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Diversity, contestation, participation in Aotearoa New Zealand's multi-use/user marine spaces

Erena Le Heron[a,*], June Logie[a], Will Allen[b,#], Richard Le Heron[a], Paula Blackett[c], Kate Davies[c], Alison Greenaway[d], Bruce Glavovic[e], Daniel Hikuroa[a]

[a] The University of Auckland, Private Bag 92019, Auckland, 1142, New Zealand
[b] Learning for Sustainability an online guide to resources on collaboration, co-design & adaptation, New Zealand
[c] National Institute for Water and Atmospheric Research (NIWA), PO Box 11115, Hillcrest, Hamilton, New Zealand
[d] Manaaki Whenua – Landcare Research, Private Bag 92170, Auckland Mail Centre, Auckland, 1142, New Zealand
[e] Massey University, Private Bag 11 222, Palmerston North, 4442, New Zealand

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ABSTRACT

Coastal nations and islands have featured a participatory turn this century directed to resolving conflicts in multi-use/user marine spaces. Yet, few conceptual and empirical studies focus on participation as an institutional form to engage with the pressures of diverse and contesting uses and user interests in marine environments. These spaces are volatile arenas of power and politics, challenging available regulatory, governance and managerial models. The paper first reviews understandings of the nature of the relational field of diversity-contestation-participation in the international literature and second draws on empirical findings from five case studies of marine participatory process configurations in contemporary Aotearoa New Zealand. The nation is a unique ecological, political, social, cultural and economic setting. Maori (the indigenous people) have developed holistic intergenerational resource nurturing principles and practices (Vision Matauranga (VM)) that are actively shaping marine futures. This momentum has markedly altered the nature and terms of engagement of participation in Aotearoa New Zealand's shallow marine regulatory context. The country is thus an ideal setting to examine the rise of quasi-independent Participatory initiatives, contextualise and examine their diversity, contestation, participation interactions, confront relational and co-production aspects of agency that are an integral part of real-time participatory processes, and to reflect on van Kerkhoff and Lebel's (2015) contention that different possible futures hang on people asking new questions and being brave enough to experiment with process, collaboration, and their own conceptualisations and knowledges'.

1. Introduction

The nature of emergence of Aotearoa New Zealand's (Aotearoa NZ) recent participatory processes (PPs) in their contested marine spaces resonates with the growing focus in the international literature about participatory processes on integrating and reconciling contending interests in the coastal zone. Participatory processes have been entered into on a large scale in Aotearoa NZ since the 1990s, ranging from single issue to complex and multi-scale. This mechanism has been a means of grappling with mixed regulation, in a context of deep passion and a desire to engage in decision-making and co-creation of vision and practices for marine spaces. The paper examines how Aotearoa NZ's unique post-Treaty settlement context has energised the co-emergence of noticeably different relations and engagement amongst communities, iwi,[1] private sector/industry, publics, local and central government, research institutes and NGOs. Of central importance to diversity-contestation-participation in Aotearoa NZ is the way the historically imbued construct of partnership (enshrined in the Treaty of Waitangi 1840) between the Crown (through legislation, institutions and procedures) and Maori (the

* Corresponding author.
E-mail addresses: e.leheron@auckland.ac.nz (E. Le Heron), j.logie@auckland.ac.nz (J. Logie), willallennz@gmail.com (W. Allen), r.leheron@auckland.ac.nz (R. Le Heron), paula.blackett@niwa.co.nz (P. Blackett), kate.davies@niwa.co.nz (K. Davies), greenawaya@landcareresearch.co.nz (A. Greenaway), b.glavovic@massey.ac.nz (B. Glavovic), d.hikuroa@auckland.ac.nz (D. Hikuroa).
http://learningforsustainability.net
[1] Iwi = Maori tribe/s.

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indigenous people) has impacted on the formation and evolution of new style PPs involving many interests alongside Maori. The research suggests that categories such as stakeholders, diversity, power, politics and conflict need to be refreshed by empirically informed research, in understood and contemporary contexts. The paper has three parts. The first part reviews shifts in the international participation literature, offers a holistic conceptualisation of the dimensions and dynamics of multi-use/user spaces, and outlines key characteristics of Aotearoa NZ's unique context, elaborating on Vision Matauranga[2] (VM) which springs from the partnership framework and features of shallow regulation of the marine realm. The second part reports on a pioneering baseline national inventory of PPs, the selection of five marine spaces with distinctive PP configurations for intensive ethnographic interviewing, and outlines the methodological issues and approaches that had to be confronted in the Aotearoa NZ setting and in the research. The final part identifies and discusses, from comparative investigation across the PPs, five framings of diversity that reveal the 'work' and 'contributions' of the generative PPs studied.[3]

In today's world, coastal, inshore and offshore marine spaces have become increasingly crowded and contested with diverse and often incompatible uses and users competing over jurisdictional, ownership, access and utilisation claims. These developments have exceeded the formal (regulatory, managerial) and informal (cultural norms, rituals, taboos) institutional capacities of existing frameworks to create stable and more governable marine spaces. The paper draws on reflections from a three-year national research project in Aotearoa NZ dedicated to advancing understandings of the effectiveness of major and sustained participatory interventions in the context. Three questions are introduced to focus on the urgency of acknowledging participation as a productive social mechanism that offers hopeful possibilities relating to constructive conflict resolution for the futures of contested marine spaces. The questions are: (1) why has participation become a 'go to' social strategy in Aotearoa NZ? (2) if participation and diversity[4] are foregrounded, how might collective issues be revealed, collective knowledge advanced, and collectively negotiated thinking be put on the agenda? and (3) how might diversity-empowered participatory processes assist in imagining and Imagineering different and positive futures for marine spaces?

[2] Matauranga = knowledge, wisdom, understanding, skill (www.maoridictionary.co.nz). Vision Matauranga is a New Zealand government policy framework (Ministry of Research Science and Technology) 'to unlock the innovation potential of Māori knowledge, resources and people to assist New Zealanders to create a better future'. https://www.mbie.govt.nz/assets/9916d28d7b/vision-matauranga-booklet.pdf The phrase is also used in Sustainable Seas National Science Challenge to refer to an overarching programme to 'empower both traditional and contemporary mātauranga Māori in any Ecosystem Based Management approach in New Zealand's marine environment'. https://sustainableseaschallenge.co.nz/programmes/vision-matauranga.

[3] The research for this paper is from a broader project 'Testing EBM-supportive participatory processes for application in multi-use marine environments' as part of the Sustainable Seas: Ko nga moana whakauka National Science Challenge in Aotearoa New Zealand 2014–2019, https://sustainableseaschallenge.co.nz/programmes/our-seas/testing-ebm.

[4] We acknowledge that conceptions of diversity include multiple aspects such as age, occupation, orientation, ethnicity, economic status, differing views or opinions, sector or industry representation, gender, human or nonhuman, differing worldviews. An intersectional understanding can be used to tease out the relational nature of these aspects. In various contexts different versions of diversity will be employed as a basis for understanding. In this paper, although acknowledging wider diversity aspects, we concentrate our discussion on the role of indigenous knowledge and practices as an important criterion of diversity in Aotearoa NZ, with the discussion having much to offer the international stage.

2. Setting the scene

2.1. Participation literature

Literature fields typically evolve from modest beginnings dedicated to scoping some concern or issue into fuller and reflexive sets of ideas about significance and applicability. The participation literature follows this pattern. A review of phases of development suggests the field offers insufficient guidance for the national level study of the Aotearoa NZ context and situated inquiry in that context.

