

A. TITLE OF PROJECT

1.1.1 Testing EBM-supportive participatory processes for application in multi-use marine environments

B. IDENTIFICATION

| | |
|--|---|
| Project Leader (Phase 1): Paula Blackett, AgResearch Ltd Private Bag Hamilton Paula.Blackett@agresearch.co.nz (07)8385585 | Investigators: Kate Davies (NIWA) Carolyn Lundquist (NIWA) Alison Greenaway (Landcare Research) Maori Researcher (to be confirmed) Sue Taei (Conservation International) Bruce Glavovic (Massey University) Will Allen (Learning for Sustainability) June Logie (Research Associate Auckland University) |
| Project Leader (Phase 2): Richard Le Heron School of Environment University of Auckland Private Bag 92019 Auckland (09) 3737599 x 88453 | |

C. ABSTRACT

The use of participatory or collaborative processes in national resource management and multi-use marine spaces is increasing both internationally, and in New Zealand. These processes have evolved to include stakeholders, scientists and social scientists in co-learning and co-design frameworks aimed at enhancing environmental governance and management. We know little, however, about how the Challenge's twin goals of enhancing the marine economy and environmental processes through EBM can be aided by customised Maori and stakeholder participatory processes. The project will provide necessary elements to effect implementation of EBM decision making by (1) reviewing national and international participatory processes, (2) co-developing key participatory process principles, procedures and practices, through co-learning and co-design, and (3) trialling participatory process options in the Challenge's case study area.

D. INTRODUCTION

There is urgency for a paradigm shift in how New Zealand views, governs and manages its marine estate if it is to balance enhanced use of its marine resources and good environmental stewardship, while meeting the aspirations and rights of society. A new emphasis assumes Māori and stakeholders engage as equal participants in agenda setting and decision making fora. Discussions in the MBIE-funded Marine Futures programme¹, Māori and stakeholder workshops for the Sustainable Seas Challenge, and the Social Science Community of Practice workshop for the Challenge all have emphasised a changing decision making culture in New Zealand. This culture is sensitive to tensions between aspirations of individual investors and collective impacts, and the trajectories of investment, organisation and conduct adopted by different user groups in multi-use spaces. Examples of participatory processes in New Zealand include Marine Protected Area stakeholder forums by DOC

and MPI, regional planning processes (e.g., the Proposed Auckland Unitary Plan), marine spatial planning initiatives such as SeaChange for the Hauraki Gulf Marine Park, and Māori and stakeholder initiatives in Fiordland and Kaikoura). The momentum in participatory processes is arguably a response to frustrations and concerns about identifying transparent, actionable, effective and fair steps forward in marine governance and management, at and across all scales. The Marine Futures workshop on the future of New Zealand marine science² noted the detachment of science from the decision making of social, political, economic and cultural (SPEC) or non-science agents who are being asked to adapt to better understand environmental knowledge. Participatory Processes (PPs) are increasingly being acknowledged as social technologies that seek to maximise commitments by investors and stakeholders to behaviour changes, and minimise the wavering of political will and adoption of new governmental, managerial and operational practices. The big question is, how do we develop effective, fair and trustworthy processes and the capacity to engage^{3,4}? The project will provide the necessary elements of effective implementation of EBM decision making by (1) reviewing national and international PPs (2) co-developing through co-learning⁵ PP principles, procedures and practices, and (3) trialling PP options in the Challenge's case study area.

E. AIM OF THE RESEARCH AND RELEVANCE TO OBJECTIVE

1. Understand the potentialities and pitfalls of the use of Participatory Processes (PP) in supporting the implementation of EBM to re-shaping of our marine economy, and environmental choices. This will be informed by investigation of national and international examples of existing PP and developing best practice PP, with special attention to heightening Vision Mātauranga (VM) contributions.
2. Develop a suite of PP and frameworks through co-learning and co-design with science and non-science stakeholders that will engender improved effectiveness in all aspects of decision making by stakeholders, individually and collectively, in multi-use marine environments. This iterative and grounded model of engagement will help create new societal conditions, improved stakeholder understandings, and embedding of a new generation of procedures and practices for managing NZ's ocean estate in general, and in specific multi-use contexts.
3. PP methodologies will be developed for and trialled in the Tasman and Golden Bay study area of the Challenge. The trialling will allow further refinement of the PP methodologies for trials elsewhere during Phase II of the Challenge.

