
Final Review Report

12 September 2016



Hauraki Gulf
Marine Park
Ko te Pataka kai
o Tikapa Moana
Te Moananui a Toi



Hauraki Gulf Forum
Tikapa Moana
Te Moananui a Toi

In partnership with mana whenua and the following agencies:

Ministry for Primary Industries
Marewa Ahu Matua



Department of
Conservation
Te Papa Atarewhai

Waikato
REGIONAL COUNCIL
Te Kaitiaki a Matarauka



Auckland
Council
Te Kaitiaki a Matarauka

INTRODUCTION

1. SeaChange Tai Timu Tai Pari is the stakeholder-led marine spatial planning ("**MSP**") project for the Hauraki Gulf. The project has been in progress for approximately three years.
2. The Hauraki Gulf is a very significant area to mana whenua, the communities of the Gulf and to New Zealanders more generally. The Hauraki Gulf is a taonga, and marine spatial planning provides an opportunity for a structured and collaborative approach to planning for the protection and sustainable use of that taonga. The project was launched following recognition of a long term decline in the Hauraki Gulf environment and contesting aspirations to use the gulf resources. The aspiration through SeaChange Tai Timu Tai Pari is to enhance the health, productivity and sustainability of the Hauraki Gulf – the mauri. Ultimately, the long term attainment of the aspiration will depend on planning associated with surrounding lands and activities.
3. The MSP development process is the responsibility of the Stakeholder Working Group (SWG). This is a unique approach internationally, notable for the scale of the undertaking with many sector representatives engaged directly and representatives of other sectors consulted during the planning process. The SWG has benefitted from interaction with the Hauraki 100 process and a cross section of interested parties.
4. The SeaChange Tai Timu Tai Pari Independent Review Panel ("**Panel**") was appointed by the Project Steering Group in July 2014. The composition of the Panel is set out in Appendix One¹. The Panel's role has been to conduct interviews and review materials to assess progress of the planning process, and to provide recommendations to assist the project participants to produce a high quality plan.
5. Consistent with the assessment criteria set out in the Terms of Reference for the Panel, it has used the *UNESCO - Marine Spatial Planning – A Step-by-Step Approach* as the guide for good practice in marine spatial planning, and is very fortunate to have Prof Charles Ehler, one of the two authors of that UNESCO Guide, as a Panel member (see also UNESCO 2014 guide, *Evaluating Marine Spatial Plans*, <http://unesdoc.unesco.org/images/0022/002277/227779e.pdf>). In addition, the Panel have adopted the understanding of Ecosystem Based Management as stated in the 2005 Scientific Consensus http://www.compassonline.org/science/EBM_CMSP/EBMconsensus).

¹ Paul Beverley chaired the Panel for the first two reviews but relinquished this role when he took up the role of Independent Chair of the SWG around August 2015.

6. The Panel has reviewed the SeaChange Tai Timu Tai Pari process twice previously (21 August 2014, 17 March 2015), and this is the final review, preceding the planned completion of the project in September 2016. The Panel is mindful that this is a novel and ambitious process and that the Panel's role is to add value to the process by making recommendations.
7. Independent review of the SeaChange Tai Timu Tai Pari project is intended to provide assurance to the PSG, Agencies and stakeholders that the plan reflects good practice in marine spatial planning (MSP), is informed by best available science and mātauranga Māori, and that the plan's outputs are robust. Independent review is intended to promote the quality and durability of the SeaChange Tai Timu Tai Pari plan; intentionally fashioned in a constructive sense in support of the envisaged implementation phases. The reviews are primarily focused on process and quality assurance of plan development. The Panel has considered the suitability of the form and content of the plan as a means to ensure that it can be implemented.
8. The First Review Report dated 21 August 2014 encompassed the initial phase of the project, entitled 'Listening hard'. This covered the following broad themes: Process of Stakeholder Working Group (SWG) selection and function; Engagement by SWG with key stakeholder/sectors of the plan; Development of SeaSketch; Provision and use of information.
9. The Second Review Report dated 17 March 2015 encompassed 'Option Development' (or Issue refinement, options identification and assessment) and part of the 'Option Testing' phases of the project. This covered the following broad themes: Uptake of key findings and recommendations from the First Review Report; Involvement of Mana Whenua; Function of RoundTables (RTs) and collaborative interaction with the SWG; Development of geospatial resources to aid option development and option testing; Engagement and Communications; Assessment of existing measures and consultation with agencies to develop and test options; Provision and use of information.
10. Recent project activity since the Panel's Second Review Report period has largely been undertaken during the period February to May 2015, and subsequently, following a project Pause, from October 2015 through to August 2016. Much of this work has been through the SWG (as RoundTables completed their work in January 2015), however sub-groups formed around a subset of SWG members, including writing team and other project support staff continued to provide input. Reflecting a changing role, the 'Mātauranga Māori RoundTable' changed its name to the 'Mātauranga Māori Representative Group' in September 2015.
11. In undertaking this Final Review Report, the Panel has had the opportunity to consider a range of documentation and to speak to a selected cross-section of people involved in the process. This report is based on the information derived

from those sources. The Panel appreciates the time taken by the interviewees to assist the Panel in its work. The Panel convened on 3 June 2016 and held a dozen meetings through to 3 August 2016, prior to commencing the writing of this Final Review Report. The Panel was convened by the PSG at this time so that its Final Review Report could be taken into account prior to the SWG providing its finalised marine spatial plan to the PSG for their consideration.

12. The intent of the Final Review Report is to provide high level advice to the Project Steering Group (PSG) about whether the information and process resulting in the Draft Marine Spatial Plan (as made available on the 22 August 2016) is reasonably robust, durable, achievable, and reflects best ('good') practice. The Panel offers comment in a constructive manner toward final drafting of the MSP and suggestions for follow-on activities.
13. The scope for this Final Review Report and the review content is organised around the themes provided by the PSG, following their agreement to the Panel's review's scope on 4 May 2016:
 - (a) Review theme 1: Uptake of key findings and recommendations from the Second Review Report
 - (b) Review theme 2: Organisational actions taken to develop a Marine Spatial Plan
 - (c) Review theme 3: Bringing together themes and elements of the Marine Spatial Plan
 - (d) Review theme 4: Application of geospatial information and resources
 - (e) Review theme 5: Assessment of existing measures and consultation with agencies to test options and contribute to plan development
 - (f) Review theme 6: Provision and use of information

EXECUTIVE SUMMARY AND RECOMMENDATIONS

Kotahitanga: Unity

In the SeaChange Tai Timu Tai Pari context, there is a need to view the Hauraki Gulf /Tikapa Moana/ Te Moana ā Toi as a whole, culturally, socially, economically and in the context of the biophysical realm, linking the mountains to the sea. It is also relevant in the sense that the Draft Plan is at a stage that will facilitate unity, while preserving diversity, in bringing together the people of the Gulf to plan its sustainable future.

