generational economic, social, cultural and ecological sustainability?</p> <ol style="list-style-type: none"> 1. What strategies can be developed to encourage investment in, and promotion of, regional, Maori and community blue economies? 2. How do we measure the performance of the blue economy (including ecosystem services, mitigation, decreasing uncertainty around risks) at national, regional and sectoral levels? 3. What are the connections among different economic activities and their impacts on marine ecosystem function and associated values? 4. How can we build a blue economy based on kaitiakitanga principles- what are the benefits, costs and opportunities for Maori and Aotearoa New Zealand? 5. What management tools can be used to foster a blue economy through EBM (e.g. ecological methods of processing aquaculture waste, ecologically advantageous commissioning and decommissioning strategies for oil and gas development marine spatial planning, marine protected areas, taiapure?)
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34. While we have yet to see the results of the research into “blue economy” in Phase I, use of the term is unnecessary and confusing. We think reference to “marine economy” is sufficient, supported by research to ensure it can develop within biological and environmental constraints.
35. The focus of research into the “use” side of the Challenge objective needs to be more practically focussed and start from where we are now:
- What initiatives are being taken by marine users to increase environmental performance?

¹⁰ <https://www.mauricompass.com/>

- What are marine users doing to demonstrate their environmental performance (e.g. through environmental reporting, third party certification schemes etc?). Are they effective and what other initiatives could be taken?
- What are markets demanding of marine users (for example in the areas of fishing, tourism, aquaculture, mining?)
- What science information do they need (linking back to priorities for baseline research)
- What opportunities are there for the development of new marine uses?
- What opportunities exist for Maori businesses to enhance their utilisation of the marine environment, drawing on Maori principles for management?
- What are the major stressors affecting the marine economy?

36. Question 5 refers to possible management tools to “foster a blue economy”, including a range of measures including MPAs, but the Challenge doesn’t pose more fundamental questions about the basis for establishing MPAs.

Theme 3

Risk and uncertainty	<p>How do we estimate risk and uncertainty associated with multiple stressors accumulating over space and time?</p> <ol style="list-style-type: none"> 1. How can we assess risk associated with multiple stressors accumulating over space and time? 2. What is necessary in a decision-making framework to enable risk and uncertainty, defined in mātauranga Maori terms, to be adequately assessed? 3. How do we develop tools that allow for different perceptions of risk and the consequences of uncertainty for ecological function, social and cultural values and business? 4. Does standard business assessment of risk to investment translate easily into blue economy thinking? 5. How does uncertainty in decision-making processes contribute to environmental, social, cultural and business risks?
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37. Some of our earlier comments are relevant here, for example in relation to current risk assessment processes applied to dolphins and the New Zealand Sea Lion. What have we learnt from these processes?

38. Questions 3 – 5 are unclear. What is meant by different perceptions of risk? Is it intended to mean “risk to different values or uses?” How do we define “blue economy thinking”?

Theme 4

Enabling EBM	<p>What actions are required to enable the implementation of EBM in Aotearoa New Zealand?</p> <ol style="list-style-type: none">1. What governance, institutional and regulatory changes could enable widespread uptake of EBM in multiple contexts and scales?2. What approaches to implementing EBM can maximise benefits and minimise costs?3. At what scales do ecological function, society and cultural expectations, and management practices, operate, and what is needed to integrate these different scales in EBM?4. What approaches, tools and models best support EBM implementation among Maori and stakeholders?5. How can EBM incorporate existing rights and interests, especially of Maori?6. What are the key features of EBM that will enable the blue economy?
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39. Our concern with this theme – as stated earlier - is the premise that EBM is something new and that to implement it we need to change our governance, institutional and regulatory framework. While we understand it is not the intention of the Challenge to undermine existing rights, including Treaty rights, the proposal in Phase II to investigate governance, institutional and regulatory changes to enable widespread uptake of EBM risks undermining the basis on which those rights have been recognized.