Arnstein's [1] famous ladder of participation broke new ground in the Anglo-American planning literature. It sought a way out of the trap of top down, command and control policy and planning procedures, but it was lodged in the planning structures of the interventionist state era where bureaucracies decided on the nature, extent and worthiness of participation and any ladder or instance of participation. Researchers soon questioned on whose terms participation was invoked [2] but also expressed the potential of consensus [3,4]. Arnstein's intervention opened up space for consultation in bureaucratic terms and provided examples to support the differentiation implied by the ladder metaphor. The early research, concerned with gradations of participation intended to reveal lines of contest and conflict [5], was soon surpassed by a critical edge identifying how the ladder device is unable to transcend structural problems in both developed and developing countries [6].

A second generation became obvious as efforts were made to free thinking from the narrow ladder metaphor by widening conceptual dimensions. Collins and Ison [7] exemplify the advances. They stressed the historical situatedness of change possibilities and the trajectory driven starting conditions of PPs, inadequate framing of situated concerns because of prior assumptions, preoccupation with stakeholder mapping rather than building stakeholding for an issue, failure to open up spaces for participatory learning or institutionalising benefits, and missing the knowledge approaches at stake in addressing resource dilemmas. Kallis et al. [8] and Shilling et al. [9] raised concerns about the dark side of collaboration, which they saw as not necessarily suited to the distributive dilemmas at the core of multi-use/user issues. In contrast Turnhout et al. [10] are more optimistic, spelling out ways in which participation creates citizens.

A third shift in emphasis highlights agency and attendant relations, to ensure that different kinds of purposive work for the design of environmental policies was recognised [11] for example offer an international panorama). Much recent writing is inflected by the western science system change idea of identifying leverage points in the system which offer different possibilities for scope, nature and degree of change [12]. This thread directly confronts and seeks to understand power relations [13–15] though the importance of the interplay of formal and informal institutions is often missed. Standard interventions have limited leverage for changing the system in contrast to higher order leverage points that are seen as addressing degrees of system change. This instrumentalist approach is significant because it re-scripts participatory projects as overtly social mechanisms capable of impacting widely *by design*. This mapping of potential environmental pathways and their risks and societal possibilities [16] is joined by thinking that sees PPs as potentially transgressive sites where diversity-pushed social learning is at a premium. This is most evident in the pioneering Future Earth research of Lotz-Sisitka et al. [17] which is based especially on enactive studies located in developing countries.

The compounding and accelerating contestation of marine spaces necessitates application of insights from the participatory and cognate literatures. Marine spaces are political microcosms featuring partialities of governmental effort where it is rare for one institution to be empowered to provide responsive oversight or where available institutions are unable to handle the complexities of more than one issue. It can be seen from the literature that participation is increasingly being seen as one crucial mechanism of change, though scrutiny in terms of their role in scenario exercises and leverage points is poorly developed. Despite

confidence in what PPs might be able to do there remains a dearth of demonstration examples of contextualised and inner workings of PPs.

2.2. Contested multi-use/user spaces

The phenomenon of multiplicity in activities, planning, users and spatial and temporal scales in marine spaces is widespread, understood to require attention to ways to resolve conflict but also suggests productive deliberation and decision making over ways forward is often met by stubborn implementation barriers. Developed country examples include the trans-boundary maritime planning of the Baltic Sea [18], the estuary-coast focus of the Chesapeake and Atlantic Coastal Bays [19], the contested zone of the Great Barrier Reef [20], and integrated management development for Canada's Eastern Scotian Shelf [21]. Christie and White [22] provide a synopsis for tropical countries, while Courtney and White [23] examine integrated coastal management in the Philippines and Wever et al. [24] outline policy lessons from Brazil and Indonesia.

The objective of centring multi-use/user spaces as a researchable phenomenon is to illuminate their broad characteristics so as to better understand the range of extant influences that PPs might be subjected to and seek to accommodate and consider the catalytic effects of participatory initiatives. The complexities and complications of multi-use/user spaces however are a severe test of conventional approaches which are for the most part led by collaborations amongst existing institutions rather than novel and stand-alone participatory configurations discussed in this paper. As the earlier literature review showed, the concerns about recognising the situatedness of conflict resolution drove conceptual changes. A highly constraining pattern of thought, to grappling with use-user complexities and tensions, is an unwillingness to accept the legitimacy of differentiated place-based knowledge. Other inhibiting pressures to conceiving the phenomenon holistically would be the resistance to acknowledging multiple values which are an integral part of places, little respect for indigenous knowledge principles or practices, and an unwillingness to treat the spaces as a mix of changing and evolving influences. These inhibitors to thought get in the way of trying to understand the lived realities of the spaces and in the way of moving towards making leadership in various guises an emergent property of participation. When the inhibitors are put aside it is apparent that for the most part multi-use/user spaces have been narrowly conceptualised in compartmentalised manners, as principally ecological, or economic, or social or cultural spaces.

A first move to overcome the inadequacies of approach is to conceptualise marine spaces as consisting of emergent near and far (local and global), and downhill and uphill (sea, coast, mountains) Social, Political, Economic, Administrative, Cultural and Ecological (SPEACE) processes. This re-positions, for example, ecological processes as being shaped by SPEACE influences and in an equivalent manner SPEACE processes as being especially shaped by land-coast-sea interactions or ocean dynamics. This powerful conceptual lens sheds new light on governance issues. At the heart of these issues are claims over rights of access and property to available or potential resources. In this regard marine spaces can be viewed as 'social arguments' about restricting or expanding the greater good of common resources. They are spaces where integrative thinking can emerge from grounded dialogue, synthesis and collaboration. This conception in turn prioritises making visible the multiple trajectories of uses and users in a space since this is a route to understanding agency. PPs are created and emerge in a nexus of extant activities and actors where conflict abounds.

The two conceptual moves of a holistic 'all influences, all life' view of processes and inclusion of both context and agency changes what is possible and permissible to think about. Reasonably any PP is directly or indirectly engaging in the wider co-designing of societal reorganisation of opportunities for users and uses. Equally reasonably PPs in their own right are living procedural laboratories where the actual constitutive elements of processes are being probed by participants with the mission of identifying possible avenues and leverage points for change. Unquestionably, the contemporary challenge is managing conflicting/competing interests in marine spaces towards *collectively* negotiated and desired societal futures and outcomes.

2.3. Aotearoa New Zealand context

Aotearoa NZ's marine estate is 20 times larger than the country's landmass and it has the 4th largest exclusive economic zone in the world. The marine resources include fisheries, aquaculture, tourism, oil and gas, minerals, renewable energy, shipping and more. The sea is also an important part of Aotearoa NZ's lifestyle and culture – for food, recreation and spiritual wellbeing. Three quarters of the population live within 10 km of the coast, and Maori connections with the sea are particularly strong. There is a growing conflict between the country's many uses of the marine environment, including its important marine economy and protection of the marine environment. In every marine space Maori commitment to VM is interwoven with traditional fully inclusive collaborative processes at iwi, hapu and whanau[5] levels. Treaty settlements have accelerated realisation of VM. This coincides with a general push for recognition and nurturing of multi-use collective resources by the population at large, though there is less grasp of the present shallow regulatory imprint for coast and sea. As the National Science Challenge Sustainable Seas [25] argues for, 'There needs to be a new way of managing … marine resources that considers multiple uses, values and sources of knowledge, and combines the needs of Maori, wider communities, and industry, with new evidence from scientific research'. The aspiration coming from Sustainable Seas and government is that marine resource use can be enhanced, while ensuring the 'seas are understood, cared for, and used wisely', and while this is a mission-led focus, it does combine with aspirations of sustainability (UN Sustainable Development Goals SDG14) held more broadly. This assessment suggests participation as a social mechanism will be an ongoing project. Two influential strands of context are VM as principles and practices, and the relatively unconstrained but often unsupportive nature of shallow regulation that has arisen out of reforms which have not kept up with the complexities of the marine scene (see also Section 2.3.2 below).