Executive Summary

14. The purpose of the Independent Review Panel (the Panel) in the overall project is to provide an independent assessment of the process of plan development together with quality assurance such that the plan reflects good practice in marine spatial planning (MSP), is informed by best available science and mātauranga Māori, and that the plan's outputs are robust. The Panel has considered the suitability of the form and content of the plan as a means to ensure that the plan can be and will be implemented.
15. The third and final review of SeaChange Tai Timu Tai Pari MSP development process and the Draft Plan itself is designed to provide high level advice to the Project Steering Group (PSG) about whether the MSP is reasonably robust, durable, achievable, and reflects best ('good') practice.
16. The scope for this Final Review Report is organised around the following six themes provided by the PSG following their meeting of 4 May 2016: Uptake of key findings and recommendations from the Second Review Report; Organisational actions taken to develop a Marine Spatial Plan; Bringing together themes and elements of the Marine Spatial Plan; Application of geospatial information and resources; Assessment of existing measures and consultation with agencies to test options and contribute to plan development; Provision and use of information.
17. This report is timed to permit consideration of the Panel's comments and recommendations by the SWG and the PSG in their final deliberations on the MSP, in addition to implications for actions following completion of the project.
18. The key finding of the Panel in this review phase is that the Project Pause in May 2015 and the subsequent re-setting of SWG, Mana Whenua, Stakeholder and Agency relationships was a sensible and necessary step in the development of the MSP. The resultant network of contacts established within the project and improvements to the collegiate input to the MSP will lead to better understanding of the MSP recommendations, in turn facilitating more cohesive implementation.

19. The new Independent Chair SWG, Project Manager, and Writing Team Lead are working together effectively, and are committed to deliver a result of value to the community, mindful that the implementation of recommendations will be contingent on a number of factors, first and foremost settlement of outstanding Treaty issues.
20. The SWG has worked collaboratively throughout the SeaChange Tai Timu Tai Pari process and should be praised for their dedication over two and a half years (~ three years with Pause). The Panel understands that it is not an easy task.
21. Agencies have had a changing and sometimes tense relationship with the project process over its term. There is evidence that in the post Pause period, Agency relationships with the SWG have improved and their advice has been sought in several areas and has been provided to varying extents. Ideas in the latter phases of the project have been tested with them to some degree.
22. The plan offers important themes and specific proposals which collectively, if implemented, would lead to a slowing and perhaps reversal of the decline in Hauraki Gulf ecosystem health and productivity. The plan signals a pathway that could lead to slowing of further damage and perhaps restoration of the Gulf environment for future generations.
23. The process adopted to produce the plan was unique and bold. It placed the development of the plan in the hands of Mana Whenua and stakeholders. This has not been attempted before and as such the ultimate outcome was arguably unpredictable. The resulting plan, as far as we can judge from the first collated Draft Plan as at 22 August 2016, is not consistent with UNESCO guidelines in many ways, a key element being the late and in some cases absent articulation of Goals and Objectives. Some of the issues identified by the Panel may be addressed prior to the plan's completion in September 2016, given the on-going refinement to the Draft Plan by the SWG.
24. The Draft Plan has some spatial aspects but could have more (and may well do so in the final version). The spatial detail provided in the various sectors is uneven, but a number of advanced sector proposals signal the way forward with recommendations for spatially detailed segmentation of the Gulf. Good initial examples are found with marine protected area (MPA) and Aquaculture sector contributions to the Draft Plan. A more fundamental observation is that some issues are not effectively dealt with on a purely spatial basis and that measures to manage some issues will not have a spatial dimension. In this light, the Draft Plan offers a wide range of management options.
25. Implementation testing has been carried out only at a cursory level and only in a few sector contributions to the plan. This is seen as the next major step following a balanced and even level of spatial planning across all sector interest areas. Cost benefit analyses would likely also be required as part of the final Plan's review toward implementation.

26. There remain a number areas where information to support the Draft Plan is weak. Specifically, these areas are economic information, infrastructure and detail for fisheries (recreational and commercial) management options (sustainable output controls, supplemented with complementary spatial controls).
27. The Draft Plan as examined by the Panel falls short of constituting a final marine spatial plan in the context envisaged at the beginning of the project. It does however collate and synthesise across an enormous body of high quality information and uniquely brings in sector group opinion and recommendations, albeit within sectorial categories. The Draft Plan falls short of combining thinking and spatially defined options across sectors to produce a composite single multi-use map. It is however an important and timely strategic document that constitutes the necessary launch pad for detailed marine spatial planning into the future.
28. Should the Agencies elect to implement the recommendations of the plan, as it relates to their respective statutory responsibilities, there will be a need to monitor and ensure implementation of the plan in an integrated way. This will be facilitated by effective communication using the networks created during the collaborative, stakeholder driven production of the plan over the life of the project.

Recommendations

29. **The IRP commends the SWG for its diligence and dedication to bringing the SeaChange Tai Timu Tai Pari MSP development process to this conclusion. The recommendations of the Panel are as follows:**
 - (a) **Consider what should be done about the economic (and social), fisheries and marine invasives information and spatial planning gaps.**
 - (b) **Ensure that clear steps are taken to set out how the plan will be implemented following its release. This will include generation of SMART objectives where they remain incomplete.**
 - (c) **Maintain momentum to facilitate cross sector discussion and agreement on developing a combined marine spatial plan in the form of a unified 'multi-use' map (Spatial Plan) for the Hauraki Gulf.**
 - (d) **Develop a monitoring plan to track implementation and success or otherwise of the plan rollout.**
 - (e) **Maintain and use the effective communication networks developed during the planning process to enhance public understanding and acknowledgement of the plan's implementation.**

SCOPE OF REVIEW

30. As with past reviews, the Project Steering Group (PSG) provided the Panel with a scope for this Final Review Report which identifies six key themes which are reported against in six sections Parts A through F:
- (a) **Review theme 1 (Part A):** Uptake of key findings and recommendations from the Second Review Report
 - (b) **Review theme 2 (Part B):** Organisational actions taken to develop a Marine Spatial Plan
 - (c) **Review theme 3 (Part C):** Bringing together themes and elements of the Marine Spatial Plan
 - (d) **Review theme 4 (Part D):** Application of geospatial information and resources
 - (e) **Review theme 5 (Part E):** Assessment of existing measures and consultation with agencies to test options and contribute to plan development
 - (f) **Review theme 6 (Part F):** Provision and use of information.
31. The Final Review Report has been undertaken in accordance with the following assessment criteria (in no particular order of importance):
- (a) Is the plan consistent with the scope, objectives and terms of reference for the Sea Change Stakeholder Working Group?
 - (b) Does the process and plan reflect best practice guidelines for marine spatial planning (default best practice adopted as in the UNESCO guide)?
 - (c) Does the process and plan reflect effective co-governance with iwi?
 - (d) Does the process and plan recognise mātauranga Māori?
 - (e) Does the process and plan reflect best use of best available information (e.g. PRIOR = Peer Review, Relevance, Integrity, Objectivity and Reliability)?
 - (f) Is the plan consistent with the Hauraki Gulf Marine Park Act 2000?
 - (g) Is the plan able to be practically implemented either through existing legislation¹ or through recommended legislative changes?
 - (h) Is the consultation and representation consistent with a best-practice, collaborative approach?
 - (i) There is a sound evidential basis for the conclusion reached?