F. PROPOSED RESEARCH

A number collaboratively developed research questions inform the project:

- 1) How have Maori and non-science and science stakeholders been involved in contemporary participatory management of New Zealand's marine estate?
- 2) What types of PPs and aspects of stakeholder involvement are rated as best practice nationally and internationally, particularly in multi-use marine environments?
- 3) What features of PP might reduce the detachment of science from decision making processes and maximise involvement of diverse stakeholders attempting to accommodate EBM into their operational needs, constraints and expectations?
- 4) What innovative and facilitative PP methodologies might be co-developed and trialled in the data rich context and setting of the Challenge's case study area, prior to further application beyond the case study area in Phase 2?

Methods:

Extensive consultations during the Challenge process prioritised co-developing innovative approaches to participatory processes that would be widely applicable in NZ's marine spaces and become the new norm in marine management and operational practice. In order to reinvigorate credibility with the

spectrum of stakeholders in this vein, this project will begin with scoping and mapping the PPs in natural resource management and multi-use marine spaces in NZ and abroad. The new findings will yield fresh narratives about PP potentialities, allow rapid and meaningful feedback within and beyond the Challenge, and, importantly, will provide significant co-originated inputs into dedicated focus groups linked to other Challenge programmes. Following consolidation of PP principles, procedures and practices from the documentary and focus group work streams, the co-design efforts of the project will specifically address the content of experimental trials in the case study area aimed at codifying best practice options.

Literature review: We begin with a desk based national and international scoping of the key elements and frameworks in natural resource management, especially those addressing forms of co-governance and management involving indigenous peoples. This will identify examples from a short list of key international journals (e.g. Marine Policy, International Environmental Management, Geoforum) and recent projects supported by major funding frameworks (e.g. MARE) that have been the subject of theoretical and empirical investigation. The review will establish a typology of approaches to PP in various institutional formats including marine spatial planning^{6,7} and coastal zone management^{8,9}, for coastal regions, the deep sea^{10,11} and exclusive economic zones (EEZ). It will build on the preliminary work of Davies et al.¹², by considering the variety of examples found in disciplinary, interdisciplinary, institutional, community, industry, NGO, and indigenous peoples' literatures or articulated on websites.

PP Project focused review: Using our professional networks and initial scoping at the Social Science Community Building workshop, supplemented by approaches to other research communities (e.g. Resource Management and Law reform, Social Impact Analysis, NZ Planning Institute) we will identify projects within New Zealand that have involved Māori and Stakeholders in participatory management around natural resources where multi-purpose use and contested values exist. This will be the first inventory of PP in NZ. The inventory will be screened by the project team for Initiatives of project interest on the basis of criteria including geographic spread, longevity, variety of decision making adopted, development of co-learning and co-design practices and structural and legal positioning. Public documents including publications, guidance material, press releases, community newsletters, and blog commentaries will be obtained and analysed for content relating to the research questions. This will include examining their SPEC and multi-use marine context and conditions of creation, problem choice and framing, PP design, procedural and decision pathways within and external to the PP, evidence of stakeholder mix and engagement, publicised achievements and failures, unexpected SPEC and environmental pressures during the PP's life, and other aspects impinging on the re-shaping of decision making amongst both science and non-science stakeholders. The NZ examples will be supplemented by a selection of international cases of significance identified with assistance from the project's international collaborators. Findings will be regularly reported to the NZ social science community of practice associated with Our Seas. Once key Māori and stakeholder groups are identified within the study area, they will be approached to participate in interviews or small group discussion, with a view to establishing/understanding/elucidating their concerns and issues, membership, and relationships with other stakeholders, and to build baseline levels of trust for Challenge initiatives.

Interviews: Semi-formal and semi-structured interviews with key participants in the projects and in the institutional home of the PP, will be undertaken by members of the project team, wherever possible including a Maori researcher to help tease out co-governance and management issues. The interview target will be approximately 30-40, though the final number is expected to emerge from an iterative scoping process. These interviews will include Māori in leading roles, senior decision makers, and staff at operational levels in other relevant organisations, drawing on standard techniques widely used by project team members^{13,14}. In developing new knowledge, interviews are sources of hidden but pertinent narratives, contra evidence, and unspoken tensions. For each project the interviews will

be constructed around a “timeline” where participants are asked to sequence the project activities and events. Questioning will be structured around this timeline and cover, as appropriate, aspects of who was involved, how, and why, in the framing of PP; reflections about PP outcomes made at various stages of the PP; summary of what participants regarded as a ‘fair, transparent and potentially transformative’ process; efforts to develop co-governance and co-management with Maori, risks around communication difficulties and behaviours of those involved, decisive decision moments in the PP’s history; how investment outcomes amongst multiple users are thought to be influenced; cognitive and commitment divides amongst stakeholders; unresolved and intractable issues; internal disputes and resolution procedures; framing of EBM-like propositions during PPs; efforts to formulate new metrics of performance; and what participants believed were crucial criteria for decision making. The precise content of interviews will be influenced by the extent and nature of the PPs reviewed.