2.3.1. Vision Matauranga

Relations between settled Maori and early British administrators when colonisation began in Aotearoa NZ were codified in the Treaty of Waitangi (1840), a formal document that laid down the rights and obligations of Maori and the Crown. The document has two versions, Maori and English. In the Maori version, the idea of sharing resources with others was highlighted, the English translation subtly emphasised the expectation that Maori should alienate land (NZ [26]. This interpretive cleavage sharpened with disregard of the assumed inalienable starting position of Maori in their future relations with Pakeha.[6] Into the 21st century Treaty settlements acknowledged the Crown's recognition of historical and contemporary grievances suffered by Maori. In the 2000s Maori re-emphasised Treaty obligations as they saw them by actively fostering the holistic and forward-thinking concept of VM [27]. The main aim of this political and knowledge intervention was to make room for enacting Maori values in land and sea contexts. VM calls for non-Maori to work with Maori to respect their needs and aspirations for land and marine management, and to unlock the potential of Matauranga[7] Maori, resources and people. This enduring posture of participation in Aotearoa NZ diverges from conventional approaches of participation intended to find 'solutions'. Critically, Maori have been

[5] Iwi = tribe, hapu = subtribe, whanau = extended family/family group.

[6] Pakeha = New Zealander of European descent.

[7] Matauranga = knowledge, wisdom, understanding, skill (www.maoridictionary.co.nz). Matauranga Maori = Maori knowledge, wisdom etc.

articulating their values and aspirations in detail, a major step in promulgating the basis and nature of their terms of engagement in post-treaty settlement conditions [28]. Underpinning this movement was the notion of kaupapa Maori[8] methodology and principles which guided all interactions with non-Maori. The methodology is an approach that is by, with and for Maori communities, seeks to realise their dreams, addresses challenges they face, is centred on Matauranga Maori and is principles based. Five principles are held: self-determination, cultural aspiration, culturally preferred pedagogy, socio-economic mediation and an extended family structure. While these features are posited as general in nature, they are in fact unique to place and iwi [29]. The frame has become the guide in Maori, iwi and hapu participation and negotiations with different local, regional, national and global interests in different settings. Moreover, it is highly pertinent to developing any situated research methodology that seeks to understand how Maori wish to and will participate in various formal and informal settings. This refreshed Maori posture towards their participation in turn impacts upon the nature of participation as a whole in the nation.

2.3.2. Shallow regulation in Aotearoa NZ

Ordinarily regulatory conditions are taken as given in the participatory literature. However, for Aotearoa NZ, regulatory developments are critical background to understanding the marine estate as a natural resource realm primarily open to either sustainable or unsustainable exploitation - the root of conflict.

There are a variety of legislation governing activities in the marine space. The Resource Management Act (RMA 1991) provides for integrated management of land and coast (up to 12 nm), with a duty to consult. The Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act (EEZ and CS Act 2012) (12 nm to 200 nm or CS) addresses “gaps” in marine management, as prior to this only some activities were regulated (eg. fishing and marine transport - which remain governed by preexisting Acts). However, the activity status of marine activities under the EEZ and CS Act as ‘permitted, prohibited or discretionary’, is defined by the Ministry of the Environment, with “limited public involvement compared to the RMA” [30]. Once defined, public can only submit to the Environmental Protection Authority on marine consent applications that are ‘discretionary’. Treaty of Waitangi obligations are also stripped back [31]. The Marine Protected Areas Policy and Implementation Plan (MPA Policy) provides for regional consultation [32], however Marine Spatial Plans (of which there is only one to-date in Aotearoa NZ), do not have the same statutory requirement to consult,[9] rather this is best practise [33,34].

A political economy perspective highlights the historical antecedents relating to activities and actors, the nature and patterns of investment and the record of clashing aspirations, behaviours and amenability to being mediated. The concept of shallow regulation is applied in Aotearoa NZ to describe a particular system of checks and balances within which contestation can play out with fewer rather than more policy and other restrictions on investor and public decision making and investment directions [35,36]. Such a context puts a premium on purposive self-organising behaviour instead of acquiescing to government directives. The PPs examined are examples of proactive and evolutionary processes made possible because they are largely outside established formal institutions. However, the sting in the tail is that though diversity moves for instance in these PPs may enlarge the questions being asked and answers being given, the PPs are reliant on wider acceptance into existing institutions and investor worlds before change is initiated.

The nature of contemporary shallow regulation of the marine realm has to be linked to developments of colonisation embracing land, coast and sea. This wider view of interactions immediately identifies the asymmetry of formal and informal institutions between land and sea. The bias towards land resource regulation over a long period has laid down sizeable differences in the legislation, institutions, procedures and expectations about resources. The interest for participatory research is the make-up of uses and users found in any space. The critical lens of specific differences in evolutionary conditions, the kinds of investment and institutional actors created and able to thrive in altering environments, what behaviours come to the fore, and lines of difference amongst actors that might translate into tensions and conflicts is helpful in this regard. A set of secondary and more empirical questions are also pertinent: what politics-power relations form the mesh in which contestation amongst interests emerges, what structure of relations favour or do not favour which actors, and how do new entrants fare in particular conditions.

3. Participatory processes research project

3.1. National inventory of PPs

Aotearoa NZ is distinguished by dispersed and fragmented formal and informal regulation of coastal and marine space. There are 25 statutes governing 14 agencies across 7 spatial jurisdictions. The range of participatory processes is extraordinary - from recent localised coastcare and citizen science initiatives to equally recent but multi-scale and multi-institutional initiatives often originating in Regional Councils, and 500 or so iwi and hapu marae[10]-based collaborations [37]. Land-based regional councils have responsibility for the territorial sea (via RMA 1991), although the exclusive economic zone is managed separately via the EEZ and CS Act 2012. Responsibility is diffuse across actors and realms. Here participatory initiatives have sprung up as a mechanism to facilitate the co-creating of management practices and decision-making around issues traceable to property rights and access to marine commons. Of the 172 participatory processes found, most are single issue. However, some are extremely complex. The initial scoping work (Fig. 1) led to a short list of 15 case studies for which document analysis was undertaken, and then finally 5 case studies were chosen for in-depth research.

3.2. Selection of five case studies

The case studies were chosen to illustrate the range of complex PPs in action around Aotearoa NZ (Table 1). They are distributed around the country's coastal locations, vary in size, type and style of PP, subject/object of interest, marine spaces concerns, and can be grouped broadly as being institutional or community driven. However, they all have much in common. Each deals with contested multi-use and user marine spaces, they each outline a strong vision, they each employed collaborative processes to navigate complex legislative environments, and each is committed to diversity, particularly in terms of indigenous knowledges and practices. They are a rich snapshot of participatory processes possibilities.