PART A: UPTAKE OF KEY FINDINGS AND RECOMMENDATIONS FROM THE SECOND REVIEW REPORT

Recommendations from the Second Review Report (*builds on those from the First Review Report*)

Theme One: Update key findings and recommendations from the Second Review Report

32. The commentary below is offered on the basis of interviews and review of documents produced over the third reporting period (since March 2015) and reflects generic comment on the major findings from the IRP's Second Review Report. More specific comment is offered in subsequent Theme specific sub-sections. This Final Review Report considers activities post the review completion date of the Second Review Report up to the 'Pause' period and then subsequent to that (February 2015 to August 2016). Most of the work was carried in two distinct periods: 1) February to May 2015, and 2) subsequently, following a Project Pause, from October 2015 through to August 2016. The bulk of the work relevant to the Final Review Report has been transacted through the SWG (or its sub-groups), as the RoundTables completed their work in January 2015. Sub-groups formed in early 2016 consisted of a subset of SWG members, writing team members, and some Agency support staff as required. The Panel's assessment of the response to the Second Review Report is:
- (a) Not all of the Panel's recommendations from the Second Review Report have been acted upon (see below). The Panel considers that post Pause the SWG is better integrated with stakeholders reflecting a greater degree of comfort that their views are being considered appropriately and reflected in deliberations towards the creation of the Marine Spatial Plan (MSP). There is evidence of better uptake of Mana Whenua considerations. There remain some Agency apprehensions over the plan, its future implementation and its developmental process.
 - (b) In terms of the UNESCO Guide, the SeaChange Tai Timu Tai Pari process remains at odds with the stated 'good international MSP practice' as: (a) there are few clearly articulated aspirational goal statements with attendant 'SMART' objectives; and as at the date of preparation of this report, (b) little evidence of cross sector marine 'spatial' planning. The exercise of undertaking analyses of use conflicts/compatibilities and spatial allocation appears to remain incomplete at best. Consideration has however been given to management options that would promote environmental recovery.
 - (c) It is noteworthy however, that the Mana Whenua integration framework running across the Draft Plan does constitute an important element of cross sector planning.

- (d) There is evidence of closer Agency alignment with the process over the latest review period, and in the final stages of development of the MSP document, but little evidence of testing of the mechanisms by which any recommendations of the MSP would be implemented. Agency engagement has however been unbalanced.
- (e) In terms of geospatial information, there are still very few definitive goals and objectives articulated in a format that can be used directly for MSP or SeaSketch. The RoundTables did not use SeaSketch to any real extent in their deliberations (apart from the MPA and Aquaculture sectors) and it appears that the package has not been used in cross sector synthesis role for developing the final MSP across sectors. SeaSketch is however a valuable tool that will be available for future stakeholders who wish to use it, given the comprehensive and high quality geospatial information that has been brought together.
- (f) Use of a considerable body of information has been effective in the construction of a Draft Plan, however in the format considered by the Panel (draft version of 22 August), the Draft Plan is more of a 'State of the Environment Report' with management options, rather than a spatially oriented plan that integrates themes / sectors sufficiently. It is nevertheless a comprehensive, timely and useful document. The information used in support of the Draft Plan is scientifically robust for most themes, although little information has been seen for economic or social considerations, and minor attention has been placed on invasive species issues. The information is now in a collated format that will enable substantiation of MSP recommendations for future spatial planning, management and implementation pathways. Economic and social development opportunities as beneficial outcomes themselves (enhancing the social license to operate), and as means to contribute to beneficial environmental and cultural outcomes, are understated.
- (g) Finally, the MSP is considered by the Panel to have benefitted from the Pause period and the realignment of the SWG, together with a refreshed consideration of Mana Whenua and SWG member involvement.

Theme Two: Involvement of Mana Whenua

Second Review Report: The recommendation for Theme Two were:

The SWG and Mātauranga Māori RoundTable work closely together and with lead writers, the technical support group and other support staff to ensure that mātauranga Māori and He Taonga Papanga Pounamu can be incorporated effectively into the SWG process and eventually into the marine spatial plan.

33. The Technical Support Group, effectively used to support the SWG and RoundTables in 2014 was discontinued after January 2015, as the focus of the then SWG Chair shifted to a writing team contingent from. One or two technical support staff were retained in the writing team through to the May 2015 Pause, while others could be called upon as needed.
34. The Mana Whenua members developed a plan for wider iwi engagement that included hui-a-iwi, the first of which was held in November 2014. The hui-a-iwi would involve both SWG and PSG Mana Whenua members, thereby ensuring a wide Mana Whenua representation. The strategy was to hold hui-a-iwi in various places around the Hauraki Gulf to ensure the widest possible Mana Whenua engagement.
35. The Panel noted that during the Sea Change Tai Timu Tai Pari process, many iwi participants have been or are under significant pressure from other demanding mostly statutory activities, including for example working on Treaty settlements, on the Proposed Auckland Unitary Plan, as well as business as usual activities. This pressure is on-going and explains the sometimes small number of participants at some hui.
36. Once the Mātauranga Māori RoundTable produced their report prior to April 2015 – He Taonga Papanga, the PSG and SWG Mana Whenua members expressed a desire to continue meeting as a group. Accordingly, the Mātauranga Māori Representative Group was formed, comprising Mātauranga Māori RoundTable members, Mana Whenua members on the PSG and SWG, and the mātauranga Māori technical writers and support team. The formation of the Mātauranga Māori Representative Group ensured Mātauranga Māori has been incorporated in the marine spatial plan with continued engagement of core members of the Mātauranga Māori writing team, drawing from information that is publically available together with iwi representative input from hui-a-iwi. A continuing and respectful rapport has developed between Mana Whenua and the SWG through the Mātauranga Māori writing team members.
 - (a) From the Mātauranga Māori and Mana Whenua input, four themes will be presented in the plan: Kotahitanga – prosperous gulf, infrastructure
 - (b) Ki uta ki tai From the mountains to the sea, water quality, catchment management

- (c) Mahinga kai – biodiversity, aquaculture
- (d) Kaitiakitanga – raised up, woven

Theme Three – Function of RoundTables and SWG

Second Review Report: The recommendations for Theme Three were:

(a) systematically identify any relevant and important remaining gaps in information and understanding and launch efforts to close those gaps, recognising that information is likely to become available very late (or too late) in the MSP process and so incorporating that information needs to be considered in Phase 3 and Phase 4 project planning, or in the next round of MSP. Again, identification of goals and objectives would help to determine what information is really needed for the marine spatial plan;

37. Information gaps identified in the Second Review Report included a need for more detailed information on biologically diverse area identification. This has largely been achieved with what is available in the literature and databases and has been translated into GIS layers where appropriate. Also identified in the Second Review Report, was a lack of information around the economic environment relevant to the Gulf. Additionally it was noted by a number of parties contributing to the RoundTable reports, that information on fisheries was available at a range of scales not necessarily adequate for detailed spatial planning (depending on the source and the reason for its generation). There has been good progress to develop a plan to provide information on commercial and recreational fisheries at scales relevant for Hauraki Gulf spatial planning purposes. Finally, the importance of serious incursions of marine invasive species was indicated in both previous reports. The seriousness of this issue is not reflected in the information assembled to date and no map is included of marine invasive hotspots, nor the extent to which invasive species have already colonised the Gulf.

(b) identify remaining unresolved issues and ensure processes are in place to resolve those issues in time for the resolutions to be included in spatial allocations and other management actions in the marine spatial plan;

38. The Pause period was actioned to resolve a number of issues, particularly the incorporation of Mana Whenua considerations and to enhance uptake and translation of input from stakeholders and Agencies. This appears to have been effective, albeit not universally successful. Apart from the items identified above (a), there appears to have been a reasonable response to this item. It has however slowed progress and the time remaining to adequately synthesize an enormous amount of information and recommendations from the former RoundTables and other sub-groups, is now critically slim. Hence it is to be

expected that the MSP document will constitute a stepping stone toward a final marine spatial plan. It will provide the required strategic foundation for future work.