Tangaroa and Vision Mātauranga

40. Tangaroa is intended to provide a mechanism for Sustainable Seas to contribute to addressing the specific aspirations and needs of Māori, where they align with the Challenge objective and to do this in a manner consistent with Treaty principles. Research questions will be integrated through the other Challenge themes.
41. We support the targeting of resources to support Maori research through Tangaroa and Vision Mātauranga. However, unless the overall approach to Phase II of the Challenge is more tightly focussed and practical, we are concerned it will deliver little of benefit to Maori.

Suggestions to tighten the focus of the Challenge

42. We recommend the Strategy for Phase II be redesigned under a clearer set of goals and objectives. Here are some possible starting points, including fisheries related matters, for further development by iwi and stakeholders.

Goal 1: Identify key habitats and ecosystems that support marine uses.

43. For fisheries, this goal could be supported by the following objectives:
- determine the location, extent and state of subtidal habitats and species drawing on mātauranga Maori and local knowledge
 - identify key habitats for fisheries productivity – including juvenile and adult use of habitats and habitat connectivity
 - carry out systematic habitat mapping
 - develop a national fisheries-habitat classification scheme
 - promote citizen participation in fisheries monitoring and research

- identify ways fisheries can be enriched through habitat enhancement, habitat creation or conservation-related methods.

Goal 2: Identify the effects of stressors on key habitats and ecosystem processes and develop tools to support management

44. Objectives could include:

- identify and quantify contaminant and sediment loads and their impacts on productivity and biodiversity across the coastal marine area
- identify the effects of fishing on habitats that support fisheries productivity
- provide tools and support for iwi and hapū to carry out monitoring and research across the coastal marine area
- develop effective models and tools to support decision-makers and marine users manage the cumulative effects of activities on habitats and ecosystems.

Goal 3: Encourage innovation in the marine economy

45. Objectives could be based on the suggestions we made earlier, bearing in mind various users are already considering these matters:

- identify what are markets are demanding of marine users (for example, fishing, tourism, aquaculture, mining)
- identify initiatives being taken by marine users to increase and demonstrate their environmental performance and explore ways they could enhance their efforts
- identify opportunities for the development of new business initiatives that meet the objectives of the Challenge
- What opportunities exist for Maori businesses to enhance their utilisation of the marine environment, drawing on Maori principles for management such as kaitiakitanga?

Governance of the Challenge

46. As noted earlier, MIOs have mandated Te Ohu Kaimoana to work on their behalf to provide advice on marine and environmental policy. Under the fisheries allocation model, all MIOs have an interest in deep water stocks, which are allocated to MIOs based on their population. Inshore stocks are allocated based on iwi coastlines within QMAs, most of which include multiple iwi interests.
47. Te Ohu Kaimoana participates in the stakeholder panel which provides advice to the Senior Leadership Team. We wish to retain the ability to participate in the Panel but also consider it appropriate to participate in the Kāhui to provide a perspective on behalf of all iwi who have interest in this research.
48. We recommend the Independent Science Panel include New Zealand scientists who have knowledge of the New Zealand fisheries management system. We note that currently there is only one member of the Panel from New Zealand.

Budget

49. The proposed budget for Phase II is \$41 million consisting of \$26.1 million for research projects, \$5 million for an Innovation and Opportunities Fund and around \$9 million for management, governance, communications and advisory services, which represents over 20% of the overall budget. In light of our experience with cost recovery through MPI and DOC, this seems overly high.

Conclusions

50. The Challenge presents a real opportunity to carry out the science needed to inform management of the marine environment and support enhanced utilisation. However, the assumption that by creating a new regime for EBM will provide the answer fails to focus the considerable resources of the Challenge on real problems faced by decision-makers, Maori and other marine users. We recommend the Draft Strategy for Phase II be reworked to provide more focused research questions, informed by our current science needs and management system. Te Ohu Kaimoana is happy to contribute to and support such a process.

Naku noa, nā



Dion Tuuta
CHIEF EXECUTIVE