3.3. Methodological issues and approaches for Aotearoa New Zealand

Iwi are important players in every marine space and are guided by their attachments to land and sea. Being attentive to non-iwi groups

[8] Kaupapa Maori = Māori approach, customary practice, agenda, principles or ideology - a philosophical doctrine, incorporating the knowledge, skills, attitudes and values of Māori society (www.maoridictionary.co.nz).

[9] “In New Zealand, there is no legislative provision for integrated marine spatial planning. The RMA does provide for partial spatial planning through the preparation of regional coastal plans, but these do not address fishing, marine reserves or marine mammal sanctuaries. Despite this legislative vacuum, New Zealand's first marine spatial plan called ‘Sea-Change – Tai Timu Tai Pari’ for the Hauraki Gulf was completed in December 2016. The process was collaborative, stakeholder-led and non-statutory.” [51].

[10] Marae = community meeting place/tribal complex.

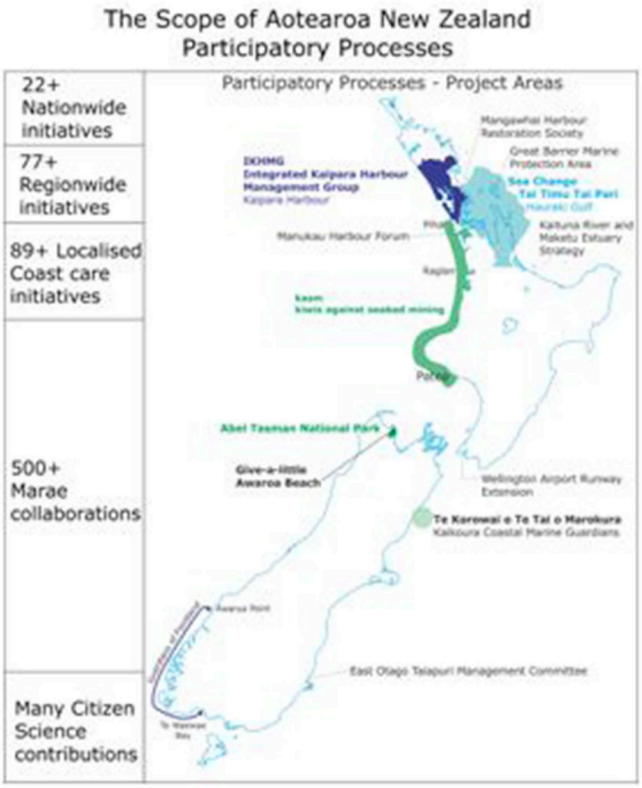

Fig. 1. Scope of Aotearoa NZ participatory processes.

was easier as they shared the dominant cultural context. The research team committed to a decolonising methodological approach [43] which seeks to meaningfully engage with VM. Decolonising oneself and practices is difficult. To aid in resolving aspects of approach we asked, 'what is the research going to offer those iwi and hapu we speak with?' And 'is this of value to them?'

As Pakeha researchers investigating PPs in a post-settlement context there is an obligation to recognise our positioning as a tauiwi[11] research team, working as Treaty Partnership allies, with the research standing as adding insights across the Treaty partnership. Team discussions were held around contacting mana whenua[12] and iwi, and culturally appropriate approaches and mechanisms for doing so. Scheduled reflection meeting allowed time to address these questions. Discussion around kaupapa[13] influenced the approach to interviewees and when talking to them. Maori researchers were consulted on the best way to make contact and which networks were appropriate to use.

Interviewees were identified through several strategies. PPs were investigated through documentary analysis to ascertain different PP roles (and therefore multiple entry points) and who were involved at different stages of the PP. This ensured a triangulation of perspectives from strategic sites in the PP. As interviewing progressed structural

Table 1
Five case studies.

Five participatory process initiatives studied	Collective focus/guiding metaphors	Nature of mandating	Key vision	Years	Recent publications
Integrated Kaipara Harbour Management Group (IKHMG)	Integrated catchment management using kaitiakitanga	Anticipated treaty settlement	`A healthy and productive Kaipara Harbour'	2005 - ongoing 13 years +	Makey and Awatere [38]
Sea Change Tai Timu Tai Pari	Marine spatial plan	Hauraki Gulf Forum, Auckland Council, Waikato Regional Council, Gulf iwi	Being the 'voice of the gulf'	2013–2016 3+ years Ministerial Advisory Group to be appointed 2019	Peart [39]
Contesting seabed mining	Consenting process	Alignments of support groups	No seabed mining Seabed mining under our terms	2005 - ongoing 13 years +	Ioms and Stuart [40]
Gift Abel Tasman Beach (Awaroa)	Public ownership of beach	Land sale process Public donations	Retain NZ ownership	January–July 2016 6 months	Connell [41]
Te Korowai	Managing fishing and conservation needs, kaitiakitanga	Mandated by legislation	'Fishing for abundance'	2005 - ongoing 13 years +	Craddock-Henry et al. [42]

[11] Tauiwi = non-Māori.

[12] Mana whenua = those who have territorial rights, power from the land, authority over land or territory, jurisdiction over land or territory - power associated with possession and occupation of tribal land. The tribe's history and legends are based in the lands they have occupied over generations and the land provides the sustenance for the people and to provide hospitality for guests (www.maoridictionary.co.nz).

[13] Kaupapa = topic, policy, matter for discussion, plan, purpose, scheme, proposal, agenda, subject, programme, theme, issue, initiative. (www.maoridictionary.co.nz). That is: the approach that would be taken, and according to what principles.

diagrams of each PP were prepared using timeline information obtained from interviews. Further diagrammatic representations of relationships were used to identify other strategic sites where additional perspectives on the PP should be obtained. Once aspects of methodology were clarified ethics approval was obtained from the National Institute of Water and Atmosphere, the host research institution.

Each interview was conducted by a core team of two interviewers. This gave the capacity to build up full interview notes which were then abridged as an Interview Summary and sent to each interviewee for comment and query. In the first instance a tentative timeline of participant involvement was established. Previous interviewing experience indicated that asking interviewees to tell their story would allow them to be in control of their own narrative: working through key moments, conflicts, high and low points, personal experiences, with tangents welcome. Participants indicated at the conclusion of their interview that they appreciated the conversational informality of the approach which gave the chance to offer up thoughts in their own process. The personalised timelines added to the growing understanding of the timeline of the PP. The reflexive discussion of the interviewee around individual experience, positioning and general momentum and the schematic of significant moments in the PP led to interviewers assessing alternate views and providing greater depth on process intricacies and implications. The gentle technique of inserting a contrary view teased out particular issues or ideas that had arisen from multiple interviews in each case study in a non-confrontational way. It also revealed detail of sometimes very contentious power-politics relationships and embedded wider administrative, political and personal conflicts.

Table 2 shows a statistical summary of the completed interviews. The case studies vary in their complexity and this aspect is acknowledged in the compilation. Importantly, 30 percent of those interviewed were Maori who held professional roles in the PPs.

Analysis followed several steps. Thorough thematic analysis of all interview notes was undertaken, revealing key commonalities and issues. Team meetings progressed the learnings from the comparative analysis, developed tables of rich information and synthesised and gained new insights in PP processes. The findings have been presented at 16 national and international conferences, which gave an opportunity to gauge the acceptability of methodology in the research communities of marine science, geography, planning, natural resource management, policy and Sustainable Seas and engage over interpretive issues with informed audiences. Most recently at the Reflections on Participation workshop and webinar hosted by Sustainable Seas and Waikato Regional Council [44] which profiled the latest findings from the team and emphasised the novel nature of the comparative PP research. The number and nature of questions put to the presenters showed critical, engaged and positive responses from the audience of practitioners, policy makers and planners.