(c) focus urgently on identifying which data gathering or analysis is required to inform decisions about unresolved issues and ensure availability of that data and analysis at the time it is required;

39. Unfortunately due to the fractionated year brought about by the Pause period, time has run out to complete a more robust data synthesis across sectors which would ideally have led to articulation of specific goals and objectives for each facet of a final integrated spatial plan (eg MPA's, Aquaculture etc.). SeaSketch would ideally have been invoked in this process to a greater extent. However, the means by which this can be achieved are in place. The pathway toward an informed collegiate discussion to create a long term spatial plan has been laid. Effort to identify further information/research required has been progressed.

(d) consider again whether negotiation training would help SWG members as they work together to develop their proposals (noting again that there is little time now left in the process);

40. There is no evidence that such training was implemented. However, the Pause and the ensuing realignment of the SWG, with additional consultation with Mana Whenua and stakeholders/agencies appears to have achieved better understanding amongst most groups and will have assisted the writing of the MSP in a way that will maximise its acceptability and promote uptake of recommendations.

(e) consider what planning work is likely to remain incomplete at the end of the Sea Change – Tai Timu Tai Pari process, and develop a means to get that work completed so that it can be taken up in the future. That might imply an extension of time, another MSP round or an institutional solution. It is important to note that as described in the UNESCO Guide, MSP is a continuing process.

41. The Draft Plan as seen to date represents a summary of the current condition of the Hauraki Gulf, a State of the Environment Report, with indications in some areas of trajectories of health indicators. It contains a series of recommendations although these remain unbalanced in detail throughout the document. In only a few sections is there any realistic development of spatial maps in a planning context. It is clear that the document will represent a stepping stone, albeit a comprehensive one, to a final spatial planning negotiation which would in turn lead to a Spatial Plan ready for implementation. It is unfortunate given time extensions that a more spatially prescribed product has not been generated, however it is acknowledged that the unique approach taken (stakeholder

ownership of the planning process) was enormously aspirational and unique internationally, hence perhaps should have been given longer for final phases of negotiation across sectors. The Agencies now need to see how this investment can be converted into something useful for their respective organisations.

Theme Four – Development of Geospatial Resources

Second Review Report recommendations for Theme Four were that the SWG:

(e) urgently develops goals and SMART objectives for each of the thematic areas they are covering;

42. There is little evidence that this has been accomplished across all elements of the MSP. However, there is an indication in the MSP draft reviewed, that goals and objectives are in development for a number of the sectors. Advances are noted for MPA, Aquaculture and Water Quality sections.

(b) uses a decision support tool (SeaSketch or something familiar to them) to facilitate the effective use of existing geospatial information in the MSP process; and

43. SeaSketch has not been used comprehensively in the production of the Draft Plan reviewed thus far. It has been used in decision support for MPA and Aquaculture sectors and for presentation purposes. It is however 'game ready' and has now been loaded with all relevant levels of information available.

(f) uses the significant technical support on offer by DoC and other technical staff associated with SeaSketch, to the extent practical at this stage of the process.

44. The Panel acknowledge the continued support by agency staff to populate and update SeaSketch for use by the SeaChange Tai Timu Tai Pari program. The resource commitment required by Auckland Council staff in preparing geospatial information to populate SeaSketch in earlier phases of the project was not generally appreciated by other project participants, particularly as it related to the work required to produce final high quality maps for use in the final plan. As stated above, SeaSketch is ready for more comprehensive use as a decision support tool and is now fit for purpose.

Theme Five – Engagement and Communications

Second Review Report recommendations: the engagement and communications team:

(a) continues to inform the wider stakeholder group of the status of the Sea Change Tai Timu Tai Pari process;

(b) continues to seek input from stakeholders where required; and

(c) prepares a proposal for monitoring public response to the marine spatial plan and its roll out.

45. It appears that post Pause, the communications and engagement process has been put on hold effectively, due to the need to reconsolidate at the SWG level. Feedback from staff previously involved with this function suggests that it may not be possible to re-engage with the momentum built prior to the Pause period. The IRP does not fully concur with this, and feels that the networks of communication established over the last few years can be harnessed effectively for the distribution of the MSP document. It will be important to prepare the public for the type of document the MSP represents in its current form and identify next steps for marine spatial planning process and implementation.

Theme Six – Existing Measures and Consultation with Agencies

Second Review Report recommendations for Theme Six were:

(a) that as options are developed, the SWG understands what those options mean in relation to the existing statutory and policy frameworks (including the extent to which those frameworks may require alteration); and (b) that the SWG work closely with/involve agencies to test potential options, both in terms of fit with the existing statutory and policy frameworks, and to increase the chances of those agencies adopting and implementing the marine spatial plan.

46. There appears to be stronger linkage and understanding between Agencies and the SWG although this is not universal. A consequence is the development of some ideas toward implementation of the MSP in some sectors, but not all, as may be facilitated by relevant Acts and legal processes combined with the operating elements of each Agency. The detail of how the MSP could be implemented by Agencies in accordance with their mandates and under the legal scaffolds that govern them is not yet evident at the time of writing this report.

Theme Seven – Provision and Use of information.

Second Review Report recommendations for Theme Seven were:

(a) that the SWG takes note of the recommendations in Theme 3 (i.e. fill missing data gaps and complete necessary analyses that may otherwise inhibit speedy development of a marine spatial plan);

47. As above the SWG has facilitated the inclusion of missing data with inclusion of biodiversity information (biogenic habitat maps), some economic information and improvements to fisheries data interpretation (recreational and commercial information from MPI), although the latter two tasks are on-going. A gap remains

over information on marine invasive species spatial distribution and impacts. This latter is considered an important issue as evidence is increasingly suggesting that marine invasive species can have significant impact on biogenic community character and on aquaculture species / economics.

(b) that the SWG makes use of the available spatial information that is provided in the appendices of the RoundTable Reports, and from other sources, as a start towards preparing a marine spatial plan.

48. From reviewing the Draft Plan it appears that there has been improved uptake of spatial information from the RoundTable reports, but there is an imbalance in how this information has been presented in the draft document. The Panel understands that some additional information was obtained from other sources (eg, Agencies, stakeholders) during 2016 in the lead up to writing and compiling of the Draft Plan.

PART B: ORGANISATIONAL ACTIONS TAKEN TO DEVELOP A MARINE SPATIAL PLAN

The Pause

49. Due to an apparent impasse from a Mana Whenua perspective, a project Pause in the development of the MSP was instigated. This significantly reduced the time available to continue with synthesis of information across RoundTables and had a knock on effect in putting time pressure on the final development of the plan and its write up. The reason was allegedly not enough transparency as to who was doing what with communication of information for plan writing and some mistrust of the type of information to be included. These concerns were amplified given the speed at which various versions of the Draft Plan were being prepared, circulated and feedback sought. There were issues with the management style of the former SWG Chair also. A critical issue was how Mana Whenua felt about how their views and information were being integrated or acknowledged in the final MSP.
50. It became clear that there was no way the plan was going to be completed to a level where there was comfort for it to be released. From the PSG perspective, there needed to be a deadline, but even with additional time (to September 2016), the final synthesis and write up was still a challenge. Despite this, it is argued by most parties concerned that a much better product will be forthcoming as a result of the Pause and extension of time.
51. The Mātauranga Māori Representative Group suggested the pause, but it was widely supported. A few changes were made to the SWG membership to complete the plan. A time extension to the end of September 2016 was agreed around October 2015, which allowed a more measured approach to completion, and sufficient time to resolve the issues that remained incomplete. The Independent Chair, Nick Main, did not extend his contract and was replaced by Paul Beverley. The combination of time extension and change of Independent Chair released the intense delivery pressure allowing a more measured process to be adopted.
52. The Mātauranga Māori RoundTable work was extended and its membership expanded to form the Mātauranga Māori Representative Group.
53. The work begun by the “RoundTables” was continued by newly established “Sub-groups” covering the same topics (eg, Water Quality, Aquaculture, Fisheries, Biodiversity and Biosecurity). In general, the sub-group model worked well, and allowed focus on the important work effort required and on issue resolution. At this stage, fewer support people were included in the SWG or sub-group meetings. Agency attendance was generally restricted to one nominated

person from each Agency. This may have limited the significant input that could have been offered to improve and test options etc.