Resource preparation for focus groups and workshops: Resource material from an initial consolidation of information will be invaluable koha in setting the scene in focus groups/workshops. This will initially consist of (1) a simplified mapping of PPs around NZ’s marine estate highlighting context, local issues and Māori initiatives, (2) a time chart of PPs found in NZ over the past decade, (3) a summary of EBM understandings of different stakeholder perspectives reflected in the projects, showing possible different values, means and ends implications, and (4) a listing of national and international best practices associated with marine centred PPs. These very different preliminary exhibits will enrich participant appreciation of the variegated settings of Māori and broader stakeholder engagement in PP in NZ. Marine Futures experience indicates that such exhibits can be effectively integrated into discussion, give up to date summaries of knowledge, and strengthen confidence in the research under way.

Focus groups: enable targeted discussion with small numbers (5-7) of highly informed stakeholders, directed to exploring the complexities of relations, power and trust, meanings, representations and practices that comprise the microcosm of PPs^{15,16}. Their value is in teasing out dimensions and tensions that are central to consolidating understandings. The research team composition will include where possible a senior Maori researcher. Three parallel investigations are planned. First, a scoping of different business models with commercial users of marine environments will allow different investor interests to lead the discussion, identify their requirements of knowledge representation, isolate key operational constraints and needs and explore how shared understandings might be obtained. These aspects are often absent from participatory processes, but are vital to bridging cognitive and commitment barriers in operational spheres^{17,18}. Second, links with Tangaroa and VM to share and examine understandings of negotiating values, means and ends differences, as derived from our project and from other work streams, are necessary steps in amplifying the project’s PP strategy. We are mindful of establishing early, equivalent conditions of engagement in this focus group process¹⁹. Third, findings from Dynamic Seas relating to contemporary and NZ specific understandings of EBM dimensions will be interrogated with evidence garnered from the documentary and interview processes on PPs. This mechanism will enable unprecedented comparisons of lines of difference from positions of context rich SPEC knowledge and ecologically enlivened EBM and be a significant elaboration on Lundquist et al.² and Thrush et al.²⁰.

Co-review of principles, procedures and practices of PP: The co-review will include engagement with stakeholders, the TEEB and Future Earth initiatives, and the project’s other international collaborators. Its purpose will be to robustly interrogate the specific NZ centred PP methodologies that have emerged from project’s co-research. The value of liaising closely with both national and international expertise is that it affords the opportunity to think through the logics embedded in the PP methodologies, and discuss unresolved concerns. The co-review group will be kept informed of the project’s progress at each milestone so they are conversant with the emerging platform of PP methodologies, options not pursued, reasons why the directions of development have been chosen,

and any particularly intractable issues. Part of the co-review will be the preliminary identification of capacity and capability building needs that the PP methodologies imply.

Co-design of best practice methodologies for trialling in the case study area: The trialling of PP methodologies by the project team will be a pioneer co-experiment²¹ with Māori, non-science and science stakeholders already participating in various local processes. It will be co-designed to reflectively examine alternative methodologies, using the accumulated experience and expertise of navigating multi-use developments in the case study area. The trialling is not intended to be a direct intervention in the extant PPs of the area, but to utilise insight, advice, warnings and recommendations from the perspectives of recent engagement. This said, the trialling through thought experiments^{1,22} could stimulate productive developments locally.

