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Empowering indigenous voices in disaster response: Applying the Mauri Model to New Zealand's worst environmental maritime disaster

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ABSTRACT

Just after midnight on October 5, 2011, the MV Rena ran aground on Otāiti, a reef situated 27 kilometers off the coast of New Zealand. The clean-up process has now been underway for more than four years, and is acknowledged as the second most expensive wreck recovery in the world, at more than half a billion US dollars. In October 2015, a resource consent hearing was concluded, and this sought approval to abandon the remaining sections of the Rena wreck on Otāiti. Māori submissions to the hearing process were divided between opposition to the applicant's request and support from others, including the Te Arawa ki Tai tribal grouping. Te Arawa ki Tai have adapted the Mauri Model Decision Making Framework to provide a better understanding of the recovery process, and the holistic understanding it provides is of relevance to other international contexts. This paper shares how the Mauri Model Decision Making Framework, in conjunction with an indigenous based methodology, empowered Te Arawa ki Tai in the recovery process and facilitated an enhanced Te Arawa ki Tai understanding. Since the grounding, Te Arawa ki Tai have co-created indicator sets that are inclusive of all of the relevant scientific and indigenous knowledge available. The impact upon mauri (life force or life supporting capacity) since the MV Rena grounding has been evaluated using the same indicator sets, with quarterly assessments. Reflections on how the concerns of the disadvantaged and marginalized Māori communities have been addressed are included.

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1. Introduction

Just after midnight on October 5, 2011, the MV Rena ran aground on Otāiti, otherwise known as the Astrolabe Reef, situated 27 kilometers off the coast of New Zealand (The Transport Accident Commission, 2014). Fig. 1 provides a map. During the ensuing clean-up, the Minister for the Environment identified the grounding as New Zealand's worst environmental disaster (Sharpe, Johnston, Watkins, Migone, & Cooke, 2011). In December 2011, one of the affected indigenous tribal groups, Te Arawa ki Tai, made submissions on the draft recovery plan, stating that the goal of the plan did not recognize and provide for a Māori (indigenous peoples of New Zealand) cultural perspective to environmental restoration. They suggested that the word "mauri" (life force or life supporting capacity) be inserted, or a new goal added to properly encompass a Māori worldview of environmental restoration. The Ministry for the Environment issued the Rena Long-Term Environmental Recovery Plan on 26 January 2012, with the stated goal to

"restore the mauri of the affected environment to its "pre-Rena" state" (Ministry for the Environment, 2012). This is significant, as it is the first instance in New Zealand that an indigenous concept was given as the goal of a government-led strategy (Morgan, Fa'au, & Bennett, 2015).

The disaster and its associated impacts have been a divisive issue in New Zealand, which historically has had a 'clean, green' image associated with the landscape and coastline. The differences in opinion regarding the recovery and fate of the wrecked vessel and debris have culminated in the resource consent process started by the Rena's owners. In May 2014, the owners of the Rena lodged several resource consent applications under the Resource Management Act (RMA, 1991) to abandon sections of the wreck and associated debris on Otāiti (Beca, 2014). The resource consent application also included provisions for future discharges of contaminants from the remnants of the vessel and remaining cargo, within the period of the ten year consent applied for Bay of Plenty Regional Council, 2014.

The different stakeholder groups with vested interests in the reef and affected areas have varying views on the recovery and resource consent application. These differences are evident in the submissions received by the Bay of Plenty Regional Council, the

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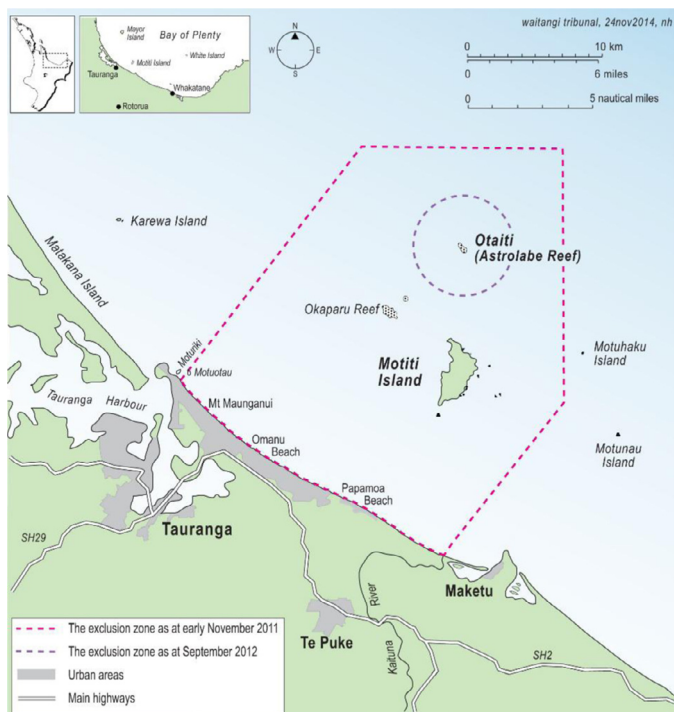


Fig. 1. Location of astrolabe reef and nautical exclusion zones (Waitangi Tribunal, 2015).

local Governmental body tasked with assessing the resource consent application. The submissions received from different affected stakeholders were presented at the resource consent hearing in Tauranga (New Zealand) in 2015, with different groups taking supporting, opposing or neutral stances regarding the Rena owner's resource consent application. The opinions, views and the impacts experienced by/of the different affected stakeholder groups regarding the Rena recovery and associated impacts can be linked to their ontological worldviews. Their differing ontologies are relevant to how solutions are perceived. There are multiple factors that shape these ontological differences, resulting in a wide array of differing and at times adversarial worldviews.