54. The IRP conducted the interview programme for the Final Review Report when the SWG's September 2016 deadline was approaching. It was clear that much work remained, but it was understood that the timing was selected by the PSG such that the IRP could provide some constructive input to the later phases of plan write-up. There is evidence of agreements being reached on spatial context within sectors, high quality communication of planning options based around management strategies and a commitment to get the task completed to a point that will permit cross sectorial negotiation on a long term spatial plan.
55. Many interviewees communicated issues with the organisation and process of the plan preparation with the more prominent of these summarised below. However, it is very important to note that the Pause was universally viewed as necessary and valuable, and there was a strong consensus that things worked much better after the Pause. The project has benefited greatly because its purposes are strongly supported by those who are working on it and that commitment and goodwill has allowed issues to be identified, confronted and resolved effectively. The project's leaders are well regarded and have sustained collaboration and commitment to a high quality outcome in challenging circumstances.
56. The Panel were advised that there were likely to be challenges to complete the work programme, particularly in the areas of specific spatial recommendations; maps to support communication of those recommendations; identification of means for implementation of recommendations; and agreement with the Agencies that will receive the recommendations and decide on what will be implemented.
58. There are efforts to identify a means to continue marine spatial planning activity but agreement on the specific form that might take remains a work in progress at the time of our interview programme.
57. The Panel were advised about efforts to communicate with and jointly plan with the sponsoring Agencies and with others, including Ministers and representatives of central government.
58. As the deadline approaches, the SWG may focus more on gaining agreement where that is possible and completing the plan document. This will be best achieved if the Plan's objectives are achievable considering statutory frameworks. Post-pause there has been a more committed writing effort and we have heard positive things about the effectiveness of the writing arrangements and the quality of the writing team. There is a difficult balance to be struck

between having the writers work as scribes for the SWG versus as contributors to development of content. Our interviewees described various tensions and gaps that emerged as the writing process proceeded and those are to be expected.

59. There are indications that as the planning effort has neared completion, and the time pressure has intensified, there has been less effort made to keep people informed and engaged, especially people who are not directly connected to the SWG's deliberations. This is understandable given time pressures and it may not be wise to expose some of the critical and sensitive issues to wider debate until the SWG has had the opportunity to assimilate the evidence, debate the issues and form its own conclusions.
60. The combination of less effort on keeping people informed and engaged with the narrower dialogue with Agency staff may mean that some of the SWG's conclusions drawn near the end of the process may not have been subject to as wide scrutiny as might be desirable.
61. One consequence of this might be that the SWG may, in some instances, not be fully aware of existing efforts in their areas of recommendations, may not have tested the feasibility and additionality of recommendations, and may not have fully explored the requirements for and obstacles to implementation.
62. As the critical issues move from solution development to implementation it may be valuable to consider classifying the communication of solutions and implementation into three categories: technical solutions that must be applied in the physical Gulf and catchments; regulations and policies and behaviour changes that will bring about these technical solutions; and actions that are recommended to be taken by Agencies and others to ensure that the implementation actually proceeds. Positive outcomes require all three categories of solution. Without sufficient consideration of how the implementation will take place there may be a risk that in some areas there is an effective articulation of what should happen but not a means to have it happen.
63. Where the technical or physical solution is identified but the means to ensure that the physical solution is implemented is not fully resolved yet, that situation should be highlighted so that the effort can continue through Agency or others' activities beyond completion and submission of the plan document.
64. As the planning process draws to a close, with time pressure for completion, the opportunities for this round of Panel recommendations to influence the outcome are limited. However, completion of the spatial plan is not the end of the process; there will be further work beyond the plan submission, further rounds of planning, and other collaborative work programmes involving a wide range of participants.

Accordingly there is value in communication of observations that may assist future planning work of this kind. The table which follows offers some observations from the SeaChange Tai Timu Tai Pari process with some possible lessons that might be applied in later rounds or further work.

65. Recommendations

	Observations	Possible lessons
Project structure and leadership	Design ensures connections with relevant interests and checks & balances. The “federal” structure means there is no strong central leadership or guiding coalition	Ensure there is a single individual or small guiding coalition with accountability and authority to lead and manage the project as a whole
SWG coverage	On-going areas of light content –e.g. biosecurity, infrastructure, socio-economic reflecting “gaps” in SWG membership interests	Identify potential content vulnerabilities and ensure project governance monitors progress on those, and takes steps to close gaps
Time allowed	Project may have always needed three years. The attempt to complete in two years contributed to the “Pause”. There were issues with the previous management style.	Monitor and manage time remaining against work remaining with room to flex if needed to avoid “running to the wire” with quality or buy-in compromised
Light issues focus and late resolution of conflicts	Need to establish shared understanding and maintain cohesion and consensus contributes to avoidance of conflict and late address of contentious issues	Highlight and report on the important issues early and throughout the planning process
Spatial dialogue	Later than ideal engagement on the specifics of spatial allocations	The issues list to identify and prioritise spatial information was needed earlier to promote dialogue in the work programme
Preparing for implementation	Focus on solution development and time pressure contributes to less than ideal effort to identify and assess implementation means	Establish more formal engagement with implementation agencies as the project nears completion
Agency Relations	Until latter parts of the MSP process, Agencies were not effectively	Given agencies carry the burden of implementation of any planning

engaged and a level of doubt about the effectiveness of the process developed

process within their respective mandates, they need to be fully engaged in process; their views respected

PART C: BRINGING TOGETHER THEMES AND ELEMENTS OF THE MARINE SPATIAL PLAN

66. The Panel acknowledges that the Draft Plan is a work in progress, and that some of the issues raised are likely to be addressed in current work, while others may be addressed subsequently. The Draft Plan of 22 August (1) lacks integration, (2) a future orientation, (3) an explicit ecosystem-based management approach (see Appendix I), and (4) a focus on performance monitoring, evaluation, and adaptation. On the positive side, the process was (1) strongly participatory and (2) obviously place- or area-based. These are the six characteristics of what a marine spatial plan should have.
67. Many but not all of the recommendations are “shoulds”. A plan should specify WHO does WHAT and WHEN (and as this is a spatial plan, also where). This plan does not do that consistently. Without that specificity the plan has implicit missing steps, referred to sometimes as “and then a miracle occurs” steps. The big gap is the WHO. Sometimes WHO cannot be specified in which case the planner may substitute the list of candidates and the process to specify WHO. In the absence of completion of the WHAT, WHO, WHEN a follow-up assessment should be undertaken following submission of the plan to do that work.
68. The section on “Why Do We Need a Spatial Plan” does a better job at explaining the fragmented (single sector) nature of existing governance that can be addressed through development of an integrated marine spatial plan.
69. The “Setting the Scene” chapter should also have a section on the stakeholder-driven process used to develop the plan, including its advantages (e.g., stakeholder ownership of the plan) and disadvantages (e.g., difficulties in organising information for planning, delays in making critical decisions, weak leadership, reasons for the “pause”, etc.). An honest assessment of this approach would be useful for future planning in the Hauraki Gulf and in other places.
70. The authors of the various initiatives have tried to write SMART objectives and succeeded in at least specifying a year (time-bound) for many of the objectives.
71. The Panel observes that a lot of “learning how to plan” was accomplished during this first round of MSP. The next round of planning, if and when that is, should be easier—and less expensive.