Table 2
Interview data.

Interview data	
Number of in-depth case studies	5
Number of formal interviews	31 detailed interviews
Large complex participatory processes (interviews = n)	Sea Change = 10 IKHMG = 6 Te Korowai = 7
Relatively defined participatory processes (interviews = n)	KASM/Deep sea mining = 5 Gift Abel Tasman = 3
Number of unique perspectives on participatory processes	31
Number of Maori professionals interviewed	9
Interview period	June 2017–July 2018

4. Themes of diversity, contestation and participation

4.1. Co-constituting diversity and participation in contested contexts

Over the last 20 years, Aotearoa NZ's encounters around contested marine spaces have profoundly changed. The nature and dynamics of this owes much to the spirited advocacy and application of VM principles. The research has recovered dimensions of this remarkable emergence.

Three sources of information underpin the exploration of diversity, contestation and participation dimensions in this section. They are: (1) vignettes, each designed to highlight an important diversity emphasis, (2) significant themes covering diversity practices at work in the PPs identified from scrutiny of interviews and (3) a table developed to reveal more deeply the influences on initiative efforts to shift problem conceptions in the PPs and to provide a base lining of visible and hidden 'facts', 'faces' and 'views' relating to PP diversity actions. The different points of entry enable a unique (but very partial) assembling of the emergence of VM and associated diversity efforts. Fig. 2 juxtaposes these entry points, heightening the potential knowledge relationalities implicit in the approach to organising this section.

4.2. Power and conflict questions

As illustrated in Fig. 2 each case study is a field of contestation that has coalesced around fundamental concerns of collectively oriented resource management. By identifying a key question for each multi-use/user space, a basis is provided for an abbreviated discussion of the cases that expose the special saliency of each marine space for extending understandings of diversity-in-action in Aotearoa NZ. The questions used go to the heart of collective imagining and some of the obstacles that truncate efforts to assemble collective knowledge and propose action on behalf of and in the interests of the multi-use/user spaces.

4.2.1. Hauraki Gulf and Tai Timu Tai Pari (Sea Change). Whose knowledge is valued?

This PP is the most complex and ambitious PP initiative of the country. The PP focused on navigating and negotiating a collective vision from and in spite of the competing science imaginaries about the ecosystem interdependencies and government and management visions emanating from the large number of interests in and connected to the Gulf and beyond. Sea Change's contextual features are unusual - the Gulf has many iwi, many activities and enterprises, many territorial authorities and a statutory monitoring entity in the form of the Hauraki Gulf Forum. Sea Change was a short duration (three years) intensively resourced attempt to arrive at a marine spatial plan to re-instate the Gulf's mauri through giving voice to the Gulf. Mandating was the subject of protracted politics throughout as iwi contested their omission from key parts of the process. Iwi managed to influence later stages of the process.

4.2.2. Kaipara Harbour and IKHMG. Who is responsible?

The Kaipara Harbour is Aotearoa NZ's largest estuarine ecosystem, one of the largest harbours in the southern hemisphere and an exemplar of single iwi oversight. The tight spatial bounding of the Kaipara and its environment by European land-based legislation and institutions, and iwi structures has been the site of on-going conflicts over the degradation and restoration of the commons known as the Kaipara. Iwi-inspired and led open collaboration over the health of the Kaipara catchment and harbour de-peripheralised the Kaipara in the eyes of traditional governing bodies. There is an holistic focus on water quality and use of science to identify the nature and sources of contaminants from the catchment, and in the harbour. The IKHMG's programme met resistance on the part of land users to acknowledge their role in the

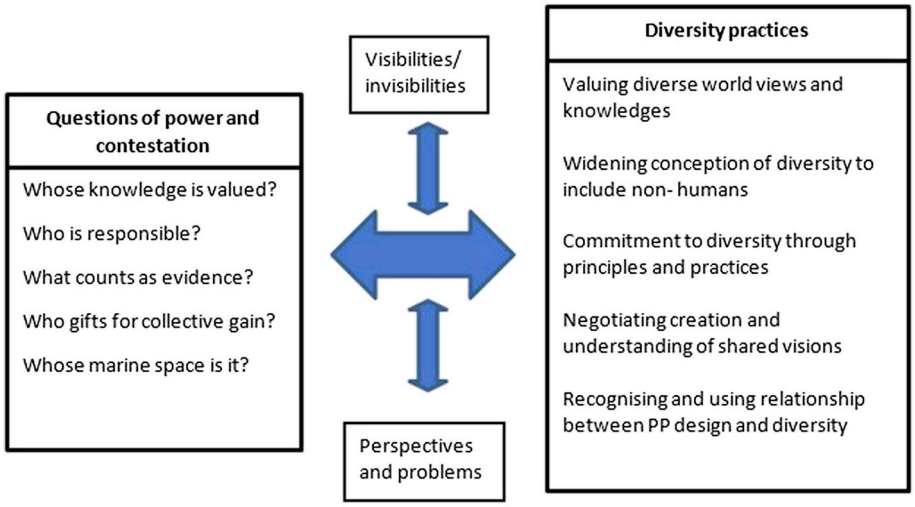

Fig. 2. Interrelated diversity themes.

decline of the Kaipara's mauri.[14] In recent years the integrated catchment approach has won increasing support.

4.2.3. Coalition formation against seabed mining. What counts as evidence?

The PP confederation mobilised around the Trans-Tasman Resources application to mine off the Taranaki coast illustrates the contingent nature of PP composition in the face of changing context and circumstances of those involved. Lines of contestation focused on the consenting process of the Environmental Protection Agency (EPA) under the EEZ and CS Act. The different trajectories associated with the key protagonists over the life of successive applications provide insights into the creation of collaborative relations of convenience on the part of major iwi (Ngati Ruanui), Kiwis Against Seabed Mining (KASM), Forest and Bird (F&B), and Department of Conservation (DOC). Some connections, such as between Taranaki Regional Council and TTR were deemed inappropriate by both iwi and KASM. At stake in the three applications considered by the EPA were the nature and status of science, expertise, kaitiakitanga[15] and precedence that could be or could not be used as evidence. Bureaucratic logic, much from pre-Treaty settlement days, clashed with the assertion of place-based knowledge and demonstrated kaitiakitanga practices.

4.2.4. Kaikoura and Te Korowai. Who gifts for collective gain?

The metaphor 'fishing for abundance' has guided and energised the place-centred participatory model known as Te Korowai. The emergence of Te Korowai as a pioneering collaboration led by iwi is intimately tied to a long history of DOC leadership, Ngai Tahu influences, Ministerial support of several governments and interventions from major political parties. Review processes amongst those stake holding at different times in the life of Te Korowai give considerable insight into the mutability of the PP and the challenges of producing a 'product' suitable for legislative support by government and also translatable and workable in Kaikoura.