One of these affected stakeholder groups is Maketū-based Te Arawa ki Tai, who have collaborated with a community operational research project using the Mauri Model Decision Making Framework to inform their stance regarding the resource consent process. Te Arawa ki Tai (the coastal branch of Te Arawa) represent the majority of Te Arawa interests impacted by the Rena disaster. The relationships to Otaiti are set out later in this paper, which presents the assessment of the mauri impacts within this community by forming a working relationship and effectively adapting an action research based methodology into a communal, indigenous post-disaster context. Within this methodology, one of the key aspects has been the compilation of the performance indicator sets, to use within the assessment of the mauri impacts. The process to select these indicators is a crucial phase of the community operational research, establishing the criteria by which impacts upon mauri are measured, directly influencing how enhancements or diminishment in mauri are defined. It is therefore important that the methodology dictating this process is sound, as the criteria effectively set the boundaries of subsequent intervention. Within systemic interventions, boundary critique can be applied prior to and during the intervention to help in the process of identifying and placing boundaries, and selecting the appropriate methods (Midgley, 2000).

Boundary critique theory highlights the importance of exploring the boundaries that are being used within an intervention, with emphasis placed on considering the participant's views towards these boundaries (Ulrich, 1983). Foote et al. (2007) defines a 'boundary' as "... a conceptual marker that identifies the people and issues included in, marginalized by or excluded from OR projects" (Pg 1). Therefore exploration of these boundaries, or the 'critique' aspect, can be thought of as consideration of the interconnections of all the relevant factors, different perspectives of stakeholder groups, the interactions between the groups involved (including the researchers) and the overall evaluation of potential points of interest within the system (Foote et al, 2007; Midgley, Munlo, & Brown, 1998, 2007; Ulrich, 1996). This process is undertaken prior to the selection of systems methods to be used, as well as mid intervention, to allow for an appropriate definition of the intervention as well as to avoid superficial diagnoses of issues, which can often result in unnecessary complications during the intervention (Midgley, 2000; Midgley et al., 2007; Ulrich, 1983). More details of boundary critique are provided in the next section.

The Mauri Model Decision Making Framework (Morgan, 2006a, 2006b, 2008) incorporates similar processes, with seemingly parallel goals to boundary critique, in that, as a decision support tool, it provides a framework for practitioners and participant groups to consider and reflect on the views of those groups involved, prompting critical examination of what needs to be included or excluded as well as an exploration of the potential marginalization of people or other factors (Foote et al., 2007). Ulrich (1983) notes the importance of meaningful engagement with affected communities when setting boundaries. This involves providing a 'rational' analysis, rather than allowing external entities to impose boundaries upon affected communities. The boundaries must have some verification from those within the affected community, with these groups identifying the factors and information that will be of most use, thereby providing validity and rationality to the intervention and boundaries used. Providing more 'rational' boundaries through meaningful engagement, as well as ensuring that the set boundaries and outcomes have community verification, have been built into the methodology employed for this study through the use of the Mauri Model, a Kaupapa Māori based community research ethos and culturally relevant community engagement methods. A Kaupapa Māori methodology essentially promotes 'research for Māori, by Māori and with Māori' (Smith, 2005), placing Māori communities at the forefront of the intervention and research formation.

As well as considering who should dictate the placement of boundaries, i.e., deciding what information is important and relevant to the context, Midgley (2000) and Midgley et al. (2007) state that some stakeholder groups can become marginalized within this process: either not included or not fully included. This can result in the devaluing of factors relevant to the marginalized groups, and can be a contributing factor to misrepresentation of information as well as problems within the intervention. Māori communities in New Zealand have often been marginalized within research projects in the past, as is the case with many other indigenous groups globally (Cochran et al., 2008; Midgley et al., 2007; Smith, 1999). With the Mauri Model Decision Making Framework being conceptually rooted in an indigenous epistemology, it empowers the indigenous voice within the intervention and decision making process by providing a conceptual framing consistent with their own, as well as providing an equal footing for inclusion and comparison of culturally and locally relevant factors within the process (Morgan, 2006a, 2006b, 2008).

The results of this assessment of mauri were timely, with the resource consent application being granted in February 2016. With the consent granted, additional conditions have been applied for monitoring, and ensuring that measures to mitigate potential

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