G. ROLES, RESOURCES

| Researcher | Organisation | Contribution |
|-------------------|----------------------------|--|
| Paula Blackett | NIWA | Dr Blackett has extensive experience in and leading collaborative and participatory research processes in a variety of social, economic and environmental domains. Her prior land and coast based research, when combined with the challenge's marine focus, will be key in closing gaps between theory and practice developed independently in different domains and across multiple practices. |
| Richard Le Heron | UoAuckland | Prof. Le Heron has extensive experience in and leading social science and transdisciplinary research focused on collaborative and participatory knowledge production processes across a range of different social, economic and environmental domains. He brings highly valuable expertise and insight to all aspects of the project. He will provide mentoring to co-leader Dr Blackett. |
| Kate Davies | NIWA | Dr Davies has extensive experience in interdisciplinary and transdisciplinary research. She will work closely with Dr Blackett and Prof Le Heron at each stage of the project. |
| Carolyn Lundquist | NIWA | As the leader of Our Seas, she provides important linkages to all other projects in Our Seas as well as Managed Seas. Her extensive collaborative experience in many research domains will be key in project co-design and implementation |
| Alison Greenaway | Landcare | As leader of CP1.1 her input on developing understandings of existing legislative frameworks will be crucial as the participatory processes research proceeds. |
| Bruce Glavovic | Massey | Prof Glavovic will contribute understandings on international participatory processes at various stages in the project. |
| Will Allen | Will Allen &Associates | Dr Allen has extensive experience in collaborative research projects focused on knowledge integration, project evaluation and best practice development. His knowledge of the Challenge's case study area and its institutions will be invaluable to the project |
| Sue Taei | Conservation International | Ms Taei's extensive experience and connections will be valuable input to gaining wider perspectives on participatory process initiatives. In, particular her connections with TEEB and with Pacific agencies and industries. |
| Maori researcher | TBD | A Maori researcher will be identified in the early stages of the project. This person will play a key role in ensuring Maori interests are adequately captured and reflected. |

H. LINKAGES AND DEPENDENCIES

The project will co-develop its PP research with members of *Tangaroa* and *Vision Mātauranga*, link into *Dynamic Seas* research on stressors and cumulative effects, share and receive valuable information on the NZ institutional and regulatory context from *Cross Programme Project 1.1*, provide supportive information for participatory initiatives in *Our Seas Project 1.2.1* on social licence, make available preliminary inputs into the Blue Economy project 2.2.1 in *Valuable Seas*, and be in a position input into the design process of socio-ecological system (SES) workshops in *Our Seas Project 1.2.2*. Insights, advice, and guidance from the PP project will feed directly into whole Challenge initiatives such as the proposed launch of Sustainable Seas in the case study area and annual Challenge conferences. The linkages and dependencies outlined will ensure great depth to capacity and capability efforts in the project.

I. COLLABORATIONS

Partners from existing processes (Marlborough Marine Futures, SeaChange, Southeast MPA Forum, the Kaikoura Marine Strategy). Central and regional government partners: (Department of Conservation, Ministry for Primary Industries, Ministry for the Environment, regional authorities) provide valuable experience and expertise to inform this project, and in-kind contributions of their expertise are envisioned as a necessary aspect of this project, to summarise institutional experiences with respect to participatory processes. Access is foreshadowed by top level agreements with partners and stakeholders.

J. INTERNATIONAL LINKAGES

The project design is embedded in established working relations with many international researchers. Ongoing contact, using email and Skype, and special sessions at international conferences, will provide ensure regular critical scrutiny of the project's progress and findings. Contacts include, but won't be restricted to: Jennifer Brewer, East Carolina State, collaborative processes; Mike Carolan, Colorado State, sociologist, co-experimentation, social processes; Charles Ehler, UNESCO, marine spatial planning initiatives; Wendy Foden, South Africa Biodiversity Institute, participatory processes; Roger Hayter, Simon Fraser University, resource governance and management; Eric Poncelet, lead facilitator, California Marine Protected Areas process; Hance Smith, University of Cardiff, ocean governance processes; Kevin St Martin, cumulative effects in marine spatial planning; and Gordon Winder, University of Munich, natural resource management. TEEB and Future Earth will be used to enhance two-way learning from international participatory processes and develop new participatory models and approaches for New Zealand.

K. ALIGNED FUNDING AND CO-FUNDING

This project is not dependent on any funding that is formally aligned to the Challenge.

L. VISION MĀTAURANGA (VM)

The project's research design explicitly embodies principles of Vision Mātauranga in the identified steps of initial and subsequent engagement. This will enable Māori to co-contribute crucial knowledge, experience and expertise to the project at all stages. The inclusion of Māori researchers in primary tasks and in the trialling processes in the case study area means there is considerable scope to co-develop capacity and capability on the part of Māori and stakeholders more generally.

M. COMMUNICATION AND OUTREACH

This research will engage with a wide range of stakeholders, end-users, and decision makers operating at a variety of governance and management scales that interconnect and extend from the local through to the international. This broad engagement will generate many communication and outreach opportunities for the Sustainable Seas Challenge. In particular, the interactions planned with the international collaborators will provide the work of Sustainable Seas with an international audience. The *Our Seas* programme is exploring an online communications platform for social scientists in the

Challenge, which could provide a vehicle for ongoing outreach and connectivity across New Zealand and around the world.