4.2.5. Awaroa and the Gift Abel Tasman Beach campaign. Whose marine space is it?

This PP demonstrates that spaces of effective intervention can be created when there is reluctance to act on the part of a key state regulatory institution. The PP was concerned with a 'delicate' topic in Aotearoa NZ namely private versus public ownership of, in this case, land (Awaroa beach) offered for sale adjacent to a National Park. The intensity of decision making 'on the hoof', 'political lobbying and championing', and the reliance on crowdfunding to give substance and mana to a private citizen-driven PP, organised and funded in the name of the public, is salutary as an example of context and circumstance being reshaped by the relational actions of agency. Other attempts to emulate the crowd funding model used for the Awaroa purchase have been largely unsuccessful.[16]

4.3. Diversity practices at work in and across the PPs

We regard *re-setting the conceptual agenda* as a crucial and primary governmental step in the 21st century to make sure the multiplicity of users and uses are enfolded into participatory framings. Trying to develop a disposition to move in this direction is daunting and often outside the remits of existing institutions. The relatively independent yet contemporaneous arrival of participatory configurations in the 2000s now stands as a platform of participatory effort that can be appraised, with an accent on the features of work these unique entities have been performing. This amounts to something of an undesigned or spontaneous 'national experiment'. For the research community, the existence of the platform of 'up and running' place-based examples, allows the research agenda to switch from a focus on the technical efficiencies and effectiveness of individual participatory processes to a focus on the whole process of their genesis and emergence to date, and to how they might be initiated in new situations.

The paper's case is that the defining feature of the Aotearoa NZ participatory initiatives is their inescapable engagement in framing the character and latent possibilities of marine spaces *through the re-focusing technique of a collective expression of purpose*. Each PP addressed the 'state' of their space by naming of collective identifier.

The response to the research at a Reflections on Participation workshop and webinar hosted by the Waikato Regional Council (a key partner in the Sea Change process) guided how the themes are organised. One line of questioning hit the mark on the origins of collective voice and the complexities and complications that would inevitably

[14] Mauri = life principle, life force, vital essence, special nature, a material symbol of a life principle, source of emotions - the essential quality and vitality of a being or entity. Also used for a physical object, individual, ecosystem or social group in which this essence is located (www.maoridictionary.co.nz).

[15] Kaitiakitanga = guardianship, stewardship, trustee.

[16] See for example: three campaigns following Awaroa purchase. https://givealittle.co.nz/cause/wekawekavalley (successful, and supported by Awaroa team) March–May 2017. Unsuccessful: https://givealittle.co.nz/project/we-are-buying-lilydale-station-for-nzfailedattemptAug2018; https://givealittle.co.nz/project/savethepark failed attempt June-August 2018.

ensue in participatory settings. The question was 'Can different problem conceptions be traced to different interests, and did these change?'. In responding, we enlarged this perceptive query by reflecting on the experiences of the PPs and how each dealt with such issues differently and how different dimensions were more or less visible.

The themes move from a discussion on the importance of valuing and respecting difference, to the logical extension of widening conceptions of diversity to include multiple human and non-human diversity. This is followed by discussion of the way in which formal or informal commitments to diversity through practices and principles can at times build up momentum, or come from momentum, followed by highlighting the importance of negotiating and developing shared visions for places and futures, and finally touch on the role process design has on making or denying space for diversity.

4.3.1. Valuing differing and diverse world views and knowledges

Valuing and respecting difference is key to any collective project. Long term, participatory and collective initiatives enrol many, who are likely to have multiple and diverse worldviews and knowledges. The PPs must find ways of negotiating and building trust and a common purpose to manage the accompanying challenges and opportunities. Treaty-based approaches acknowledging Maori as partners is a key strategy in Aotearoa NZ, enabling co-creation of PPs, visions and outcomes, rather than risking monocultural and consequently less adaptive futures. The world views offered by different knowledge systems may (or may not) have meshing points with the dominant system, but always open up possibilities and reframe interventions [45,46]. Added to the mix of multiple indigenous knowledges are the multiplicity of science and technical knowledges [47] that must be valued, respected and grappled with.

In the Aotearoa NZ examples, a whole catchment perspective in keeping with kaitiakitanga exposes how and why land resource development has disturbing implications for coast, industries and harbours. Faced with unambiguous evidence of primary sources of degradation, the challenge is to shift values, mindsets and entrenched practices of those whose externalities have cumulatively rated the health of the Kaipara. This is the crux of diversity-led participation.

4.3.2. Widening conception of diversity to include non-humans

All background work in each case study revealed a huge absence around holistic presence of biota. However, each case study had its own particular relations with non-humans. This widening of the conception of diversity is the next logical step, and the examples connected with, and allowed voice for non-humans in more or less expansive ways. For some, there was a connection with fishing as a way of life, or a connection with the beach as being fundamental to being a 'New Zealander'. Some described themselves as "ocean folk", with a deep connection with ocean and wanting to protect it, others whakapapa[17]-ed to the area in a genealogical connection with place and ecosystems. This last describes Maori relations with nature as an actual relative, from whom, in their iwi area they are descended. This transforms engagement with marine spaces. The first of the two examples below has its genesis in this whakapapa.

Two particular examples of relations with non-humans stand out: There are hopes by IKHMG and iwi treaty negotiators that upcoming treaty settlements will result in the Kaipara Harbour becoming a legal entity following the success of Whanganui River and Urewera in this regard [48] – radically transforming engagements with these environments, places, people and mauri. The reality of non-human personhood of mountains, rivers, lakes and sea and what it might mean in the future to consider these and their needs in a Pakeha framework as equal, equivalent, entangled and encountered, has the potential to dramatically alter ecosystem based management futures.[18] Secondly, Sea Change is an elaborate initiative that declared itself the 'voice of the gulf', thinking holistically and non-sectorially, and sought to establish what a commitment to restoring its mauri might look like. This is a genuine imagining of Commons for all and what is entailed to revitalise comments by different governmental principles and practices.

4.3.3. Commitment to diversity through principles and practices

Diversity was committed to or accommodated through both formal and informal mechanisms. At times this was a disposition to openness, such as that adopted by the Gift Abel Tasman Beach instigators. Their motto was to 'treat all ideas with respect', and they also prioritised 'talking to iwi' first, and throughout the process. IKHMG and Sea Change both used formal mechanisms to encourage diversity. As an iwi-led initiative, IKHMG mandated engagement through their treaty settlement process, which provided certainty for local and national government agencies, and run open quarterly hui (meetings). Sea Change took a formal route by negotiating a co-governance arrangement in the Project Steering Group and a range of representatives in the Stakeholder Working Group. These examples are illustrative of tactics employed across the case studies. What is positive about them is that in every case diversity was considered important, and what that diversity was composed of was also thought about. Section 4.4 elaborates further on conceptions of diversity (Table 3).

4.3.4. Negotiating creation and understanding of shared visions

Perhaps the most generative element of the analysed PPs is the resolve to assemble knowledge around holistic concepts. The PPs have been diligent in this respect. The place privileging metaphors of marine futures open a stage for iwi and diverse interests to concentrate dialogue to tease out collectively inspired understandings. All parties were keen to leave behind institutional impasses in visioning and implementation and replace them with collectively agreed goals and mechanisms. This was first tackled with conversations about how to outline narratives supportive of the newly imagined and valued goals. The creation of shared visions enabled each PP to work towards a slightly abstracted future, providing a reference point of agreement when conflict inevitably arose.