72. The Draft Plan has little discussion of the continuing and adaptive nature of marine spatial planning. This could be used to emphasise the uncertain nature of MSP, the need for performance monitoring and evaluation, the need for additional data collection and research based on data gaps identified in the first round of planning, etc. Will the Final Plan recommend continuing monitoring, evaluation and adaptation?
73. There is almost no integration across the five initiatives. No assessment was made of use conflicts and/or compatibilities either in the form of a conflict matrix or conflict maps—common practice in most marine spatial planning processes around the world. As written in the 22 August draft version, the plan reads as separate chapters—not an integrated plan that answers the question: where are we now? The essence of MSP is integrating various sectors and concerns. Without integration across sectors, one might wind up with very different results, biased toward one (or more) particular sector or concern, and very far from the integrated outcome originally intended.
74. The Draft Plan is not time-bound. What is the timeframe of the Draft Plan? Is this a plan for the next 10 years, 20 years, 50 years? The Plan would be more coherent if the objectives and management actions could be grouped into short-, medium- and long term actions whatever the timeframe of the Plan is.
75. The Draft Plan is not explicitly future oriented, but MSP is a future-oriented activity. Its purpose is to help envision and create a desirable future and enable proactive decision-making in the short run to move toward what is desired. Consequently, planning should not be limited to defining and analysing only existing conditions and maintaining the status quo, but should reveal possible alternative futures of how the area could look in another 10, 15, or 20 years. Estimates of the spatial needs of future activities should be part of a marine spatial plan.
76. Terminology is inconsistent throughout the Draft Plan, e.g., management actions and implementation measures are the same. Biodiversity “themes” are really “goals”.
77. Indicators of performance or success are not addressed or identified anywhere in the Draft Plan. Each thematic chapter should identify:
 - (a) A small number (<2-4) of general goals related to the theme;
 - (b) One or a small number (<2-4) of SMART management objectives related to each goal;
 - (c) One or a small number (<2-4) of related management actions related each management objective; and
 - (d) A proposed indicator(s) to measure each management action and to guide the design of a performance monitoring system.

78. In introductory segments, lessons learned from the initial reliance on a stakeholder-led process, need to be highlighted. In particular issues caused by the delay in recognition/inclusion of local and central government/agencies, their responsibilities, and skills, during the first phase and the “pause” need to be identified. It sounds like everything ran very smoothly during the first phase, yet the late involvement of Agencies in particular has resulted in delayed development of implementation pathways.
79. The “principles” are written to accommodate a Maori and Western world (joint?) view, appropriate for New Zealand. This is a plus, but identification of a set of standard marine management principles such as the ecosystem-based management (EBM), the precautionary principle, the integration principle, etc. is not readily apparent.
80. The “vision” is pretty standard material. The same version may be found in MSP’s in countries as disparate as Viet Nam and the USA. Is there anything unique to the Hauraki Gulf vision? Since this is supposed to be a spatial plan, a spatial vision of “where we want to be”; perhaps the vision would be more useful in the form of a map rather than simple text.
81. The Draft Plan, in general, does not apply the principle of ecosystem-based management. For example, the fish stocks initiative talks about applying ecosystem-based management; what it really uses is much more narrow ecosystem-based fisheries management approach.
82. The “management actions” for fish stocks are grouped by management objective(s); that is good, but often not the case in other initiatives of the Draft Plan.
83. Socio-economic analysis is lacking throughout the Draft Plan. The fishing and aquaculture initiative have a minimal amount of economic information—value added and employment. Social and economic analysis is absent about everywhere else.
84. The value of non-market goods and services, e.g., ecosystem services and natural capital, are mentioned several times in the Draft Plan, but not addressed.
85. No information is provided on the cost of implementing the Draft Plan—a fundamental question that most decision makers would want to know before considering plan recommendations.
86. No mention is made of equity considerations. Who benefits from the proposed management actions? Who pays? Who wins? Who loses?
87. Maps are under-used throughout the Draft *spatial* Plan. For example, no maps are used in the fish/fishing initiative, except for two scallop maps. At least in the aquaculture chapter there is a map of existing and preferred sites for aquaculture—and areas unsuitable for aquaculture.

88. The cultural indicators section is interesting and useful, but again, this discussion should come at the beginning of the Draft Plan, not the end. These are important points that should not read as an after-thought. There is no reason why these cultural indicators should not be related to management actions of the Draft Plan, as well as state-of-the environment monitoring.
89. Finally, based on several interviews, the MSP process does not appear to have an effective communication plan for rolling out the Final Plan.

Recommendations

90. **That in follow-up activity during steps towards implementation of the plan the principles of EBM and ecosystem connectedness be harnessed in the form of Goals and Objectives.**
91. **The Agencies and other entities who receive the MSP for implementation, examine the processes being developed in the National Science Challenge ‘Sustainable Seas’, which focuses on EBM tool development linked to the public license to operate in the marine domain.**

PART D: APPLICATION OF GEOSPATIAL INFORMATION AND RESOURCES

Development of Goals and SMART Objectives

92. This was a recommendation from the Second Review Report and has been addressed to a limited extent in some of the draft thematic papers, e.g., water quality and fish stocks, being prepared for the final plan. At least many of the draft objective statements are *time-bound*, i.e., specified to be achieved by a certain year, but still lack other dimensions of SMART objectives, most importantly *measurable*. Also as there is no indication of how the costs associated with implementation of the Draft Plan will fall (including on the public), or whether some of the management actions are dependent on enabling steps (eg, statutory processes), these time horizons may need to be further extended.
93. Management '*actions*' is the term that should be used rather than '*measures*' as stated in the Draft Plan as one would wish to '*measure*' the results of the actions to be implemented to achieve the objectives are also listed, but these are not related directly to objectives in many cases. It is often difficult to relate what objectives will be achieved by implementing specific management measures. In only a few cases are *indicators* identified that would be measured (monitored) to assess progress toward achieving objectives over time. Without this specificity, progress toward plan goals and objectives will be difficult to measure.

Use of SeaSketch (or something similar) to facilitate the effective use of existing geospatial information in the MSP process

94. The Panel has heard from several interviewees that the use of SeaSketch as a geospatial decision support tool (DST) has finally gained some acceptance very late in the planning process—perhaps too late for this first round of planning, but the Panel sees good progress in laying the groundwork for any further development and implementation of the MSP. It is unclear to the Panel what the next steps would be, but this Final Review Report is offered as a guide on where gaps need to be filled and how implementation can progress.
95. Decision support tools like SeaSketch can help users visualize how things fit together. SeaSketch was explicitly designed to aid non-technical users' problem solving and negotiating processes by serving as a prompt for conversation rather than as an optimizing tool such as Marxam and other DSTs. The data in DST's can provide representations and show relationships within the marine environment that users cannot see in real life.
96. SeaSketch could have provided a common platform that could have made negotiations more visible. Stakeholders who are resistant to negotiation would have found it more difficult to avoid making concessions with SeaSketch in the

room. A DST like SeaSketch can make it very clear who is making concessions and who is not—and encourage collective problem solving.

