

Numerically modelling sustainability using the Mauri Model

TE KIPA KEPA BRIAN MORGAN

(1): Department of Civil and Environmental Engineering, The University of Auckland, Private Bag 92019, Auckland, 1142, New Zealand

Thirty years hence indigenous peoples' opposition to development introduced a spiritual and cultural perspective to environmental management hitherto not considered in decision making in New Zealand. Claims made to the Waitangi Tribunal concerned themselves with engineering projects that were denigrating the water ecosystems and environment. Indigenous concepts raised in the Tribunal hearings included; the retention of intrinsic values / mauri; 'Māori' spiritual and cultural values; enhancing environmental, cultural and social well-being; and future generations.

That earlier contribution in defining the relationship of indigenous peoples with their environment has made an invaluable contribution to understanding the recovery effort associated with New Zealand's worst environmental disaster. The MV Rena ran aground on 5 October 2011, releasing oil, containers and container debris, which was further aggravated three months later when the MV Rena broke in two. Amidst the pragmatic response to the disaster, Te Arawa Ki Tai representatives were proactive in shaping the long-term recovery plan. Subsequently the Ministry for the Environment prepared the Rena Long-Term Environmental Recovery Plan which includes recovery of the *mauri of the environment to its pre-Rena state* as its goal.

The Mauri Model Decision Making Framework acknowledges those valuable insights, and indicates how diametrically opposed cultural perspectives can be better accommodated and engaged, even synthesised to facilitate better resource management decision making. This paper will show how a better understanding of the recovery of the mauri to its pre-Rena state can be facilitated through the combination of scientific and indigenous knowledge, and can produce decisions that are robust and defensible from multiple perspectives. The Mauri Model is unique in its approach to resource management as the framework offers a transparent and inclusive approach to considering the environmental, economic, social and cultural facets of the decisions being contemplated. The Mauri Model is unique because it is capable of including multiple-worldviews and adopts mauri (intrinsic value or well-being) in the place of the more common monetised assessments of pseudo sustainability using Cost Benefit Analysis.

Thirty years hence a consistent theme of indigenous peoples' opposition to development introduced a spiritual and cultural perspective to environmental management that hitherto had not been considered in decision making in Aotearoa New Zealand. Claims made to the Waitangi Tribunal; Motunui, Kaituna, Manukau, Orakei, concerned themselves with engineering projects that were denigrating the water ecosystems and environment. Indigenous concepts raised in the Tribunal hearings for these cases included; the retention of intrinsic values / mauri; 'Māori' spiritual and cultural values; enhancing environmental, cultural and social well-being; and future generations.

These early claims accumulated as a series of abandoned engineering projects that represented a significant waste of engineering effort, expended with an inadequate understanding of the full social and cultural context within which these projects were being proposed. There were also significant costs for the indigenous peoples forced to delay other commitments to challenge poorly thought through projects. The success of these Claims made necessary the introduction of legislation that incorporated the lessons being provided from Indigenous Knowledge.

That earlier contribution in defining the relationship of indigenous peoples with their environment has made an invaluable contribution to understanding the recovery effort associated with New Zealand's worst environmental disaster. The MV Rena ran aground Otaiti on 5 October 2011, resulting in oil spills and the release of containers and container debris, which was further aggravated three months later when the MV Rena broke in two. Amidst the immediate necessity of a pragmatic response to the disaster, Te Arawa Ki Tai representatives were proactive in shaping the long-term recovery plan. Subsequently the Ministry for the Environment prepared the Rena Long-Term Environmental Recovery Plan which includes recovery of the mauri of the environment to its pre-Rena state as its goal.

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The Mauri Model was digitised in 2013 to extend research regarding recovery options for New Zealand's worst environmental disaster. The open source website www.mauriometer.com was launched with the intention of promoting greater community involvement in decision making regarding the disaster recovery options being postulated. The Mauri Model can account for the different priorities inherent in the indigenous and western scientific worldviews. These characteristics of the Mauri Model make it well suited to the challenge of effectively incorporating the conceptualisation of the marine ecosystem as an ancestral treasure on one hand and as public commons on the other. How does the Mauri Model contribute in this complex context of environmental disaster response? Come to the presentation to find out.