4.3.5. Interrelations between participatory process design and diversity

Van Kerkhoff and Lebel [49] have recently contended that different possible futures hang on people asking new questions and being brave enough to experiment with process, collaboration, and their own conceptualisations and knowledges. The case studies in particular (though all to varying degrees) showed a willingness to take risks with experimental process design. A strategically placed manager in one PP, with more than a decade of experience, stressed the need to "do the big scary thing… we need brave investors, open-ended processes need to be invested in" and to "enter not knowing, with a diversity of participants that is uncomfortable". PPs in the marine space have for the most part been remarkably experimental.

Sea Change Marine Spatial Plan was written by 14 community members in a radical break from the traditional model of agencies and councils creating spatial plans. The 14 Stakeholder Working Group members were self-selected from the wider community to 'speak for the gulf' [39,50] and over a four year period made huge efforts to grapple with all aspects and find agreed ways forward. This is a far cry from traditional approaches as it distributes power and knowledge to and from other actors. The research revealed that on occasion multiple parties were willing to release their power resource base and come together, resulting in unprecedented environmental management collaborations.

A different kind of experimental process was the Abel Tasman Beach Campaign. It was an extremely successful project to intervene in the

[17] Whakapapa = Genealogy, descent. Here, traced their lineage or descent to.

[18] See also [2] for re-thinking human-plant relations.

Table 3
Diversity perspectives and problem conceptions.

Case Study	Conceptions of whanau, hapu, iwi, Vision Matauranga	Conception/s of marine space as an object to be voiced, analysed and treasured	Evidence of multi-stakeholder concerns and levels of practice change	Intergenerational concerns connected with different perspectives (beyond representational)	Legitimising different knowledges
Sea Change Tai Timu Tai Pari Marine Spatial Plan	- Mana Whenua (MW) aim to restore mauri to the Gulf, had opportunity for involvement but limited capacity to engage - Separate Maori Spatial Plan (MSP) and a Sea Change Marine Spatial Plan integrated into one marine spatial plan. - Maori world view included in plan despite much political resistance - Separate MW Roundtable added to complement existing suite of six roundtables allowing additional expertise could be included	- Goal of Hauraki Gulf Marine Park Act 2000 (HGMPA) to manage and sustain the life supporting capacity of the Gulf - MSP broadly supported - Gulf valued by commercial fishers as exploitable space - Voice of Gulf aided assisted shipping industry to lower speed in Gulf (to protect Bryder whales)	- Concern to avoid entrenched voices but building trust and empathy with other people's views slow. - A process to respond to fisheries issues in the Gulf through the mandate of the Hauraki Gulf Forum - Independent spokespersons for Matauranga Maori added to key work streams. - Roundtables suggested most users averse to changing practices - Revolt from recreational fishers	- Visibilities: short term effects/ planning, non- statutory - Invisibilities: long term effects/ planning (lack of continuing funding)	- Visibilities: Matauranga Maori science and Western science - Invisibilities: semi-invisible community inspired mapping through 'Seascape' project
Integrated Kaipara Harbour Management Group (IKHMG)	- The Te Uri o Hau Settlement Trust leads IKHMG and co-chair with Nga Maunga Whakahii Development Trust - a partnership of participation, advice, action and support. - The mauri objective explicitly recognizes a Maori worldview and challenges institutions to manage toward indigenous based aspirations.	- Intention by IKHMG to register the harbour as a legal entity. - Creation of nine Flagship farms aimed at demonstrating new land management for health of harbour - DOC and Fonterra in Northern Wairoa river and catchment restoration for harbour	- IKHMG, born from the iwi and the community, reported back to the community via quarterly meetings on different marae. - Te Uri o Hau Settlement Trust and DOC (plus MPI), – Auckland Regional Council with Rodney and Kaipara (small district councils) aided Te Uri o Hau to get people working.	- Visibilities: project driven (e.g. Flagship Farms), short term funding, co-management - Invisibilities: Advocacy group efforts to influence long-term planning	- Visibilities: Matauranga Maori knowledge and Western science integrated - Invisibilities: Seeking overlapping and interlinked perspective for Kaipara management; Complex legislation and governance
Awaroa Crowdfunding (Gift Abel Tasman Beach)	- Awaroa beach was the hapu's burial ground - A conscious effort by instigators to engage with the iwi and DOC right at the beginning - Decision to give the beach to DOC made at hui.	- Signage in place telling story of the beach, the past, the campaign and future hopes. - Iwi were fully involved in the design of the 'serenity clause'	- Success was achieved by a large number of people, 40,000 public pledges – each pledge perhaps representing 400 people - Every idea given to project team was treated with respect, dignity and integrity	- Visibilities: Short-term fund raising (including Give-a-little Crowd Funding) - Invisibilities: DOC acting on behalf of Abel Tasman National Park	- Visibilities:Matauranga Maori science/ history highlighted during process - Invisibilities: Private property, beach as a commons; Instigators working with iwi from outset
Contesting seabed mining (KASM and South Taranaki iwi)	- KASM (dedicated to issue) and iwi (negotiating their interests) entered into collaborative arrangements and aligned with other interests in application and consent reviews. - Unique relationship between iwi and local community who are 'ocean folk' in Raglan - Iwi held fast to position that 'We are partners with Crown, not stakeholders' - Iwi affronted by mining of 'maunga' (treasure)– sacred black sand	- Memories of marine environment important to iwi - Evidence of presence of especially valued biota southern whale, Maui dolphin, Blue Whale provided by NIWA - The effect of seabed mining on surf breaks - New Zealanders are coastal people but EPA ignored	- Community meetings on the west coast initiated by Ngati Ruanui, iwi and KASM present at consent meetings in Wellington - Iwi aggrieved that despite main users of marine environment they were not consulted by EPA - Range of collaborations with Greenpeace, Forest & Bird, World Wildlife Fund and Environmental Defence Society.	- Visibilities: Community meetings, signage, events (e.g. Big Day fundraiser, film crew with local kids), web site, Facebook page, Greenpeace, Forest and Bird - Invisibilities: communities (surfing, dive clubs, recreational fishers, Legasea), EPA hearings, TTR consultation; EPA; EEZ Act	- Visibilities: TTR'S active relationship with the South Taranaki District Council - Invisibilities: Courage of conviction - up against a company who say there would be little damage to seabed.
Te Korowai o te tai o Marokura (Kaikoura Marine Guardians)	- Te Korowai o te tai o Marokura explicitly incorporates Maori world view in their vision and documents.	- Memories of marine environment important to iwi and local community - Ocean as source of food and livelihoods. Trying to support	- Community meetings in Kaikoura run by Te Korowai and later Kaikoura Marine Guardians - Te Korowai process from formation to special legislation being passed	- Visibilities: short term effects/ planning, statutory requirements and creation of Marine Guardians - Invisibilities: non- statutory voluntary lowering of local catch	- Visibilities: Matauranga Maori in 'intentionally bicultural vision', characterisation report, strategy. Online videos of all Team Korowai offering perspectives.