97. However, the value of a DST relies on stakeholders sharing the assumption that the data within it are accurate and that all relevant, important data are included—this did not appear to be the Hauraki Gulf case. When the data within the tool didn't match individual users' experience of the marine area, stakeholders had a variety of responses, ranging from questioning the data, discussing the methodology used to produce the maps, and even in some cases perceptions of outright rejection of SeaSketch. Some stakeholders who did not question the accuracy of the data within the DST were frustrated when aspects that they perceived as important were not included. They found that discussions were limited by the data's representations in SeaSketch and found it difficult to consider values or criteria that did not appear within the DST.
98. In the end, it came down to a matter of *trust* (or lack thereof)—and stakeholders, especially in the pre-Pause part of the planning process, did not trust the information inputted to SeaSketch. In the contentious context of the Hauraki Gulf MSP process, the lack of a common agreed platform of information made collective decisions more difficult.

Use of available spatial information

99. The evidence from the Draft Plan of 22 August 2016 is that there has been improvement in the use of spatial information developed during the RoundTable process. This is especially the case for sections dealing with Aquaculture and MPA planning. The other sections do not however invoke the use of spatial information to any great extent and hence the MSP as it currently stands is limited in its effectiveness as a comprehensive spatial planning document. To date SeaSketch has been used for information presentation in summary format. Its use as a decision support tool to permit discussion and compromise across sectors is as yet untested in the SeaChange Tai Timu Tai Pari context.

Recommendations

- 100. That given the investment in SeaSketch, it is promoted as a decision support tool for the future refinement of the MSP. This may require a preliminary period of review of current SeaSketch information layer holdings to resolve any disagreements about content.**
- 101. That each section that represents a sector or interest group, present information in a consistent manner in the form of maps where relevant and where these can add value to the description or communication of management recommendations or options.**

PART E: ASSESSMENT OF EXISTING MEASURES AND CONSULTATION WITH AGENCIES TO TEST OPTIONS AND CONTRIBUTE TO PLAN DEVELOPMENT

Interaction with Agencies

102. Feedback from Agencies suggested that there was not enough interaction with the SWG during the RoundTable phase, and although improved upon, there was a need for better interaction post Pause. The relevance to the 'process for engagement' is that Agencies as providers of information and feedback on management actions to serve particular objectives was limited. There is now insufficient time to discuss these issues and to build commitment should these management actions be recommended for implementation. Some areas are better developed than others but at the current stage of this review there are lots of gaps.
103. Option testing with the Agencies has happened to some degree in some sectors and is the first step to identify rollout issues. Focus will be on actions that are achievable within the constraints of legal mandate.
104. Engagement with Agencies around mechanisms or pathways of action has occurred to some degree. The SWG is still forming agreements and directional recommendations and has not had sufficient time for engagement with Agencies to understand what is already being done or planned, and who needs to do what to implement the directional conclusions reached.
105. Since re-engagement post Pause, the opportunity to uptake SeaSketch has improved. DoC and other technical staff are to be congratulated on bringing the DST up to an operational standard for SeaChange Tai Timu Tai Pari use, and in particular for encouraging its use in the MPA sub-group process in 2016. There is now better recognition of the degree of accuracy of information. This is evidenced by the fact that SeaSketch is now up on the screen at most SWG and all MPA sub-group meetings.

Management Process

106. The process has been largely a collaborative self-selected SWG member model, where no Agency people were at the table; rather Agencies were called on when required. This situation has improved post-Pause for some themes (e.g., MPAs). A number of sub-groups adopted selected Agency staff input and attendance at meetings.
- 107 Over several years, Auckland Council invested considerable resources into a mapping and analysis sub-project in anticipation of SWG's geospatial needs. Most of the output was GIS data layers for population into SeaSketch, but also

high quality mapping product. In the end, this sub-project's output was only used in a limited way, and the 'Mapping and Analysis' sub-project was closed down by April 2016.

108. The project governance model used was complex and this led to difficulties in developing the plan post Pause. The impact of the SWG deferring consensus or decisions on some topics has not been fully appreciated, as it affected considerations required at the Project Board level.
109. The Panel noted that some of the discussion sets out aspirations for structural reform of the Hauraki Gulf Forum membership, in addition to proposed management actions which propose alignment of management activities with the Hauraki Gulf Marine Park boundaries. The problem definition for these outcomes sought needs careful consideration, prior to proposing a solution, given the basis on which particular activities are managed under other legislation, in addition to the outcomes sought under the Hauraki Gulf Marine Park Act. There are potentially a number of ways that various outcomes can be achieved without adherence to, or change from, one particular jurisdictional boundary, or beyond the make-up of existing Hauraki Gulf Forum membership. Similarly, the rationale for current management approaches for most activities has been the subject of broader public input. Where improvements are still needed, an assessment of more effective and efficient ways to achieve these outcomes needs to be explored without pre-conceived views of the desired solution. Discussion with affected Agencies to explore and offer alternative solutions may identify simpler and smarter options to achieve particular outcomes. Similarly, affected Agencies need to recognise that their existing management approaches need to be responsive to existing and changing values and uses, through the application of a suite of tools under existing legislation.
110. The final stages of Draft Plan production by the SWG was understandably an intense period of activity from July through to August 2016. The integration of all matters of interest to the SWG took time. Agency staff were increasingly being asked to do things at short notice (e.g., mapping, comment on chapters, ground-truthing of management options etc.). Overall, Agency input was limited, such that the final plan has not been socialised as broadly as desired.

Recommendations

- 111. If not already in progress, provide Agencies with relevant draft content of the MSP as soon as possible, requesting input to identify issues with content and recommendations.**
- 112. Ensure the plan completion process identifies which Agencies need to be engaged to implement each SWG recommended actions, test these with**

the Agencies to identify which are achievable, which are not (and why) and which require further work or the consideration of alternative approaches / options (and what).

PART F: PROVISION AND USE OF INFORMATION

Evidence Based Conclusions

113. The Mātauranga Māori Representative Group provided the support and impetus for Mana Whenua mātauranga to be appropriately sourced and used in the SeaChange Tai Timu Tai Pari process. In particular, the Draft Plan includes sections detailing Māori world view and bicultural context, the mauri of water, whakapapa and mana of water, cultural footprint of mana whenua, Treaty settlements and implications. The Draft Plan is structured around four overarching principles – Kaitiakitanga (Guardianship of Tikapa Moana, Te Moananui-ā-Toi), Mahinga Kai, Pataka Kai (Replenishing the Food Basket), Ki Uta Ki Tai (Integrated Catchment Management), and Kotahitanga (Prosperous Communities).
114. The Panel noted that all Mana Whenua participants have been or are under significant pressure from other demanding activities, including for example working on Treaty settlements, on the Auckland Unitary Plan, as well as business as usual activities. This pressure is on-going, and in particular the Treaty settlement process has implications for SeaChange Tai Timu Tai Pari. Mana Whenua are concerned that options proposed therein may limit Treaty negotiations, for example, Mana Whenua totally support enhancing mauri and abundance, but do not wish to compromise their opportunities and Treaty redress rights.