N. CAPACITY BUILDING

The project affords the opportunity to build significant new capacity and capability at all levels, in co-leadership, negotiating research co-design protocols for participatory processes in multi-use marine settings, establishing relations with a diversity of stakeholders, and inducting early researchers into complex research processes. Post graduate students and interns are scheduled starting year 2. Cross-programme gains in capacity and capability are essential to maximise gains from the case study area trialling processes, and cross-project and programme links. Many in the project team have lengthy experience in building capacity and capability, and are looking forward to specifically addressing this task, as well as extending their own skill, expertise and communication base.

O. ETHICS APPROVAL

Ethics approval is required and will be obtained from NIWA and the University of Auckland Human Ethics Committee through the initial application round in 2016. No issues of compliance or delays to approval are anticipated.

Q. REFERENCES

- 1 Le Heron, R. *et al.* Non-sectarian scenario experiments in socio-ecological knowledge building for multi-use marine environments. *Marine Policy* (Forthcoming).
- 2 Lundquist, C. *et al.* Prioritising marine science needs in New Zealand: a focus on multi-user management and policy to address cumulative impacts. *Frontiers in Marine Science* (Forthcoming).
- 3 Smith, P. & McDonough, M. Beyond public policy: Fairness in national resource decision making. *Society and Natural Resources* **14**, 289-249 (2001).
- 4 Parkins, J. & Mitchell, R. Public participation as public debate: a deliberative turn in national resource management. *Society and Natural Resources* (2005).
- 5 Muro, M. & Jeffrey, P. A critical review of the theory and application of social learning in participatory natural resource management processes. *Journal of Environmental Planning and Management* **51**, 325-344, doi:<http://dx.doi.org/10.1080/09640560801977190> (2008).
- 6 Crowder, L. B. & Norse, E. A. Essential ecological insights for marine ecosystem-based management and marine spatial planning. *Marine Policy* **32**, 772-778 (2008).
- 7 Ehler, C. N. & Douvere, F. Marine spatial planning: a step-by-step approach towards ecosystem-based management. (International Oceanographic Commission, Paris, 2009).
- 8 Glavovic, B. Towards deliberative coastal governance: insights from South Africa and the Mississippi Delta. *Regional Environmental Change* (2014).
- 9 Murry, G. *et al.* Cumulative Effects, Creeping Enclosure, and the Marine Commons of New Jersey *International Journal of the Commons* **4**, 367-389 (2010).
- 10 Ardon, J., Gjerde, K., Pullen, S. & Tilot, V. Marine spatial planning in the high seas. *Marine Policy* **32**, 832-839 (2008).
- 11 Ritchie, H. & Ellis, G. A system that works for the sea? Exploring stakeholder engagement in marine spatial planning. *Journal of Environmental Planning and Management* **53**, 701-723 (2008).
- 12 Davies, K., Fisher, K., Dickson, M., Thrush, S. & LeHeron, R. Improving Ecosystem Service Frameworks to Address Wicked Problems *Ecology and Society* **20**, 37, doi:<http://dx.doi.org/10.5751/ES-07581-200237> (2015).
- 13 Clark, G. Stylised facts and close dialogue: methodology in economic geography. *Annals Association of American Geographers* **88**, 73-87 (1998).

- 14 Ettlinger, N. Cultural geography and a relational microspace approach to trusts, rationalities, networks and change in collaborative workplaces. *Journal of Economic Geography* **3**, 145-171 (2003).
- 15 Breen, R. A practical guide to focus-group research. *Journal of Geography in Higher Education* **30**, 463-475 (2006).
- 16 Cameron, J. in *Qualitative research methods in human geography* (ed I. Hay) (Oxford, 2010).
- 17 Straterra. Position paper: enabling responsible seabed mining. (Straterra, Inc., Wellington, 2015).
- 18 World Ocean Council. *Business forum, industry leadership in ocean governance and the blue economy*, <<http://www.oceancouncil.org>> (2014).
- 19 Coombes, B., Johnson, J. & Howitt, R. Indigenous geographies III Methodological innovation and the unsettling of participatory research. *Progress in Human Geography* **38**, 845-854 (2014).
- 20 Thrush, S. et al. Addressing surprise, and uncertain futures in marine science, governance and society. *Ecology and Society* (Forthcoming).
- 21 Carolan, M. S. The wild side of agro-food studies: On co-experimentation, politics, change, and hope. *Sociologia Ruralis* **53**, 413-431 (2013).
- 22 Lewis, N., Le Heron, R., Campbell, H., Carolan, M. & T., M. in *Biological Economies: Experimentation and the politics of agri-food frontiers* (eds R. Le Heron, H. Campbell, N. Lewis, & M. Carolan) (Routledge, 2015).