(*continued on next page*)

Table 3 (*continued*)

Case Study	Conceptions of whanau, hapu, iwi, Vision Matauranga	Conception/s of marine space as an object to be voiced, analysed and treasured	Evidence of multi-stakeholder concerns and levels of practice change	Intergenerational concerns connected with different perspectives (beyond representational)	Legitimising different knowledges
	- A strong relationship between Te Korowai and local hapu - marae as meeting space for many years.	both aspects, 'fishing for abundance' one of key vision elements. - Conception of recreational fishing as: "the sea – a place to get a feed, not fill your freezer"	took a decade, worked hard to gain community agreement. - Marine Protected Area created when initially strong resistance. This was in conjunction with customary right mechanisms ((taiapure, mataitai).	limits, offshore trawling and fishing beyond remit, funding streams, Team Korowai group efforts to influence planning for Kaikoura's future.	- Invisibilities: dependence on government funding and later trusts

politics of resource ownership. On the one hand it appeared as a Pakeha project to buy privately owned land with the dual purposes of preventing foreign ownership and transferring it to the national conservation estate to be owned by 'all New Zealanders'. However, interviews revealed deep commitment to treaty values by those behind the initiative. Approaching iwi first before media was seen by iwi as culturally appropriate and the initiative was a collaborative partnership from the beginning. An initial move to return land to the local iwi morphed into transfer of ownership to DOC, as retaining ownership in Aotearoa New Zealand was deemed by iwi to be the priority with a straight transfer to iwi being too confrontational at that point. This was in effect an experimental intervention in land ownership and transition of ownership; nothing similar had ever been done.

4.4. Arrangements of diversity: visibility and perspectives

What do the comparative experiences of the PPs reveal about the actual manner in which diverse and frequently challenging perspectives and viewpoints were accommodated through PP processes? Each PP provides very different experiential journeys for those involved, the choices confronted and the nature of accommodating decisions that were necessitated.

Table 3 introduces the complexities of our case studies by interrogating their discursive features of diversity. The table illustrates the difficulties in working with diverse inputs and arrangements, and some of the boundaries that are felt. It illuminates the co-constitutive assemblages of the PPs as they navigate contested marine spaces. Two components in particular are highlighted. Firstly, the multiplicity of world views or conceptions of the marine space, and philosophical approaches to working in that space. These are not always compatible and require great commitment to work through. The table is rich in detail for each case study, showing genesis, philosophy and negotiation. Secondly, it outlines the way diversity itself is visible in different senses within each case study. This interrogation of absences and presences highlights key commonalities and some notable gaps. Table 3 is meant to be utilised as a resource to more fully understand the depth of the case studies, many of which have long histories, and to begin thinking critically through what diversity in multi-use/user marine spaces might actually look like.

Table 3 is immediately useful in clearly showing influence of Maori perspectives on specific and wider issues. It reveals the diversity of perspectives in PPs and the materialities of the marine spaces concerned. The table also provides insights on how problems are perceived over time, including evidence of change/no change in practices, which is tied to interests despite pressures from different directions. The complexities relating to diverse inputs and problem evolution over the life of a PP are evident from the table examples.

The idea of visible and hidden 'facts' and 'views' is a powerful heuristic in baselining relations of power and politics. The latter part of the table outlines in terms of visibilities and invisibilities to demonstrate gaps in thinking, or somethings practises that are not obvious but still occurring. The table also draws out the idea that diversity does not merely mean representational diversity by illustrating how diversity may have intergenerational components and how types of diversity may be legitimised in various ways. The work the table does in interrogating diversity practices and drawing out specific elements is invaluable in understanding the effects that representational and other forms of diversity have on PPs and outcomes.

5. Discussion and conclusion

The paper has been predicated on the assumption that the absence of diversity is an absence of imagining what could be. What follows from this realisation is that without diversity decision making at every level would be deadlocked with the same set of solutions which fail to deal with the essence of the localised or multi-scalar problem. This

then, maintains current trajectories and protects the status quo. In particular, diversity moves are a social force that has the potential to open up processes, to allow more detailed inspection, and identification of influences and agencies responsible for unsatisfactory outcomes. The grounded comparative evidence brought forward by way of the themes suggests that conceptualising diversity, operationalizing a diversity related culture, and creating diversity initiatives are hard work, in part because they all bump up against entrenched power relations. However, the PPs are living laboratories exploring issues of who gets what, why, how, for how long, and to what ends, using what means, thus are however imperfectly, doing things differently. This is far removed from bureaucratic procedural decision making that favours consultation only and seeks quick turn-around. This profoundly important finding, that diversity brings dividends, should build confidence in the deployment of any PP. Participatory processes do open up new questions, they inform more thoroughly and there are more voices arguing cases, with greater scope for accountability. A general caveat however must be added. There are limits to PPs, as they are caught in their regulatory contexts, and may at times be dismissed as only a coherent response to existing mechanisms, rather than a collaborative attempt to change the playing field. As the seabed mining example shows, collaboration amongst interests was insufficient to persuade the EPA to heed the advice of collaboration, an example of shallow regulation.

The evidence reveals the challenge of how to meld the formal and informal institutional arrangements that open up or close down opportunities for meaningful PPs. In other words, how does the law and regulation dovetail or not with the non-regulatory processes and 'voluntary' practices associated with some of these and other cases? This is especially important in incorporating Maori in formulating decision options, and actual decision making. The paper highlights the demands of working with indigenous knowledge and practices respectfully and the kinds of slippage in institutionalising efforts that can so easily occur. The complexities discussed in the thematic explorations attest to these multiple aspects of transformative engagement.

A discouraging aspect of the research is that the in-depth interviews did not particularly close the gap between the well-intentioned PP efforts and the ongoing, and in some cases accelerating, pressures that undermine the health of coastal/marine systems. The evidence suggests institutions are not always adequately responsive to PP recommendations or to the saliency of their ongoing efforts. This was the message of Le Heron et al. [37] who argued that there are systemic rigidities in formal and informal networks that make obtaining change exceedingly difficult. This raises some tough questions about the need for stronger interventions than those which are in play. The advantages of self-organisation in a shallow regulatory setting become less attractive if implementation is continually stalled. International initiatives such as the seabed mining regulations being developed by the International Seabed Authority and negotiations to develop area based management tools for the high seas as part of the United Nations Law of the Sea review would raise the bar in national obligations.

Another wider issue is the fundamentally different institutional realities and jurisdictional responsibilities/stakeholder interactions that prevail in different coastal-marine domains. The place-based differences shown by the case studies need to be complemented with recognition of impediments in the institutional landscape against mountains to the sea[19] governance. In other words, on the land institutions are wedded to supporting natural resource exploitation irrespective of externalities, costs or cumulative effects. A further wrinkle is that the mix of stakeholders and governance provisions that prevail at the land-sea interface are markedly different from those prevailing beyond the EEZ and continental shelf, where international law might be a much more prominent factor shaping stakeholder and governance interactions. In each of these realms the power of trans-boundary diversity mobilisations are as yet unknown.

Finally, the paper has refreshed several categories. 'Diversity' and related initiatives are unpacked into multiple and frequently altering dimensions from co-learning pressures that are traceable to the effects of VM and Treaty Partnership momentum. The popular word 'stakeholders' is shown to carry bureaucratic overtones of privileging, whereas the verb 'stakeholding' accents the idea of purpose. This is highlighted in each marine space. The grounded research shows practical ways of circumventing or ring-fencing power and powerful agency. Politics is separated into politics of knowing and politics around new possibilities that might be enacted. Conflict is revealed as likely to be recomposed with changing mixes of users and their actions. These reinterpretations are examples of emergent properties propelled by participation. There is in all of this, a constancy, marine multi-use/user spaces continue to be spaces of ferment, but the improved understandings and techniques of a new generation of participatory competence suggests better marine futures will be made.

[19] Mountains to sea, ki uta ki tai, is a Maori concept that complements and works with holistic eco-system based thinking.

Declarations of interest

None.

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