Use of socio-economic information

115. In general, the Draft Plan uses very little socio-economic information. Aquaculture, for example, has some qualitative discussion of social/economic impacts.
116. Very little discussion in any of the draft material on the costs or benefits of different management actions, including:
- (a) Direct benefits are not listed, e.g., the values of products and services produced, and the distribution of benefits;
 - (b) Administrative and/or compliance costs are not estimated;
 - (c) No discussion of the costs or the feasibility of financing any of the management actions (ability to pay for the plan);
 - (d) Nothing is written on equity—who benefits, who loses?—from management actions proposed in the draft material.

Recommendations

117. The Draft Plan is now at a stage where recommendations on this theme are in a sense redundant. The work on collating information and applying it to the Draft Plan has been done.
118. A MSP is a living document; hence there will be a need to update information layers from newly formed datasets to permit review of the spatial plan over time.
119. It may be a good idea to consider how new information can be included into review of the MSP over time.
120. It is suggested that the network of data providers and Agency contacts be maintained in some form to facilitate seamless introduction on new information in a timely fashion into the future.

APPENDIX I

Ecosystem-Based Management

Almost every MSP initiative that has been undertaken claims to use ecosystem-based management as a guiding principle—but in the end very few deliver EBM across marine areas. Simply stated ecosystem-based management seeks to **balance** *ecological, economic, and social goals and objectives toward sustainable development*. As the draft “Fisheries” chapter states “the term ‘ecosystem-based management’ means different things to different people, and there is no one universal definition. However, the most widely-used definition of ecosystem-based management (COMPASS, 2005) states that EBM:

- Emphasizes the protection of ecosystem structure, functioning, and key processes;
- Explicitly accounts for the interconnectedness within systems, recognizing the importance of interactions between many target species or key services and other non-target species;
- Acknowledges interconnectedness among systems, such as among air, land and sea;
- Integrates ecological, social, economic, and institutional perspectives, recognizing their strong interdependences; and
- Is place-based in focusing on a specific ecosystem and the range of human activities affecting it.

The “Fisheries” draft chapter uses a more narrow definition consistent with the United Nation as Food and Agricultural Organization’s (FAO) of *ecosystem-based management of fisheries*. The SeaChange authors rightly point out that “...we use it in the context of *managing fisheries species and their harvest...*” with explicit regard to their interactions with other species, habitats, and the ecological functions they provide within the ecosystem.

Since no attempt is observed (in the Draft Plan seen to date) to have been made to acknowledge interconnectedness among systems (or other uses), nor to integrate social, economic, and institutional perspectives with ecological (or environmental) objectives, this approach falls short of ecosystem-based management of the Hauraki Gulf.

No other draft chapters use EBM concepts to develop or present their themes.

Literature Cited

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APPENDIX II
INDEPENDENT REVIEW PANEL BIOGRAPHIES

Professor Charles Ehler

Professor Charles Ehler works in Paris, France, as a MSP consultant to UNESCO's Intergovernmental Oceanographic Commission (IOC), other international organisations, national governments, and non-governmental organisations.

Before moving to Paris in 2005, Charles was a senior executive for the U.S. National Oceanic and Atmospheric Administration (NOAA) and US Environmental Protection Agency for 32 years.

Charles previously taught regional planning and natural resources management at the University of Michigan, the University of California at Los Angeles (UCLA), and the State University of New York at Stony Brook. He was the Marine Vice-Chair of IUCN's World Commission on Protected Areas from 2000-2005.

In 2007 Charles received an award from the Intergovernmental Panel on Climate Change for his work on coastal adaptation and its contribution to the award of the Nobel Prize to the IPCC. He is the author of over 100 publications on coastal and marine planning, including the 2009 UNESCO Guide to the new field of MSP and a 2014 UNESCO Guide to evaluating marine spatial plans.

Professor Chris Battershill

Dr Chris Battershill became the inaugural Professor and Chair of Coastal Science with the University of Waikato in January 2011, following 12 years as leader of the Marine Resources and Biodiversity Teams at the Australian Institute of Marine Science (AIMS).

From an MSc start in petrochemical development and environmental toxicology funded by the Shell, BP and Todd Maui Environmental Program, he completed his PhD at Auckland University in reef ecology in 1986 then undertook a 3 year Research Fellowship funded through the National Cancer Institute (US) based at the University of Canterbury, leading the cancer drug discovery field program.

This was followed by post-doctoral work in Australia, a senior scientist role at DOC and program leadership at NIWA over 12 years, focused on conservation and sustainability of marine resource use.

Recent work includes leadership of the Rena Long Term Environmental Recovery Program. Publications include co-authorship of 3 books and over 100 international peer reviewed research articles.

Dr Dan Hikuroa

Dr Daniel (Dan) Hikuroa is an Earth System Scientist who integrates mātauranga Māori and science to realise the dreams and aspirations of the communities he works with and is currently a Senior Lecturer in the Department of Anthropology at the University of Auckland.

From 2011 to 2016 he was the Research Director at Ngā Pae o te Māramatanga, New Zealand's Māori Centre of Research Excellence, and prior to that he was the Community Earth Systems Science Programmes Manager at the Institute of Earth Science and Engineering, University of Auckland.

He is an established world expert on integrating indigenous knowledge and science and has undertaken many projects including co-writing the 2014 State of the Hauraki Gulf Environment Report, geothermal developments, planning river and catchment restorations, co-writing iwi environmental management plans, hazard and vulnerability assessments and industrial waste rehabilitation.

Dan has also been spearheading alternative ways of assessing sustainability, including integrating indigenous knowledge and epistemologies into assessment frameworks and decision-support tools.

He is currently a Senior Lecturer in the Department of Anthropology at the University of Auckland, a Principal Investigator at Ngā Pae o te Māramatanga, Associate Investigator at Te Pūnaha Matatini, member of Ngā Kaihautū Tikanga Taiao, statutory advisory to the Environmental Protection Authority, and key researcher in the national science challenges Resilience to Natures Challenges and Sustainable Seas.

Dan is a member of Waitomo Caves Management Committee and the Waitomo Caves Environmental Advisory Group and serves on a number of trusts and as an independent science advisor for numerous iwi and hapū trusts.

Dr Rick Boven

Dr Rick Boven leads Stakeholder Strategies, a company that works with public and private organisations and NGOs on strategic issues in the commercial, economic, social and environmental domains. He has worked as a social scientist, market researcher and business strategist. He was the founding partner of the Boston Consulting Group in New Zealand and was the Director of think tank the New Zealand Institute from 2009 to 2012.

He has provided strategic advice to leading companies in Australia, New Zealand and USA in a wide range of industries including financial services, retailing and distribution, energy, telecommunications, high tech, information technology, transport, manufacturing and agriculture. His areas of expertise include organisation design, governance, risk management, strategy development, management development and operational effectiveness.

Rick is a Chartered Fellow of the Institute of Directors. He has been a director of ASB Bank and Sovereign Insurance and of several internationalising technology companies.

Rick's qualifications include an MA in psychology, an MBA and a PhD in environment management. He is published across a wide range of subjects, including social welfare, mathematical psychology, educational sociology, strategic management, business ethics, economic development and environmental strategy. He is an advisor to several environmental organisations and a frequent speaker on environment topics.

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² In his capacity as Function Lead for the Independent Review Panel.

